

Syncx 6200 Series Appliance
Backend Integration Guide

SYNCXTM
Integration Appliances

COMMERCEROUTE®

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Table of Contents

SECTION ONE: INTRODUCTION

Chapter 1

Welcome

What's in this Guide	1-1
What's in the Other Guides	1-2
Conventions Used in this Guide.....	1-2
How to Get Started	1-4

Configuring Your Browser	1-5
Disable Auto-Select	1-5
Set Your Browser's Internet Options.....	1-6
What's Next?	1-10

Chapter 2

CR Interchange Environment Tour

Overview	2-1
-----------------------	-----

Log In to the Tour	2-2
---------------------------------	-----

Key Concepts	2-3
Data Transformation.....	2-3
Organize Your Trading Partners.....	2-6
Operations Hold all Your Transformation Details.....	2-9
What's Next?	2-12

Working with Schedules	2-13
-------------------------------------	------

Working with Sources	2-14
-----------------------------------	------

Working with Targets	2-15
Target File Name Variables.....	2-15

Working with Documents 2-16

Working with Transformations..... 2-17

 Using the Transformation Wizard..... 2-17

 Mapping Relationships..... 2-18

 Using the Formula Builder..... 2-19

Working with Process Messages..... 2-20

Working with Target Messages 2-21

 Merged Document Technology 2-21

 What's Next?..... 2-22

Managing Partner Activities..... 2-23

 Checking the System Log..... 2-23

 Checking Pending Processes..... 2-24

 Checking the Transfer History 2-25

 What's Next?..... 2-26

 Related Topics 2-26

Chapter 3

CR Interchange Tutorial

Overview 3-1

 Scenario..... 3-1

Step 1 - Log In to the Appliance 3-2

Step 2 - Create a Schedule..... 3-3

Step 3 - Create a Source..... 3-5

Step 4 - Create a Target..... 3-7

Step 5 - Create a Document Definition..... 3-9

Step 6 - Create a Process Message..... 3-12

Step 7 - Create a Transformation..... 3-14

 Select Transformation Type 3-14

 Select Data Source 3-16

Select Tables	3-17
Specify Table Usage	3-18
Create Relationships.....	3-19
Indicate Parent-Child Usage	3-20
Filter Source Data.....	3-21
Select Target Documents	3-22
Map Source Element to Target Elements	3-22
Step 8 - Create a Partner.....	3-24
Step 9 - Create a Project	3-26
Step 10 - Create an Operation	3-28
Step 11 - Monitor Your Operations	3-30
Step 12 - Log Out	3-32
What's Next?	3-32
Related Topics.....	3-32

SECTION TWO: DEFINITIONS

Chapter 4

Standard Trading Partner Definitions

Overview 4-1

How to Create a Standard Trading Partner Definition 4-2

 What’s Next? 4-3

 Related Topics 4-3

Chapter 5

Projects

Overview 5-1

How to Create a Project..... 5-2

Append Projects 5-4

 What is an Append Project?..... 5-4

 How to Create an Append Project 5-4

 What’s Next? 5-5

 Related Topics 5-5

Chapter 6

Creating Schedule Definitions

Overview 6-1

 Summary of Steps 6-1

Set the Occurrence 6-2

Set the Frequency 6-5

Set the Duration 6-6

 What’s Next? 6-6

 Related Topics 6-7

Chapter 7

Creating Source Definitions

Overview	7-1
Syncx 6200 Series Appliance Source Definitions.....	7-1
How to Create a Database Source Definition	7-2
Related Topics	7-3
How to Create a File Share Source Definition	7-5
File Name Variables	7-6
Related Topics	7-7
How to Create an FTP Source Definition.....	7-8
File Name Variables	7-9
Related Topics.....	7-10
How to Create an HTTP Source Definition	7-11
Related Topics	7-12
How to Create an SCP Source Definition	7-13
Related Topics	7-14

Chapter 8

Creating Target Definitions

Overview	8-1
Syncx 6200 Series Appliance Target Definitions	8-1
How to Create a CRbuilder Process Target Definition	8-2
Related Topics	8-3
How to Create a Database Target Definition	8-4
Related Topics	8-5
How to Create a File Share Target Definition	8-7
File Name Variables	8-8
Related Topics	8-9
How to Create an FTP Target Definition	8-10
File Name Variables	8-11

Disable Rename	8-12
Related Topics	8-12
How to Create an HTTP Target Definition	8-14
Storing/Redirecting an HTTP Response	8-15
Related Topics	8-16
How to Create an SAP Target Definition	8-17
Storing/Redirecting an SAP Response	8-19
Related Topics	8-19
How to Create an SCP Target Definition	8-20
File Name Variables	8-21
Related Topics	8-22
How to Create an SMTP Target Definition	8-23
Related Topics	8-24

Chapter 9

Creating Document Definitions

Overview	9-1
Syncx 6200 Series Appliance Document Definitions	9-1
How to Create a Document Definition	9-2
Working with Simple Text Documents	9-3
Working with Complex Text Documents	9-9
Modifying Segment and Field Orders	9-19
Supported Delimiters	9-19
Related Topics	9-20

Chapter 10

Creating Operations

Overview	10-1
How to Create an Operation	10-2
Optimization Options (DIFF)	10-5
EDI Options	10-6

Working with Chained Operations	10-8
What is a Chained Operation?	10-8
How to Chain Operations	10-8
 Manually Activating Operations.....	 10-11
What's Next?.....	10-11
Related Topics.....	10-12

SECTION THREE: TRANSFORMATIONS

Chapter 11

Transforming Databases

Overview 11-1

 Appliance Database Transformations 11-1

How to Transform from a Database to a CRbuilder Process 11-2

 Summary of Steps 11-2

 Use the Transformation Wizard to Build Your Transformation 11-2

 What’s Next? 11-15

How to Transform from a Database to a Database..... 11-16

 Summary of Steps 11-16

 Use the Transformation Wizard to Build Your Transformation ... 11-16

 What’s Next? 11-37

How to Transform from a Database to an EDI Document 11-38

 Summary of Steps 11-38

 Use the Transformation Wizard to Build Your Transformation ... 11-38

 What’s Next? 11-53

How to Transform from an EDI Document to a Database 11-54

 Summary of Steps 11-54

 Use the Transformation Wizard to Build Your Transformation ... 11-54

 What’s Next? 11-67

How to Transform from a Database to RosettaNet..... 11-68

 Summary of Steps 11-68

 Use the Transformation Wizard to Build Your Transformation ... 11-68

 What’s Next? 11-82

How to Transform from RosettaNet to a Database..... 11-83

 Summary of Steps 11-83

 Use the Transformation Wizard to Build Your Transformation ... 11-83

What's Next?.....	11-95
How to Transform from a Database to an SAP Environment...	11-96
Summary of Steps.....	11-96
Use the Transformation Wizard to Build Your Transformation ...	11-96
What's Next?.....	11-110
How to Transform from a Database to a Text File	11-112
Summary of Steps.....	11-112
Use the Transformation Wizard to Build Your Transformation .	11-112
What's Next?.....	11-125
How to Transform from a Text File to a Database	11-126
Summary of Steps.....	11-126
Use the Transformation Wizard to Build Your Transformation .	11-126
What's Next?.....	11-137
How to Transform from a Database to an XML Document	11-138
Summary of Steps.....	11-138
Use the Transformation Wizard to Build Your Transformation .	11-138
What's Next?.....	11-154
How to Transform from an XML Document to a Database	11-155
Summary of Steps.....	11-155
Use the Transformation Wizard to Build Your Transformation .	11-155
What's Next?.....	11-167

Chapter 12

Transforming EDI

Overview	12-1
Appliance EDI Transformations	12-1
How to Transform from an EDI Document	
to a CRbuilder Process.....	12-2
Summary of Steps.....	12-2
Use the Transformation Wizard to Build Your Transformation	12-2
What's Next?.....	12-7

How to Transform from an EDI Document to a Database	12-8
Summary of Steps	12-8
Use the Transformation Wizard to Build Your Transformation	12-8
What's Next?	12-21
How to Transform from a Database to an EDI Document	12-22
Summary of Steps	12-22
Use the Transformation Wizard to Build Your Transformation ...	12-22
What's Next?	12-37
How to Transform from an EDI Document to an EDI Document	12-38
Summary of Steps	12-38
Use the Transformation Wizard to Build Your Transformation ...	12-39
What's Next?	12-46
How to Transform from an EDI Document to RosettaNet	12-47
Summary of Steps	12-47
Use the Transformation Wizard to Build Your Transformation ...	12-48
What's Next?	12-54
How to Transform from RosettaNet to an EDI Document	12-55
Summary of Steps	12-55
Use the Transformation Wizard to Build Your Transformation ...	12-56
What's Next?	12-62
How to Transform from an EDI Document to an SAP Environment	12-63
Summary of Steps	12-63
Use the Transformation Wizard to Build Your Transformation ...	12-63
What's Next?	12-69
How to Transform from an EDI Document to a Text File	12-71
Summary of Steps	12-71
Use the Transformation Wizard to Build Your Transformation ...	12-72
What's Next?	12-77
How to Transform from a Text File to an EDI Document	12-78
Summary of Steps	12-78
Use the Transformation Wizard to Build Your Transformation ...	12-79

What's Next?.....	12-84
-------------------	-------

How to Transform from an EDI Document

to an XML Document.....	12-85
Summary of Steps.....	12-85
Use the Transformation Wizard to Build Your Transformation ...	12-86
What's Next?.....	12-94

How to Transform from an XML Document

to an EDI Document.....	12-95
Summary of Steps.....	12-95
Use the Transformation Wizard to Build Your Transformation ...	12-96
What's Next?.....	12-102

Chapter 13

Transforming RosettaNet

Overview	13-1
Appliance RosettaNet Transformations.....	13-1

How to Transform from RosettaNet to a CRbuilder Process.....	13-2
Summary of Steps.....	13-2
Use the Transformation Wizard to Build Your Transformation	13-2
What's Next?.....	13-6

How to Transform from RosettaNet to a Database	13-7
Summary of Steps.....	13-7
Use the Transformation Wizard to Build Your Transformation	13-7
What's Next?.....	13-19

How to Transform from a Database to RosettaNet	13-20
Summary of Steps.....	13-20
Use the Transformation Wizard to Build Your Transformation ...	13-20
What's Next?.....	13-34

How to Transform from RosettaNet to an EDI Document.....	13-35
Summary of Steps.....	13-35
Use the Transformation Wizard to Build Your Transformation ...	13-36
What's Next?.....	13-42

How to Transform from an EDI Document to RosettaNet	13-43
Summary of Steps	13-43
Use the Transformation Wizard to Build Your Transformation ...	13-44
What's Next?	13-50
How to Transform from RosettaNet to an SAP Environment...	13-51
Summary of Steps	13-51
Use the Transformation Wizard to Build Your Transformation ...	13-51
What's Next?	13-56
How to Transform from RosettaNet to a Text File	13-58
Summary of Steps	13-58
Use the Transformation Wizard to Build Your Transformation ...	13-59
What's Next?	13-63
How to Transform from a Text File to RosettaNet	13-64
Summary of Steps	13-64
Use the Transformation Wizard to Build Your Transformation ...	13-65
What's Next?	13-70
How to Transform from RosettaNet to an XML Document	13-71
Summary of Steps	13-71
Use the Transformation Wizard to Build Your Transformation ...	13-72
What's Next?	13-79
How to Transform from an XML Document to RosettaNet	13-80
Summary of Steps	13-80
Use the Transformation Wizard to Build Your Transformation ...	13-81
What's Next?	13-86

Chapter 14

Transforming SAP

Overview	14-1
Appliance SAP Transformations	14-1
How to Transform from a Database to an SAP Environment	14-2
Summary of Steps	14-2
Use the Transformation Wizard to Build Your Transformation	14-2
What's Next?	14-16

How to Transform from an EDI Document to an SAP Environment	14-18
Summary of Steps.....	14-18
Use the Transformation Wizard to Build Your Transformation ...	14-18
What's Next?.....	14-24
How to Transform from RosettaNet to an SAP Environment...	14-26
Summary of Steps.....	14-26
Use the Transformation Wizard to Build Your Transformation ...	14-26
What's Next?.....	14-31
How to Transform from a Text File to an SAP Environment	14-33
Summary of Steps.....	14-33
Use the Transformation Wizard to Build Your Transformation ...	14-33
What's Next?.....	14-38
How to Transform from an XML Document to an SAP Environment	14-40
Summary of Steps.....	14-40
Use the Transformation Wizard to Build Your Transformation ...	14-40
What's Next?.....	14-45

Chapter 15

Transforming Text

Overview	15-1
Appliance Text Transformations.....	15-1
How to Transform from a Text File to a CRbuilder Process	15-2
Summary of Steps.....	15-2
Use the Transformation Wizard to Build Your Transformation	15-2
What's Next?.....	15-5
How to Transform from a Text File to a Database	15-6
Summary of Steps.....	15-6
Use the Transformation Wizard to Build Your Transformation	15-6
What's Next?.....	15-17
How to Transform from a Database to a Text File	15-18
Summary of Steps.....	15-18

Use the Transformation Wizard to Build Your Transformation ...	15-18
What's Next?	15-31
How to Transform from a Text File to an EDI Document.....	15-32
Summary of Steps	15-32
Use the Transformation Wizard to Build Your Transformation ...	15-33
What's Next?	15-38
How to Transform from an EDI Document to a Text File.....	15-39
Summary of Steps	15-39
Use the Transformation Wizard to Build Your Transformation ...	15-40
What's Next?	15-45
How to Transform from a Text File to RosettaNet	15-46
Summary of Steps	15-46
Use the Transformation Wizard to Build Your Transformation ...	15-47
What's Next?	15-52
How to Transform from RosettaNet to a Text File	15-53
Summary of Steps	15-53
Use the Transformation Wizard to Build Your Transformation ...	15-54
What's Next?	15-58
How to Transform from a Text File to an SAP Environment	15-59
Summary of Steps	15-59
Use the Transformation Wizard to Build Your Transformation ...	15-59
What's Next?	15-64
How to Transform from a Text File to a Text File.....	15-66
Summary of Steps	15-66
Use the Transformation Wizard to Build Your Transformation ...	15-67
What's Next?	15-70
How to Transform from a Text File to an XML Document.....	15-71
Summary of Steps	15-71
Use the Transformation Wizard to Build Your Transformation ...	15-72
What's Next?	15-78
How to Transform from an XML Document to a Text File.....	15-79
Summary of Steps	15-79

Chapter 16

Use the Transformation Wizard to Build Your Transformation ...	15-80
What's Next?.....	15-84
 Transforming XML	
Overview	16-1
Appliance XML Transformations	16-1
 How to Transform from an XML Document	
to a CRbuilder Process.....	16-2
Summary of Steps.....	16-2
Use the Transformation Wizard to Build Your Transformation	16-2
What's Next?.....	16-6
 How to Transform from an XML Document to a Database	
Summary of Steps.....	16-7
Use the Transformation Wizard to Build Your Transformation	16-7
What's Next?.....	16-19
 How to Transform from a Database to an XML Document	
Summary of Steps.....	16-20
Use the Transformation Wizard to Build Your Transformation ...	16-20
What's Next?.....	16-36
 How to Transform from an XML Document	
to an EDI Document.....	16-37
Summary of Steps.....	16-37
Use the Transformation Wizard to Build Your Transformation ...	16-38
What's Next?.....	16-44
 How to Transform from an EDI Document	
to an XML Document.....	16-45
Summary of Steps.....	16-45
Use the Transformation Wizard to Build Your Transformation ...	16-46
What's Next?.....	16-54
 How to Transform from an XML Document to RosettaNet.....	
Summary of Steps.....	16-55
Use the Transformation Wizard to Build Your Transformation ...	16-56

What's Next?	16-61
How to Transform from RosettaNet to an XML Document	16-62
Summary of Steps	16-62
Use the Transformation Wizard to Build Your Transformation ...	16-63
What's Next?	16-70
How to Transform from an XML Document to an SAP Environment.....	16-71
Summary of Steps	16-71
Use the Transformation Wizard to Build Your Transformation ...	16-71
What's Next?	16-76
How to Transform from an XML Document to a Text File	16-78
Summary of Steps	16-78
Use the Transformation Wizard to Build Your Transformation ...	16-79
What's Next?	16-83
How to Transform from a Text File to an XML Document.....	16-84
Summary of Steps	16-84
Use the Transformation Wizard to Build Your Transformation ...	16-85
What's Next?	16-91
How to Transform from an XML Document to an XML Document	16-92
Summary of Steps	16-92
Use the Transformation Wizard to Build Your Transformation ...	16-93
What's Next?	16-100

Chapter 17

Transformation Mapping

Overview	17-1
How To Map Source and Target Fields	17-2
What's Next?.....	17-3

SECTION FOUR: ADVANCED MAPPING CONCEPTS

Chapter 18

Advanced Transformation Map Tools

Overview 18-1

Test Source Data..... 18-2

 File-Based Sources 18-3

 Database Sources..... 18-4

 Reviewing Data 18-5

Test Transformation 18-6

Test Operations 18-8

Control Data Element Display 18-11

Resetting Data 18-12

Transformation Reports..... 18-13

Related Topics 18-14

Chapter 19

Formula Builder

Overview 19-1

How to Use the Formula Builder 19-2

 Launch and Configure the Formula Builder..... 19-2

 Modifying Expressions with Source Elements..... 19-4

 Related Topics..... 19-4

Chapter 20	Conditional Output
	Overview 20-1
	How to Create Conditional Output 20-2
	Apply a Formula to the Condition..... 20-4
	Related Topics 20-5
Chapter 21	Checking for Mapping Validation Errors
	How to Check for Mapping Validation Errors 21-2
Chapter 22	Mapping with Outer Joins
	How to Map an Outer Join 22-2
	Related Topics 22-12
Chapter 23	Mapping Hierarchical-to-Flat Structures
	Overview 23-1
	Sample Situation 1 23-2
	Document Structures and Data 23-2
	Scenario..... 23-2
	Map the Cost Attribute 23-3
	Complete the Sample 23-7
	Sample Situation 2 23-9
	Document Structures and Data 23-9
	Scenario..... 23-9
	Complete the Sample 23-13
	Related Topics 23-14

Chapter 24

Mapping Flat-to-Hierarchical Structures

Overview	24-1
Sample Situation 3	24-2
Document Structures and Data.....	24-2
“Normal” Mapping	24-3
Add Extra Folders	24-5
Map Source to New Target Data Elements	24-7
Define Associated Attribute Codes	24-9
Related Topics.....	24-10

SECTION FIVE: CREATING PRIVATE PROCESSES

Chapter 25

Introduction to CRbuilder

Overview 25-1

Key Features 25-3

 Benefits Summary 25-3

Chapter 26

Installation

Installing CRbuilder..... 26-1

 Prerequisites 26-1

 Installation Procedure..... 26-1

Chapter 27

CRbuilder Development Techniques

Overview 27-1

 CRbuilder Process Development Steps..... 27-1

Development Best Practices 27-5

 Use Suffixes to Distinguish Similar Processes 27-5

 Use Data Elements to Identify Process
 and Task Instances..... 27-5

 Use Data Elements in E-mail Addresses 27-6

 Forward Tasks..... 27-7

 Use Generic Web Pages..... 27-7

Chapter 28

Define Your CRbuilder process	27-9
CRbuilder Tutorial	
About This Tutorial	28-1
Before You Start	28-2
Working with Syncx Operations.....	28-2
Administrator Check List	28-2
Scenario: Create a Fulfilment Order Request	28-3
Create and Define Process Settings	28-5
Define Your General Process Options.....	28-5
Configure the Process Properties	28-6
Create Process Data Elements.....	28-7
Create and Link Tasks.....	28-10
Create a New Route	28-11
Save Your Model.....	28-11
Configure the Begin Data Aggregation Task	28-12
Enter a Task Description in the General Tab	28-12
Create Initial Data Element	28-12
Set the Task's Logic in the Closing Script Tab.....	28-17
Configure the Audit Order Task	28-28
Associate and Define an E-mail in the Document Tab	28-28
Configure Distributor 2 Task	28-30
Enter a Task Description in the General Tab	28-30
Link a Syncx Operation with the Task in the Document Tab.....	28-30
Configure Distributor 1 Task	28-33
Enter a Task Description in the General Tab	28-33
Link a Syncx Operation with the Task in the Document Tab.....	28-33
Insert Check Function in Closing Script Tab.....	28-35
Configure the Supplier A Task	28-41
Enter a Task Description in the General Tab	28-41

Change OR Source Logic.....	28-41
Insert Stored Procedure in Opening Script Tab	28-42
Link a Syncx Operation with the Task.....	28-45
Define Terminating Tasks	28-49
Check for Errors	28-50
Deploy Your Model.....	28-50
Deploying Your Process.....	28-50

Chapter 29

Processes

Overview	29-1
Creating and Defining Processes	29-4
Opening Files.....	29-4
Setting CRbuilder Options	29-5
Set Your General Process Options	29-5
Process Properties	29-7
Defining Process Properties.....	29-7
Creating Tasks	29-9
Linking Tasks with Routes	29-13
About Terminator Tasks	29-14
Notes	29-16

Chapter 30

Tasks

Tasks—The Building Blocks of Processes	30-1
Defining Task Data	30-3
General Tab	30-4
Task Name and Description	30-4

Chapter 31

Incoming Task Logic	30-4
Data Elements Tab (Initial task only)	30-12
Defining Data Elements	30-12
Opening and Closing Script Tabs	30-13
Internal Functions:	30-15
 Scripting Functions	
Data Elements	31-1
Creating Data Elements	31-1
Routes	31-4
Adding a Route	31-4
Logical	31-6
Inserting If/Then Statements	31-6
Object Call To	31-10
Using COM Objects	31-10
Using CORBA Objects	31-10
Using SOAP	31-11
Using Enterprise Java Beans (EJB)	31-11
Database Statement	31-12
ODBC	31-12
LDAP	31-13
File Transfer Operation	31-14
Overview	31-14
Using Data Elements	31-14
File Transfer Options	31-14
File Transfer Protocol Options	31-16
Example File Transfer Operation	31-16
Using HTTPS	31-18
Using SCP	31-18

Chapter 32

Internal Functions 31-19

 Block Escalated Task 31-19

 Block Escalation Task 31-20

 Create Scheduled Task 31-21

 Cancel Scheduled Task 31-25

 Block Task Instance 31-27

 Terminate Task 31-29

 Terminate Process 31-30

 Report Data Elements 31-31

 Comment 31-33

Special Functions 31-34

 Edit Object 31-34

 Copy & Paste 31-34

 Delete 31-34

 GetLastError() Function 31-34

Using Operators 31-37

Data Elements

Data Elements 32-1

 Creating Process Data Elements 32-2

 Creating Task Data Elements 32-3

 Initial Task Data Elements 32-5

 Loading Data Elements From an Associated Document 32-6

Working with Data Elements 32-8

 Using Data Elements in E-mail 32-8

About Data Types 32-10

Chapter 33

Escalation & Document Tabs

Escalation Tab 33-1

Document Tab 33-4

 Associate an E-mail with a Task 33-5

Using URLs in Outgoing E-mail	33-7
-------------------------------------	------

Chapter 34

Associating Tasks with Syncx Operations

Overview	34-1
How to Link an Operation to a Task	34-2
Pre-defined vs. Dynamically Resolved Operations	34-2
Using Data Elements to Customize Operations	34-5

Chapter 35

Advanced Escalation Scenarios

What Is an Escalation?	35-1
Creating an Escalation Task	35-2
Escalation Scenarios	35-5
Allow no processing of the escalated task after escalation	35-5
Task 1 processing can continue until the escalation task is completed.....	35-6
Task 1 processing is not interrupted	35-6
To Insert BlockEscalatedTask function	35-7
Using BlockEscalationTask() Function.....	35-8
Using Block Task Instance Function	35-9

Chapter 36

Database Connectivity

Extracting Information from Databases	36-1
Inserting ODBC Database Lookup	36-1
Select	36-4
Delete	36-5
Insert	36-5
Update.....	36-5
Filtering Your Query Using an Advanced WHERE Clause	36-6
Filtering Your Query Using the Filter Criteria	36-6
Modifying Column Values.....	36-6
To Modify Column Values	36-7
Example of SQL Actions Using the Filter Grid	36-7

Chapter 37

<i>Select</i> SQL Action	36-7
<i>Insert</i> SQL Action	36-8
<i>Update</i> SQL Action	36-8
<i>Delete</i> SQL Action	36-9
Using Stored Procedures	36-9
 Calling External Objects	
Using Enterprise Java Beans	37-1
Inserting an EJB.....	37-1
Set the Parameters' Values	37-3
Create Method	37-4
 Using Simple Object Access Protocol (SOAP)	37-6
Inserting SOAP Object Call	37-6
Attempt M-Post.....	37-7
Define the SOAP Object	37-7
Add SOAP Parameters.....	37-7
Use Data Element to Save SOAP Response	37-8
Test SOAP Object Call.....	37-9
 Using Lightweight Directory Access Protocol	37-10
Naming Model	37-10
Executing LDAP Search.....	37-10
Specify Your Search Query	37-12
Manually Building Search Query	37-13
 Using COM Objects	37-14
Inserting COM Objects	37-14
Set the Parameter's Values.....	37-16
 Using CORBA Objects	37-18
Inserting CORBA Object	37-18
Set the Parameter's Values.....	37-20
Using the Corbaloc URL.....	37-21

Chapter 38**Using Server-Side Scripting Pages**

Writing Messages to the Appliance	38-1
Message Types.....	38-2
What's a Route ID?	38-2
An Active Server Pages Example	38-3
To start a New Process Instance	38-3
To Respond to a New Process Instance.....	38-4
A Java Server Pages Example	38-6
To Start a New Process Instance	38-6
To Respond to a New Process Instance.....	38-7
Launching a Syncx Interchange Operation	38-8
Linking a Task to a Server-Side Scripting Page	38-9

Chapter 39**Deploying Your Process**

Checking and Fixing Errors	39-1
To Check for Errors	39-2
Deploy Your Process	39-4
Deploying Your Process.....	39-4
Deploying for External Dependency Check Only	39-6

Chapter 40**Contacting CommerceRoute**

Getting Help	40-1
Online Help.....	40-1
Contact Information	40-3
Address Information.....	40-3
Professional Services Assistance.....	40-3
Technical Support.....	40-3
Career Opportunities.....	40-3
Additional Product Information	40-3

Chapter 41

Appendix A: Properties and Methods
Supported by the CRMSGR Object

Validate (Property)..... 41-1

Route (Property)..... 41-2

Priority (Property) 41-3

ProcessName (Property)..... 41-3

TaskName (Property) 41-4

OperationName (Property) 41-4

From (Property) 41-4

To (Property) 41-5

Cc (Property) 41-5

Bcc (Property) 41-6

Subject (Property)..... 41-6

CreateMessage (method) 41-6

Data (Property)..... 41-7

AddDataElement (method) 41-7

PostMessage (method) 41-8

 Notes..... 41-8

Chapter 42

Appendix B: Sample Tables

Sample Interface Table..... 42-1

Data Element Descriptions 42-3

Action Codes 42-3

Chapter 43

Appendix C: Advanced Mapping Document Details

Sample Situation 1 43-2
 Document Structures and Data..... 43-2

Sample Situation 2 43-7
 Document Structures and Data..... 43-7

Sample Situation 3 43-12
 Document Structures and Data..... 43-12

Chapter 44

Index

Introduction

SECTION ONE


Chapter 1

Welcome

What's in this Guide

If you want information on how to integrate your backend systems and transform data using the Syncx 6200 Series Appliance (“the Appliance”), this is the correct guide for you. A summary of this guide’s contents is listed below.

- How to configure your browser to work with the Syncx 6200 Series Appliance
- A tour of the CR Integration environment
- A tutorial to help you start working with the Appliance
- Details on how to define the different kinds of definitions used in the CR Integration environment
- Step-by-step instructions on how to transform one type of information to another
- Detailed information about how to create private processes to automate your backend systems

 **Note:** Side notes provide summary information that reinforces the concepts detailed in the main text.

What's in the Other Guides


There are four other guides that come with your Appliance; a summary of their contents is provided below.

- The *Getting Started Guide* comes in the same shipping box as the Appliance. This is the first book administrators should read, as it provides details on connecting your Appliance to your network, and steps you through the required initial configuration process.
- The *Public Processes Guide* helps you define your partner-facing RosettaNet-based systems. This book shows you how to define your trading partners, select appropriate RosettaNet files (PIPs), and configure your integration points to correctly interface your public processes with your private processes.
- The *Administrator's Guide* is for system administrators. It describes how to physically connect your Appliance to your network, how to configure its network settings and services, and how to manage the Appliance. In this book, administrators will also learn how to obtain new PIPs and other pertinent material from CommerceRoute's Connect service.
- The *Reference Guide* is for anyone--end users and administrators alike--who wants more detailed information about the Appliance's environment and interface. It also provides information about the various technologies and protocols that the Appliance supports (such as XML, HTTP, etc.).

Conventions Used in this Guide

The following conventions are used in this guide:

- `Computer type` indicates information that you enter into the interface, such as specifying a URL.
- **Bold type** indicates buttons, fields, and other interface objects.
- *Italic type* is used to introduce new terms.

 **Tip:** Tips help you work more efficiently by highlighting details, shortcuts, or cross-references to other documentation that gives more information about the concepts described in the main text.

In addition, the following entries appear now and then:

Note

Notes expand upon the concepts described in the main text with additional, detailed information.



Caution: Cautions advise you of any potential problems stemming from a particular action.



Warning! Warnings advise you of any serious potential problems stemming from a particular action.

How to Get Started

We recommend following these steps to familiarize yourself with the Syncx 6200 Series Appliance:

- ❶ **Configure your browser to work with the Appliance.** Follow the instructions in this chapter to make sure your browser is configured to work with the Appliance correctly.
- ❷ **Follow the Tour.** The tour (Chapter 2) will step you through the Appliance's integration environment, providing pre-built examples of various definitions.
- ❸ **Complete the Tutorial.** After learning about the Appliance's interface in the Tour, you will gain experience creating various definitions and building your first operation in the Tutorial in Chapter 3.
- ❹ **Transform your information.** Once you are familiar with the environment, refer to the Transforming chapters (starting in Chapter 15) to help you transform one type of information to another.

Configuring Your Browser

Accessing the Syncx 6200 Series Appliance is done through a Java-enabled Web browser. There are a few browser settings you need to make sure are correct for the Appliance.

You will need to use Microsoft Internet Explorer, version 5.0 Service Pack 1 or newer. Visit Microsoft's Web site if you need to download a newer version.

Disable Auto-Select

- ❶ Select the **View** menu in your browser and choose **Encoding**.
- ❷ Make sure that the first sub menu item, **Auto-Select**, is disabled. *Disabled* means that the entry does not have a check next to it (see the figure below).
 - a. If your **Auto-Select** menu item has a check next to it, select it to toggle **Auto-Select** off.
 - b. If your **Auto-Select** menu item does not have a check, you do not need to do anything; it is already disabled.

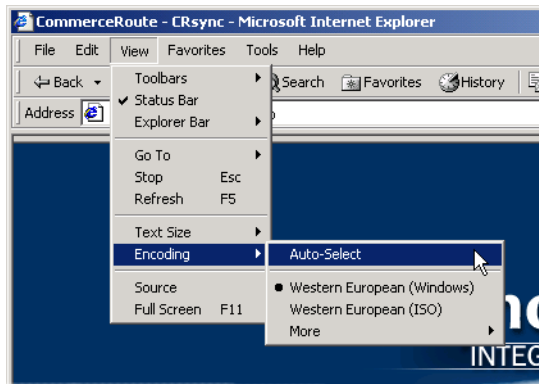


Figure 1-1. Make sure that your browser's **Auto-Select** feature is disabled.

Set Your Browser's Internet Options

You also need to confirm that your Internet options settings are correct:

Refresh Every Visit to the Page

- 1 In your browser, select **Internet Options** from the **Tools** menu to bring up your **Internet Options** dialog box. Click on the **Settings** button in the **Temporary Internet Files** area (see the figure below).

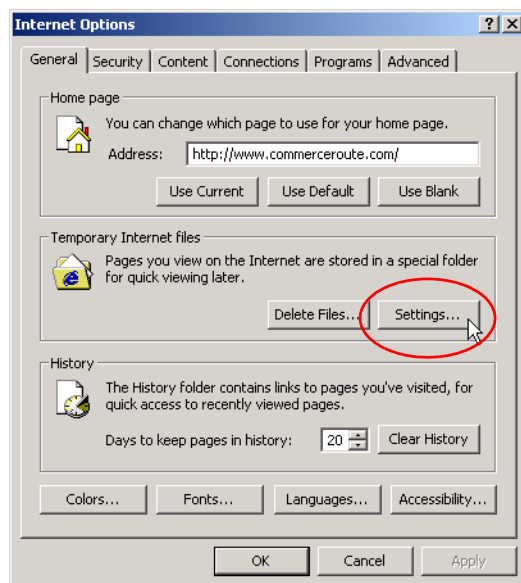


Figure 1-2. Bring up your Internet Options dialog box and click the **Settings** button to check how your browser stores temporary pages.

- ② You should now have the **Settings** dialog box in front of you. Make sure that the first radio button, **Every visit to the page**, is selected as shown in the figure below.

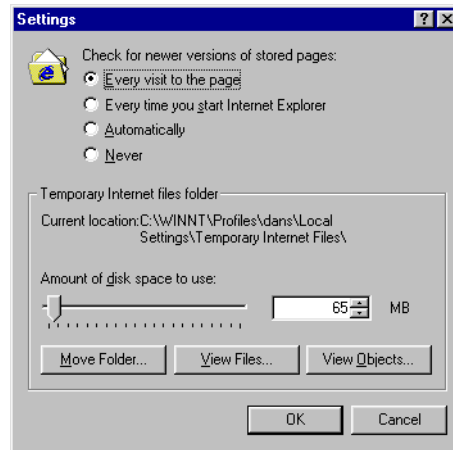


Figure 1-3. Select the Settings dialog's first radio button, **Every visit to the page**.

- ③ Click **OK** to close this dialog box. You should be back to the **Internet Options** dialog box.

Enable Cookies

- ❶ Click on the **Security** tab.
- ❷ Click the **Custom Level** button to display your security settings.

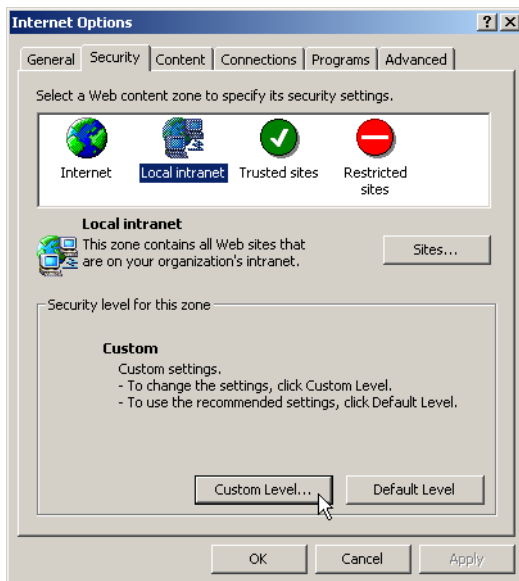


Figure 1-4. Click the **Custom Level** button in the Internet Options' **Security** tab.

- 3 The Security Settings dialog appears. Scroll down until you see the **Cookies** heading.
- 4 As shown in the figure below, make sure to select the **Enable** radio button for **Allow cookies that are stored on your computer** and **Allow per-session cookies**.
- 5 Click **OK** to save your settings and dismiss the dialog. You should be back to the **Internet Options** dialog box.

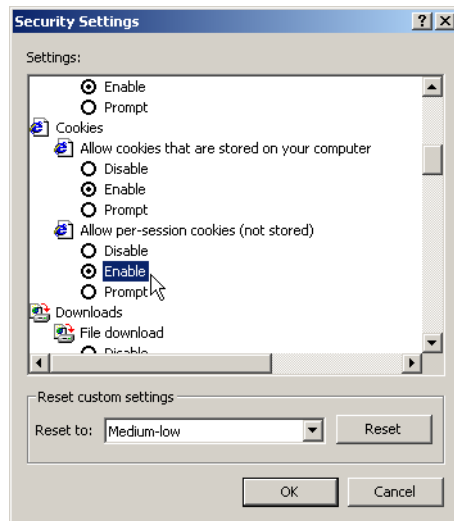


Figure 1-5. Make sure you select **Enable** for both settings in the Cookies section.

Show Pictures

- 1 Next, select the Internet Options' **Advanced** tab.
- 2 Scroll down until you see the **Multimedia** section. Make sure that the **Show Pictures** checkbox is selected (see the figure below). Click **OK** to close the dialog box.

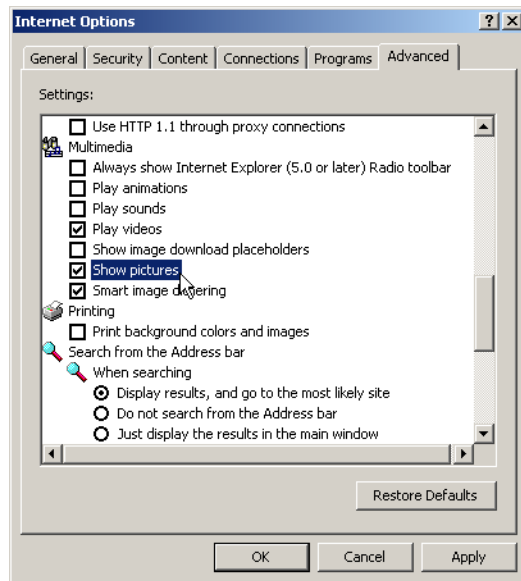


Figure 1-6. Make sure that the **Show Pictures** option is selected in the Internet Options dialog's **Advanced** tab.

That's it! Your browser should be ready to work with your Appliance.

What's Next?

You are now ready to start the tour of the Appliance in Chapter 2, where you will be introduced to key concepts and the CR Interchange environment.

Chapter 2

CR Interchange Environment Tour

Overview

This chapter will take you on a tour of the CR Interchange environment. A summary of the tour's contents is listed below:

- A discussion of key terms and concepts that you will need to understand in order to use the Appliance
- Examples of each different type of definition you can create
- How to get information about your operations

Log In to the Tour

Assuming you have a Web connection, you can follow along on your computer by accessing your Syncx 6200 Series Appliance. Navigate to `http://ApplianceID` where ApplianceID is the name or the IP address of your Appliance. Contact your system administrator for details if you need more information.

Once you've accessed the login page, log in to the CR Interchange environment using SyncxTour as your username and SyncxTour as your (case-sensitive) password (see Figure 2-1 below).

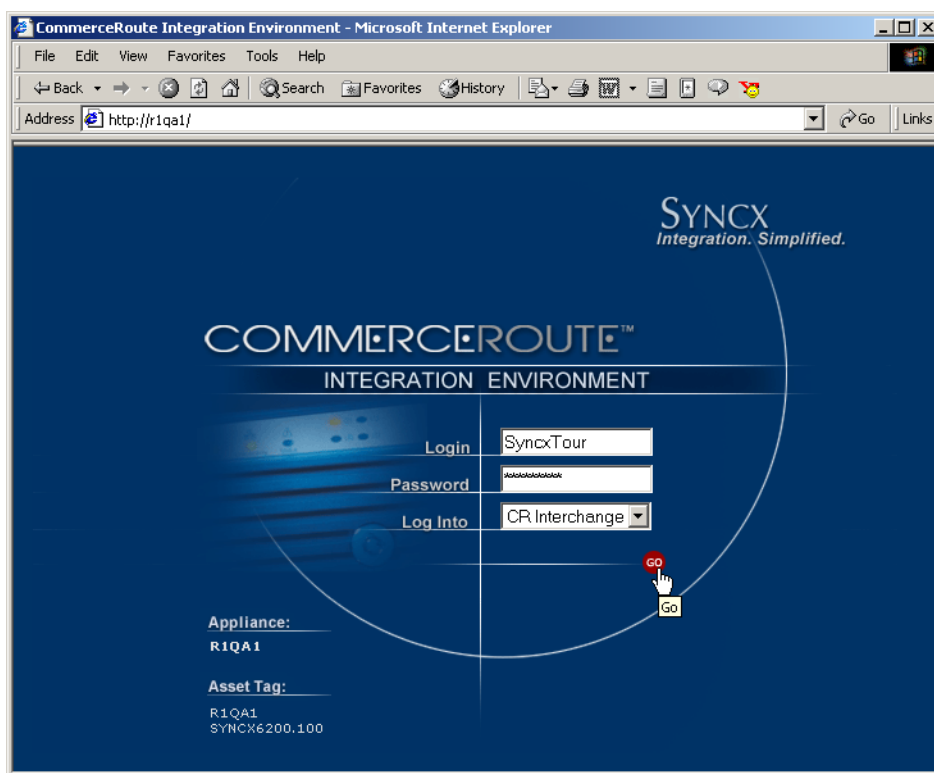


Figure 2-1. You can follow along with this Tour by logging in to your Syncx 6200 Series Appliance as SyncxTour/SyncxTour.

Once you have successfully logged on, you can work through the rest of the steps in the tour. The information will make more sense if you work through the steps in the order presented here.

Key Concepts

Data Transformation

One of the foundations of Business-to-Business integration (B2Bi) is the ability to streamline and automate the sharing of business information throughout the value chain. But with different members using different types of technologies, sharing information between various formats and locations can be a very complex and laborious task.

Although the simplest solution to this problem is to force all parties to use a single standard, the cost and pain required for each company to abandon their existing infrastructure and adopt a new single standard makes such a solution unrealistic.

Data Transformation Defined

Because organizations will not or cannot change their legacy systems, shared information must be converted into the appropriate format for each different system. *Data transformation* is a process wherein information of one data type is converted into another. Examples include converting text-based data into an EDI file, or reading information from a database and storing it in an XML file.

Requirements for Data Transformation

Consider a situation where you have information in a text file that needs to be stored in a business partner's database on a regular basis. To successfully transform the information, you need to be able to answer several questions about the transformation process:

- What is the format of the stored information that you use (such as a database, a text file, etc.)?
- Where do you store this information (e.g., the location of the database, or a text file stored on an FTP server)?
- What is your business partner's data format (such as an EDI file, text file, database, etc.)?
- Where is your business partner's information located (e.g., the location of your partner's database, or a text file stored on an FTP server)?
- How does your data map to your partner's information (e.g., your "PartnerID" entry maps to the database's "Ptr_ID" column in the "CUSTOMER" table)?

- When should this information be sent (such as every other Friday, every half hour for the next day, or the first Monday of each new quarter)?

Answering all these questions would give you the information you need to define a single data transformation. But the complexity of managing data transformations increases exponentially by adding new files, additional business partners, schedule changes, or any other factor that affects the details of a transformation.

How Syncx 6200 Series Appliance Simplifies Data Transformation

The Syncx 6200 Series Appliance simplifies the process of creating and managing all these various pieces of information by using graphical definitions to store the different pieces of each data transformation. Which screen you use depends on the type of data transformation you want to perform. One example screen is shown in Figure 2-2 below.

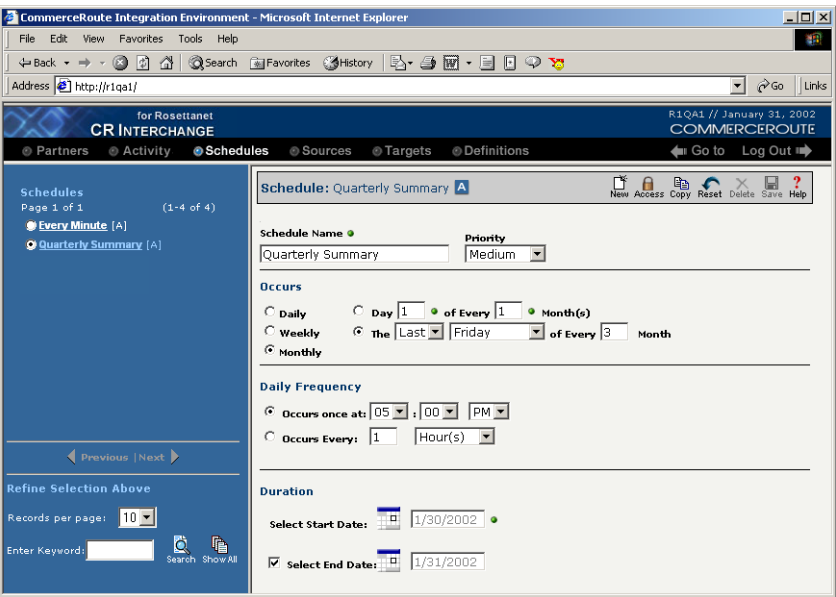



Figure 2-2. The Syncx 6200 Series Appliance provides an intuitive Web-based interface that lets you quickly and accurately define each aspect of your data transformation. In this example, the **Schedule** screen is being used to create a “Quarterly Summary” definition.

Types of Definitions

The following screens are available within the Syncx 6200 Series Appliance integration environment. This Tour will introduce you to many of these, and you'll get hands-on experience working with them when you work through the Tutorial in Chapter 3.

- **Partners and Projects:** These definitions act as “folders,” helping you to organize your information.
- **Schedules:** Defines the date, time and frequency when the operation should activate.
- **Documents:** Defines the type of document that contains the data you want to transform (text file, EDI, XML, etc.).
- **Sources:** Identifies where the information is currently stored (on an FTP server, in a File Share directory, in a database, etc.).
- **Targets:** Identifies where the transformed information will be sent (to a different FTP location, in a File Share directory, in a database, etc.).
- **Transformations:** Describes how information from a source is mapped to a target. “File” could be a fixed-length or comma-delimited text file, a database table, EDI or XML file, etc.
- **Process Messages:** Sends a specific e-mail whose message depends on whether the operation succeeded or failed.
- **Target Messages:** Used in tandem with an SMTP-type target to send e-mail whose contents can be dynamic.
- **Success/Failure Operations:** Associates an operation with a corresponding success or failure operation that would activate upon the successful completion or failure of the original operation.
- **Logs:** Several different log screens provide historical information about activated operations.

 **Note:** This guide discusses only Standard Trading Partner definitions. For details about RosettaNet Trading Partner definitions, see Chapter 3, “RosettaNet Trading Partner Definitions” in the *Public Processes Guide*.

 **Tip:** Standard Trading Partners are identified by [Std] at the end of their name; RosettaNet Trading Partners are identified by [RN].

Organize Your Trading Partners

Trading Partner Overview

Syncx offers you an environment in the Partners navigation area where you can store all the details about your business partners that you need in order to successfully share business information.

There are two types of trading partner definitions:

- **RosettaNet Partners:** Available only in Syncx Appliances for RosettaNet, these definitions are used to work with partners who have adopted RosettaNet trading processes.
- **Standard Partners:** These definitions are used to define all non-RosettaNet-based partners. This tour will introduce you to Standard Trading Partner definitions.

Standard Trading Partner Hierarchy

Standard trading partner definitions are organized into projects and operations. Partner definitions hold projects, which in turn hold collections of related operations.

The structure is similar to creating a folder on your hard disk for all documents related to a certain partner. Within the partner's folder, you may have a folder for each project you are working on for that partner. Within a project folder, you store all the documents related to the project.

Partner managers organize their operations using partners and projects. *Partners* are the top-level folders in the partner management hierarchy. Partners hold *projects*, which in turn hold collections of related operations. The structure is similar to creating a folder on your hard disk for all documents related to a certain company. Within the company's partner folder, you may have a folder for each project you are working on for that company. Within a project folder, you store all the documents related to the project.

Tip: For step-by-step instructions on how to create a partner, see Chapter 4, “Standard Trading Partner Definitions.”

Note: You probably will not see all the system’s partners—you will only be able to view the partners that your user ID can access.

Trading Partner Definitions

Partners may represent external business partners or internal departments. A trading partner definition includes information, such as company name, main contact, address information, and user and group access privileges. For each partner, you can also maintain the key contacts involved with data exchange operations.

Take a moment to examine the list at the left edge of the screen in Figure 2-3 below. The top-level folders are the partners. Each partner can hold one or more projects, and each project holds one or more operations. You can expand and collapse the set of folders by clicking on its icon to open or close its contents.

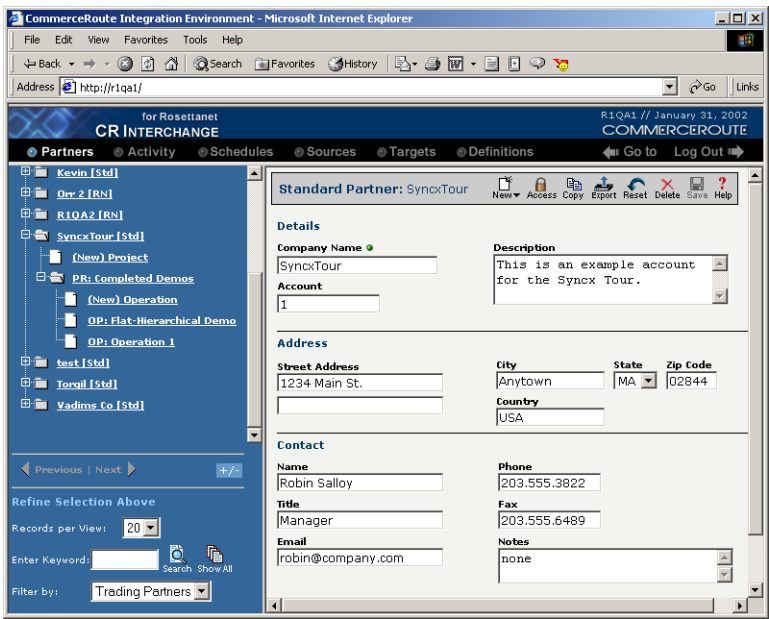


Figure 2-3. Partners act as the top-level “folders” that help you organize your information. Partners can identify companies, departments, or any other type of organizational structure that you need.

Tip: For step-by-step instructions on how to create a project, see Chapter 5, “Projects.”

Projects

Projects are used as mid-level folders that contain operations. Projects are always contained within a partner folder (see Figure 2-4 below).

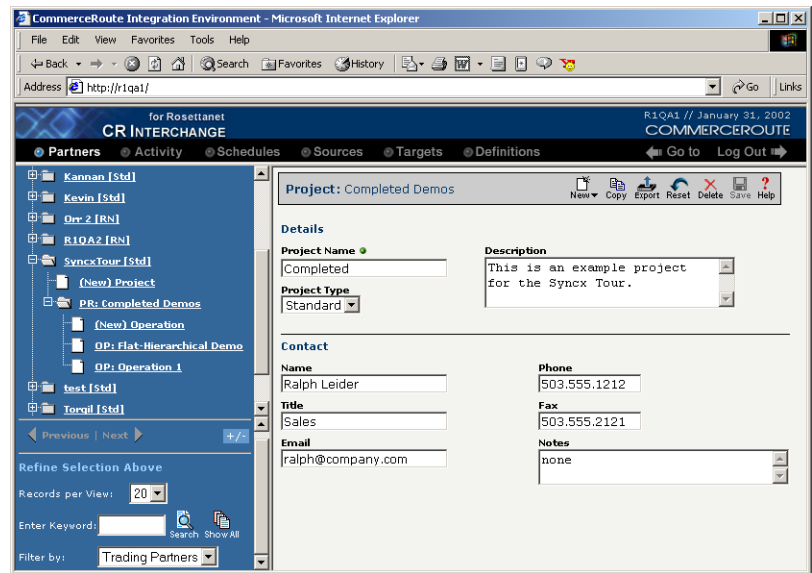



Figure 2-4. Projects are the mid-level “folders” used to group common operations of one partner. A project is always set within a partner.

 **Tip:** For step-by-step instructions on how to create an operation, see Chapter 10, “Creating Operations.”

Operations Hold all Your Transformation Details

Remember that each definition stores a piece of information about the data transformation, such as where the information is stored, where it should be sent, what the formats of the data are, when the transformation should occur, etc. After you have created all the definitions that you need, they are assembled into operations.

An *operation*, therefore, is simply a specific collection of definitions that are grouped together to define a particular data transformation. Each definition within the operation provides a unique detail, such as where the information is, where the information should go, and when the transformation should happen (see Figure 2-5 below).

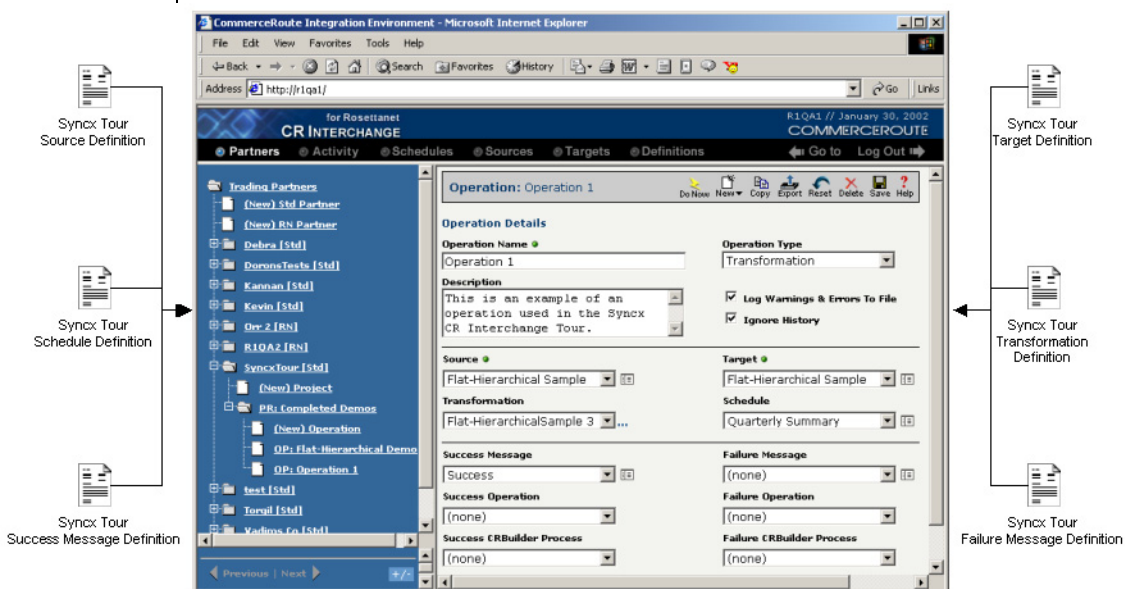


Figure 2-5. An operation is a collection of various definitions. This assembly of definitions contains all the information needed by the system to transform data. In this example, six definitions have been assembled to create an operation called **Operation Tour**.

Selecting an Operation's Settings

As described above, an operation is simply a collection of definitions. You choose the appropriate combination of definitions and save that set as a new operation. In Figure 2-6 below, we've clicked on the **Source** drop-down menu to see the complete list of available defined sources. You could do the same for every drop-down menu in the operation: click on it and choose the appropriate definition for each item within the operation.

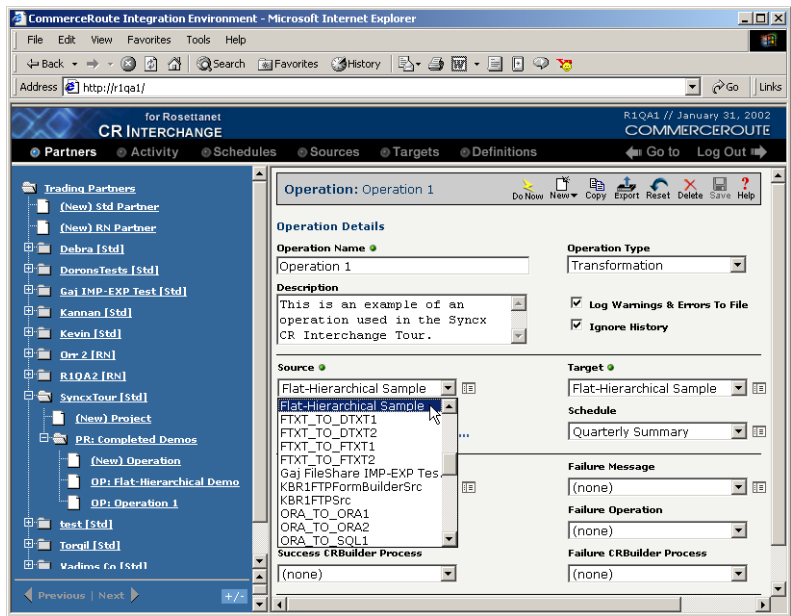


Figure 2-6. An operation is a combination of definitions. Build new operations by assembling the various definitions you want to use. In the image above, we're selecting the appropriate Source definition from the **Source** drop-down menu.

Operations are Modular

The integration environment is flexible and modular, letting you define—and re-define—many different settings. As an example, you may have 100 different files that must be transformed and sent to a fulfillment house on a weekly basis. Some of the files may be text files; other information may be stored in databases, EDI files, XML files, or other types. Regardless of the file type, you need to have all 100 files transformed

every Friday at 5:00pm.

With the Syncx 6200 Series Appliance, you only need to define a single schedule called “End of Week” that specifies Friday, 5:00pm. This single schedule can then be applied to all 100 files, rather than repeating this scheduling information separately for each of the 100 files. This modular approach is equally beneficial when defining the files’ target destinations, transformation types, etc.

But what would you do if you needed to reset the 100 files to be sent at 6:00pm on Friday instead of the original 5:00pm? Simply change the time field in the “End of Week” schedule definition. The 100 files that reference this schedule will immediately be updated to reflect the new time (see Figure 2-7 below).

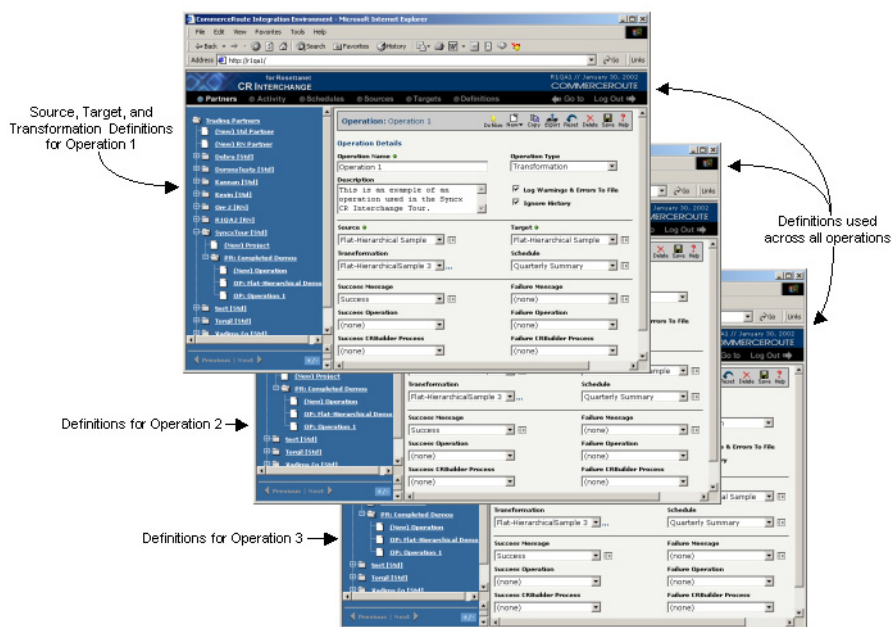


Figure 2-7. The Appliance’s modular system facilitates changes while minimizing hassles. The graphic above depicts three operations. Each operation references different target, source, and transformation definitions, but they all share the same message and schedule definitions. Changing a value in the **End of Week** schedule definition would therefore immediately update all three operations.

What's Next?

You have finished the Key Concepts section of the Tour. You are now ready to enter the Creating Definitions section.

Working with Schedules

Tip: For step-by-step instructions on how to create a schedule, see Chapter 6, “Creating Schedule Definitions.”

Note: Although an operation usually only activates according to its schedule, you can manually activate any operation by clicking its **Do Now** button.

Let’s take a closer look at the various definitions that make up our demo operation. To create or modify any definition, navigate to the appropriate screen (click the navigation bar’s **Sources** button if you want to create a source definition, **Schedules** if you want a schedule definition, etc.), click the **New** button in the toolbar, and choose the appropriate settings for the definition.

We’ll start with a schedule definition. Click on the **Schedules** navigation button, then select the Quarterly Summary radio button at the left of the screen. Note that you can choose virtually any type of schedule you need; simply select the desired options to configure the different schedules (see Figure 2-8 below).

The screenshot shows the 'CommerceRoute Integration Environment' in a Microsoft Internet Explorer browser window. The address bar shows 'http://r1qa1/'. The page title is 'for Rosettanet CR INTERCHANGE'. The navigation bar includes buttons for Partners, Activity, Schedules, Sources, Targets, and Definitions. The 'Schedules' button is selected. On the left, a list of schedules shows 'Every Minute [A]' and 'Quarterly Summary [A]'. The 'Quarterly Summary' schedule is selected. The main content area shows the configuration for the 'Quarterly Summary' schedule. The 'Schedule Name' is 'Quarterly Summary' and the 'Priority' is 'Medium'. Under the 'Occurs' section, the 'Monthly' radio button is selected. The 'Occurs' settings are 'The Last Friday of Every 3 Month'. Under the 'Daily Frequency' section, the 'Occurs once at' radio button is selected, with the time set to '05:00 PM'. Under the 'Duration' section, the 'Select Start Date' is '1/30/2002' and the 'Select End Date' is '1/31/2002'. The 'Select End Date' checkbox is checked.

Figure 2-8. To see what the Schedule definition “Quarterly Summary” looks like, click the **Schedules** navigation button at the top of the screen, then select the radio button next to the schedule’s name in the list at the left of the screen.

Working with Sources

Tip: For step-by-step instructions on how to create a source, see Chapter 7, “Creating Source Definitions.”

Tip: You might notice indicator lights next to certain fields: these are used to indicate that a field is required. For more information on this and other user interface items, see Chapter 2, “Common User Interface Objects” in the *Reference Guide*.

To see some examples of source definitions, navigate to the Sources screen by clicking the **Sources** button in the navigation bar. A source definition tells the system what the source of your data is, or, in other words, where your files are located. Although the example source in Figure 2-9 below is configured for FTP, you could just as easily create sources for a database or File Sharing—simply change the drop-down menus and fill in the appropriate information.

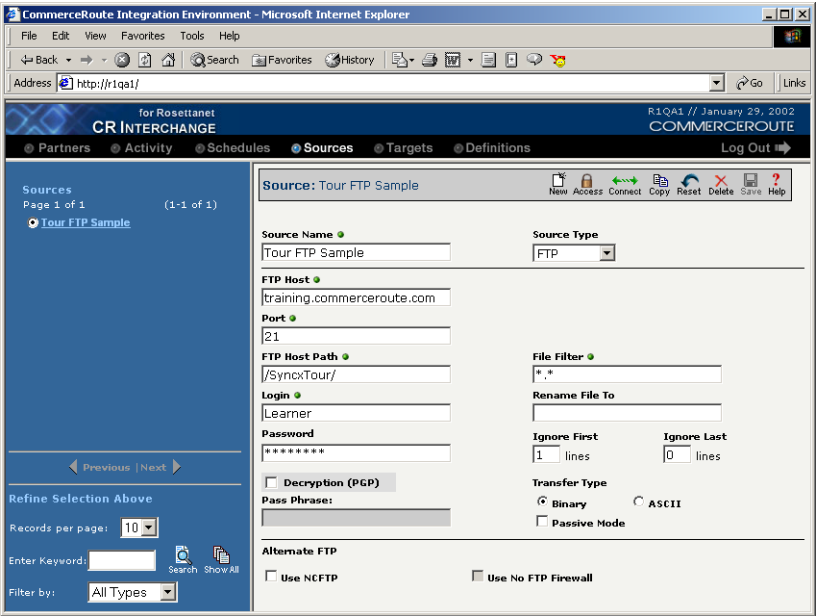


Figure 2-9. To see what the Source definition “Tour FTP Sample” looks like, click the **Sources** navigation button, then select the radio button next to the source’s name in the list at the left of the screen.

Working with Targets

Tip: For step-by-step instructions on how to create a target, see Chapter 8, “Creating Target Definitions.”

Go to the Targets screen by clicking on the **Targets** button in the navigation bar. Targets are the opposite of sources: whereas sources define where your information is currently stored, a target defines where you want to put your information (e.g., your business partner’s database, a customer’s FTP server, etc.) Figure 2-10 below displays the “Getting Started UNC” definition.

You will also see the familiar indicator lights that tell you which fields are required for each different type of target.

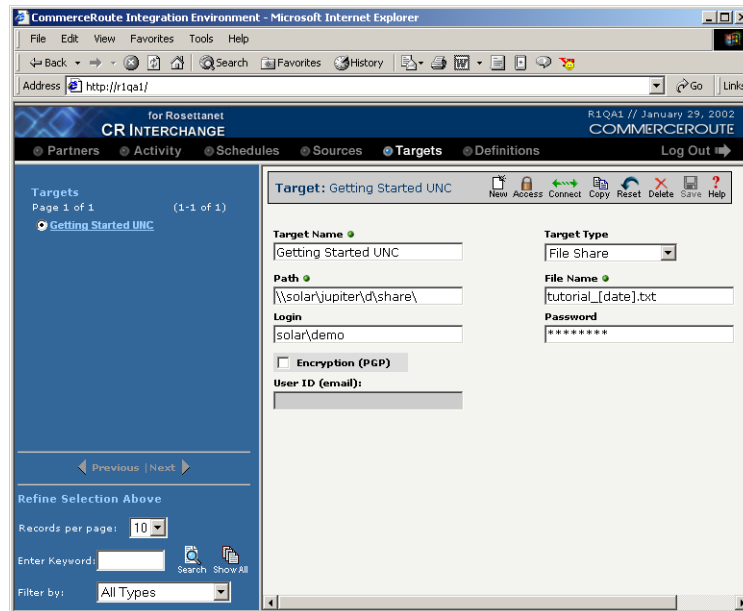



Figure 2-10. This is an example target definition. To see it in your browser, click on the **Targets** button, then select “Getting Started UNC” from the list of available target definitions at the left of the screen.

Target File Name Variables

Tip: See Chapter 5, “Creating Target Messages” in the *Reference Guide* for more information about target variables.

The Appliance provides four special target file name variables that you can use to manage your target files. Figure 2-10 above shows the usage of one such variable, [Date], which will insert the date that the target was created into its file name.

Working with Documents

 **Tip:** For step-by-step instructions on how to create a document definition, see Chapter 9, “Creating Document Definitions.”

Go to the Definitions screen by clicking on the **Definitions** button in the navigation bar and selecting the **Documents** tab in the upper-left corner of the screen. This screen is used to describe the structure of simple and complex text documents. Both fixed-length or delimited document types are supported. Figure 2-11 below is an example of a simple comma-delimited text file document definition.

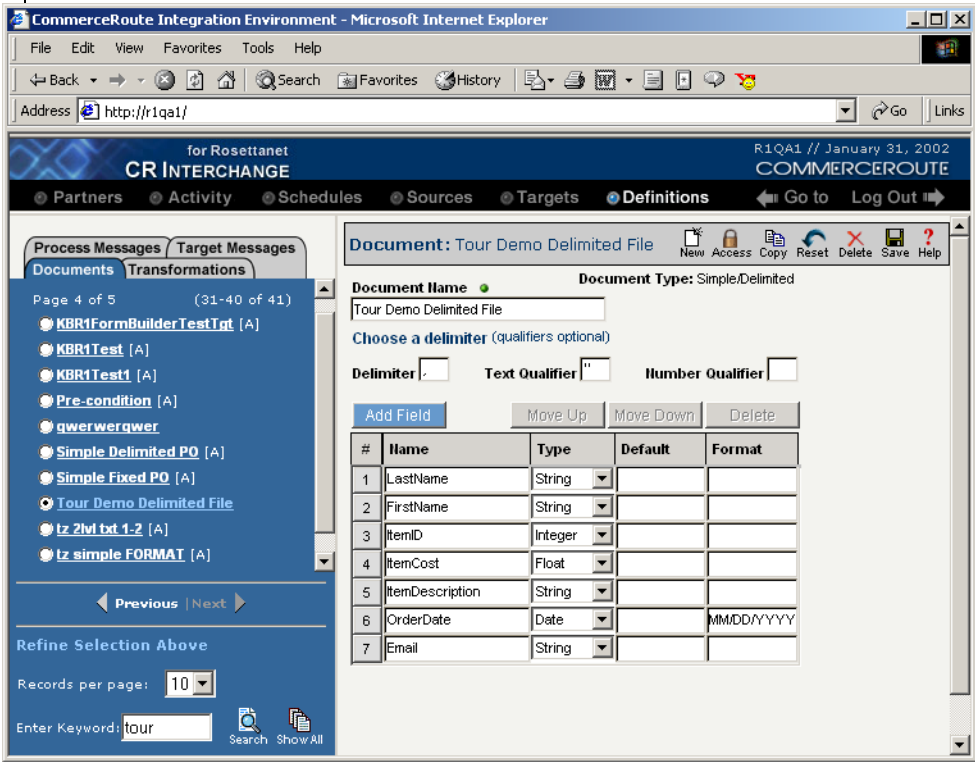


Figure 2-11. This is a comma-delimited text file that we defined for the tour. To view document definitions, click on the **Definitions** navigation button, then make sure the **Documents** tab is selected in the upper-left corner of the screen.

Working with Transformations

Note: You will not be able to launch the wizard or create any new definitions if you are logged in as SyncxTour.

Tip: For step-by-step instructions on how to create a transformation, see the “Transformations and Operations” section, starting on page 11-1.

Click on the **Transformations** tab in the upper-left corner of the **Definitions** screen. Transformations are where you map transformation data from your source file to your target destination.

Since a transformation defines how a specific source’s data maps to a particular target, the source and target definitions must be created and saved before defining the transformation.

Using the Transformation Wizard

The Appliance provides a Transformation Wizard to help you step through the transformation definition process. People with user-level or higher access will be able to launch the Wizard and have it help them select the appropriate combination of source and target, etc. (see Figure 2-12).

Note

If you logged in to your Appliance as SyncxTour, you will not have permission to launch the Transformation Wizard and create a new transformation definition. You will have an opportunity to work directly with the Transformation Wizard in the Tutorial chapter.

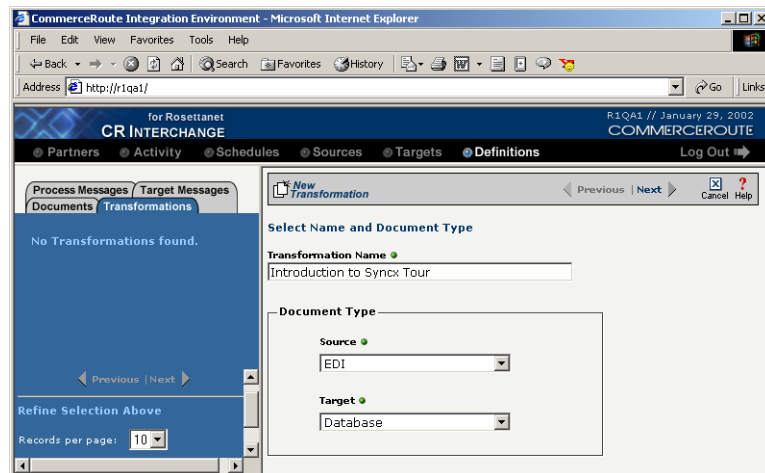


Figure 2-12. People with user-level or higher access permissions can use the Transformation Wizard to create a new transformation mapping. You will be able to create a transformation in the next chapter’s tutorial.

Mapping Relationships

Once the Transformation Wizard is finished, the main Transformation screen appears. It is here in this window that you can map the relationship between your source and target documents at the field level (see Figure 2-13 below). To view this mapping screen, navigate to the **Transformations** tab in the **Definitions** screen, then select the appropriate radio button from the transformation list.

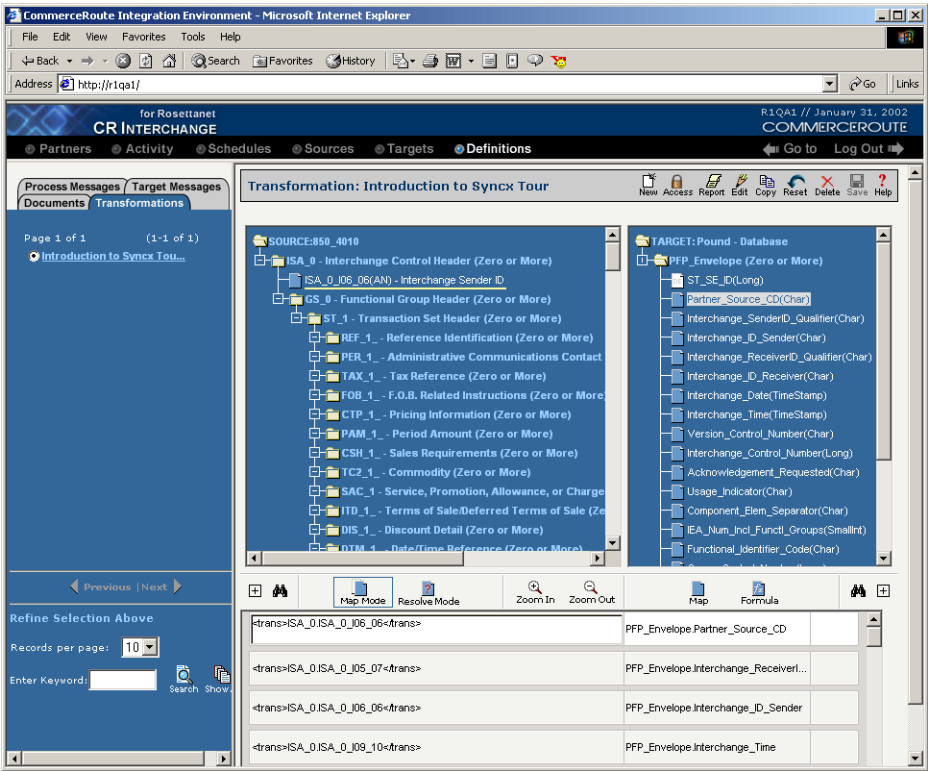



Figure 2-13. The Transformation screen makes it easy to map the contents of different files to each other. In the example shown here, we are mapping information from an EDI document to a database.

 **Tip:** For more information, see Chapter 19, “Formula Builder” in the *Reference Guide*.

Using the Formula Builder

You can also manipulate any mapped field's value during the transformation by using the Formula Builder. Clicking the desired source field's **Formula** button brings up a separate window where you can use mathematical operators, concatenate text strings, or even use formulas to perform more sophisticated functions (see Figure 2-14 below).

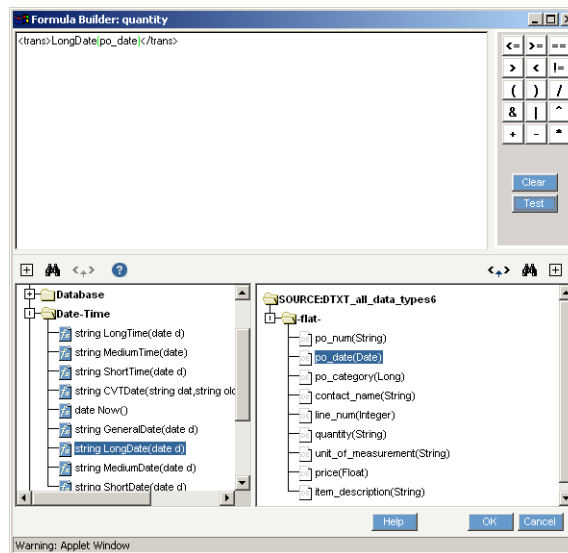


Figure 2-14. You can manipulate the value of any source field by clicking on the field's **Formula** icon. Use the Formula Builder to perform mathematical calculations, to concatenate fields, and even to perform sophisticated functions.

Working with Process Messages


Tip: For step-by-step instructions on how to create a process message, see “Creating Process Messages” on page 4-1 of the *Reference Guide*.

Click on the **Process Messages** tab in the upper-left corner of the **Definitions** screen. Process messages are e-mails that can be automatically sent to notify the successful completion (or failure) of an operation. Figure 2-15 below shows a process message definition called “Success.” You can see the basic e-mail information that will be sent to the recipient when its associated operation successfully finishes.

The screenshot shows a web browser window titled "CommerceRoute Integration Environment - Microsoft Internet Explorer". The address bar shows "http://r1qa1/". The page header includes "for Rosettanet CR INTERCHANGE" and "R1QA1 // January 31, 2002 COMMERCEROUTE". The navigation menu includes "Partners", "Activity", "Schedules", "Sources", "Targets", and "Definitions". The "Definitions" tab is selected, and the "Process Messages" sub-tab is active. The left sidebar shows "Documents" and "Transformations" tabs, with "Process Messages" and "Target Messages" sub-tabs. The main content area displays the "Process Message: Success" definition. The message name is "Success", the SMTP Mail Server is "smtp.company.com", the To address is "person@company.com", the From address is "me@company.com", the Subject is "Successful Operation", and the Text is "Your operation completed successfully." The interface includes various action buttons like "New", "Access", "Copy", "Reset", "Delete", "Save", and "Help".

Figure 2-15. Select the **Process Messages** tab in the upper-left corner of the screen. This is where you create messages that can be used as e-mails that are sent upon the success or failure of an operation.

Working with Target Messages


 **Tip:** For step-by-step instructions on how to create a target message, see “Creating Target Messages” on page 5-1 of the *Reference Guide*.

Click on the **Target Messages** tab in the upper-left corner of the **Definitions** screen. Target Messages are used to create the body of an e-mail for operations that have e-mail (SMTP) targets.

Merged Document Technology

Merged documents are a way to send customized messages to different recipients without having to manually change the contents of each e-mail. Target messages support embedded tags that can be used as variables or even powerful functions. When the target message is processed by the Appliance, the value of each message tag is supplied by the target message’s Source Document Definition file. Thus, the e-mail “template” and the external data file’s contents are “merged,” allowing customized messages to be sent using a single target message definition.

Figure 2-16 below shows an example target e-mail that would be used to confirm customers’ orders. This target message sends an e-mail with a customized greeting and specific order information for each customer.

 **Note:** Target message tags always use the format `<trans>Name</trans>`. The Name between the tags must match the name of a field that is defined in its Source Document Definition.

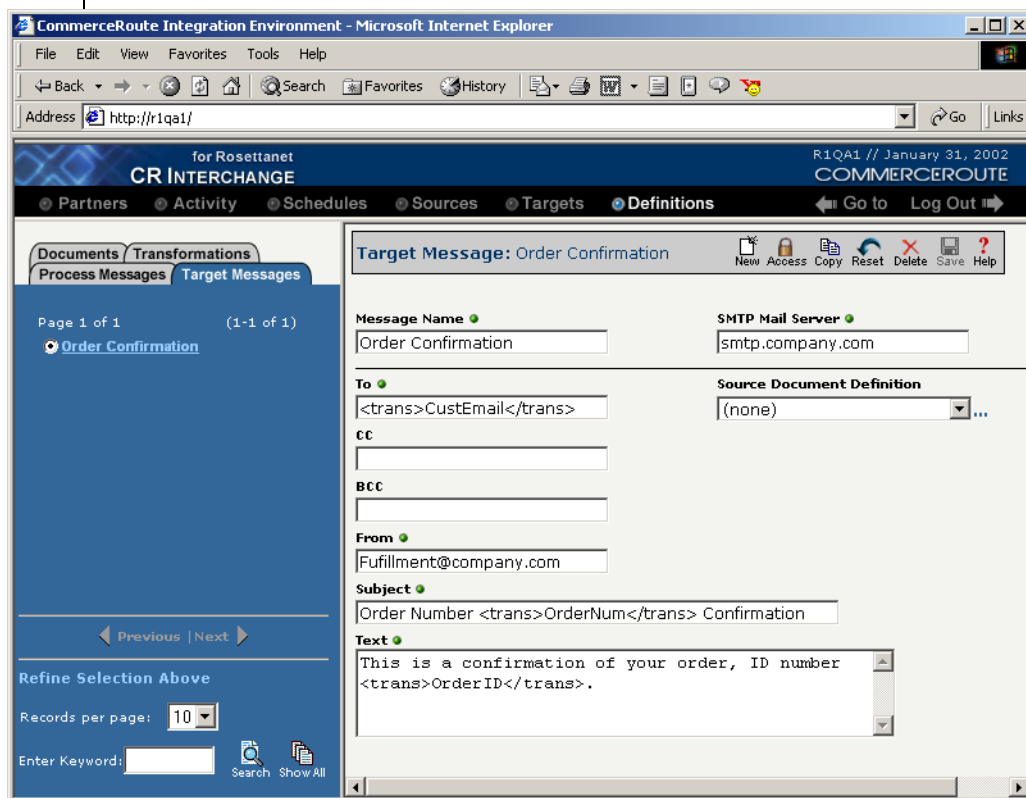


Figure 2-16. Target Messages are used to create the e-mail messages that are sent by e-mail (SMTP)-based targets.

What's Next?

You have finished the Creating Definitions section of the Tour. You are now ready to enter the Managing Partner Activities section.

Managing Partner Activities

Tip: For step-by-step instructions on how to use the System Log, see “Checking the System Log” on page 8-1 of the *Reference Guide*.

Checking the System Log

Click on the **Operation Log** tab in the upper-left corner of the **Activity** screen. The Syncx 6200 Series Appliance has a log that lets you review which operations have been completed for all partners, projects, and operations that you have authority to access. You can get details on any log entry by selecting its message and reading the corresponding details in the lower pane (see Figure 2-17 below).

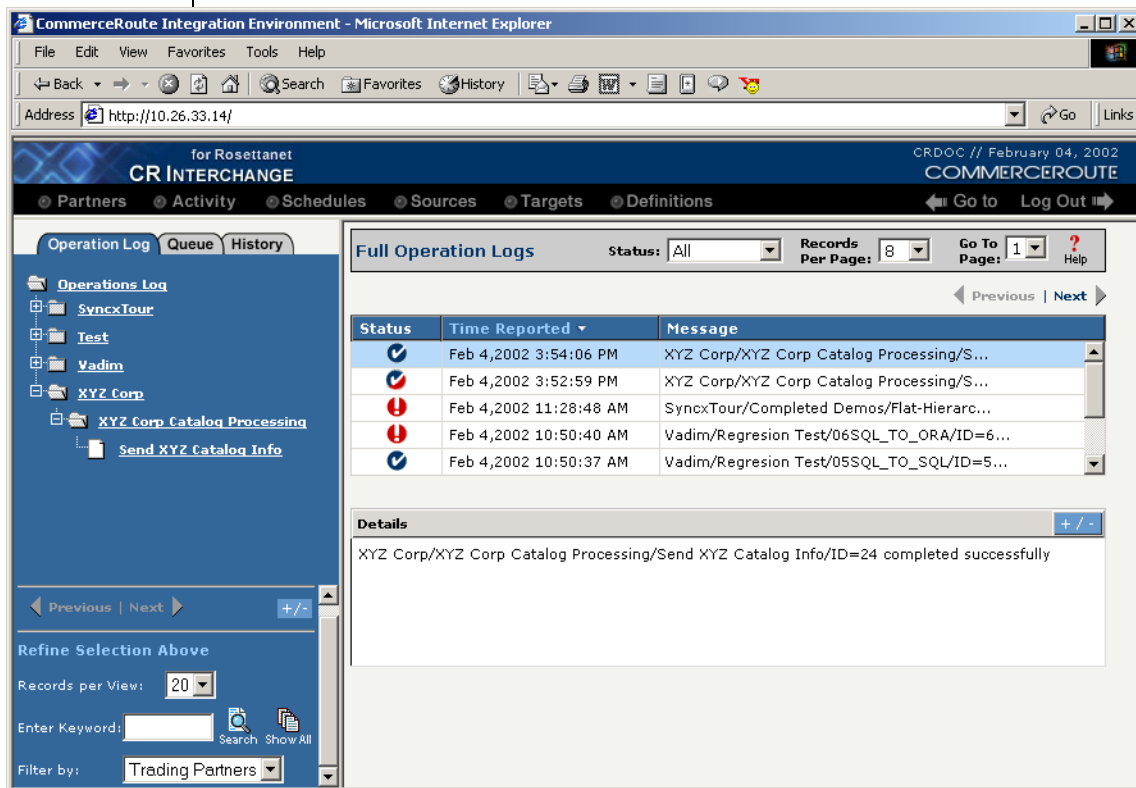



Figure 2-17. The **Operation Log** is where you can review records of all operations that you have permission to see.

 **Tip:** For step-by-step instructions on how to check pending processes, see “Checking Pending Processes” on page 9-1 of the *Reference Guide*.

Checking Pending Processes

Click on the **Queue** tab in the upper-left corner of the **Activity** screen. This is where you can see if there are any operations that are waiting in the Server queue. Think of pending processes like print jobs in a print queue: you can only see them if the printer is slow and many jobs are sent at the same time. Not seeing any entry in this list simply means the Appliance engine is processing operations faster than they are requested.

If necessary, you can also delete any pending operation by clicking the checkbox next to the appropriate operation, then pressing the **Delete** button. Be aware, however, that operations are held in the queue until they have completed. If you delete an “active” operation that is already being processed by the Appliance, it will be removed from this list and the system will stop processing it. If the target for this “interrupted” operation is a file, you can delete or overwrite this partially created file. But if the operation’s target is a database, you may need to manually clean up your database tables because some of the transformed information may already have been written to your target database before the operation was interrupted (see Figure 2-18 below).

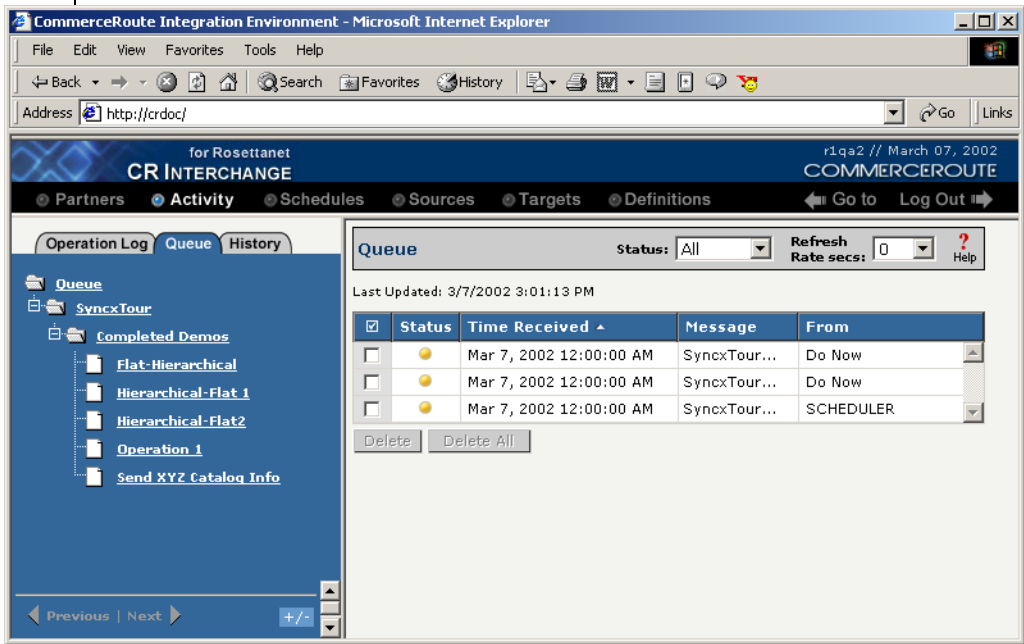



Figure 2-18. The **Pending Processes** screen lists all pending operations that you have authority to see.

 **Tip:** For step-by-step instructions on how to check the history of file transfers, see Chapter 10, “Checking File Transfer History” in the *Reference Guide*.

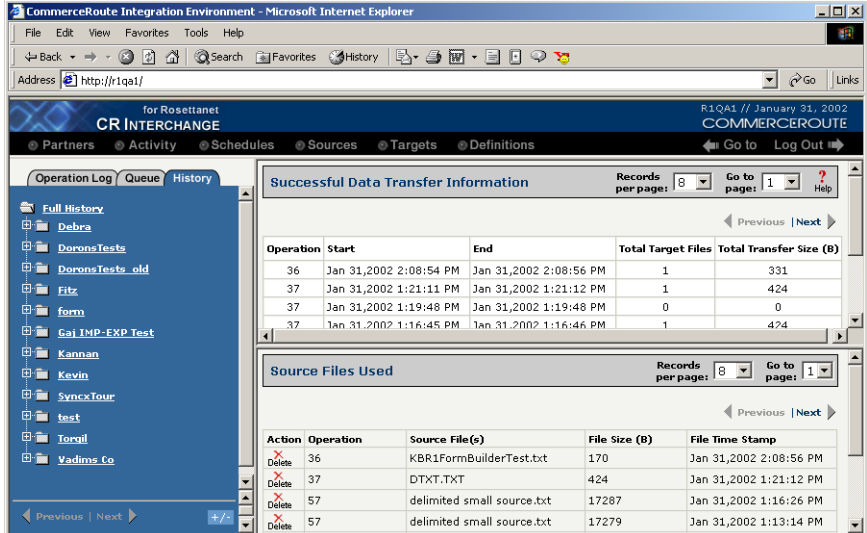
Checking the Transfer History

Click on the **History** tab in the upper-left corner of the **Activity** screen. This screen displays the list of successful file transfers (as opposed to database operations; they will not be listed here) that you have authority to see.

The Appliance ensures that documents are only transferred once. When an operation starts—but before it moves any file—it will check the transfer history list to see if the same file has already been transferred. Three criteria are used to ensure unique file transfers:

- File name
- Modification date
- Operation ID

If all of these criteria are the same, the system assumes the file has been processed and skips transferring this particular file. If you need to repeat any transfer, simply delete the operation entry by clicking its **Delete** button (see Figure 2-19 below).



The screenshot shows the CommerceRoute Integration Environment interface in Microsoft Internet Explorer. The browser address bar shows <http://rl1qal/>. The page title is "CommerceRoute Integration Environment - Microsoft Internet Explorer". The main navigation bar includes links for Partners, Activity, Schedules, Sources, Targets, and Definitions. The "History" tab is selected in the "Operation Log Queue History" section.

The "Successful Data Transfer Information" section displays a table with the following data:

Operation	Start	End	Total Target Files	Total Transfer Size (B)
36	Jan 31, 2002 2:08:54 PM	Jan 31, 2002 2:08:56 PM	1	331
37	Jan 31, 2002 1:21:11 PM	Jan 31, 2002 1:21:12 PM	1	424
37	Jan 31, 2002 1:19:48 PM	Jan 31, 2002 1:19:48 PM	0	0
37	Jan 31, 2002 1:16:45 PM	Jan 31, 2002 1:16:46 PM	1	424

The "Source Files Used" section displays a table with the following data:

Action	Operation	Source File(s)	File Size (B)	File Time Stamp
Delete	36	KBR1FormBuilderTest.txt	170	Jan 31, 2002 2:08:56 PM
Delete	37	DTXT.TXT	424	Jan 31, 2002 1:21:12 PM
Delete	57	delimited small source.txt	17287	Jan 31, 2002 1:16:26 PM
Delete	57	delimited small source.txt	17279	Jan 31, 2002 1:13:14 PM

Figure 2-19. The **History** screen lists all the successful file transfers that you have authority to see.

What's Next?

Congratulations! You have completed the CR Interchange Tour.

You are now ready to start the Tutorial in the next chapter, where you can create several different types of definitions.

Related Topics

- To get more information about the various buttons and other objects throughout the user interface, see Chapter 2, “Common User Interface Objects” in the *Reference Guide*.
- To get step-by-step instructions on creating each supported type of definition, see the remaining chapters in this guide.

Chapter 3

CR Interchange Tutorial

Overview

This tutorial will give you experience working within the CR Interchange environment. Carefully read the instructions and follow the steps on your computer.

Scenario

For this tutorial, you are working for a company called “Company.com.” You have many customers and business partners with whom you share information. Using the Syncx 6200 Series Appliance, you will create an automated data exchange process that will let your company exchange data with a business partner, *XYZ Corp.*

Step 1 - Log In to the Appliance

Follow these steps to log in to the Tutorial correctly:

- ❶ Using your browser, navigate to the Syncx 6200 Series Appliance Appliance at: `http://ApplianceID` where `ApplianceID` is the name or IP address of your Syncx 6200 Series Appliance. Check with your system administrator if you're not sure of the location of your Appliance on your company's network.
- ❷ Enter `Tutorial` for the username and `tutorial` for your password.
- ! **Caution!** If you logged in to this site to follow along with the Tour in the previous chapter, you must log out and log back in using the different username/password combination as noted above. If you do not use this different user ID, you will not be able to create any definitions.
- ❸ Make sure the drop-down menu selection is set to “CR Interchange,” then click the **GO** button (see Figure 3-1 below).

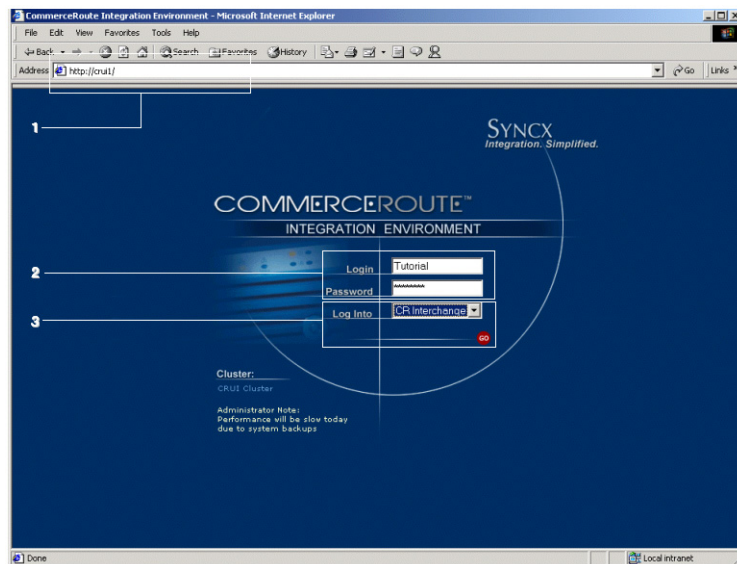




Figure 3-1. Make sure you use the correct login and password for the Tutorial.


Step 2 - Create a Schedule

 **Tip:** The indicator lights denote required fields. The green means the field has been filled in; the red means that you must fill in the field before you can save the definition.

 **Tip:** For more information on setting permissions, see “How to Modify a Definition’s Access Permissions” on page 7-2 in the *Reference Guide*.

With the Syncx 6200 Series Appliance, you can define as many schedules as you need. Give each schedule a meaningful label (e.g., “End of Week,” “Every Other Month,” etc.) and set it with the appropriate parameters, such as the activation time and date, frequency, and termination date. In this case, we want a schedule that activates every Friday at 5:00pm.

- ❶ Click on the **Schedules** button in the main navigation bar at the top of the screen (see screen below).
- ❷ If a new schedule isn't already open, click the **New** button in the toolbar.
- ❸ Since this schedule is designed to run at the end of each week, type in End of Week in the **Schedule Name** field.
- ❹ Adjust the priority of this schedule to the appropriate level using the **Priority** drop-down menu.
- ❺ Select the **Weekly** button in the **Occurs** section, type a 1 in the **Every...Week(s) on** field, then select the **Friday** checkbox.
- ❻ Select the **Occurs Once at:** field and set the time you want this schedule to run, such as 5 : 00pm.
- ❼ Click the calendar button to set the **Start Date** to today, but leave the **No End Date** option off, since we want this schedule to always run.
- ❽ You’ve finished this schedule, so click the **Save** button in the toolbar to save your changes. Note that you now have a new “End of Week” schedule definition selected in the schedule list at the left side of the screen. Your schedule should resemble Figure 3-2 below.
- ❾ You could optionally give other users and groups access to this new schedule by clicking the **Access** button in the toolbar and selecting their names from the Prohibited Access list and clicking the **Add** button. For this example, let’s just leave you with sole access.

 **Caution:** If anyone has already worked through this tutorial on your Appliance, many of the definitions you are creating may have already been created. When this happens, the Appliance notifies you that a definition or process with the same name already exists. It then creates another version with a number at the end to distinguish it as unique (such as “XYZ Schedule_1”). Make sure you always select the correct definition with the appropriate numeral.

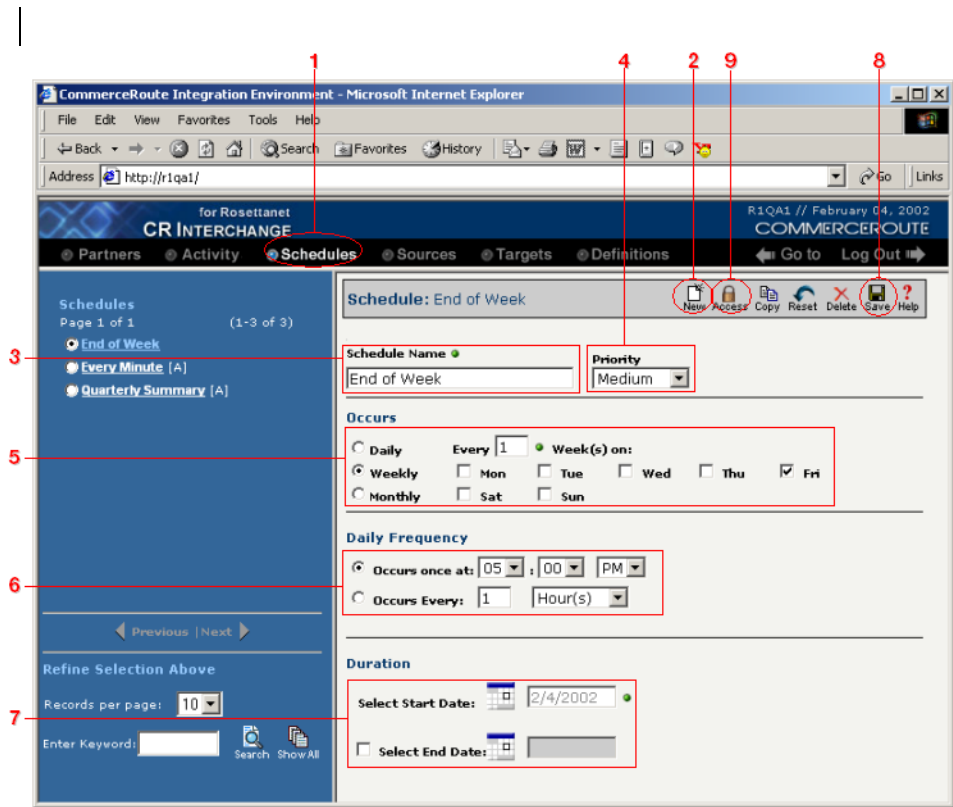



Figure 3-2. The completed End of Week schedule definition.

Warning! Because you are working in a Web environment, you may lose unsaved information if you navigate to different screens without saving your definitions. To ensure your work is saved, click the **Save** button in the toolbar before navigating to other pages.

Step 3 - Create a Source

The Appliance lets you define many different locations where your data are stored. Let's say that your company, Company.com, uses a database to store its catalog information. We need to create a source definition that will define how to access the database:

- ❶ Click on the **Sources** button in the main navigation bar at the top of the screen.
- ❷ If a new source isn't already open, click the **New** button in the toolbar.
- ❸ Label this source `Company.com`, then choose **Database** from the **Source Type** drop-down menu.
- ❹ The database you need to access for this tutorial is a SQL Server database, so select **SQL Server** from the **Driver** drop-down menu.
- ❺ This database is located on a training server. Enter `training.commercero.com` as the Server Name and `Pubs` as the name of the database you want to access.
- ❻ For this tutorial, enter `Tutorial` as your login and `tutorial` as your password.
- ❼ You've finished this source, so click the **Save** button in the toolbar. Note that you now have a new "Company.com" source definition selected in the source list at the left side of the screen. Compare your source to the one shown in Figure 3-3 below.
- ❽ (Optional) If you want to test your connection to the training server, press the **Connect** button. A dialog will appear, telling you the status of your connection.

 **Tip:** For more information on setting access permissions, see "How to Modify a Definition's Access Permissions" on page 7-2 in the *Reference Guide*.

Note

You could optionally give other users and groups access to this new source by clicking the **Access** button in the toolbar and selecting their names from the Users/Groups list and clicking the **Add** button. For this example, let's just leave you with sole access.

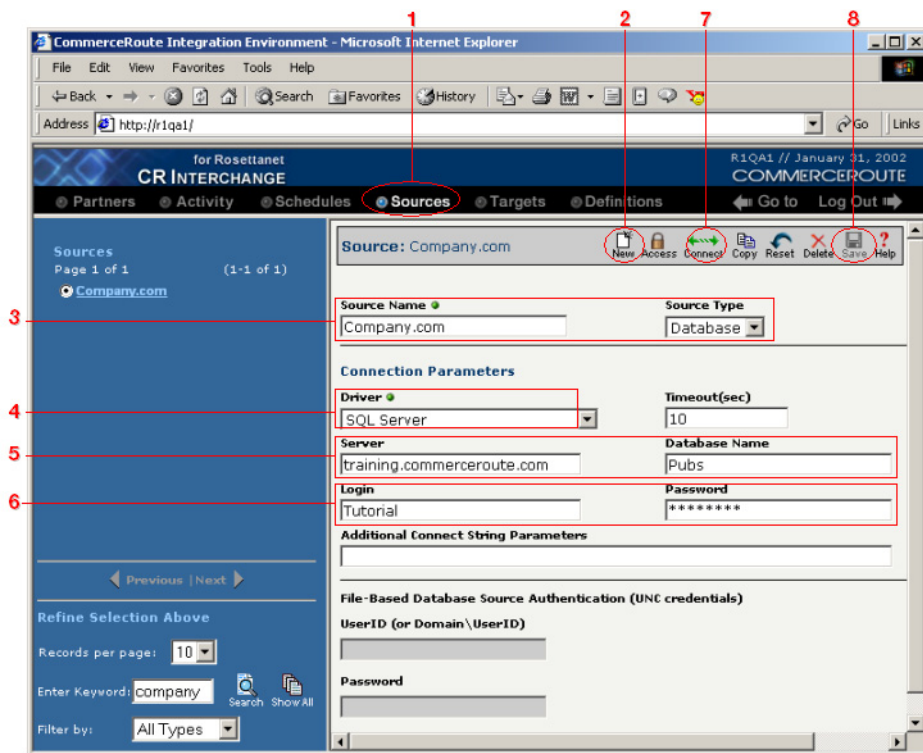


Figure 3-3. The completed Company.com database source.

Step 4 - Create a Target

Defining data target destinations is as easy as defining data source locations. Depending on the type of document, you can configure the target definition for FTP, Database, File Share, HTTP, or other protocols.


Let's assume that Company.com needs to share information with XYZ Corp. We have already defined Company.com's database source. But to complete a transformation, we need to have target information as well. In this example, XYZ Corp. uses comma-delimited text files that are stored on an FTP server. Let's create an appropriate target definition:


- ❶ As noted above, XYZ Corp. stores its information on an FTP server. We need to create a target definition file for them, so click on the **Targets** button in the navigation bar to go to the Targets screen.
- ❷ If a new target isn't already open, click the **New** button in the toolbar.
- ❸ Name this target XYZ Corp. Catalog, then select "FTP" from the **Target Type** drop-down menu.
- ❹ Enter a valid FTP server location in the **FTP Host** field, such as `training.commercerooute.com`.
- ❺ If you are using the CommerceRoute training FTP server, enter `/target/` in the **FTP Host Path** field. If not, enter a valid root location. The path should start and end with a "/", like in `/target/`. Next, enter the name of the target file(s) in the **File Name** field. In this case, we want to uniquely identify your file, so enter `GettingStarted_[Date]_[Time].txt`; this will place the exact date and time of the file transfer into the file name.
- ❻ Enter an appropriate login and password for the FTP server (Learner is the username for the CommerceRoute training server; `ne3t0n` is the password).

Note

You could optionally give other users and groups access to this new target by clicking the **Access** button in the toolbar and selecting their names from the Prohibited Access list and clicking the **Add** button. For this example, let's just leave you with sole access.

- ❼ You've finished this target, so click the **Save** button in the toolbar. Note that you now have a new "XYZ Corp. Catalog" target definition selected in the target list at the left side of the screen. Your target should resemble the screen in Figure 3-4 below.

 **Tip:** For more information on the variables you can use to name your targets, see "File Name Variables" on page 8-8.

 **Tip:** For more information on setting permissions, see "How to Modify a Definition's Access Permissions" on page 7-2 in the *Reference Guide*.

- 8 If you want to check your connection, click the **Connect** button in the toolbar. This will run your username/password combination against your selected FTP server and display whether or not it successfully connected.

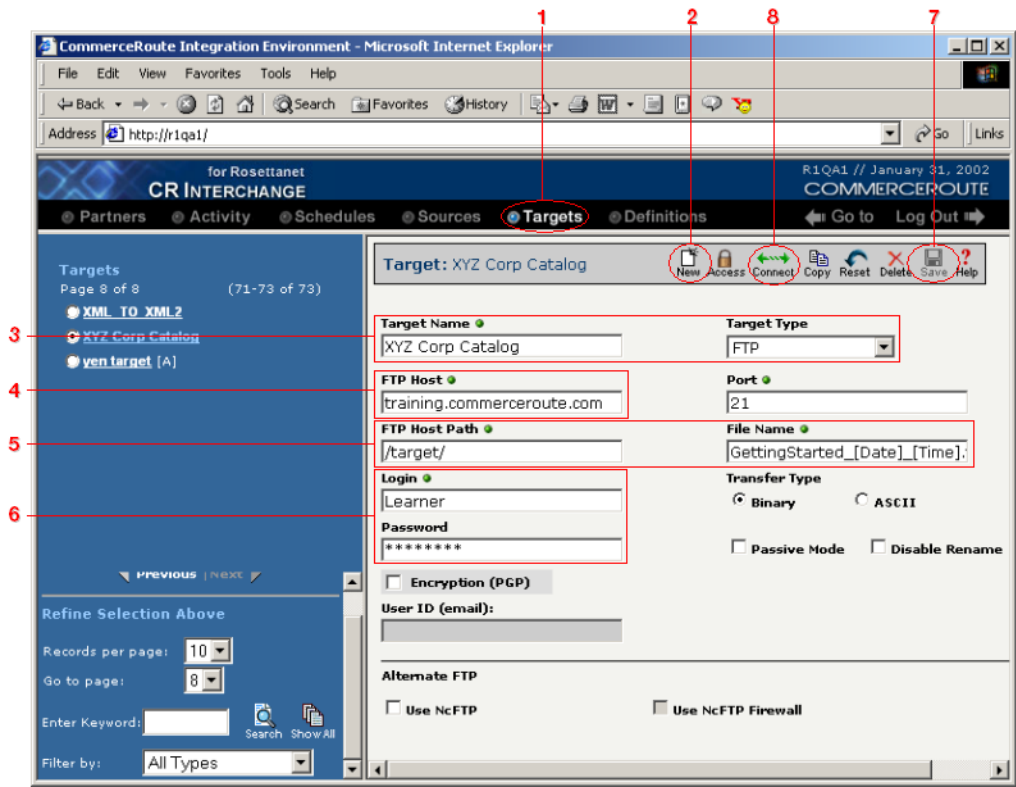


Figure 3-4. The completed XYZ Corp. Catalog target definition.

Step 5 - Create a Document Definition

Our business partner XYZ Corp. uses comma-delimited text files, so we'll need to define a text file that matches their file structure exactly.

- 1 Click on the **Definitions** button in the navigation bar at the top of the screen.
- 2 Select the **Documents** tab in the upper-left corner of the screen.
- 3 If a new document definition isn't already open, click the **New** button in the toolbar.

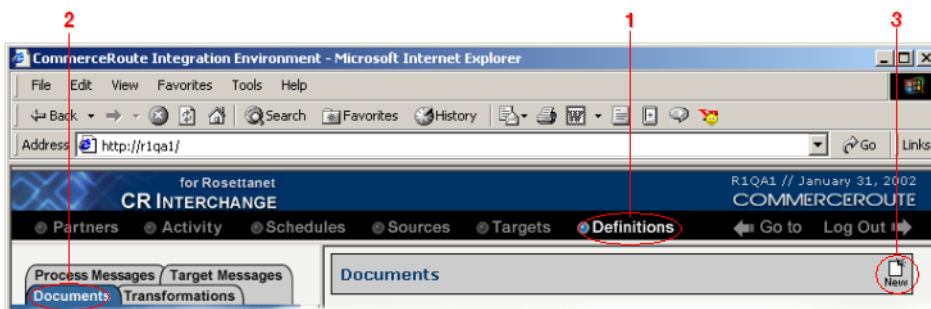


Figure 3-5. Navigate to the **Documents** tab within the **Definitions** area.

The next screen is where you specify the type of document definition you are creating.

- ❶ First, give this definition an appropriate name like XYZ_Corp_Catalog.
- ❷ Choose the **Simple Text Document** radio button in the **Select Document Type** region.
- ❸ Choose the **Character Delimited** radio button in the **Select Document Format** region.
- ❹ Compare your work to that shown in Figure 3-6 below, then click the **Create** button.

The screenshot shows a web-based configuration window titled "Document". At the top right are three icons: a circular arrow for "Reset", a red X for "Delete", and a question mark for "Help". The main content area has three sections:

- Enter Document Name**: A text input field containing "XYZ_Corp_Catalog". A red box and the number "1" point to this field.
- Select Document Type**: A group box containing two radio buttons. The "Simple Text Document" radio button is selected and highlighted with a red box and the number "2". The "Complex Text Document" radio button is unselected.
- Select Document Format**: A group box containing two radio buttons. The "Character Delimited" radio button is selected and highlighted with a red box and the number "3". The "Fixed Field Widths" radio button is unselected.
- Create**: A blue button at the bottom right, highlighted with a red box and the number "4".

Figure 3-6. Select the appropriate combination of radio buttons.

The next screen is used to define each field in your document.

- ❶ We'll create a definition for a text file that uses commas to separate the different data. Type a comma in the **Delimiter** field.
- ❷ Type a double-quote in the **Text Qualifier** field.
- ❸ In this simple tutorial, let's create a small text file that holds five different pieces of information. Click the **Add Field** button five (5) times.
- ❹ You should now have five empty fields. Configure each field using the following values:

Name	Type	Default	Format
VendorName	String	XYZ Corp	
VendorID	Integer	3112	
OrderID	String	1000	
Date	Date	06/01/01	MM/DD/YY
BookID	String		

- ❺ You've finished this document definition, so click the **Save** button in the toolbar. Your document should resemble Figure 3-7 below.

The screenshot shows the 'Document: XYZ_Corp_Catalog' window. At the top is a toolbar with icons for New, Access, Copy, Reset, Delete, Save (circled with a red 5), and Help. Below the toolbar, the 'Document Name' is 'XYZ_Corp_Catalog' and the 'Document Type' is 'Simple/Delimited'. Under 'Choose a delimiter (qualifiers optional)', there are three fields: 'Delimiter' (containing a comma, circled with a red 1), 'Text Qualifier' (containing a double quote, circled with a red 2), and 'Number Qualifier' (empty). Below these is an 'Add Field' button (circled with a red 3) and buttons for 'Move Up', 'Move Down', and 'Delete'. At the bottom is a table with 5 rows and 5 columns: #, Name, Type, Default, and Format. The rows are: 1. VendorName, String, XYZ Corp, ; 2. VendorID, Integer, 3112, ; 3. OrderID, String, 1000, ; 4. Date, Date, 06/01/01, MM/DD/YY; 5. BookID, String, , . A red bracket with a 4 is next to the last three rows of the table.

Figure 3-7. The completed XYZ_Corp_Catalog document definition.

Step 6 - Create a Process Message


The next step is to create a message that automatically sends a notification after a successful transformation:

- ❶ Click the **Process Messages** tab in the upper-left corner of the **Definitions** screen.
- ❷ If a new process message isn't already open, click the **New** button in the toolbar.
- ❸ First, since this message is designed to be a success notification, label it as **Success**. Then enter into the **SMTP Mail Server** field the name of your e-mail server provided by your administrator, e.g., `smtp.company.com`.
- ❹ Enter your e-mail address into the **To** field. (Note that this e-mail ID is assumed to be the appropriate recipient of the process message.)
- ❺ Enter your e-mail address into the **From** field.
- ❻ Enter an appropriate title into the e-mail's **Subject** field, such as `Operation was Successful`.
- ❼ Enter an appropriate message into the e-mail's body, such as `Your operation completed successfully`.

Note

You could optionally give other users and groups access to this new operation by clicking the **Access** button in the toolbar and selecting their names from the **Prohibited Access** list and clicking the **Add** button. For this example, let's just leave you with sole access.

- ❽ You've finished this process message definition, so click the **Save** button in the toolbar. Note that you now have a new "Success" process message definition selected in the message list at the left side of the screen. Your message should resemble Figure 3-8 below.

 **Tip:** For more information on setting permissions, see "How to Modify a Definition's Access Permissions" on page 7-2 in the *Reference Guide*.

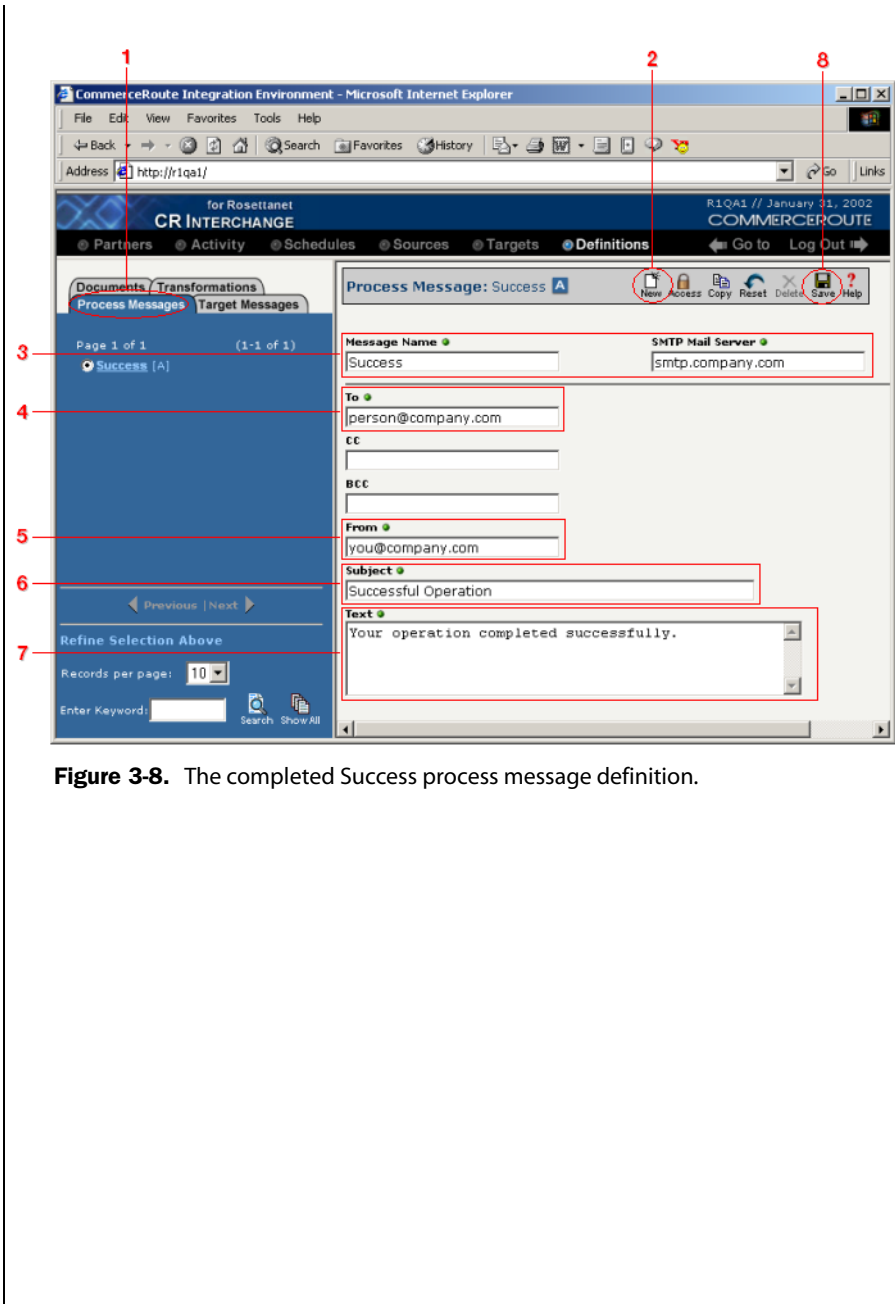


Figure 3-8. The completed Success process message definition.

Step 7 - Create a Transformation

Select Transformation Type

The transformation definition we will create next will be used to map Company.com's database (whose information is stored in our source definition) to the comma-delimited data file that you just created for your vendor, XYZ Corp:

- ❶ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen. Click the **New** button in the toolbar. The Transformation Wizard appears.
- ❷ Give this transformation an appropriate name like `Company.com DB to XYZ Corp Catalog`.
- ❸ Since we plan to transform our database information into a comma-delimited file for XYZ Corp., choose **Database** under **Source** and **Text File** under **Target**.
- ❹ Compare your work to Figure 3-9 below, then click **Next** in the toolbar to continue.

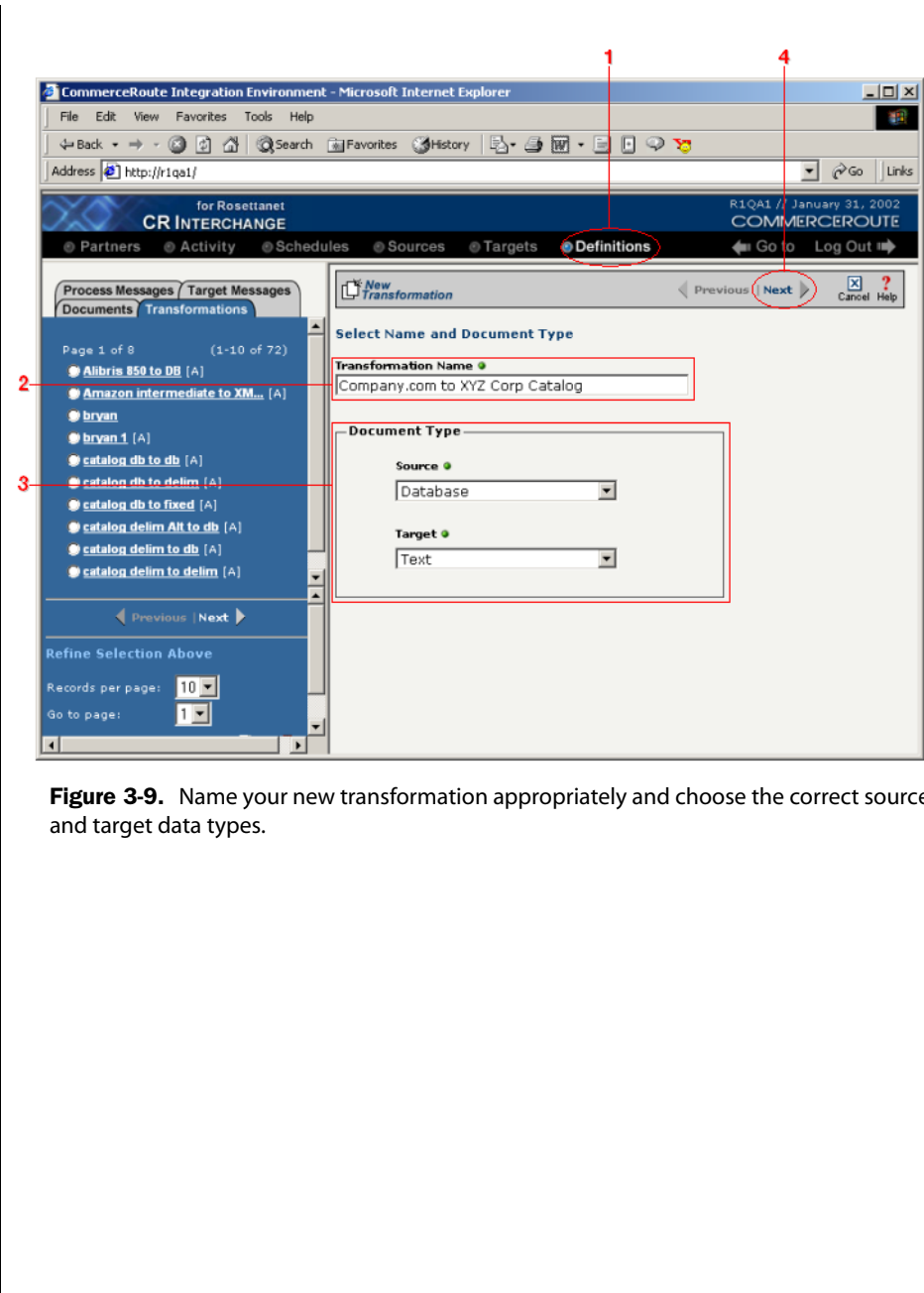


Figure 3-9. Name your new transformation appropriately and choose the correct source and target data types.

Select Data Source

You should now be in the Transformation Wizard's Selecting a Data Source page.

- 1 Locate the Company.com Catalog Database entry in the **Data Source** drop-down menu.
- 2 Compare your work with Figure 3-10 below, then click **Next** in the toolbar to continue.

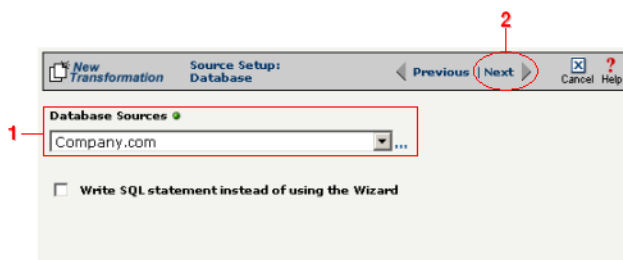


Figure 3-10. This part of the Transformation Wizard is where you select which (database) source you will use.

Select Tables

This screen is where we specify which tables we want to use in our (source) database.

- ❶ We want to see all the tables in this database, so leave the **Search** field empty and press the **Search** button (making sure that the **Table** checkbox is selected).
- ❷ Select **Sales** and **Stores** in the **Available Tables** list, then click the **Add** button (the right-facing arrow) to move them to the **Selected Tables** window.
- ❸ Compare your work with Figure 3-11 below, then click **Next** to continue.

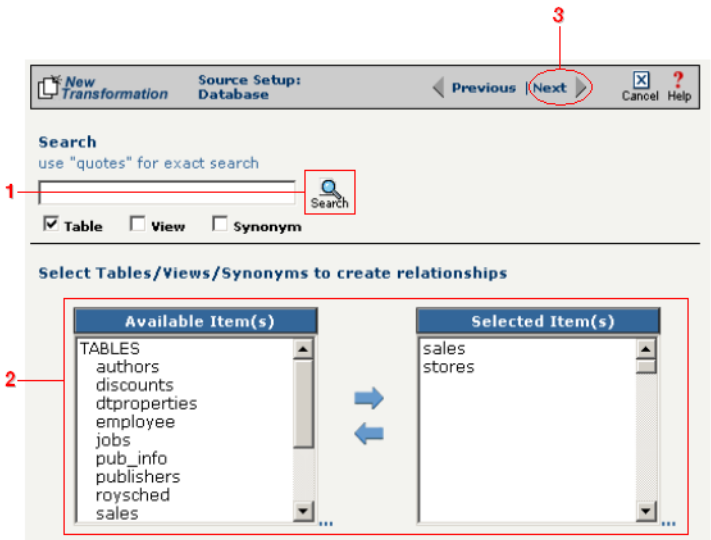


Figure 3-11. Select the database table(s) you will use to access your source data.

Specify Table Usage

- 1 When defining the database tables’ hierarchical relationships, we’ll only be using each table in the source database once, so leave both tables with their default value of 1.
- 2 Click **Next** to continue (see Figure 3-12 below).

New TransformationSource Setup: DatabasePreviousNextCancelHelp

Selecting Multiple TablesWhen defining...

Define the number of times each Table/View/Synonym will be used

List of Tables/Views/Synonyms	Times Used
sales	1
stores	1

Figure 3-12. This screen lets you specify the number of times you will use each database table when defining their respective relationship(s).

Create Relationships

The Create Relationships screen is where you can define a hierarchical relationship between tables. In this case, do the following:

- 1 Select `stores` from **Parent** and `sales` from **Child**.
- 2 Next, select `stor_id` in **Parent Fields**, and `stor_id` in **Child Fields**.
- 3 Finally, click the **Add** button to link the two tables together by these two fields.
- 4 Compare your work with Figure 3-13 below, then click **Next** to continue.

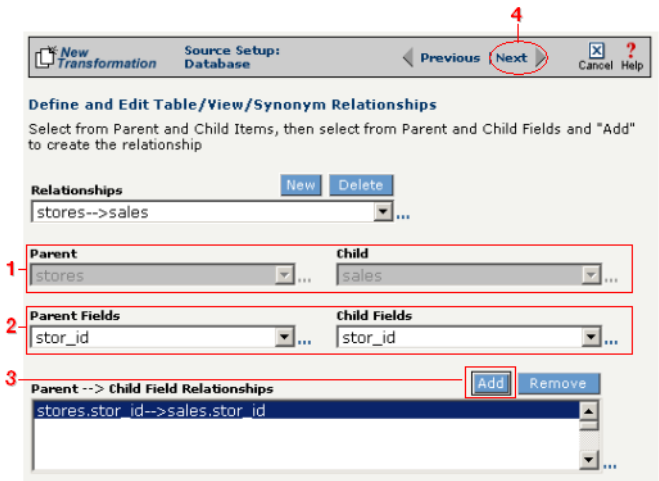


Figure 3-13. Use this screen to define your source database's hierarchical relationships.

Indicate Parent-Child Usage

In this screen you indicate the nature of the parent-child relationship: whether it is one-to-many, one-to-one, etc.

- 1 Make sure the **1 to N** radio button is selected, as shown in Figure 3-14 below.
- 2 Click **Next** to continue.

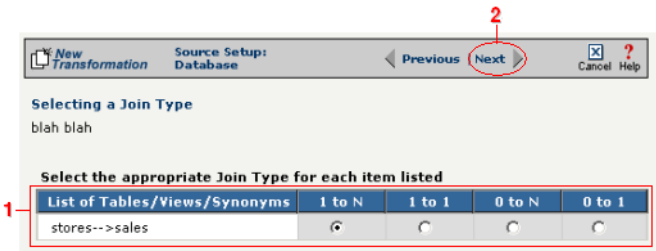


Figure 3-14. This screen lets you indicate the nature of each parent-child relationship.

Filter Source Data

You have the option of filtering the source tables to eliminate transforming unneeded data (e.g., transform records only where the quantity was greater than 100).

In this tutorial, we don't want to filter anything, so just click the **Next** button to continue (see Figure 3-15 below).

SQL Where Clause
blah blah

Type Filter Condition

Field List	Filter Condition	Sort
sales.stor_id		...
sales.ord_num		...
sales.ord_date		...
sales.qty		...
sales.payterms		...

Figure 3-15. This is an optional screen that is used to filter your source data.

You have completed all the details that describe how you will access your source (database) data. Next, you will provide details about the target.

Select Target Documents

Because your target is a text file, there is only one detail that the Appliance needs: which Document Definition is the appropriate one to use for this target:

- 1 Select **XYZ_Corp_Catalog** from the list of available files for your target from the drop-down menu.
- 2 Compare your work with Figure 3-16 below, then click **Save** to save your work and exit the wizard.

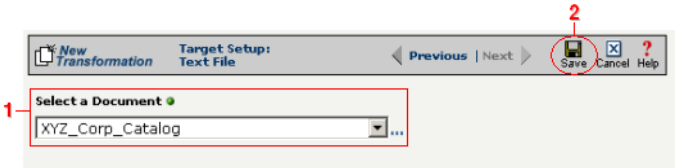


Figure 3-16. Choose which pre-defined document definition you will use for your target.

Map Source Element to Target Elements

That's the end of the Transformation Wizard. You should now be in the main Transformation window.

- 1 Use the table below to map each of the following pairs of source and target data elements:
 - a. Select the appropriate source.
 - b. Select the appropriate target.
 - c. Click the **Map** button to save their relationship.

Source	Target
stores.stor_id	VendorID
stores.sales.ord_num	OrderID
stores.stor_name	VendorName
stores.sales.title_id	BookID
stores.sales.ord_date	Date

- 2 Click the **Save** button to save your changes. You now have a new transformation definition that maps five separate pieces of data. Your new transformation should appear in the transformation list at the left side of the screen. Compare your work with Figure 3-17 below.

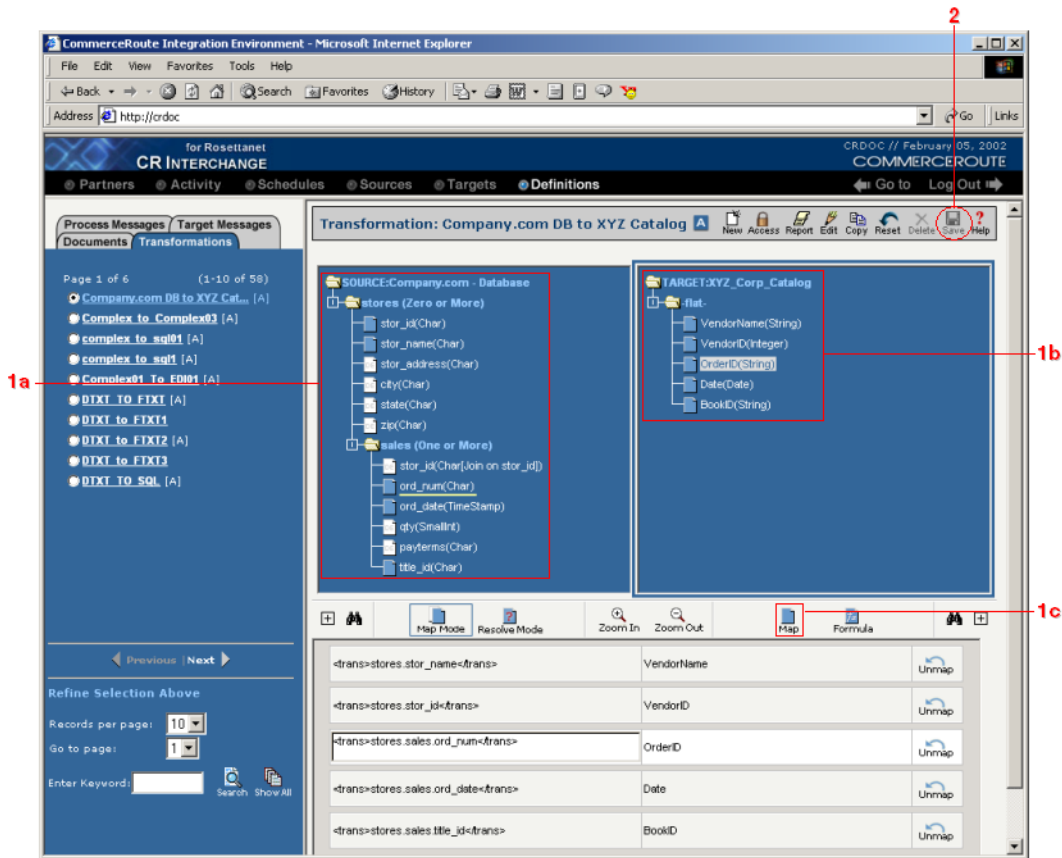


Figure 3-17. The completed Company.com DB to XYZ Corp. Catalog File transformation definition.

Step 8 - Create a Partner



Tip: For more information on setting permissions, see “How to Modify a Definition’s Access Permissions” on page 7-2 in the *Reference Guide*.

You’ve finished creating definitions. We are now going to create a hierarchical folder structure that will help you organize your operations.

Partners may represent external business partners or internal departments. In this tutorial, we want to create a new standard partner definition for our vendor, XYZ Corp:

- ❶ Click on the **Partners** button in the main navigation bar at the top of the screen.
- ❷ Move your mouse over the **New** button in the toolbar, then select **New Standard Partner** from the drop-down menu.
- ❸ Label this partner XYZ Corp, since it will hold all materials related to this company.
- ❹ Fill out all the partner and contact information for the company. (It doesn’t matter what you put in, just enter appropriate data.)

Note

You’re in charge of your new partner. If you wish, go ahead and add a few other existing users to your partner. You may also add a group to access your partner as well. To change user or group privileges, click on the **Access** button in the toolbar to bring up the Change Access Control window.

- ❺ You’ve finished creating and modifying your partner, so click the **Save** button in the toolbar to save your changes. Your new partner should appear in the partner list at the left side of the screen. Compare your partner with Figure 3-18 below.

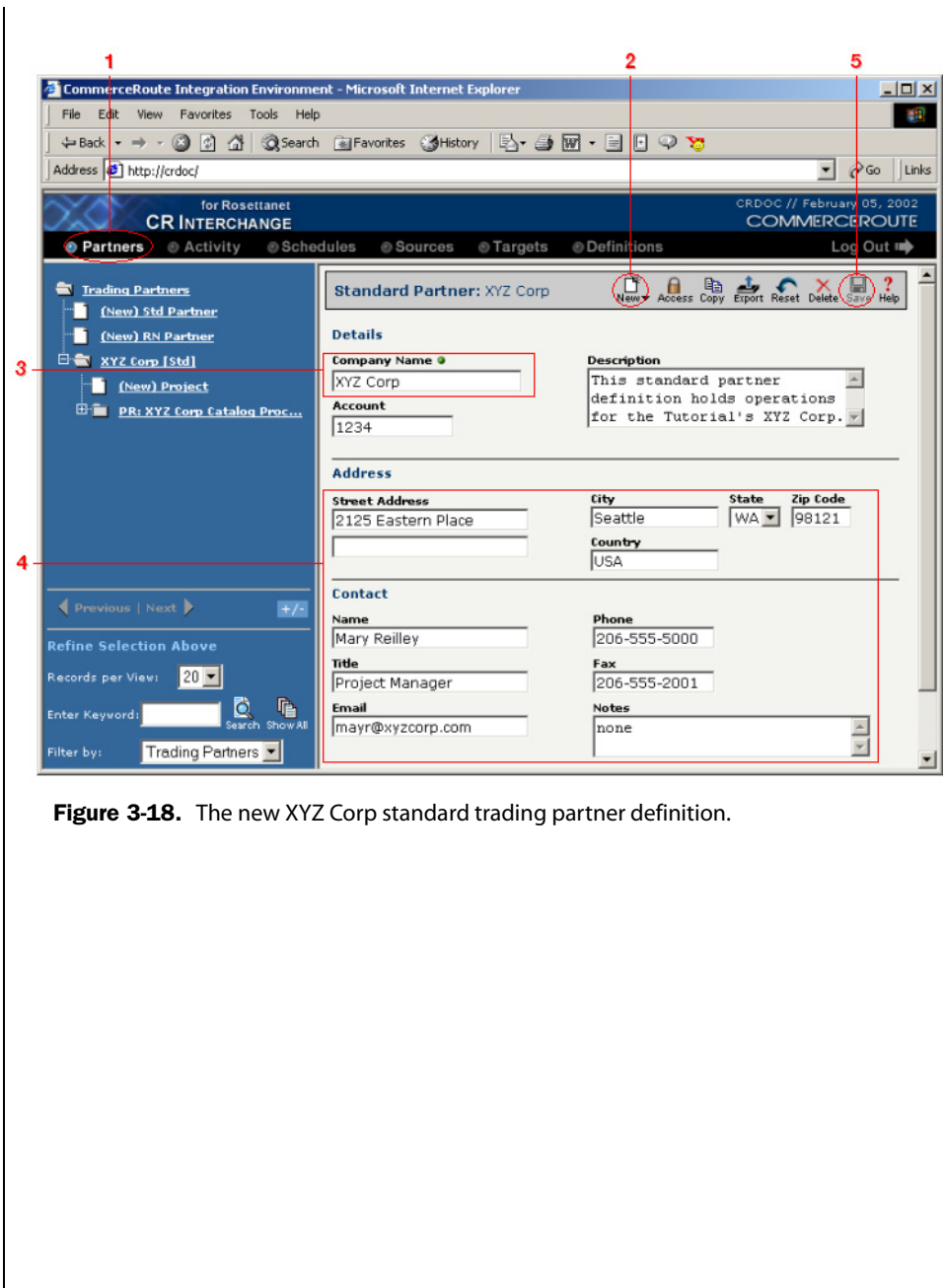


Figure 3-18. The new XYZ Corp standard trading partner definition.

Step 9 - Create a Project

Now that we've created a partner for XYZ corporation, we'll add a project to hold all operations that deal with catalog processing:

- ➊ After you've saved your new partner, add a project to that partner by moving your mouse over the **New** button in the toolbar, then select **New Project** from the drop-down menu.

! **Caution!** To ensure your new project belongs to the XYZ Corp trading partner, make sure you have selected the XYZ Corp. partner definition before clicking the **New** button.

- ➋ This project will deal with vendor catalog information. Call this project something appropriate, like XYZ Corp Catalog Processing.
- ➌ Fill out the remaining detail and contact information as you like. Note that this contact information is specific to this project, whereas the partner information you entered earlier is for the entire partner.
- ➍ When you've finished, click **Save** in the toolbar to save your new project. You should see a new folder appear within your partner with this project's name in the list at the left side of the screen. Compare your project with Figure 3-19 below.

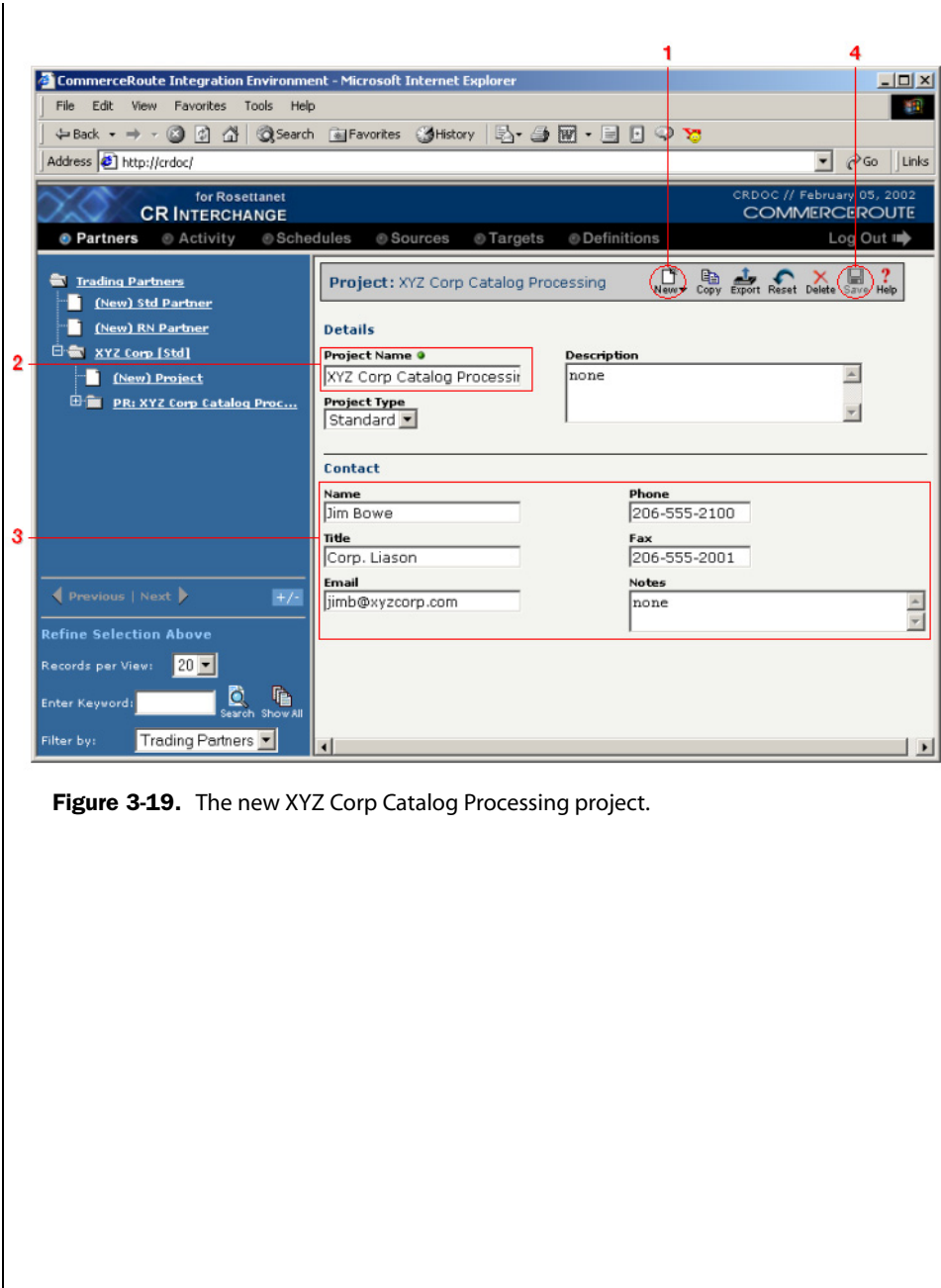


Figure 3-19. The new XYZ Corp Catalog Processing project.

Step 10 - Create an Operation

Now that you have created all your definitions and set up your partner and project folders, it is time to bring everything together into an operation. Remember that it is in the operation where the actual work is defined and activated.

- ➊ Add an operation to your new project by selecting your project folder at the left pane then clicking the **New** button in the toolbar.



Caution: You must select a project to create an operation. Make sure you have selected the XYZ Corp. Catalog Processing project before clicking the **New** button.

- ➋ This operation will define how you send catalog information to your vendor. Call this project something appropriate, like **Send XYZ Corp Catalog Info**. Next, enter a description in the **Description** field. Then select **Transformation** from the **Operation Type** drop-down menu.
- ➌ Select your **Company.com** definition from the **Source** drop-down menu, then select your **XYZ Corp. Catalog** definition from the **Target** drop-down menu.
- ➍ Select your **End of Week** definition from the **Schedule** drop-down menu, then select your **Company.com DB to XYZ Corp. Catalog File** definition from the **Transformation** drop-down menu.
- ➎ Select your **Success** definition from the **Success Message** drop-down menu.

Note

There are more options you could choose when defining your operation: create a new failure message and associate it with the appropriate field, or have another operation activate upon the successful completion of this operation, etc.

- 6 When you've finished, click **Save** in the toolbar to save your new operation. You should see a new file icon appear within your project with this operation's name. Compare your operation to Figure 3-20 below.

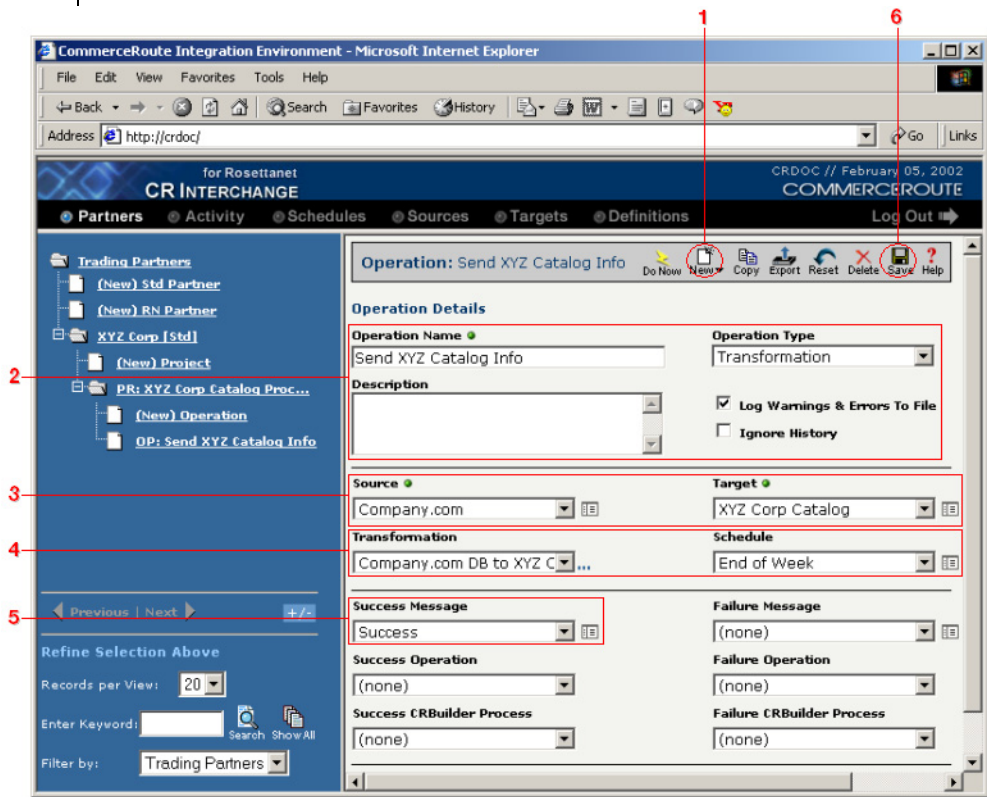




Figure 3-20. The completed Send XYZ Corp Catalog Info operation.

Step 11 - Monitor Your Operations

 **Note:** If the Appliance is not running, you will need to ask your system administrator for help.

Now that you've created your operation by configuring a set of definitions, it's time to activate it. Since you chose a schedule to be associated with this operation, your operation will activate every Friday at 5:00pm. But we have a faster way to test an operation:

- ❶ Click the **Do Now**  button that is just to the left of the toolbar in the Operations screen. Doing so will immediately activate the operation, regardless of its schedule setting.
- ❷ Assuming that the Appliance is running, your operation will be picked up by the system: click on the **Activity** navigation button at the top of the screen (see Figure 3-21 below).
- ❸ You should be viewing the default tab, **Operation Log**. This is the log of all the completed operations that you can view (remember that depending upon your privileges, you might not have access to other partners' information). Look to see if your operation is at the top of the list.
- ❹ You can also click on the **Queue** tab in the upper-left corner of the screen. This tab displays the list of all the operations that are sitting in the queue, waiting to be activated by the server. Note that if your operation is here, you have an opportunity to cancel it before its job is processed. If you see your operation here and wish to cancel it, click the **Delete** button next to your operation entry.

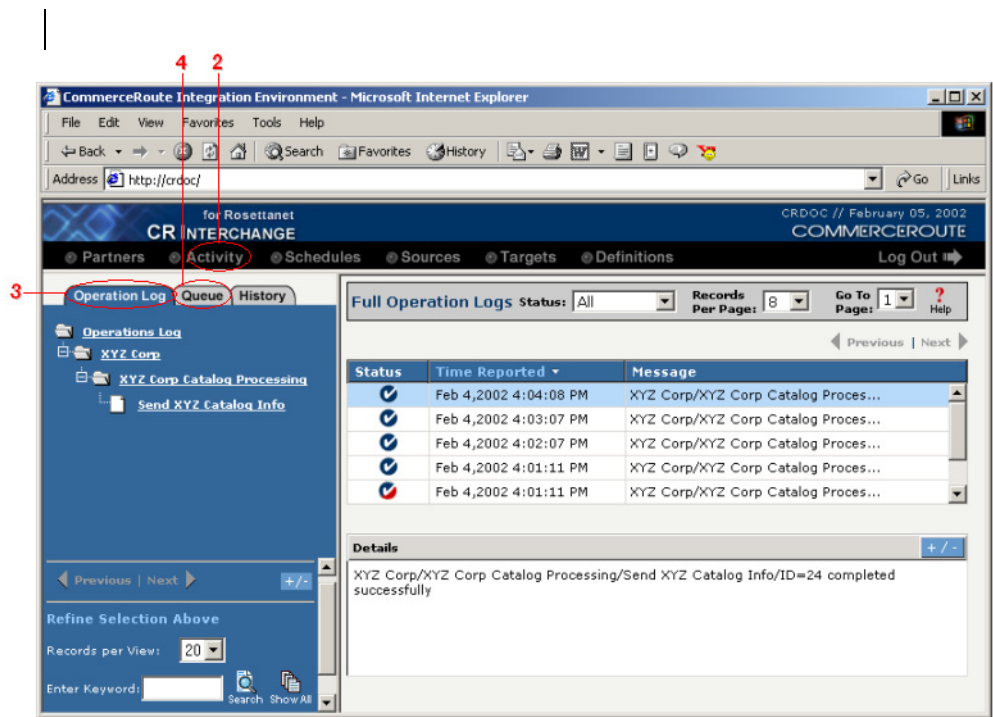


Figure 3-21. The System Log tab is where you can check the log of all operations that have completed, and which you have permission to see.

Note

The Syncx 6200 Series Appliance is so efficient at handling work requests that you might not see operations sitting in the queue—they are processed as soon as they come in to the queue. Be aware that operations are displayed in this queue from when they are activated by the engine until they are completed. If you delete an “active” operation that is already being processed by the Appliance, it will be removed from this list and the system will stop processing it. If the target for this “interrupted” operation is a file, you can delete or overwrite this partially created file. But if the operation’s target is a database, you may need to manually clean up your database tables because some of the transformed information may already have been written to your target database before the operation was interrupted.

Step 12 - Log Out

- 1
- Click the **Log Out** button at the top-right of the screen to log yourself out from the Tutorial (see Figure 3-22 below).

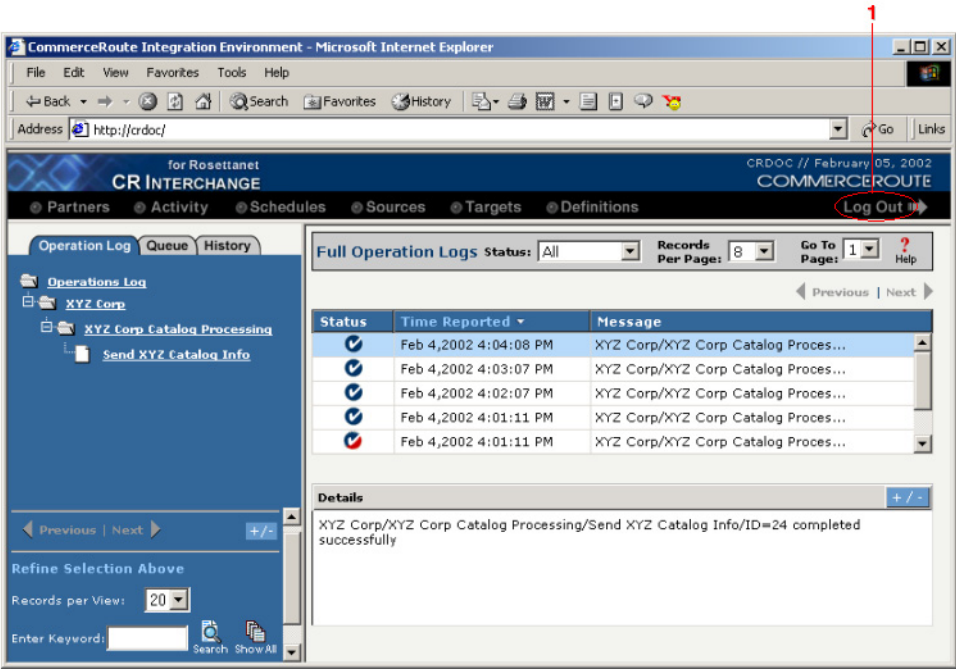


Figure 3-22. Make sure to log out from the Tutorial when you have finished.

What's Next?

Congratulations! You have completed the CR Interchange Tutorial. You are now ready to start creating your own definitions. What kind of definitions you need to create depends on what type of transformation you plan to do. The Transforming Data chapters found within this guide contain step-by-step instructions on how to transform any supported data type to any other.

Related Topics

- To get more information about the various buttons and other objects throughout the user interface, see Chapter 2, “Common User Interface

Objects” in the *Reference Guide*.

- To get step-by-step instructions on creating each supported type of definition, see the remaining chapters in this guide.




Definitions

SECTION TWO

Chapter 4

Standard Trading Partner Definitions

Overview


 **Note:** This guide discusses Standard Trading Partner definitions. For details about RosettaNet Trading Partner definitions, see Chapter 3 in the *Public Processes Guide*.


Syncx offers you an environment in the Partners navigation area where you can store all the details about your business partners that you need in order to successfully share business information.

There are two types of trading partner definitions:

- **RosettaNet Trading Partners:** Available only in Syncx Appliances for RosettaNet, these definitions are used to work with partners who have adopted RosettaNet trading processes. Details about RosettaNet Partner definitions can be found in the *Public Processes* guide.
- **Standard Trading Partners:** These definitions are used to define all non-RosettaNet-based partners. This chapter will step you through creating Standard Trading Partner definitions.

How to Create a Standard Trading Partner Definition

 **Tip:** An alternate way of creating a new definition is to click the **(New) Standard Partner** link in the hierarchical navigation tree in the left frame of the screen.

 **Tip:** For more information about setting user and/or group access to your definition, see Chapter 7, “Permissions” in the *Reference Guide*.

Standard Trading Partner definitions are used as hierarchical folders that contain projects and operations. Partner definitions may represent external business partners or internal departments.

Follow these steps to create a new standard trading partner definition. Each step is marked in Figure 4-1 below.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Click the **Partners** button in the navigation bar.
- ❸ Move your mouse over the **New** button in the toolbar, then select **New Standard Partner** from the drop-down menu.
- ❹ Type a company name into the **Company Name** field.
- ❺ (Optional) If you wish, you can enter a description of this partner in the **Description** field.
- ❻ (Optional) Enter an account number in the **Account** field. This should be a meaningful ID that you use within your organization to track and identify this partner.
- ❼ (Optional) Enter the appropriate address information for this partner.
- ❽ (Optional) Fill in the contact information that is appropriate for this partner.
- ❾ Click the **Save** button on the toolbar to save your new partner. Your partner name now appears in the list of partners on the left side of the screen.
- ❿ (Optional) If you want to give other users and/or groups access to all the projects and operations in this partner, click the **Access** button in the toolbar.

Note

You can use the account's **Export** button to export all its projects and operations (along with all the operations' supporting definitions) to an external archive file.

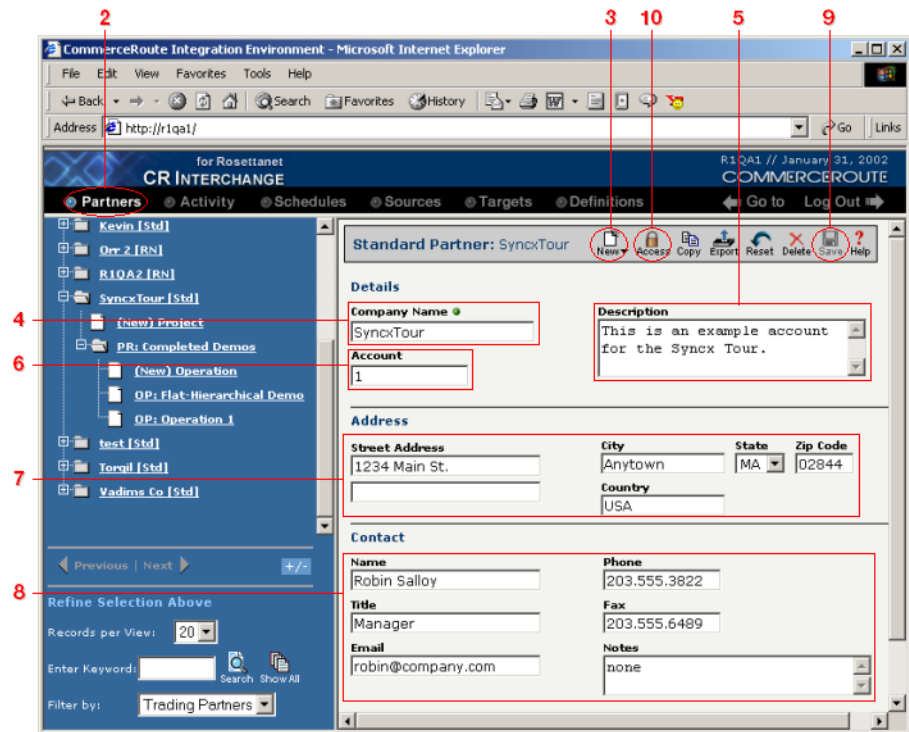


Figure 4-1. Follow the steps listed above to successfully define a new standard partner.

What's Next?

If you have just created a partner, you probably will want to create at least one project for this partner. See Chapter 5 for details.

Related Topics

- To see an example standard partner definition in the Tour, see “Organize Your Trading Partners” on page 2-6.
- To create a standard partner definition within the Tutorial, see “Step 8 - Create a Partner” on page 3-24.

- To learn about RosettaNet partner definitions, see Chapter 4, “Standard Trading Partner Definitions” in the *Public Processes Guide*.

Chapter 5

Projects

Overview

Projects are used as mid-level folders that contain operations. Projects are always contained within a standard trading partner folder.

How to Create a Project



Tip: An alternate way of creating a new project is to click the **(New) Project** link within the appropriate partner in the hierarchical navigation tree in the left frame of the screen.



Tip: For more information about Append projects, see “Append Projects” on page 5-4.

Follow these steps to create a new project. Each step is marked in Figure 5-1 below.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Click the **Partners** button in the navigation bar.
- ❸ Select the partner for which you want to create a new project.
- ❹ Move your mouse over the **New** button in the toolbar, then select **New Project** from the drop-down menu.
- ❺ Type appropriate name for the new project into the **Project Name** field.
- ❻ (Optional) If you wish, you can enter a description of this project in the **Description** field.
- ❼ Select the type of project this is by choosing the appropriate entry within the **Project Type** drop-down menu:
 - a. **Standard:** This is the default project setting, where each operation's output in this project is separate from all the other operations' output.
 - b. **Append:** This type of project combines the results of the project's operations and puts them in a single output text file.
- ❽ (Optional) Fill in the contact information that is appropriate for this project.
- ❾ Click the **Save** button on the toolbar to save your new project. Your project now appears as a child of the partner you selected.

Note

You can use the project's **Export** button to export all its operations (plus the project's partner information) to an external archive file.

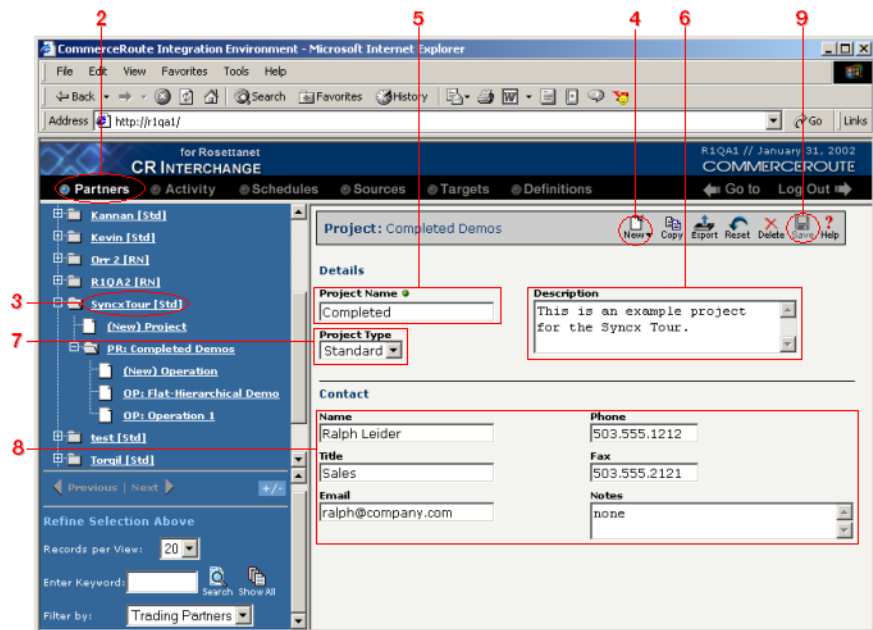


Figure 5-1. Follow the steps listed above to successfully define a new project.

Append Projects

 **Tip:** You can also chain a series of operations together, so that the completion of each operation activates the next operation in the chain. See “Working with Chained Operations” on page 10-8 for details.

What is an Append Project?

An append project is a special type of project that combines the results of all its operations and puts them in a single text file.

There are a few requirements for append projects:

- All operations within the append project must use the same target.
- The operations’ target must be a text file; database, XML, and other non-text file targets are not supported.
- Each time an operation in an append project is activated, the results of its transformation will be appended to the end of the target text file.
- There is no limit to how many operations can be part of an append project.

How to Create an Append Project

When your target is a text file, you also have the option of writing the combined output of all chained operations together to the same target file. This is called an *append* project.

Follow the steps below to create an append project. Each step is marked in Figure 5-2 below.

- ❶ Create a project with all the standard contact information. (See the beginning of this chapter if you need more information on creating projects).
- ❷ Select **Append** from the **Project Type** drop-down menu.
- ❸ Click **Save** on the toolbar. You have created an append project that will hold all your chained operations.

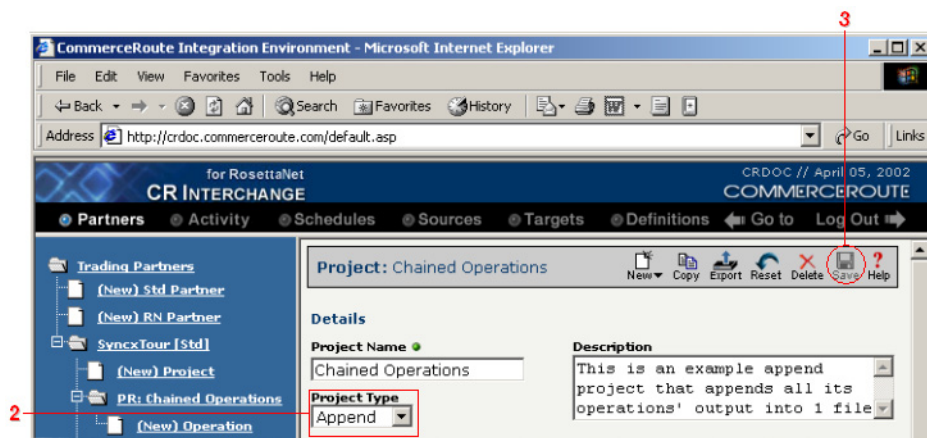


Figure 5-2. Choose “Append” from the **Project Type** drop-down menu.

What’s Next?

If you have just created a project, you probably will want to create at least one operation for it. See Chapter 10 for details.

Related Topics

- To see an example project in the Tour, see “Organize Your Trading Partners” on page 2-6.
- To create a project within the Tutorial, see “Step 9 - Create a Project” on page 3-26.
- To read about chained operations, see “Working with Chained Operations” on page 10-8.



Chapter 6

Creating Schedule Definitions

Overview

Schedules contain information about when an operation will automatically be activated. The Syncx 6200 Series Appliance lets you define virtually any type of schedule you need, such as every Friday at 5pm, the last Friday of each quarter, or every hour for one day.

Summary of Steps

Follow these steps to create a schedule definition. Details for steps 2-4 are provided in this chapter.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Set the Occurrence
- ❸ Set the Frequency
- ❹ Set the Duration

Set the Occurrence

Follow these steps to create a new schedule. The steps are marked in the figures below.

- ❶ Click on the **Schedules** button in the main navigation bar at the top of the screen.
- ❷ If a new schedule isn't already open, click the **New** button in the toolbar to create a new schedule definition.
- ❸ Enter an appropriate name for your new schedule in the **Schedule Name** field.

Note

The higher the schedule's priority, the higher it is placed into the message queue. Therefore, pending schedules with higher priorities will be processed faster than those with lower priorities.

- ❹ (Optional) If you want to make this schedule a high-priority or low priority, you can change the value in the **Priority** drop-down menu (see Figure 6-1 below).

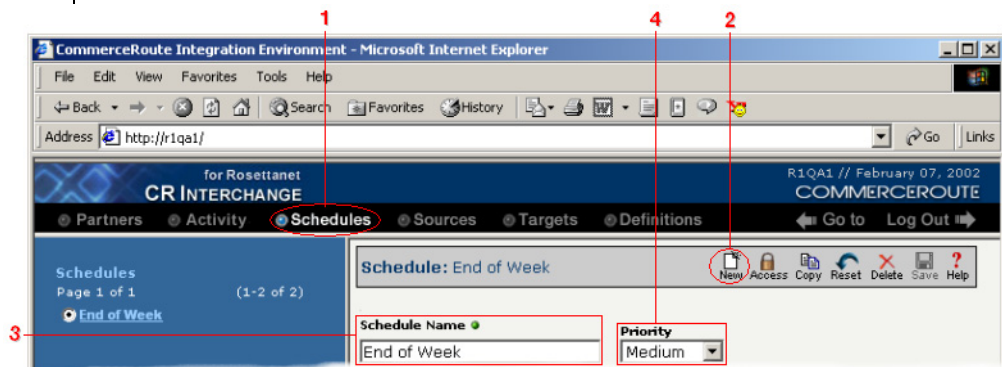


Figure 6-1. Start to define your new schedule by navigating to the **Schedules** page and clicking the **New** button in the toolbar.

Next, choose when this schedule should occur. You have three choices. Follow the option that is appropriate for your schedule.

Option 1: This schedule will activate every day, or every few days

- ❶ Select the **Daily** radio button.
- ❷ Enter a number in the **Every_Days** field to indicate on which number of days (e.g., 1 for every day, 2 for every other day, etc.) the schedule should activate (see Figure 6-2 below).

Figure 6-2. Follow these steps if you are creating a daily schedule.

Option 2: This schedule will activate during a specified set of days of the week

- ❶ Select the **Weekly** radio button.
- ❷ Enter a number in the **Every_Week** field to indicate on which number of week (e.g., 1 for every week, 2 for every other week, etc.) the schedule should activate.
- ❸ Select the appropriate combination of days of the week during which the schedule should activate (see Figure 6-3 below).

Figure 6-3. Follow these steps if you are creating a weekly schedule.

Option 3: This schedule will activate on a monthly basis:

- ❶ Select the **Monthly** radio button.
- ❷ With Option 3, you have two different ways of indicating the activation date(s). Follow the option that is appropriate for your schedule.

Option 3a: Specify the number of the day during the month(s) when

the schedule is to activate

- a. Select the **Day** radio button and enter a number in the field to indicate on which day of the month the schedule should activate.
- b. Enter a number in the **Every_Month** field to indicate on which number of months (e.g., 1 for every month, 2 for every other month, etc.) the schedule should activate (see Figure 6-4 below).

The screenshot shows a configuration window titled 'Occurs'. It has three radio buttons: 'Daily', 'Weekly', and 'Monthly'. The 'Monthly' radio button is selected. To the right of the radio buttons are two input fields: 'Day' and 'of Every'. The 'Day' field contains the number '1'. The 'of Every' field contains the number '3'. To the right of these fields is a dropdown menu labeled 'Month(s)' with 'Month' selected. Red callouts are present: '1' points to the 'Monthly' radio button, '2a' points to the 'Day' field, and '2b' points to the 'of Every' field.

Figure 6-4. Follow these steps if you are creating a monthly schedule.

Option 3b: Choose from first, second, third, fourth, or last of a specific day during the month(s) when the schedule is to activate

- a. Select the second radio button, and select the appropriate combination of days from the drop-down menus.
- b. Enter a number in the **Every_Month** field to indicate on which number of months (e.g., 1 for every month, 2 for every other month, etc.) the schedule should activate (see Figure 6-5 below).

The screenshot shows the same 'Occurs' configuration window. The 'Monthly' radio button is selected. The 'Day' field is a dropdown menu showing 'The Last'. The 'of Every' field is a dropdown menu showing 'Friday'. The 'Month(s)' field is an input field containing 'of Every 3'. Red callouts are present: '1' points to the 'Monthly' radio button, '2a' points to the 'Day' dropdown menu, and '2b' points to the 'of Every' dropdown menu.

Figure 6-5. Alternatively, you can use the drop-down menus to select which day of the month you want.

You have completed Option 3.

Set the Frequency

Once the occurrence has been set, you need to determine the schedule's frequency. You have two choices. Follow the option that is appropriate for your schedule.

Option 1: This schedule should activate only once

- ❶ Select the **Occurs Once At** button.
- ❷ Set the desired time by choosing the appropriate values from the hour, minute, and AM/PM drop-down menus (see Figure 6-6 below).

Daily Frequency

❶ ☒ Occurs once at: 10 : 00 AM

☐ Occurs Every: 1 Hour(s)

Starting at: 01 : 00 AM

Ending at: 01 : 00 AM

❷

Figure 6-6. Use the **Occurs Once At** drop-down menus if your schedule should activate only once.

Option 2: This schedule will repeatedly re-activate for a specified period of time throughout the day

- ❶ Select the **Occurs Every** radio button and enter the time value into the field and select either Minutes or Hours.
- ❷ Set the desired starting and ending times by choosing the appropriate values from the hour, minute, and AM/PM drop-down menus (see Figure 6-7 below).

Daily Frequency

☐ Occurs once at: 10 : 00 AM

❶ ☒ Occurs Every: 15 Minute(s)

Starting at: 08 : 00 AM

Ending at: 05 : 45 PM

❷

Figure 6-7. Use the **Occurs Every** option when your schedule should activate more than once.

Set the Duration

The last section to configure is the schedule's duration. Follow the option that is appropriate for your schedule:

Option 1: This schedule will be valid for a period of time, ending on a specified date

- ❶ Click the calendar button next to the **Select Start Date** field to select the desired start date.
- ❷ Click the **Select End Date** checkbox, then click its calendar button to select the desired end date (see Figure 6-8 below).

The image shows a 'Duration' configuration window. It has two rows. The first row is labeled 'Select Start Date:' and has a calendar icon and a date field showing '9/19/2001'. A red box and the number '1' point to this row. The second row is labeled 'Select End Date:' with a checked checkbox, a calendar icon, and a date field showing '12/31/2001'. A red box and the number '2' point to this row.

Figure 6-8. Use both the **Start Date** and **End Date** calendars to set schedules that have a specific date of expiration.

Option 2: This schedule will not have an ending date

- ❶ Click the calendar button next to the **Select Start Date** field to select the desired start date (see Figure 6-9 below).

The image shows a 'Duration' configuration window. It has two rows. The first row is labeled 'Select Start Date:' and has a calendar icon and a date field showing '9/19/2001'. A red box and the number '1' point to this row. The second row is labeled 'Select End Date:' with an unchecked checkbox, a calendar icon, and an empty date field.

Figure 6-9. Leave the **Select End Date** option off for schedules that will never expire.

What's Next?

If you have just created a schedule, you will need to associate it with one or more operations for it to function. See Chapter 10 for details.

Related Topics

- To see an example schedule in the Tour, see “Working with Schedules” on page 2-13.
- To create a schedule within the Tutorial, see “Step 2 - Create a Schedule” on page 3-3.
- To use a schedule in an operation, see Chapter 10.



Chapter 7

Creating Source Definitions

Overview

Source definitions provide all the necessary details about the nature of your source information and where it is stored. Syncx 6200 Series Appliance Appliances offer a variety of different source definition types as noted in the list below. The steps for how to create each different type of source definition are provided in this chapter.

Syncx 6200 Series Appliance Source Definitions

- Database
- File Share (UNC)
- FTP
- HTTP
- SCP

How to Create a Database Source Definition

Follow these steps to create a new database source definition. Each step is marked in Figure 7-1 below.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Click on the **Sources** button in the main navigation bar at the top of the screen.
- ❸ Click on the **New** button in the toolbar to create a new source definition.
- ❹ Choose **Database** from the **Source Type** drop-down menu.
- ❺ Enter an appropriate name for your new source in the **Source Name** field.
- ❻ Select the appropriate database driver from the **Driver** drop-down menu. Depending upon the driver you select, different fields may become enabled or disabled.
- ❼ (Optional) If you want to set a limit for how long to wait for a successful connection to the database, enter the number of seconds in the **Timeout** field.
- ❽ Enter the database server name (either name or IP address) you want to access into the **Server** field.
- ❾ Enter the name of the database you want to access into the **Database Name** field.
- ❿ (Optional) Enter a username and password into their respective fields that will allow access to your database.
- ⓫ (Optional) If there are any additional parameters that you want to add to your database connection string (such as a non-default port ID), enter them in the **Additional Connect String Parameters** field.
- ⓬ For file-based data sources, enter the appropriate username (or domain name/user) and password information in the **File-Based Database Source Authentication** fields.
- ⓭ Click the **Save** button in the toolbar. Compare your definition to that shown in Figure 7-1 below.
- ⓮ (Optional) If you want to give other users and/or groups access to this definition, click the **Access** button in the toolbar.

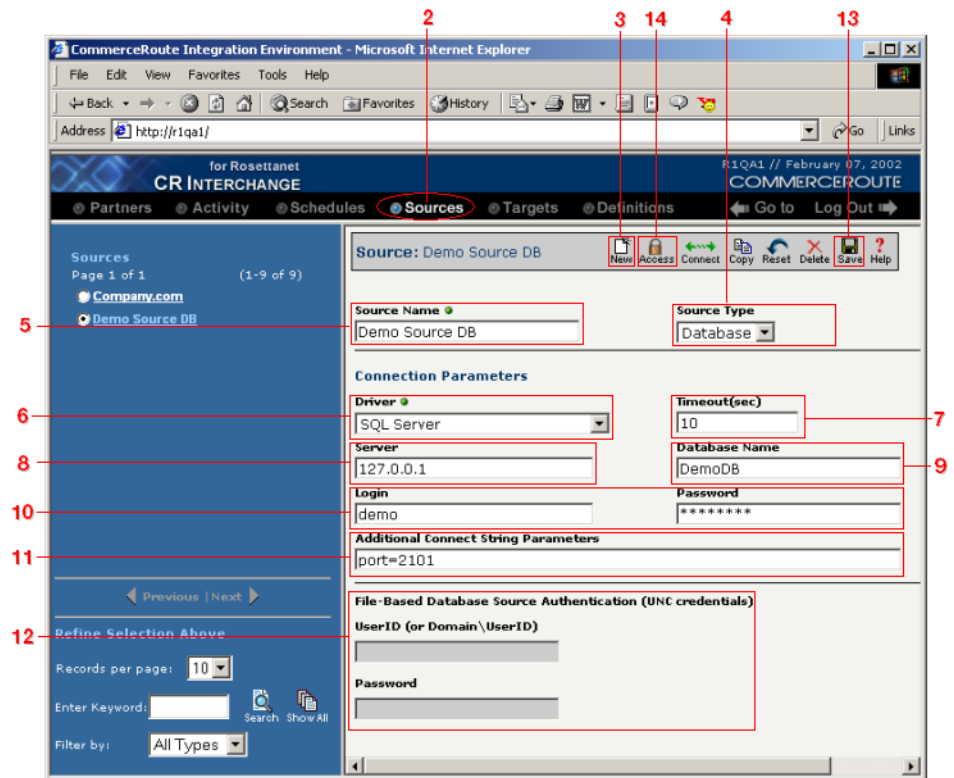


Figure 7-1. Follow the steps listed above to successfully define a new database source.

Related Topics


- To get more information about Databases, see “About Databases” on page 11-5 of the *Reference Guide*.
- For more information about setting user and/or group access to your definition, see Chapter 7, “Permissions” in the *Reference Guide*.
- To create a target Database definition, see “How to Create a Database Target Definition” on page 8-4.
- To use a target definition in an operation, see Chapter 10, “Creating

Operations.”

How to Create a File Share Source Definition

Follow these steps to create a new file share source definition. Each step is marked in Figure 7-2 below.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Click on the **Sources** button in the main navigation bar at the top of the screen.
- ❸ Click on the **New** button in the toolbar to create a new source definition.
- ❹ Select **File Share** from the **Source Type** drop-down menu.
- ❺ Type a new name for the source in the **Source Name** field
- ❻ Enter the name of the file share path in the **Path** field. For example, \\demo\ directs the system to look for a shared network drive called “demo”.
- ❼ (Optional) If you need to enter a login (in the form of domainName\username) and password to access the shared network drive, enter appropriate values here.
- ❽ Enter the name(s) of the file(s) (such as BillofSale.txt, or *.*) into in the **Directory File Filter** field that contain your source information.
- ❾ (Optional) If you want to rename your source file(s) once it has been used in a transformation, enter the new name into the **Rename File To** field.
- ❿ (Optional) If this File Share source will be used with a mail merge for e-mail-based target messages, select the appropriate definition from the **Source Document Definition** drop-down menu.
- ⓫ (Optional) If your environment uses Pretty Good Privacy (PGP), select the **Decryption (PGP)** checkbox and enter a valid PGP passphrase.
- ⓬ (Optional) If you have headers and/or footers in your file, enter the number of lines into the appropriate field that you want the system to ignore.
- ⓭ Click the **Save** button in the toolbar. Compare your definition to that shown in Figure 7-2 below.
- ⓮ (Optional) If you want to give other users and/or groups access to this definition, click the **Access** button in the toolbar.

 **Tip:** You can use some variables when renaming your source file. See “File Name Variables” below for details.

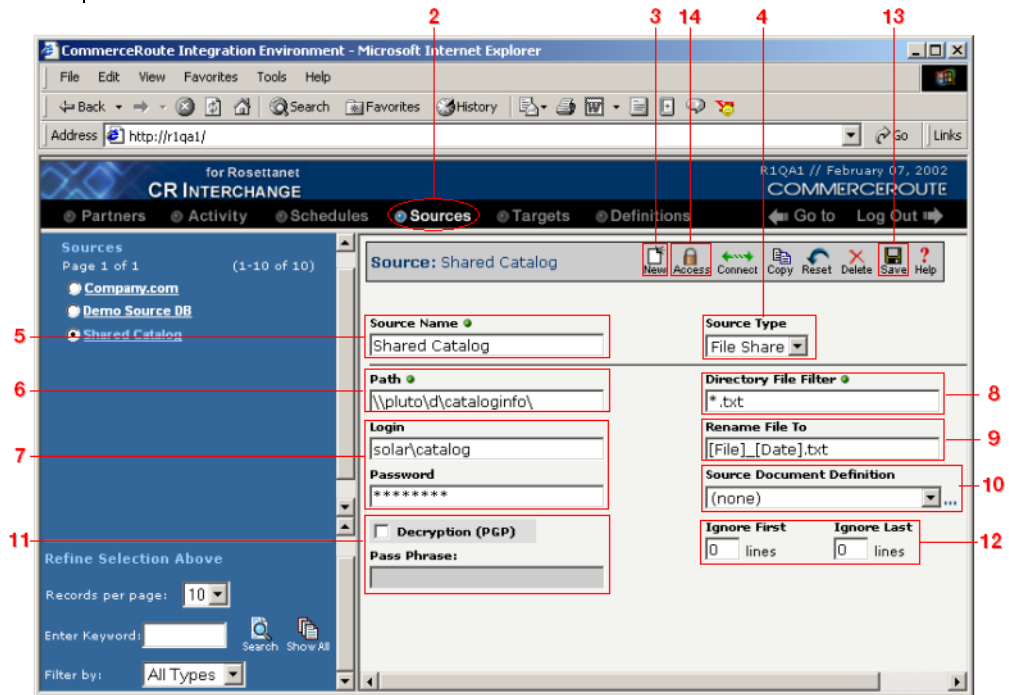


Figure 7-2. Follow the steps listed above to successfully define a new File Share source.

File Name Variables

The Syncx Integration Appliance provides four special file name variables that you can use when creating target files and/or renaming source files. Entered into a source definition's **Rename File To** field, or a target definition's **File Name** field, these variables can be used to generate unique file names.

You can use the following variables (which the system identifies by the surrounding [] brackets) when declaring your file name(s):

- [Date] for the current date.
- [Ext] to match the source file's extension.
- [File] for the name of the file as recorded by the source.

- [Time] for the current time.

For example, entering a name of Demo_[Date] . [Ext] would create a file name of Demo_07142001.txt, assuming that the source file's extension was .txt, and the date of the transformation was July 14, 2001.

Related Topics

- To get more information about File Share, see “About File Share” on page 11-27 of the *Reference Guide*.
- For more information about setting user and/or group access to your definition, see Chapter 7, “Permissions” in the *Reference Guide*.
- To create a target File Share definition, see “How to Create a File Share Target Definition” on page 8-7.
- To use a target definition in an operation, see Chapter 10, “Creating Operations”.

How to Create an FTP Source Definition

Follow these steps to create a new FTP source definition. Each step is marked in Figure 7-3 below.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Click on the **Sources** button in the main navigation bar at the top of the screen.
- ❸ Click on the **New** button in the toolbar to create a new source definition.
- ❹ Select “FTP” from the **Source Type** drop-down menu.
- ❺ Enter a unique name for your source definition in the **Source Name** field.
- ❻ Enter a valid FTP server location in the **FTP Host** field.
- ❼ Provide the proper Port ID in the **Port** field.
- ❽ Enter a valid root location in the **FTP Host Path** field. The path should start and end with a /, like in /catalogs/.
- ❾ Enter an appropriate login and password for the FTP server in their respective fields.
- ❿ Indicate which file(s) contain your source information (such as file.txt, *.doc, or *.txt) on your FTP server in the **File Filter** field.
- ⓫ (Optional) If you want to rename your source file(s), enter the new name into the **Rename File To** field.
- ⓬ (Optional) If you have headers and/or footers in your file, enter the number of lines into the appropriate field that you want the system to ignore.
- ⓭ (Optional) If your environment uses Pretty Good Privacy (PGP), select the **Decryption (PGP)** checkbox and enter a valid PGP passphrase.
- ⓮ If your files are ASCII-based, choose the **ASCII** transfer type radio button. For all other file types, choose **Binary** transfer type.
- ⓯ (Optional) If the FTP server uses passive mode, select the **Passive Mode** checkbox.
- ⓰ (Optional) If you want the Appliance to use an alternate FTP mechanism (NcFTP), select the appropriate set of checkboxes in the **Alternate FTP** area.
- ⓱ Click the **Save** button in the toolbar. Compare your definition to that shown in Figure 7-3 below.
- ⓲ (Optional) If you want to give other users and/or groups access to this definition, click the **Access** button in the toolbar.

💡 **Tip:** You can use some variables when renaming your source file. See “File Name Variables” below for details.

💡 **Tip:** For more information about NcFTP, see “Alternative FTP Options” on page 11-28 in the *Reference Guide*.

CommerceRoute Integration Environment - Microsoft Internet Explorer

Address: http://crdoc.commercerooute.com/default.asp

CRDOC // April 08, 2002
COMMERCEROUTE

Partners Activity Schedules **Sources** Targets Definitions

Sources
Page 1 of 1 (1-1 of 1)
Demo FTP Source

Source: Demo FTP Source

Source Name: Demo FTP Source

Source Type: FTP

FTP Host: ftp.demo.com

Port: 21

FTP Host Path: /catalog/

Login: anonymous

Password: *****

File Filter: *.txt

Rename File To:

Ignore First: 1 lines

Ignore Last: 0 lines

Decryption (PGP)

Pass Phrase:

Transfer Type: Binary (selected), ASCII

Passive Mode

Alternate FTP

Use NcFTP

Disable MDTM Command

Disable flags in LIST Commands

Use NcFTP Firewall

Disable FEAT Command

Records per page: 10

Enter Keyword: Search Show All

Filter by: All Types

Figure 7-3. Follow the steps listed above to successfully define a new FTP source.

File Name Variables

The Synx Integration Appliance provides four special file name variables that you can use when creating target files and/or renaming source files. Entered into a source definition's **Rename File To** field, or a target definition's **File Name** field, these variables can be used to generate unique file names.

You can use the following variables (which the system identifies by the surrounding [] brackets) when declaring your file name(s):

- [Date] for the current date.

- [Ext] to match the source file's extension.
- [File] for the name of the file as recorded by the source.
- [Time] for the current time.

For example, entering a name of Demo_[Date].[Ext] would create a file name of Demo_07142001.txt, assuming that the source file's extension was .txt, and the date of the transformation was July 14, 2001.

Related Topics

- To get more information about FTP, see “About FTP” on page 11-28 of the *Reference Guide*.
- To get more information about PGP, see “About PGP” on page 11-33 of the *Reference Guide*.
- For more information about setting user and/or group access to your definition, see Chapter 7, “Permissions” in the *Reference Guide*.
- To create a target FTP definition, see “How to Create an FTP Target Definition” on page 8-10.
- To use a target definition in an operation, see Chapter 10, “Creating Operations.”

How to Create an HTTP Source Definition

Follow these steps to create a new HTTP source definition. Each step is marked in Figure 7-4 below.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Click on the **Sources** button in the main navigation bar at the top of the screen.
- ❸ Click on the **New** button in the toolbar to create a new source definition.
- ❹ Select “HTTP” from the **Source Type** drop-down menu.
- ❺ Enter a unique name for your source definition in the **Source Name** field.
- ❻ (Optional) Enter an appropriate login and password for the Web server in their respective fields.
- ❼ Enter a valid URL address in the **URL** field.
- ❽ (Optional) If you want to use Secure HTTP (HTTPS) and you want to provide a client certificate for authentication purposes, enter the name of the security certificate in the **HTTPS Certificate Name** field.
- ❾ Click the **Save** button in the toolbar. Compare your definition to that shown in Figure 7-4 below.
- ❿ (Optional) If you want to give other users and/or groups access to this definition, click the **Access** button in the toolbar.

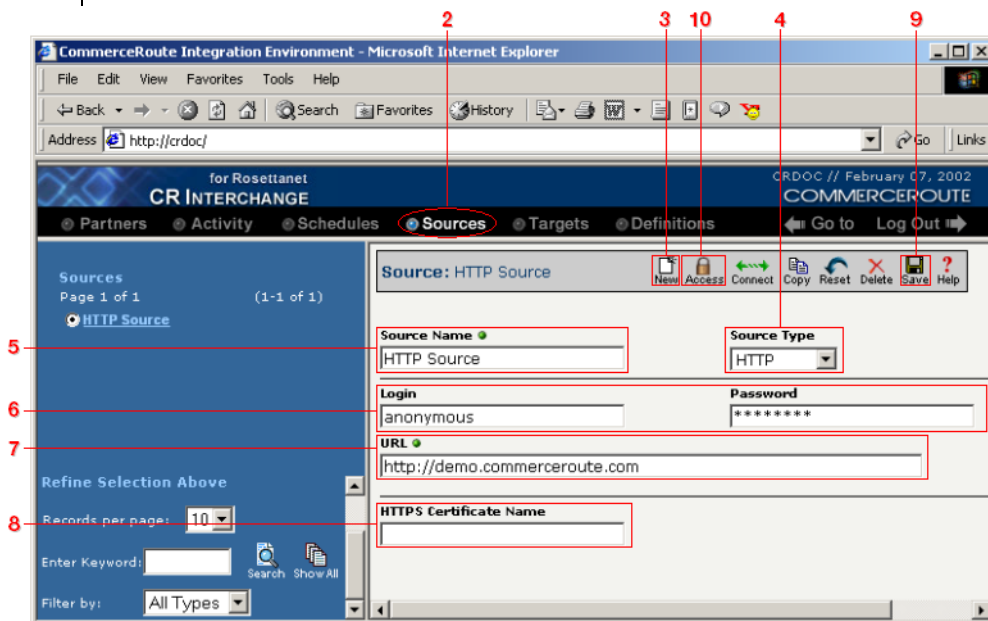


Figure 7-4. Follow the steps listed above to successfully define a new HTTP source.

Related Topics

- To get more information about HTTP, see “About HTTP” on page 11-31 of the *Reference Guide*.
- For more information about setting user and/or group access to your definition, see Chapter 7, “Permissions” in the *Reference Guide*.
- To create a target HTTP definition, see “How to Create an HTTP Target Definition” on page 8-14.
- To use a target definition in an operation, see Chapter 10, “Creating Operations.”

How to Create an SCP Source Definition

Follow these steps to create a new SCP source definition. Each step is marked in Figure 7-5 below.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Click on the **Sources** button in the main navigation bar at the top of the screen.
- ❸ Click the **New** button in the toolbar to create a new source definition.
- ❹ Select “SCP” from the **Source Type** drop-down menu.
- ❺ Enter a unique name for your source definition in the **Source Name** field.
- ❻ Enter a valid SCP server location in the **Host** field.
- ❼ Enter a valid root location in the **Host Path** field. The path should start and end with a “/”, like in /catalogs/.
- ❽ Enter an appropriate login and password for the SCP server in their respective fields.
- ❾ Indicate which file(s) contain your source information (such as `file.txt`, `*.doc`, or `*.txt`) on your SCP server in the **File Name** field.
- ❿ (Optional) If you have headers and/or footers in your file, enter the number of lines into the appropriate field that you want the system to ignore.
- ⓫ Click the **Save** button in the toolbar. Compare your definition to that shown in Figure 7-5 below.
- ⓬ (Optional) If you want to give other users and/or groups access to this definition, click the **Access** button in the toolbar.

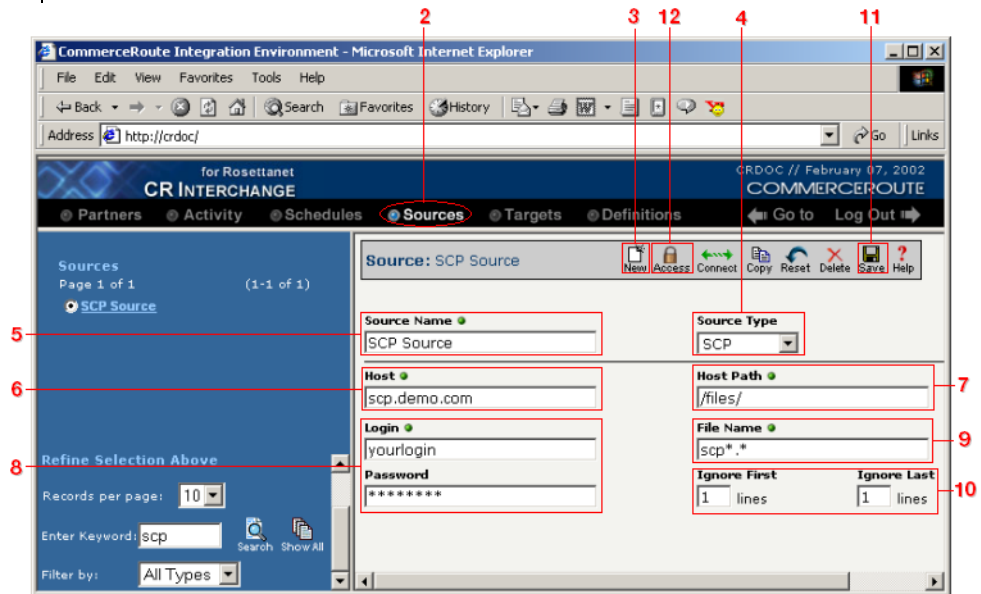


Figure 7-5. Follow the steps listed above to successfully define a new SCP source.

Related Topics

- To get more information about SCP, see “About SCP” on page 11-39 of the *Reference Guide*.
- For more information about setting user and/or group access to your definition, see Chapter 7, “Permissions” in the *Reference Guide*.
- To create a target SCP definition, see “How to Create an SCP Target Definition” on page 8-20.
- To use a source definition in an operation, see Chapter 10, “Creating Operations.”

Chapter 8

Creating Target Definitions

Overview

Target definitions provide all the necessary details about how and where you plan to send your business information. Syncx 6200 Series Appliance offers many different target definition types as noted in the list below. The steps for how to create each different type of target definition are provided in this chapter.

Syncx 6200 Series Appliance Target Definitions

- CRbuilder Process
- Database
- File Share (UNC)
- FTP
- HTTP
- SCP
- SMTP

How to Create a CRbuilder Process Target Definition

Follow these steps to create a new CRbuilder Process target definition. Each step is marked in Figure 8-1 below.

- 1 Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- 2 Click on the **Targets** button in the main navigation bar at the top of the screen.
- 3 Click on the **New** button in the toolbar to create a new target definition.
- 4 Select **CRbuilder Process** from the **Target Type** drop-down menu.
- 5 Type a new name for the target in the **Target Name** field.
- 6 Select the name of the CRbuilder process that you want to invoke from the **Process Name** drop-down menu.
- 7 Click the **Save** button in the toolbar. Compare your definition to that shown in Figure 8-1 below.
- 8 (Optional) If you want to give other users and/or groups access to this definition, click the **Access** button in the toolbar.

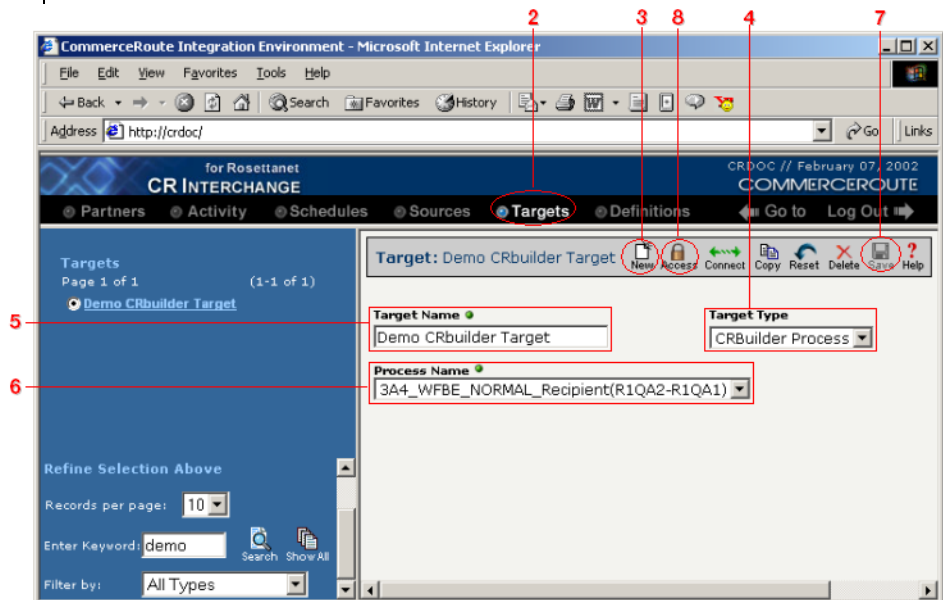


Figure 8-1. Follow the steps listed above to successfully define a new CRbuilder Process target.

Related Topics

- To get more information about CRbuilder processes, see the “Creating Private Processes” Section, starting on Chapter 25.
- For more information about setting user and/or group access to your definition, see Chapter 7, “Permissions” in the *Reference Guide*.
- To use a target definition in an operation, see Chapter 10, “Creating Operations.”

How to Create a Database Target Definition

Follow these steps to create a new database target definition. Each step is marked in Figure 8-2 below.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Click on the **Targets** button in the main navigation bar at the top of the screen.
- ❸ Click on the **New** button in the toolbar to create a new target definition.
- ❹ Choose **Database** from the **Target Type** drop-down menu.
- ❺ Enter an appropriate name for your new target in the **Target Name** field.
- ❻ Select the appropriate database driver from the **Driver** drop-down menu. Depending upon the driver you select, different fields may become enabled or disabled.
- ❼ (Optional) If you want to set a limit for how long to wait for a successful connection to the database, enter the number of seconds in the **Timeout** field.
- ❽ Enter the database server name (typically a name or IP address) you want to access into the **Server** field.
- ❾ For database types where the database name is not provided by the Server name, enter the appropriate value into the **Database Name** field.
- ❿ (Optional) Enter a username and password into their respective fields that will allow access to your database.
- ⓫ (Optional) If there are any additional parameters that you want to add to your database connection string (such as a non-default port ID), enter them in the **Additional Connect String Parameters** field.
- ⓬ For file-based data targets, enter the appropriate username (or domain name/user) and password information in the **File-Based Database Source Authentication** fields.
- ⓭ Click the **Save** button in the toolbar. Compare your definition to that shown in Figure 8-2 below.
- ⓮ (Optional) If you want to give other users and/or groups access to this definition, click the **Access** button in the toolbar.

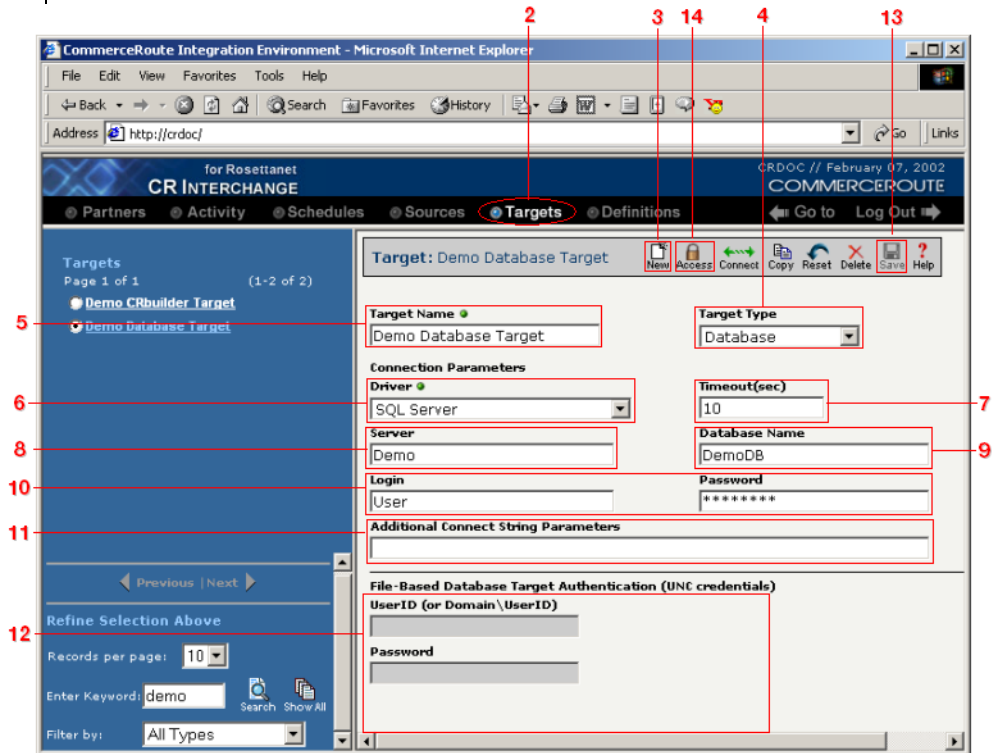


Figure 8-2. Follow the steps listed above to successfully define a new database target.

Related Topics


- To get more information about databases, see “About Databases” on page 11-5 of the *Reference Guide*.
- For more information about setting user and/or group access to your definition, see Chapter 7, “Permissions” in the *Reference Guide*.
- To create a source Database definition, see “How to Create a Database Source Definition” on page 7-2.
- To use a target definition in an operation, see Chapter 10, “Creating

Operations.”

How to Create a File Share Target Definition

Follow these steps to create a new file share target definition. Each step is marked in Figure 8-3 below.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Click on the **Targets** button in the main navigation bar at the top of the screen.
- ❸ Click on the **New** button in the toolbar to create a new target definition.
- ❹ Select **File Share** from the **Target Type** drop-down menu.
- ❺ Type a new name for the target in the **Target Name** field.
- ❻ Enter the name of the file share path in the **Path** field. For example, `\\demo\` directs the system to look for a shared network drive called “demo”.
- ❼ Enter the file name(s) (such as `BillofSale.txt`) that will contain your target information in the **File Name** field.
- ❽ (Optional) If you need to enter a login (in the form of `domainName\username`) and password to access the shared network drive, enter appropriate values here.
- ❾ (Optional) If your environment uses Pretty Good Privacy (PGP), select the **Encryption (PGP)** checkbox and enter a valid user ID.
- ❿ Click the **Save** button in the toolbar. Compare your definition to that shown in Figure 8-3 below.
- ⓫ (Optional) If you want to give other users and/or groups access to this definition, click the **Access** button in the toolbar.

 **Tip:** You can use some variables when naming your target text file. See “File Name Variables” below for details.

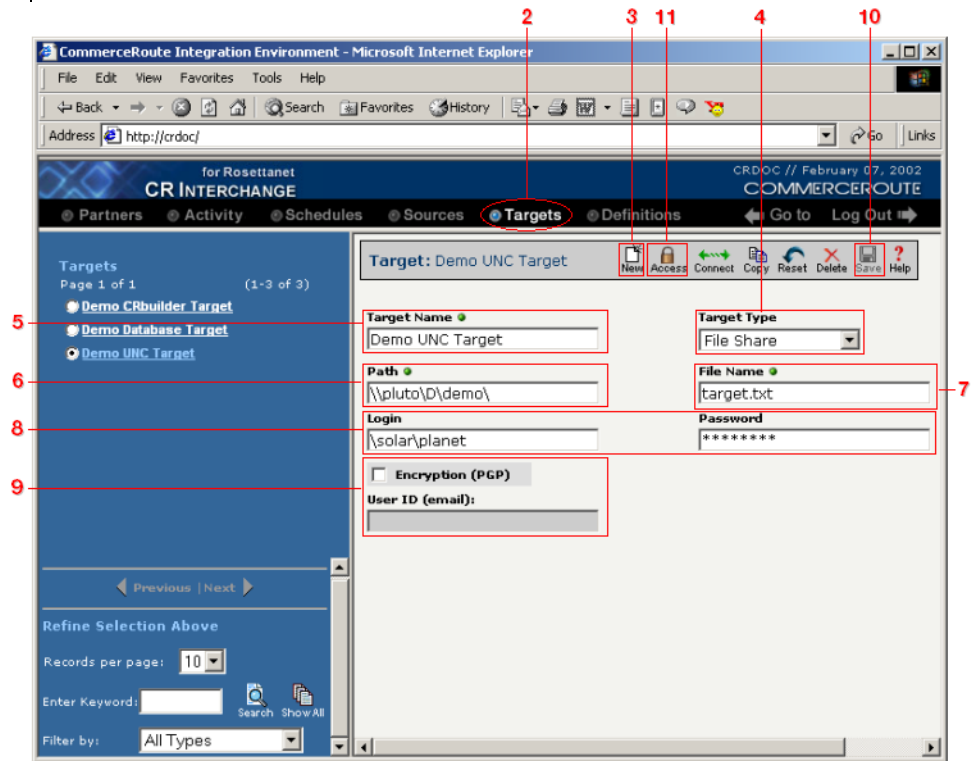


Figure 8-3. Follow the steps listed above to successfully define a new File Share target.

File Name Variables

The Syncx Integration Appliance provides four special file name variables that you can use when creating target files and/or renaming source files. Entered into a source definition's **Rename File To** field, or a target definition's **File Name** field, these variables can be used to generate unique file names.

You can use the following variables (which the system identifies by the surrounding [] brackets) when declaring your file name(s):

- [Date] for the current date.
- [Ext] to match the source file's extension.


- [File] for the name of the file as recorded by the source.
- [Time] for the current time.


For example, entering a name of Demo_[Date].[Ext] would create a file name of Demo_07142001.txt, assuming that the source file's extension was .txt, and the date of the transformation was July 14, 2001.


Related Topics

- To get more information about File Share, see “About File Share” on page 11-27 of the *Reference Guide*.
- For more information about setting user and/or group access to your definition, see Chapter 7, “Permissions” in the *Reference Guide*.
- To create a source File Share definition, see “How to Create a File Share Source Definition” on page 7-5.
- To use a target definition in an operation, see Chapter 10, “Creating Operations.”

How to Create an FTP Target Definition

 **Tip:** You can use some variables when naming your target text file. See “File Name Variables” below for details.

 **Tip:** For more information about temporary file names, see “Disable Rename” on page 8-12.

 **Tip:** For more information about NcFTP, see “Alternative FTP Options” on page 11-28 in the *Reference Guide*.

Follow these steps to create a new FTP target definition. Each step is marked in Figure 8-4 below.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Click on the **Targets** button in the main navigation bar at the top of the screen.
- ❸ Click on the **New** button in the toolbar to create a new target definition.
- ❹ Select “FTP” from the **Target Type** drop-down menu.
- ❺ Enter a unique name for your target definition in the **Target Name** field.
- ❻ Enter a valid FTP server location in the **FTP Host** field, e.g., `ftp.company.com`.
- ❼ Provide the proper Port ID in the **Port** field.
- ❽ Enter a valid root location in the **FTP Host Path** field. The path should start and end with a “/”, like in `/target/`.
- ❾ Enter the file name(s) (such as `BillofSale.txt`) that will contain your target information in the **File Name** field.
- ❿ Enter an appropriate login and password for the FTP server in their respective fields.
- ⓫ If your files are ASCII-based, choose the **ASCII** transfer type radio button. For all other file types, choose **Binary** transfer type.
- ⓬ (Optional) If your environment uses Pretty Good Privacy (PGP), select the **Encryption (PGP)** checkbox and enter a valid user ID.
- ⓭ (Optional) If the FTP server uses passive mode, select the **Passive Mode** checkbox.
- ⓮ If the FTP server in this new definition does not allow file renames, select the **Disable Rename** checkbox.
- ⓯ (Optional) If you want the Appliance to use an alternate FTP mechanism (NcFTP), select the appropriate set of checkboxes in the **Alternate FTP** area.
- ⓰ Click the **Save** button in the toolbar. Compare your definition to that shown in Figure 8-4 below.
- ⓱ (Optional) If you want to give other users and/or groups access to this definition, click the **Access** button in the toolbar.

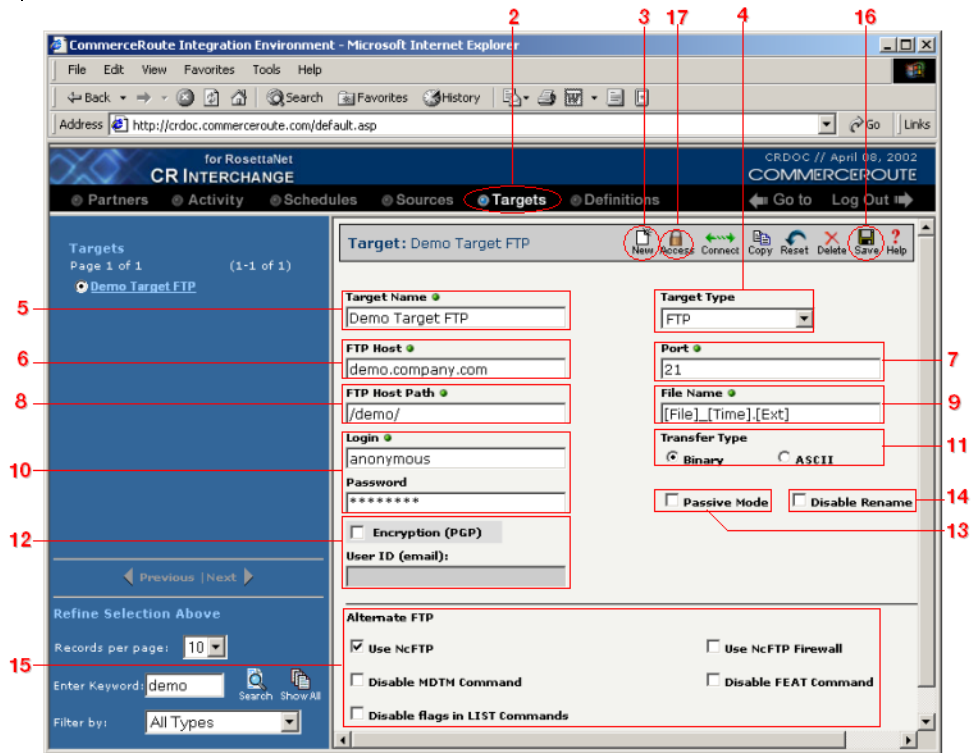


Figure 8-4. Follow the steps listed above to successfully define a new FTP target.

File Name Variables

The Syncx Integration Appliance provides four special file name variables that you can use when creating target files and/or renaming source files. Entered into a source definition's **Rename File To** field, or a target definition's **File Name** field, these variables can be used to generate unique file names.

You can use the following variables (which the system identifies by the surrounding `[]` brackets) when declaring your file name(s):

- `[Date]` for the current date.
- `[Ext]` to match the source file's extension.

- [File] for the name of the file as recorded by the source.
- [Time] for the current time.

For example, entering a name of Demo_[Date] . [Ext] would create a file name of Demo_07142001.txt, assuming that the source file's extension was .txt, and the date of the transformation was July 14, 2001.

Disable Rename

Automated systems can be configured to activate as soon as a new file of an expected name is written to an FTP server. But in cases where there is a large amount of data, the system may attempt to process the file before all its contents have been written to the server.

As an example, a 10 gigabyte file called "Orders.txt" is sent to an FTP server. The FTP server receives the upload request, creates an empty file called "Orders.txt", and starts to load the data into it. But within a few seconds, an automated system discovers the "Orders.txt" file and attempts to process it, even though the bulk of the data hasn't yet been written to the file.

To prevent this error condition, Syncx Appliances by default use a temporary filename when sending data to an FTP server. Once the file is completely written to the server, the Appliance changes the temporary name to the name specified in the FTP target definition.

However, some FTP servers will not permit changing filenames. For these servers, select the **Disable Rename** checkbox in the target definition to have the Appliance to create the file on the FTP server using the name specified in the target definition.

Related Topics

- To get more information about FTP, see "About FTP" on page 11-28 of the *Reference Guide*.
- To get more information about PGP, see "About PGP" on page 11-33 of the *Reference Guide*.
- For more information about setting user and/or group access to your definition, see Chapter 7, "Permissions" in the *Reference Guide*.
- To create a source FTP definition, see "How to Create an FTP Source

Definition” on page 7-8.

- To use a target definition in an operation, see Chapter 10, “Creating Operations.”

How to Create an HTTP Target Definition

Follow these steps to create a new HTTP target definition. Each step is marked in Figure 8-5 below.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Click on the **Targets** button in the main navigation bar at the top of the screen.
- ❸ Click on the **New** button in the toolbar to create a new target definition.
- ❹ Select “HTTP” from the **Target Type** drop-down menu.
- ❺ Enter a unique name for your target definition in the **Target Name** field.
- ❻ (Optional) Enter an appropriate login and password for the Web server in their respective fields.
- ❼ Enter a valid URL address in the **URL** field. (The address can be either an HTTP or an HTTPS URL.)
- ❽ (Optional) If you want to store the response from the Web server in another (pre-defined) target, select the appropriate target's name in the **Target Location for Results** field.
- ❾ (Optional) If you want to use Secure HTTP (HTTPS) and you want to provide a client certificate for authentication purposes, enter the name of the security certificate in the **HTTPS Certificate Name** field.
- ❿ Click the **Save** button in the toolbar. Compare your definition to that shown in Figure 8-5 below.
- ⓫ (Optional) If you want to give other users and/or groups access to this definition, click the **Access** button in the toolbar.



Tip: See “Storing/Redirecting an HTTP Response” below for more information about Target Location for Results.

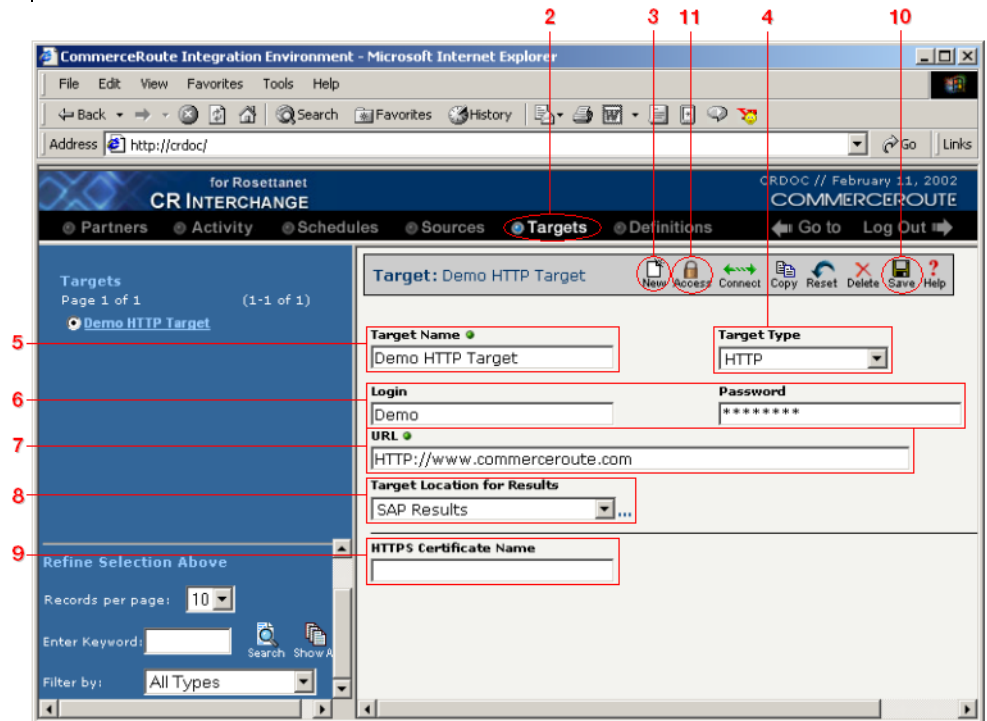


Figure 8-5. Follow the steps listed above to successfully define a new HTTP target.

Storing/Redirecting an HTTP Response


Since Web servers respond to posts/requests (such as a request to get a text data file), this “response” from the Web server (e.g., the data file) can be treated as a target.


The optional **Target Location for Results** drop-down menu is used to select a pre-defined target that will receive whatever data file that is contained in the Web server's response. Note that because this target definition will receive its data from a Web server, the only appropriate types of target definitions you can select are FTP, File Share, or SCP.

Related Topics

- To get more information about HTTP, see “About HTTP” on page 11-31 of the *Reference Guide*.
- For more information about setting user and/or group access to your definition, see Chapter 7, “Permissions” in the *Reference Guide*.
- To create a source HTTP definition, see “How to Create an HTTP Source Definition” on page 7-11.
- To use a target definition in an operation, see Chapter 10, “Creating Operations.”

How to Create an SAP Target Definition

 **Note:** SAP is an option available only in some Syncx 6200 Series Appliance Appliances. Your Appliance may or may not display this functionality.

 **Tip:** See “Storing/Redirecting an SAP Response” below for more information about Target Location for Results.

Follow these steps to create a new SAP target definition. Each step is marked in Figure 8-6 below.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Click on the **Targets** button in the main navigation bar at the top of the screen.
- ❸ Click on the **New** button in the toolbar to create a new target definition.
- ❹ Select “SAP” from the **Target Type** drop-down menu.
- ❺ Enter a unique name for your source definition in the **Target Name** field.
- ❻ Enter a valid SAP server location in the **Application Server** field.
- ❼ Enter the proper system number (this should be a 2 digit number) into the **System Number** field.
- ❽ Identify which language you are using by entering a 1 or 2-character string into the **Language** field. (For example, “English” is typically identified by the value E or EN.)
- ❾ Enter an appropriate user ID and password for the SAP server in their respective fields.
- ❿ Enter the proper client number (this should be a 3-digit number) into the **Client Number** field.
- ⓫ (Optional) If the SAP system is using load balancing, enter the appropriate name into the **Group Logon** field.
- ⓫ (Optional) If you want to store the response from the SAP server in another (pre-defined) target, select the appropriate target's name in the **Target Location for Results** field.

- 13 Click the **Save** button in the toolbar. Compare your definition to that shown in Figure 8-6 below.
- 14 (Optional) If you want to give other users and/or groups access to this definition, click the **Access** button in the toolbar.

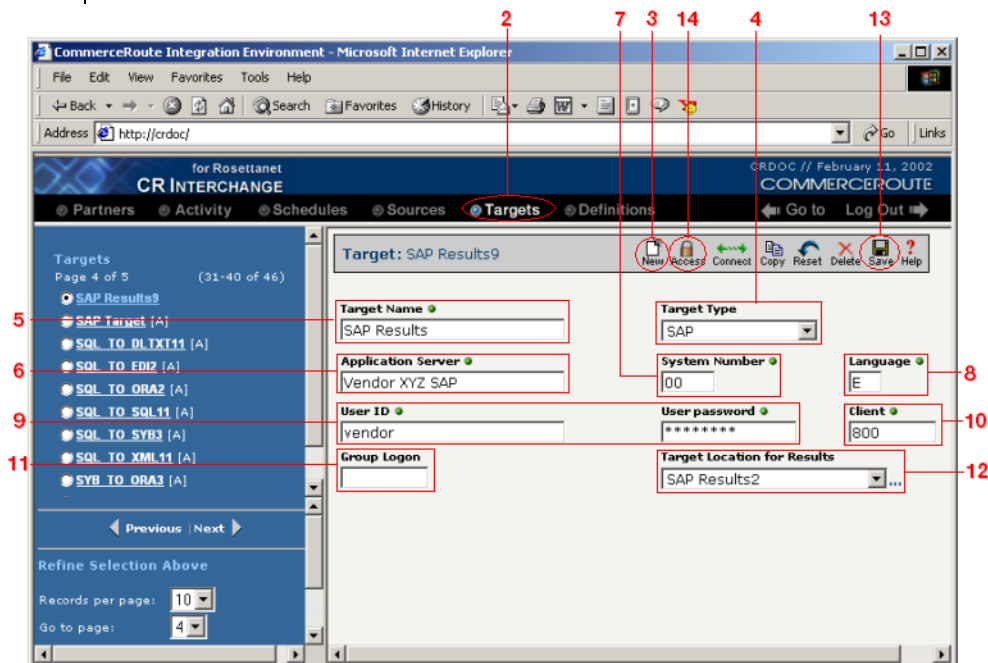




Figure 8-6. Follow the steps listed above to successfully define a new SAP target.

 **Note:** Because the results of the SAP RFC/BAPI call are XML-based, the only appropriate types of target definitions you can select are FTP, File Share, or SCP.

 **Tip:** See “File Name Variables” on page 8-8 for more details about file name variables.

Storing/Redirecting an SAP Response

Since SAP servers can respond to requests, this “response” from the SAP server can be treated as a target.

The optional **Target Location for Results** drop-down menu is used to select a pre-defined target that will receive whatever data file that is contained in the SAP server’s response.

If you chose to use this option, any operation that uses this SAP definition as its target will generate the following files and store them on the specified server:

- `<Targetname>.xml` is the SAP output file, where `<Targetname>` is the filename of the target you selected in the **Target Location for Results** drop-down menu.

As an example, you could have an operation that transforms a text file called `sample.txt` to an SAP target. If the SAP target’s file name was set to `[File]_[Time].xml`, then the output file would be labelled `sample_143854.xml`, as `sample` was the name of the source file and `143854` was a time stamp (of 2:38:54 pm).

- The SAP file’s corresponding DTD file that was used to define the SAP environment.


Related Topics

- To get more information about SAP, see “About SAP” on page 11-34 of the *Reference Guide*.
- To see how to indirectly use SAP as a source, see “SAP as a Source” on page 11-37 in the *Reference Guide*.
- For more information about setting user and/or group access to your definition, see Chapter 7, “Permissions” in the *Reference Guide*.
- To use a target definition in an operation, see Chapter 10, “Creating Operations.”

How to Create an SCP Target Definition

Follow these steps to create a new SCP target definition. Each step is marked in Figure 8-7 below.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Click on the **Targets** button in the main navigation bar at the top of the screen.
- ❸ Click on the **New** button in the toolbar to create a new target definition.
- ❹ Select “SCP” from the **Target Type** drop-down menu.
- ❺ Enter a unique name for your source definition in the **Target Name** field.
- ❻ Enter a valid SCP server location in the **Host** field.
- ❼ Enter a valid root location in the **Host Path** field. The path should start and end with a “/”, like in /catalogs/.
- ❽ Enter an appropriate login and password for the SCP server in their respective fields.
- ❾ Enter the file name(s) (such as `BillofSale.txt`) that will contain your target information in the **File Name** field.
- ❿ Click the **Save** button in the toolbar. Compare your definition to that shown in Figure 8-7 below.
- ⓫ (Optional) If you want to give other users and/or groups access to this definition, click the **Access** button in the toolbar.

 **Tip:** You can use some variables when naming your target text file. See “File Name Variables” below for details.

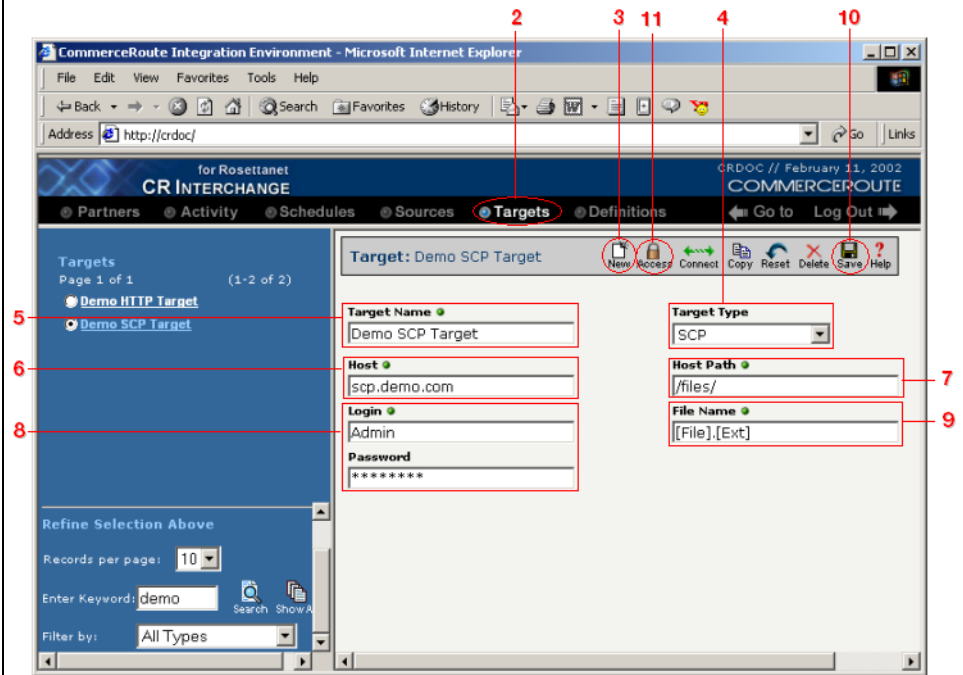


Figure 8-7. Follow the steps listed above to successfully define a new SCP target.

File Name Variables

The Syncx Integration Appliance provides four special file name variables that you can use when creating target files and/or renaming source files. Entered into a source definition's **Rename File To** field, or a target definition's **File Name** field, these variables can be used to generate unique file names.

You can use the following variables (which the system identifies by the surrounding `[]` brackets) when declaring your file name(s):

- `[Date]` for the current date.
- `[Ext]` to match the source file's extension.
- `[File]` for the name of the file as recorded by the source.

- [Time] for the current time.

For example, entering a name of Demo_[Date] . [Ext] would create a file name of Demo_07142001.txt, assuming that the source file's extension was .txt, and the date of the transformation was July 14, 2001.

Related Topics

- To get more information about SCP, see “About SCP” on page 11-39 of the *Reference Guide*.
- For more information about setting user and/or group access to your definition, see Chapter 7, “Permissions” in the *Reference Guide*.
- To create a source SCP definition, see “How to Create an SCP Source Definition” on page 7-13.
- To use a target definition in an operation, see Chapter 10, “Creating Operations.”

How to Create an SMTP Target Definition

Follow these steps to create a new SMTP target definition. Each step is marked in Figure 8-8 below.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Click on the **Targets** button in the main navigation bar at the top of the screen.
- ❸ Click on the **New** button in the toolbar to create a new target definition.
- ❹ Select **SMTP** from the **Target Type** drop-down menu.
- ❺ Type a new name for the target in the **Target Name** field.
- ❻ Select the pre-defined target message that you want to use from the **SMTP Message** drop-down menu.
- ❼ Click the **Save** button in the toolbar. Compare your definition to that shown in Figure 8-8 below.
- ❽ (Optional) If you want to give other users and/or groups access to this definition, click the **Access** button in the toolbar.

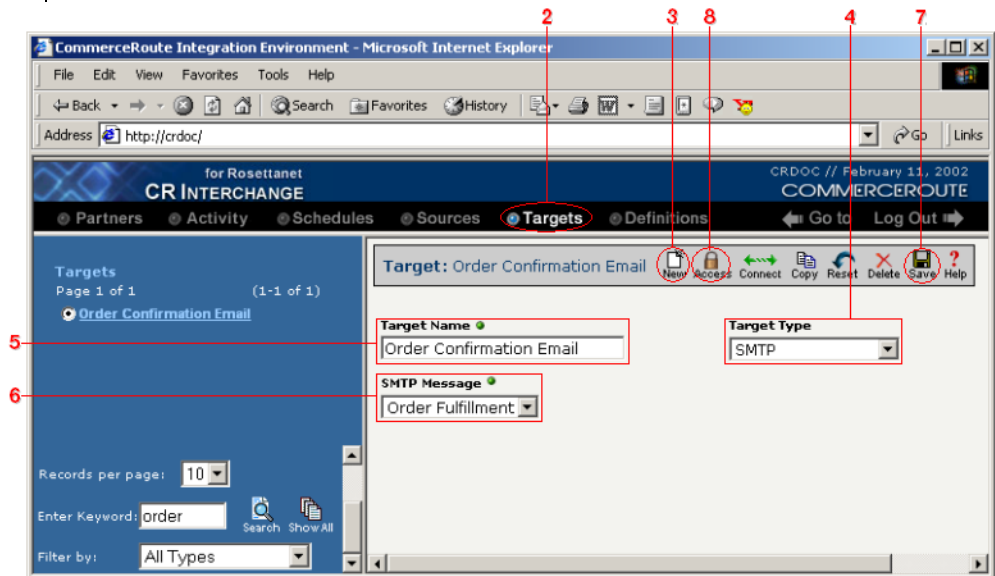


Figure 8-8. Follow the steps listed above to successfully define a new SMTP target.

Related Topics

- For more information about setting user and/or group access to your definition, see Chapter 7, “Permissions” in the *Reference Guide*.
- To create a target message definition, see “Creating Target Messages” on page 5-1 in the *Reference Guide*.
- To use a SMTP target in a mail merge, see “Mail Merge” on page 6-2 in the *Reference Guide*.
- To use a target definition in an operation, see Chapter 10, “Creating Operations.”

Chapter 9

Creating Document Definitions

Overview

Document definitions are used to define flat (simple) and complex text files that will be used either as a source or target in a transformation. Syncx 6200 Series Appliance supports simple and complex files in delimited or fixed-length formats. The steps for how to create these document definitions are detailed in this chapter.

Syncx 6200 Series Appliance Document Definitions

- Simple Delimited File
- Simple Fixed-Length File
- Complex Delimited File
- Complex Fixed-Length File

How to Create a Document Definition

Follow these steps to create a document definition. The steps are marked in the figures below.

- 1 Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- 2 Click the **Definitions** button in the navigation bar.
- 3 Select the **Documents** tab in the upper-left corner of the Definitions screen.
- 4 Click the **New** button in the toolbar (see Figure 9-1 below).

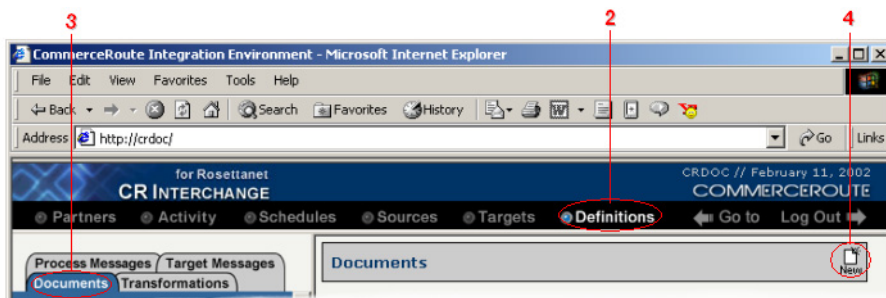


Figure 9-1. Start creating your new document definition by navigating to the **Definitions** page and selecting the **Documents** tab.

What you do next depends on the type of document definition you want to create. You have four choices: follow the option that is appropriate for your document.

Working with Simple Text Documents

Simple text documents can either be based upon a delimited structure (such as commas or tabs), or they can use fixed-length fields. Follow the option that is appropriate for your text file:

Character-delimited Simple Text Documents

Follow these steps to define a character-delimited simple text document:


- ❶ Enter an appropriate name for your new document definition in the **Document Name** field.
- ❷ Choose the **Simple Text Document** radio button in the **Document Type** region.
- ❸ Choose the **Character Delimited** radio button in the **Document Format** region.
- ❹ Compare your work to that shown in Figure 9-2 below, then click the **Create** button to continue.


The screenshot shows a window titled "Document" with a header bar containing "Reset", "Delete", and "Help" icons. The main content area has three sections:


- Enter Document Name:** A text input field containing "Simple Delimited Doc". A red box and the number 1 point to this field.
- Select Document Type:** A group box containing two radio buttons: "Simple Text Document" (selected) and "Complex Text Document". A red box and the number 2 point to the "Simple Text Document" radio button.
- Select Document Format:** A group box containing two radio buttons: "Fixed Field Widths" and "Character Delimited" (selected). A red box and the number 3 point to the "Character Delimited" radio button.
- Create:** A blue button at the bottom right. A red box and the number 4 point to this button.

Figure 9-2. Start creating your new document definition by selecting the appropriate combination of radio buttons.

The next screen is used to define each field in your document.

 **Tip:** For more information about supported delimiters, see “Supported Delimiters” on page 9-19.

 **Tip:** **Integer** fields are treated the same as **Long**.

 **Tip:** **Float** fields can hold real numbers up to 7 digits (3.4E +/- 38). Use a **Double** for real numbers up to 15 digits (1.7E +/- 308).

- ❶ Type in the character (such as a comma) that will be used as the text file’s delimiter.
- ❷ (Optional) Enter an appropriate character (such as a double-quote) in the **Text Qualifier** field. (If you need to, you can also enter a numeric qualifier into the **Numeric Qualifier** field.)

Note

Text qualifiers tell the system how to either recognize text strings in source files, or to qualify strings of characters when it creates the target document. Quotes (either single or double) are commonly used for text qualifiers. Other examples could be a caret (“^”), pound sign (#), etc.


- ❸ Click the **Add Field** button to define the document’s first field.
- ❹ Enter a name in a **Field Name** field.
- ❺ Select the appropriate data type for this field from the **Type** drop-down menu:
 - Choose **String** if the field contains a string of text, such as “apple”.
 - Choose **Integer** if the field contains a whole number up to +/- 2,147,483,648.
 - Choose **Date** if the field contains a date, like 12/21/01.
 - Choose **Long** if the field contains a whole number +/- 2,147,483,647.
 - Choose **Float** if the field contains real numbers up to 7 digits in length, such as 9.99.
 - Choose **Double** if the field contains very large and/or very precise real numbers up to 15 digits in length, such as 98435238.999999.
 - Choose **Boolean** if the field will hold the value of True or False.
 - Choose **Identifier** if this field will be used to identify this segment in a complex text file.
- ❻ (Optional) If you want this field to have a default value, enter the value into the **Default Value** field.
- ❼ (Optional) If you want this field to have a specific format, enter the format into the **Format** field.
 As an example, dates can be formatted in several different ways. Use DD for (double-digit) day, as in 07
 MM for month, like 11

YY or YYYY for double-digit or 4-digit year, such as 1999

CC for century, like 20

You can also use various characters as date separators, including -, /, and . (period), as in 1999-01-19.

- 8 (Optional) Repeat the previous steps for each additional data field you need to define.
- 9 Click the **Save** button in the toolbar. Compare your definition to that shown in Figure 9-3 below.
- 10 (Optional) If you want to give other users and/or groups access to this definition, click the **Access** button in the toolbar.

 **Tip:** For information about how to adjust the order of your fields, see “Modifying Segment and Field Orders” on page 9-19.

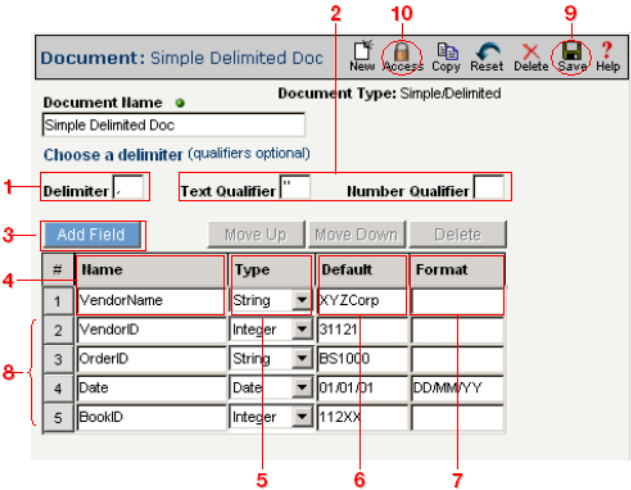


Figure 9-3. Follow the steps listed above to define a new delimited text definition.

Fixed-Length Simple Text Documents


Follow these steps to define a fixed-length simple text document:


- ❶ Enter an appropriate name for your new document definition in the **Document Name** field.
- ❷ Choose the **Simple Text Document** radio button in the **Document Type** region.
- ❸ Choose the **Fixed Field Widths** radio button in the **Document Format** region.
- ❹ Compare your work to that shown in Figure 9-4 below, then click the **Continue** button to continue.


Figure 9-4. Start creating your new document definition by selecting the appropriate combination of radio buttons.

The next screen is used to define each field in your document.

- ❶ Click the **Add Field** button to define the document's first field.
- ❷ Enter a name in a **Field Name** field.
- ❸ Select the appropriate data type for this field from the **Type** drop-down menu:
 - Choose **String** if the field contains a string of text, such as "apple".

 **Tip:** **Integer** fields are treated the same as **Long**.

 **Tip:** **Float** fields can hold real numbers up to 7 digits (3.4E +/- 38). Use a **Double** for real numbers up to 15 digits (1.7E +/- 308).

 **Tip:** To correctly configure a fixed-length text file, the first field in the file starts at the first character position, which is 1. If the first field is 30 characters long, then it would take up character positions 1 through 30.

- Choose **Integer** if the field contains a whole number up to +/- 2,147,483,648.
 - Choose **Date** if the field contains a date, like 12/21/01.
 - Choose **Long** if the field contains a whole number +/- 2,147,483,647.
 - Choose **Float** if the field contains real numbers up to 7 digits in length, such as 9.99.
 - Choose **Double** if the field contains very large and/or very precise real numbers up to 15 digits in length, such as 98435238.999999.
 - Choose **Boolean** if the field will hold the value of True or False.
 - Choose **Identifier** if this field will be used to identify this segment in a complex text file.
- ④ Enter the starting character position (such as 1 for the beginning of the file) within the **Begin** field. (The default value will always be the next character after the previous field's ending position.)

Note

Fixed-length text files always specify a certain number of characters that are reserved for each field. For example, you may identify a field called `LastName` that always has 30 characters reserved for it. (If the actual value is `Smith`, only 5 characters are used; the remaining characters have nothing in them.)

- ⑤ Enter the number of characters that are reserved for this field into the **Length** field.
- ⑥ (Optional) If you want this field to have a default value, enter the value into the **Default Value** field.
- ⑦ (Optional) If you want this field to have a specific format, enter the format into the **Format** field.

As an example, dates can be formatted in several different ways. Use

DD for (double-digit) day, as in 07


MM for month, like 11

YY or YYYY for double-digit or 4-digit year, such as 1999

CC for century, like 20


You can also use various characters as date separators, including -, /, and . (period), as in 1999-01-19.

- ⑧ (Optional) Repeat the previous steps for each additional data field you

 **Tip:** For information about how to adjust the order of your fields, see “Modifying Segment and Field Orders” on page 9-19.

need to define.

- 9 (Optional) If you have changed any field’s character length value, press the **Calculate** button to recalculate all the fields’ starting positions.

 **Warning!** The **Calculate** button resets all the document definition’s **Begin** and **End** field values, based on the **Length** values you specified. Do not use this button if your file’s field positions have gaps or overlaps, as they will be deleted.

- 10 Click the **Save** button in the toolbar. Compare your definition to that shown in Figure 9-5 below.
- 11 (Optional) If you want to give other users and/or groups access to this definition, click the **Access** button in the toolbar.

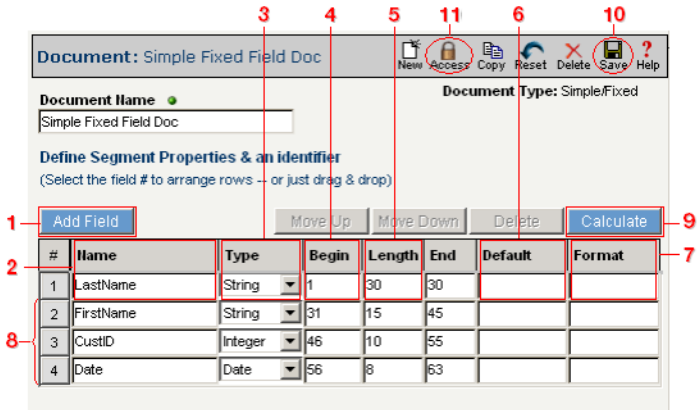


Figure 9-5. Follow the steps listed above to successfully define a new fixed-length text definition.

Working with Complex Text Documents

Like simple text documents, complex text documents can either be based upon a delimited structure (such as commas or tabs), or they can use fixed-length fields. Follow the option that is appropriate for your text file.

Character-delimited Complex Text Documents


Follow these steps to define a character-delimited complex text document:

- 1 Enter an appropriate name for your new document definition in the **Document Name** field.
- 2 Choose the **Complex Text Document** radio button in the **Document Type** region.
- 3 Choose the **Character Delimited** radio button in the **Document Format** region.
- 4 Compare your work to that shown in Figure 9-6 below, then click the **Create** button to continue.

The screenshot shows a web form titled "Document" with a header bar containing "Reset", "Delete", and "Help" buttons. The form is divided into three main sections: "Enter Document Name", "Select Document Type", and "Select Document Format".

- Enter Document Name:** A text input field containing "Complex Delimited Doc", highlighted with a red box and labeled with a red "1".
- Select Document Type:** A section with two radio buttons. The "Complex Text Document" option is selected and highlighted with a red box and labeled with a red "2".
- Select Document Format:** A section with two radio buttons. The "Character Delimited" option is selected and highlighted with a red box and labeled with a red "3".
- Create Button:** A blue button labeled "Create" at the bottom right, highlighted with a red box and labeled with a red "4".

Figure 9-6. Start creating your new document definition by selecting the appropriate combination of radio buttons.

 **Tip:** For more information about supported delimiters, see “Supported Delimiters” on page 9-19.

The next screen is used to define each segment in your complex document:

- ❶ Type in the character (such as a comma) that will be used as the text file’s delimiter.
- ❷ (Optional) Enter an appropriate character (such as a double-quote) in the **Text Qualifier** field. (If you need to, you can also enter a numeric qualifier into the **Numeric Qualifier** field.)

Note

Text qualifiers tell the system how to either recognize text strings in source files, or to qualify strings of characters when it creates the target document. Quotes (either single or double) are commonly used for text qualifiers. Other examples could be a caret (“^”), pound sign (#), etc.


- ❸ Click the **Add Segment** button to define the document’s first segment.
- ❹ Enter a name in a **Segment Name** field.
- ❺ Identify the parent of this segment from the **Segment Parent** drop-down menu.
- ❻ Specify how the segment will occur in your complex document by choosing one of the options from the **Occurrence** drop-down menu:
 - a. Choose **Only Once** if this segment must occur once but only once in the document.
 - b. Choose **One or More** if this segment must occur at least once, but can also be repeated.
 - c. Choose **Zero or One** if this segment may not occur, but if it does, it can only occur once.
 - d. Choose **Zero or More** if this segment may not occur, but if it does, it can occur one or more times.
- ❼ (Optional) Repeat the previous steps for each additional segment you need to define.

- 8 Click the **Save** button in the toolbar. Your definition should look similar to that shown in Figure 9-7 below.

Figure 9-7. Use this screen to choose your delimiter and qualifier(s), and define your complex document's segments.


Now that all the segments have been created, you will need to define each segment's properties:


- 1 Select the desired segment by clicking its number. The segment entry should highlight, as shown in Figure 9-8 below.
- 2 Click the **Properties** button.


 **Tip:** As a shortcut, you can double-click on a segment's number button instead of selecting the segment and then clicking the **Properties** button.

#	Segment Name	Segment Parent	Occurrence
1	_Root	N/A	N/A
2	Header1	_Root	Only Once
3	HeaderDetail	Header1	Only Once
4	Body	_Root	One or More

Figure 9-8. To define the fields within a segment, select the segment number, then click the **Properties** button.

 **Tip:** Integer fields are treated the same as **Long**.

 **Tip:** Float fields can hold real numbers up to 7 digits (3.4E +/- 38). Use a **Double** for real numbers up to 15 digits (1.7E +/- 308).

 **Note:** Each segment must have one and only one field whose data type is **Identifier**.

The Segment Properties dialog appears.

- ❶ Click the **Add Field** button to add your first field to this segment.
- ❷ Type an appropriate name for the field.
- ❸ Select the appropriate data type for this field from the **Data Type** drop-down menu:
 - Choose **String** if the field contains a string of text, such as "apple".
 - Choose **Integer** if the field contains a whole number up to +/- 2,147,483,648.
 - Choose **Date** if the field contains a date, like 12/21/01.
 - Choose **Long** if the field contains a whole number +/- 2,147,483,647.
 - Choose **Float** if the field contains real numbers up to 7 digits in length, such as 9.99.
 - Choose **Double** if the field contains very large and/or very precise real numbers up to 15 digits in length, such as 98435238.999999.
 - Choose **Boolean** if the field will hold the value of True or False.
 - Choose **Identifier** if this field will be used to identify this segment in a complex text file.
- ❹ (Optional) If you want this field to have a default value, enter the value into the **Default Value** field.
- ❺ (Optional) If you want this field to have a specific format, enter the format into the **Format** field.
 As an example, dates can be formatted in several different ways. Use
 DD for (double-digit) day, as in 07
 MM for month, like 11
 YY or YYYY for double-digit or 4-digit year, such as 1999
 CC for century, like 20
 You can also use various characters as date separators, including, -, /, and . (period), as in 1999-01-19.
- ❻ (Optional) Repeat the previous steps for each additional field you need to define.
- ❼ Compare your definition to that shown in Figure 9-9 below. Click the **OK** button once you have finished creating all the fields you need for this

segment.

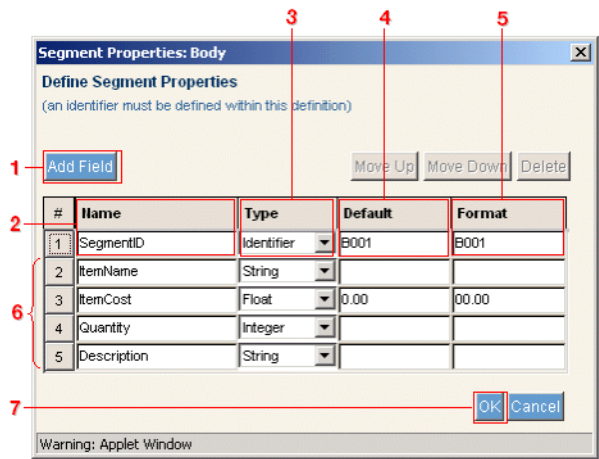


Figure 9-9. Each segment’s properties must include one and only one Identifier field. In this figure, the Segment ID field is the identifier (with a value of B001).

Tip: For information about how to adjust the order of your fields, see “Modifying Segment and Field Orders” on page 9-19.

You have completed defining your complex, delimited text document. Make sure to click the **Save** button in the toolbar to save your work.

Fixed-Length Complex Text Documents

Follow these steps to define a fixed-length complex text document:

- ❶ Enter an appropriate name for your new document definition in the **Document Name** field.
- ❷ Choose the **Complex Text Document** radio button in the **Document Type** region.
- ❸ Choose the **Fixed Field Widths** radio button in the **Document Format** region.
- ❹ Compare your work to that shown in Figure 9-10 below, then click the **Continue** button to continue.

The screenshot shows a web form titled "Document" with a header bar containing "Reset", "Delete", and "Help" buttons. The form is divided into three main sections: "Enter Document Name", "Select Document Type", and "Select Document Format".

- Enter Document Name:** A text input field containing "Complex Fixed Field Doc". A red box highlights this field, with a red line and the number "1" pointing to it.
- Select Document Type:** A section with two radio buttons: "Simple Text Document" and "Complex Text Document". The "Complex Text Document" button is selected and highlighted with a red box, with a red line and the number "2" pointing to it.
- Select Document Format:** A section with two radio buttons: "Fixed Field Widths" and "Character Delimited". The "Fixed Field Widths" button is selected and highlighted with a red box, with a red line and the number "3" pointing to it.
- Create Button:** A blue button labeled "Create" is located at the bottom right of the form. A red line and the number "4" point to it.

Figure 9-10. Start creating your new document definition by selecting the appropriate combination of radio buttons.

The next screen is used to define each segment in your complex document:

- ❶ Click the **Add Segment** button to define the document's first segment.
- ❷ Enter a name in a **Segment Name** field.
- ❸ Identify the parent of this segment from the **Segment Parent** drop-down menu.
- ❹ Specify how the segment will occur in your complex document by choosing one of the options from the **Occurrence** drop-down menu:
 - a. Choose **Only Once** if this segment must occur once but only once in the

document.

- b. Choose **One or More** if this segment must occur at least once, but can also be repeated.
 - c. Choose **Zero or One** if this segment may not occur, but if it does, it can only occur once.
 - d. Choose **Zero or More** if this segment may not occur, but if it does, it can occur one or more times.
- 5 (Optional) Repeat the previous steps for each additional segment you need to define.
 - 6 Click the **Save** button in the toolbar. Your definition should look similar to that shown in Figure 9-11 below.

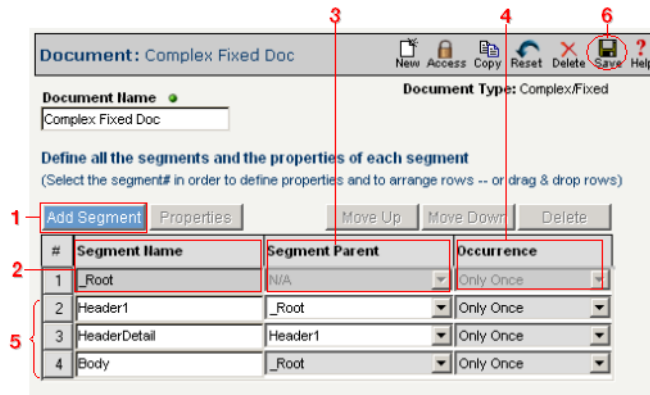





Figure 9-11. Use this screen to define your complex document's segments.

 **Tip:** As a shortcut, you can double-click on a segment's number button instead of selecting the segment and then clicking the **Properties** button.

 **Tip:** **Integer** fields are treated the same as **Long**.

 **Tip:** **Float** fields can hold real numbers up to 7 digits (3.4E +/- 38). Use a **Double** for real numbers up to 15 digits (1.7E +/- 308).

Now that all the segments have been created, you will need to define each segment's properties:

- 1 Select the desired segment by clicking its number. The segment entry should highlight, as shown in Figure 9-12 below.
- 2 Click the **Properties** button.

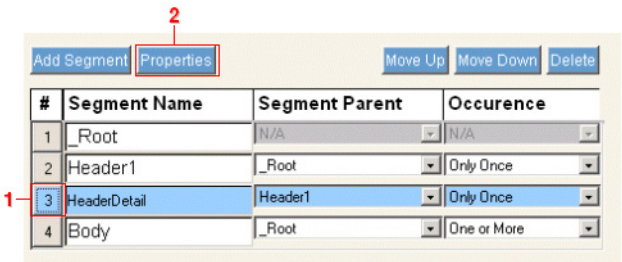




Figure 9-12. To define the fields within a segment, select the segment number, then click the **Properties** button.

The Segment Properties dialog appears.

- 1 Click the **Add Field** button to add your first field to this segment.
- 2 Type an appropriate name for the field in the **Field Name**.
- 3 Select the appropriate data type for this field from the **Type** drop-down menu:
 - Choose **String** if the field contains a string of text, such as "apple".
 - Choose **Integer** if the field contains a whole number up to +/- 2,147,483,648.
 - Choose **Date** if the field contains a date, like 12/21/01.
 - Choose **Long** if the field contains a whole number +/- 2,147,483,647.
 - Choose **Float** if the field contains real numbers up to 7 digits in length, such as 9.99.
 - Choose **Double** if the field contains very large and/or very precise real numbers up to 15 digits in length, such as 98435238.999999.
 - Choose **Boolean** if the field will hold the value of True or False.

 **Note:** Each segment must have one and only one field whose data type is Identifier.

 **Tip:** To correctly configure a fixed-length text file, the first field in the file starts at the first character position, which is 1. If the first field is 30 characters long, then it would take up character positions 0 through 29.

- Choose **Identifier** if this field will be used to identify this segment in a complex text file.

- 4 Enter the starting character position (such as 1 for the beginning of the file) within the **Begin** field. (The default value will always be the next character after the previous field's ending position.)

Note

Fixed-length text files always specify a certain number of characters that are reserved for each field. For example, you may identify a field called `LastName` that always has 30 characters reserved for it. (If the actual value is `Smith`, only 5 characters are used; the remaining characters have nothing in them.)

- 5 Enter the number of characters that are reserved for this field into the **Length** field.
- 6 (Optional) If you want this field to have a default value, enter the value into the **Default Value** field.
- 7 (Optional) If you want this field to have a specific format, enter the format into the **Format** field.

As an example, dates can be formatted in several different ways. Use

DD for (double-digit) day, as in 07

MM for month, like 11

YY or YYYY for double-digit or 4-digit year, such as 1999

CC for century, like 20

You can also use various characters as date separators, including -, /, and . (period), as in 1999-01-19.

- 8 (Optional) Repeat the previous steps for each additional field you need to define.
- 9 (Optional) If you have changed any field's character length value, press the **Calculate** button to recalculate all the fields' starting positions.




Warning! The **Calculate** button resets all the document definition's **Begin** and **End** field values, based on the **Length** values you specified. Do not use this button if your file's field positions have gaps or overlaps, as they will be deleted.


- 10 Compare your definition to that shown in Figure 9-13 below. Click the **OK** button once you have finished creating all the fields you need for this segment.

#	Name	Type	Begin	Length	End	Default	Format
1	SegmentID	Identifier	1	4	4	8001	8001
2	ItemName	String	5	25	29		
3	ItemCost	Float	30	10	39	0.00	
4	Quantify	Integer	40	3	42		
5	Description	String	43	35	77		

Figure 9-13. Each segment’s properties must include one and only one Identifier field. In this figure, the Segment ID field is the identifier (with a value of B001).

 **Tip:** For information about how to adjust the order of your fields, see “Modifying Segment and Field Orders” on page 9-19.

You have completed defining your complex, fixed-length text document. Make sure to click the **Save** button in the toolbar to save your work.

 **Tip:** As a shortcut, you can change an item's order by clicking and dragging the number button up or down. Where you release the button will be the new location of the selected item.

Modifying Segment and Field Orders

Follow these steps if you want to change the order of your segments and/or segment properties:

- ❶ Select the segment or field by clicking on its number as shown in Figure 9-14 below.
- ❷ Click **Move Up** to move the selected item further up one line.
- ❸ Click **Move Down** to move the selected item further down one line.
- ❹ (Optional) If you want to delete any entry, click the **Delete** button.

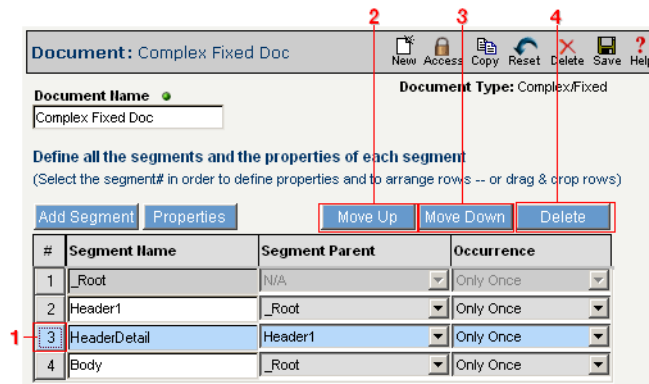


Figure 9-14. Click on the number of the entry you want to move, then use the **Move Up** and/or **Move Down** buttons to adjust the fields' order.

Supported Delimiters

Delimited text files use a special reserved character called a *delimiter* to tell the system how to identify one data field from another. Common delimiters are commas, tabs, etc.

Synx 6200 Series Appliance lets you use virtually any character for your delimiter:

- For standard (typeable) characters, type the character you want to use (like the comma character) into the **Delimiter** field.
- For tab-delimited files, use \T.
- For non-standard characters (such as a carriage-return), use a backslash (\),

along with the ASCII number (\13 would mean to use a carriage return).



Warning! Make sure that whatever character you declare as your delimiter is not used anywhere in your data.

Related Topics

- To see an example document definition in the Tour, see “Working with Documents” on page 2-16.
- To create a document definition within the Tutorial, see “Step 5 - Create a Document Definition” on page 3-9.
- To use a document definition in a mail merge, see “Mail Merge” on page 6-2 in the *Reference Guide*.
- For more information about setting user and/or group access to your definition, see Chapter 7, “Permissions” in the *Reference Guide*.

Chapter 10

Creating Operations

Overview

An *operation* is a specific collection of definitions (including source, target, schedule, transformation map, etc.) that are grouped together to define a particular data transformation. Each definition within the operation provides a unique detail, such as where the information is, where the information should go, and when the transformation should happen.

How to Create an Operation



Tip: An alternate way of creating a new operation is to click the **(New) Operation** link within the appropriate project in the hierarchical navigation tree in the left frame of the screen.



Tip: The **Operation Type** field is only a visual reminder that helps you remember what type of operation it is; it has no function.

Follow these steps to create an operation. Each step is marked in Figure 10-1 below.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Click the **Partners** button in the navigation bar.
- ❸ Select the project for which you want to create a new operation.
- ❹ Move your mouse over the **New** button in the toolbar, then select **New Operation** from the drop-down menu.
- ❺ Type a name into the **Operation Name** field.
- ❻ (Optional) If you wish, you can enter a description of this operation in the **Description** field.
- ❼ (Optional) To help visually identify which type of operation you are defining, you can select the appropriate item from the **Operation Type** drop-down menu. You have four choices:
 - a. **Archive:** This type of operation is used to make a copy of a file and moves it to another location. No transformation of data occurs.
 - b. **E-mail Notification:** This operation type indicates that information from some data source is placed into an e-mail (such as an order confirmation e-mail). To use this, your target must be an SMTP type.
 - c. **FTP Append:** Uses the FTP protocol to take one file and add its contents to the target file.
 - d. **Transformation:** Use this option to manipulate or change data as it moves from the source to the target. The specifics of how this manipulation happens would be defined by the Transformation definition you select later.
- ❽ (Optional) Select the **Log Warnings & Errors to File** checkbox if you want to log warnings and errors generated during a transformation to a log file that can be viewed on the **Operations Log** page.
- ❾ (Optional) Select the **Ignore History** checkbox if you don’t want to record this operation’s source file transfer history. Doing so allows you to repeat the same operation without having to delete its record in the **History** screen.
- ❿ Select a source from the **Source** drop-down menu. (Alternatively, if you want to create a new source, click the **New** icon to the left of the field.)
- ⓫ Select a target from the **Target** drop-down menu. (Alternatively, if you want to create a new target, click the **New** icon to the left of the field.)
- ⓬ Select a pre-defined transformation from the **Transformation** drop-down

menu.

- 13 Select a schedule from the **Schedule** drop-down menu. (Alternatively, if you want to create a new schedule, click on the **New** icon to the left of the field.)
- 14 (Optional) Select a pre-defined success message from the **Success Message** drop-down menu. (Alternatively, if you want to create a new message, click on the **New** icon to the left of the field.)
- 15 (Optional) Select a pre-defined failure message from the **Failure Message** drop-down menu. (Alternatively, if you want to create a new message, click on the **New** icon to the left of the field.)
- 16 (Optional) If you want to activate another operation within the same project whenever this operation completes successfully, select a pre-defined operation from the **Success Operation** drop-down menu.
- 17 (Optional) If you want to activate another operation within the same project whenever this operation fails, select a pre-defined operation from the **Failure Operation** drop-down menu.
- 18 (Optional) Select a pre-defined success process from the **Success CRbuilder Process** drop-down menu.
- 19 (Optional) Select a pre-defined failure process from the **Failure CRbuilder Process** drop-down menu.

- 20 Compare your work with Figure 10-1 below, then click the **Save** button. You will see a new operation associated with your project.

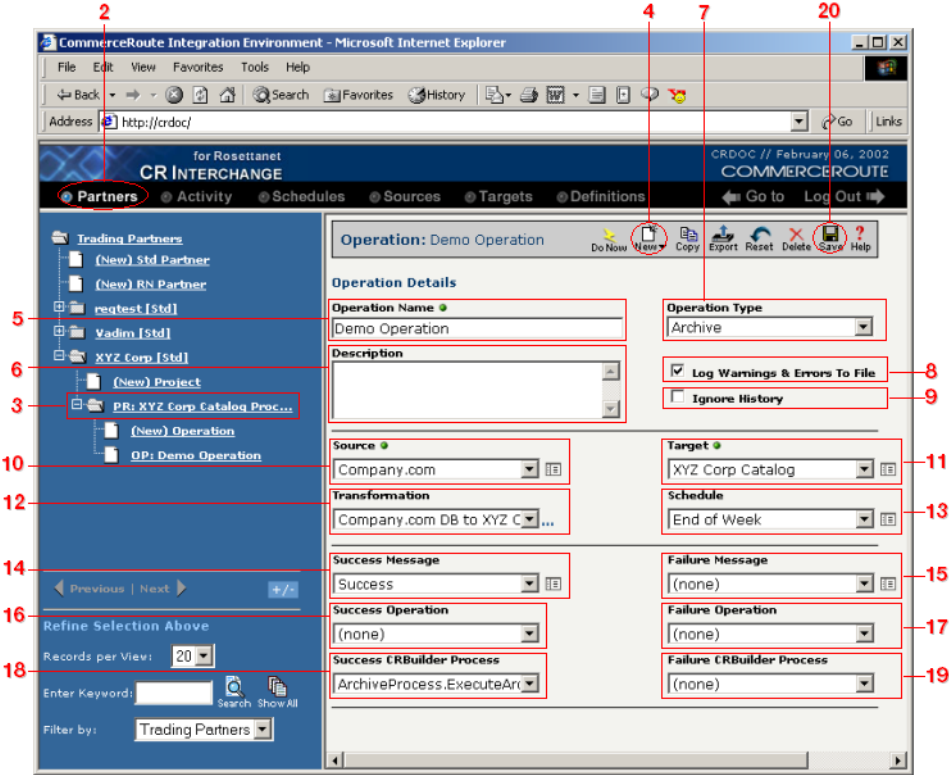


Figure 10-1. A completed operation, created by assembling the appropriate source, target, schedule, transformation, and other desired definitions.

Note

You can use the operation's **Export** button to export it, along with all its supporting definitions (plus project and partner information) to an external archive file.

Optimization Options (DIFF)

Found at the bottom of the operation screen, DIFF is available for operations whose source and target types are flat file or a database with a single table (not a SQL statement). See Figure 10-2 below.

Optimization Options

The selected transformation in this operation can be optimized using the DIFF feature.

☒ Use DIFF

SOURCE:

The selected transformation has a FLAT Text source.
Data comparison can be done in the following ways:

☒ Use data snapshot from the previous run of this operation for comparison

☐ Use the following FTP or FileShare Source for comparison (none)

TARGET:

The selected transformation has a File based target (TEXT).
The following output files can be created . Please select the output files to be created and specify filename for each.
The files will be created at the location selected in the TARGET.


	Output File Name
<input checked="" type="checkbox"/> Create a file containing new records in the source (Insert)	NewOrders.txt
<input checked="" type="checkbox"/> Create a file containing records updated in the source (Update)	ChangedOrders.txt
<input checked="" type="checkbox"/> Create a file containing records deleted in the source (Delete)	DeletedOrders.txt

Figure 10-2. The DIFF Optimization Options can be found at the bottom of the Operations screen. These options can be used to optimize your operation by filtering out redundant data.

When your operation is using a combination of source and target that supports DIFF, this function can be used to optimize your transformation by filtering out redundant data.

DIFF can optimize your operations by comparing the source and target and creating any combination of three types of output: Inserts, Updates and Deletes. Selecting the appropriate option(s) depends upon the desired result: an example could include choosing **Update** when you want to transform only changed data.

For the example shown in Figure 10-2 above, DIFF checks the source file and compares its contents against the last time the operation ran. Syncx 6200 Series Appliance then writes out all new order information into one file called “NewOrders.txt”, all changed order information into another file called “ChangedOrders.txt”, and all deleted orders into a third file called “DeletedOrders.txt”. These output files will be placed into the same location as the operation’s target definition.

 **Note:** Because of the differences in supported file types, an operation might support DIFF, or it may have EDI options, but it will never offer both.

EDI Options

Operations that use an EDI document in its source and/or target definition have a set of EDI-specific options found at the bottom of the operation screen. The numbers below describe how to use these options and are related to the highlighted features shown in Figure 10-3 below.

- ❶ This option is valid for source and/or target EDI documents. Select this checkbox if you want to complete this operation's transformation even if errors are found within the EDI document. (If the checkbox is not selected, Syncx 6200 Series Appliance will terminate the transformation as soon as it encounters any error within the EDI document.)
- ❷ This option is valid for source EDI documents. Select this checkbox if you want to automatically send an acknowledgement (an EDI 997 document) to the originator of the EDI file (e.g., your business partner who sent you an EDI 850 Purchase Order document). This acknowledgement file will be placed into whatever pre-defined target you choose from the checkbox's drop-down menu.
 - a. Select the level of detail you want to report in your 997 document.
 - b. Choose an option to indicate how you will process your trading partner's EDI data:

Accept: Choosing this radio button will enter the "A" code in the 997 document's AK901 field, which states that the source EDI file will be accepted, regardless of any document errors that may be found.

Accept but note errors: Choosing this radio button will enter the "E" code in the 997 document's AK901 field, which states that the source EDI file will be accepted, but that any functional group errors will be reported.

Reject: Choosing this radio button will enter the "R" code in the 997 document's AK901 field, which states that the source EDI file will be rejected if any error is found.

Partially Accept: Choosing this radio button will enter the "P" code in the 997 document's AK901 field, which states that only error-free transaction sets will be accepted--any transaction sets with errors will be rejected.
 - c. Choose an option to indicate how you will process a particular transaction set from your trading partner:

Accept: Choosing this radio button will enter the "A" code in the 997 document's AK501 field, which states that the source EDI file will be

accepted, regardless of any document errors that may be found.


Accept but note errors: Choosing this radio button will enter the “E” code in the 997 document’s AK501 field, which states that the source EDI file will be accepted, but that errors in the transaction set will be reported.

Reject: Choosing this radio button will enter the “R” code in the 997 document’s AK501 field, which states that the transaction set will be rejected if any error is found.

The screenshot shows the 'EDI Options' dialog box. It has two main sections: 'EDI Options' and 'Functional Acknowledgement Options'. In the 'EDI Options' section, there are two checkboxes: 'Ignore pre-defined EDI errors and complete transformation' (checked) and 'Generate Functional Acknowledgement (997) in the following Target : XYZ FTP Server' (checked). In the 'Functional Acknowledgement Options' section, there are three sub-sections: 'Detail Level', 'Functional Group Ack. Code (AK901)', and 'Transaction Set Ack. Code (AK501)'. The 'Detail Level' section has three checkboxes: 'Transaction Set (AK2)' (checked), 'Data Segment (AK3)' (unchecked), and 'Data Element (AK4)' (unchecked). The 'Functional Group Ack. Code (AK901)' section has four radio buttons: 'Accept' (unchecked), 'Accept, but note errors' (checked), 'Reject' (unchecked), and 'Partially Accept' (unchecked). The 'Transaction Set Ack. Code (AK501)' section has three radio buttons: 'Accept' (unchecked), 'Accept, but note errors' (checked), and 'Reject' (unchecked). Red annotations are present: '1' points to the first checkbox, '2' points to the second checkbox, '2a' points to the 'Transaction Set (AK2)' checkbox, '2b' points to the 'Data Segment (AK3)' checkbox, and '2c' points to the 'Accept, but note errors' radio button in the 'Transaction Set Ack. Code (AK501)' section.

Figure 10-3. These options are for operations that use an EDI file for its source and/or target.

Working with Chained Operations

 **Tip:** Use chained operations in conjunction with Append projects to funnel the chain's collective output into a single text file. See for "Append Projects" on page 5-4 details.

What is a Chained Operation?

You can "chain" multiple operations within the same project together so that the first (or *initial*) operation triggers a second operation, and with each subsequent operation activating another in turn. These *chained operations* are linked with the **Success** and/or **Failure Operation** drop-down menu in each operation's screen.

There are a few requirements for chained operations:

- All operations that will be chained together must reside in the same project.
- Only the first operation that starts the chain may have a schedule; all subsequent operations should not reference any schedule.
- An operation can reference only a single success operation and/or a single failure operation.
- There is no limit to how many operations can be linked together.

See Figure 10-4 below as an example. In this operation, we have created an initial operation called "Import Customer" Data, which is linked to a second operation called "Import Product Data." We did this by choosing "Import Product Data" from the **Success Operation** drop-down menu in the initial operation. The second operation could then link to another operation within the same project, and so on, until the desired chain is completed.

When the initial operation is activated, all subsequent linked operations will activate upon its completion, assuming each subsequent operation was successful.

How to Chain Operations

Follow these steps to create a set of chained operations:

- ❶ The first step is to define all the operations that need to be chained together.
- ⚠ **Caution!** All operations within the chain must reside within the same project.
- ❷ Once you have created all the operations you want to chain together, open the initial operation.
 - a. In the **Success** or **Failure Operation** drop-down menu, select the name of the operation that should be activated next.

- b. Select a schedule. Note that this is the only operation in the “chain” that will have a schedule associated with it.
- c. You have finished configuring the initial operation, so click the **Save** button to save your changes (see Figure 10-4 below).

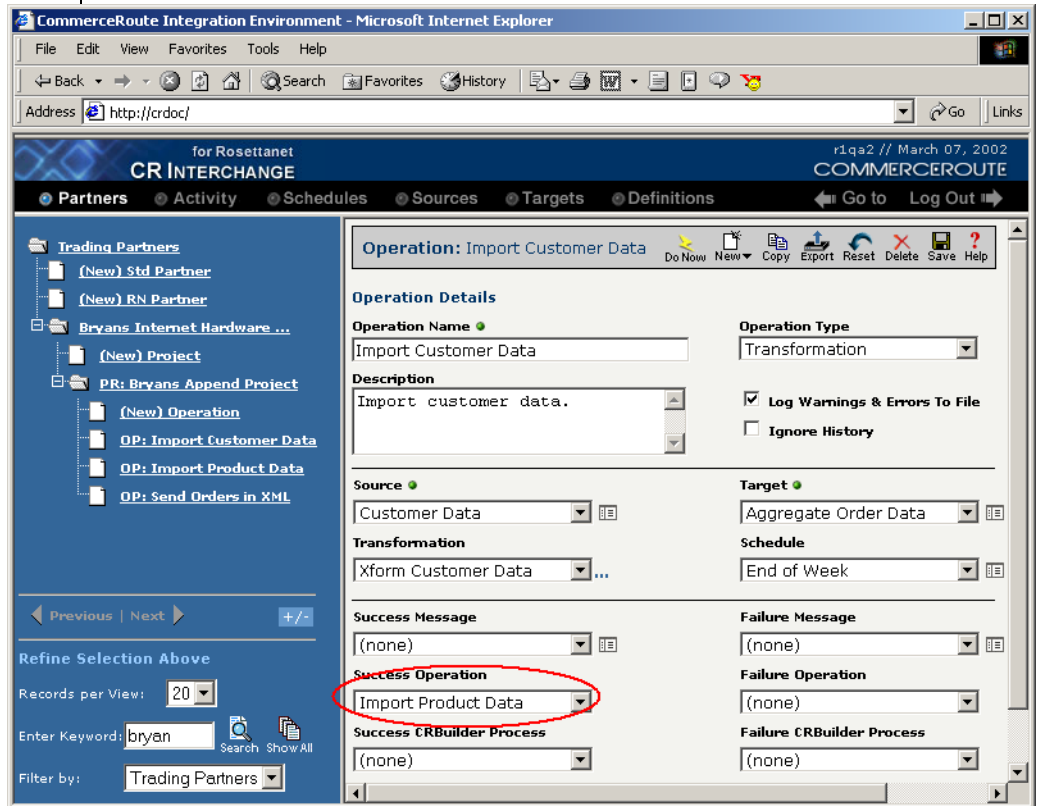


Figure 10-4. This is an example of an initial chained operation. When completed successfully, this operation will activate the operation specified in its **Success Operation** drop-down menu.

- 3 Open the second operation in the chain and use its **Success** or **Failure Operation** drop-down menu to select the name of the operation that should be activated next.

! **Caution!** In chained operations, only the initial operation should have a schedule; leave the schedule field blank for the rest of the operations.

- 4 Continue referencing the appropriate success (failure) operation for each subsequent operation until the chain is complete.

Tip: This option can be used in combination with Append projects, which let you append all output to a single file. See “Append Projects” on page 5-4 for details.

Using Output from a Previous Operation

An additional feature that can be used in chained operations is the “Output from Previous Operation” option. Listed in an operation’s **Source** drop-down menu, this option lets you use the results of the previous operation’s transformation as its source (see Figure 10-5 below). In other words, this option lets you “feed” the results of any chained operation to the next operation, which will use it as its own source (“input”).

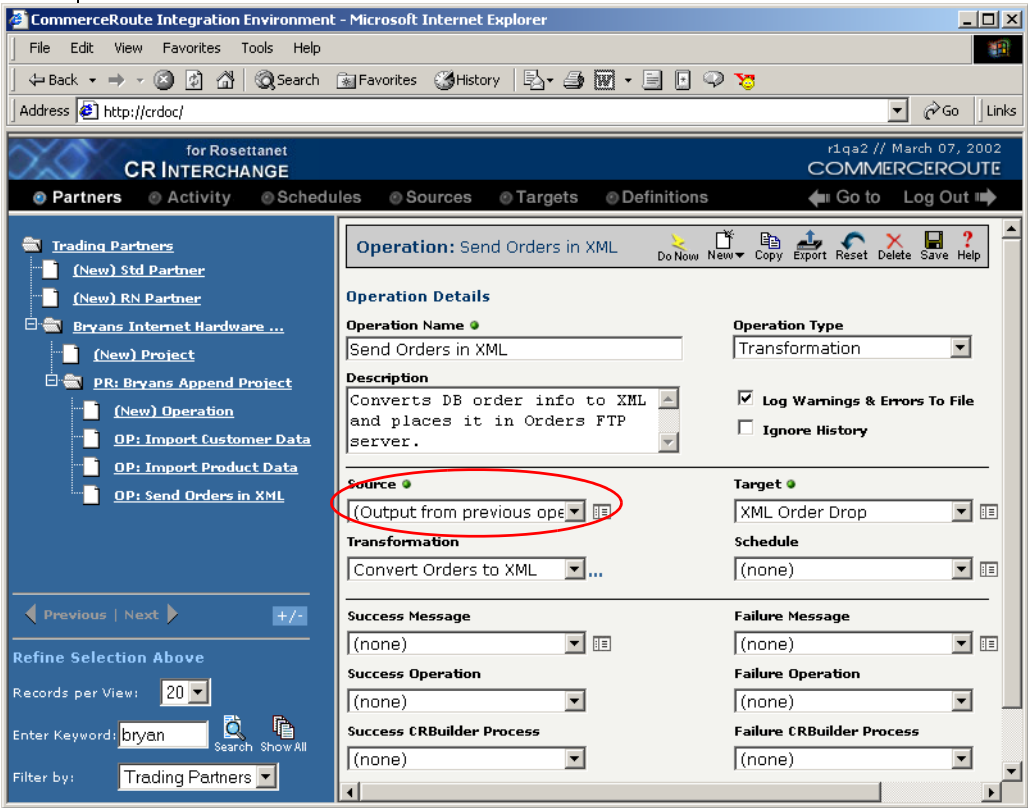


Figure 10-5. The “Output from Previous Operation” option in an operation’s **Source** drop-down menu passes the output of one chained operation to another.

Manually Activating Operations

Operations with schedules will activate according to the schedule's information. However, any operation (with or without a schedule) can be immediately activated by clicking the **Do Now** button, located just to the right of the operation's name (see Figure 10-6 below).

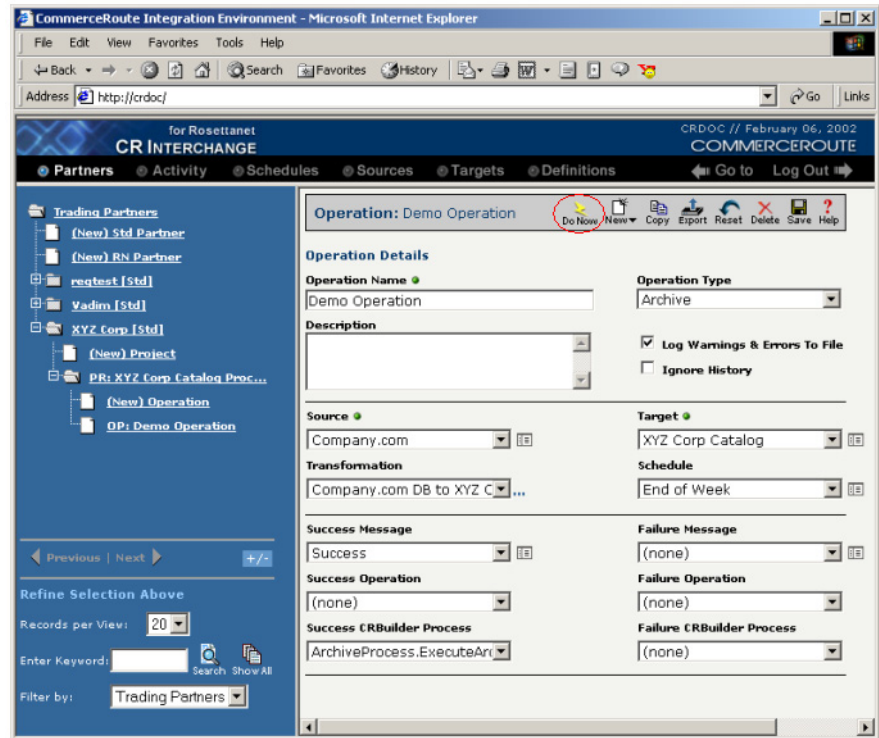


Figure 10-6. Click the **Do Now** button to manually activate an operation.

What's Next?

If you have just created your operation, you may want to test it. You can click the **Do Now** button to manually activate the operation (regardless of its schedule setting), then either check to see if it is pending processing in the Pending Processes screen, or to see the operation's results in the System Log.

Related Topics

- To see an example operation in the Tour, see “Key Concepts” on page 2-3 and “Operations Hold all Your Transformation Details” on page 2-9.
- To create an operation within the Tutorial, see “Step 10 - Create an Operation” on page 3-28.
- To read how to use chained operations in conjunction with Append projects, see “Append Projects” on page 5-4.
- To check whether an activated operation is waiting to be processed by the Appliance, see Chapter 9, “Checking Pending Processes” in the *Reference Guide*.
- To check the results of an activated operation, see Chapter , “How to Check the Operation Log” in the *Reference Guide*.


Transformations and Operations

SECTION THREE

Chapter 11

Transforming Databases

Overview


 **Tip:** For more information about how Syncx 6200 Series Appliance works with databases, see “About Databases” on page 11-5 in the *Reference Guide*.


This chapter describes how to transform information in databases to or from all supported data types. The complete list of database transformations is shown below, followed by step-by-step instructions for each transformation combination.

Appliance Database Transformations

- Database to CRbuilder Process
- Database to Database
- Database to EDI
- EDI to Database
- Database to RosettaNet
- RosettaNet to Database
- Database to SAP
- Database to Text
- Text to Database
- Database to XML
- XML to Database

How to Transform from a Database to a CRbuilder Process

 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

 **Note:** Make sure you've completed steps 1-3 above before attempting to define your transformation.

Summary of Steps

Follow these steps to transform information from a database to a CRbuilder process:

- 1 Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- 2 Create Your Source Definition (see “How to Create a Database Source Definition” on page 7-2 for details)
- 3 Create Your Target Definition (see “How to Create a CRbuilder Process Target Definition” on page 8-2 for details)
- 4 Use the Transformation Wizard to Build Your Transformation (see below for details)
- 5 Map the Source and Target Fields (see Chapter 17 for details)
- 6 Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

Use the Transformation Wizard to Build Your Transformation

- 1 Click the **Definitions** button in the navigation bar.
- 2 Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- 3 Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

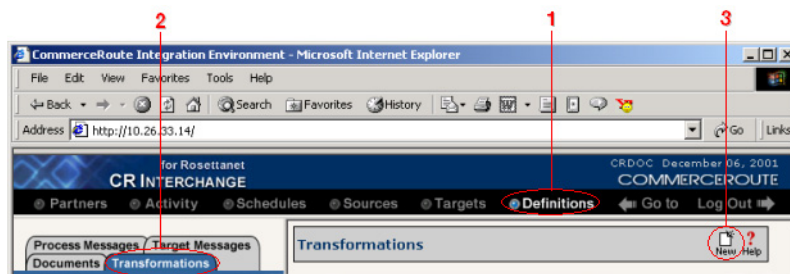


Figure 11-1. To launch the Transformation Wizard, click on the **Transformations** tab in the

Definitions screen and click the **New** button in the toolbar.

- ④ Enter an appropriate name for your new transformation in the **Transformation Name** field.
- ⑤ Select “Database” from the **Source** and “CRbuilder Process” from the **Target** drop-down menu.
- ⑥ Click the **Next** button in the toolbar to continue.

The screenshot shows the 'New Transformation' dialog box. At the top, there is a toolbar with 'Previous', 'Next', 'Cancel', and 'Help' buttons. The 'Next' button is circled in red and labeled with a red '6'. Below the toolbar, the 'Transformation Name' field is highlighted with a red box and labeled with a red '4'. It contains the text 'Demo DB -> CRbuilder Process'. Below this, the 'Data Type' section is shown. It contains two dropdown menus: 'Source' and 'Target'. The 'Source' dropdown is highlighted with a red box and labeled with a red '5'. It is currently set to 'Database'. The 'Target' dropdown is set to 'CRBuilder Process'.

Figure 11-2. Give your new transformation definition an appropriate name, then choose **EDI Document** for your Source and **CRbuilder Process** for your Target.

Select Source Information (Database)

- ❶ In the next screen of the Transformation Wizard, select the name of the Source that holds the database information you want to transform from the **Data Source** drop-down menu.
- ❷ Choose how you will get information from your database. You have two options:

Option 1: Use the Transformation Wizard to help you access your database without typing SQL

- a. Select the appropriate database definition from the **Database Source** drop-down menu.
- b. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

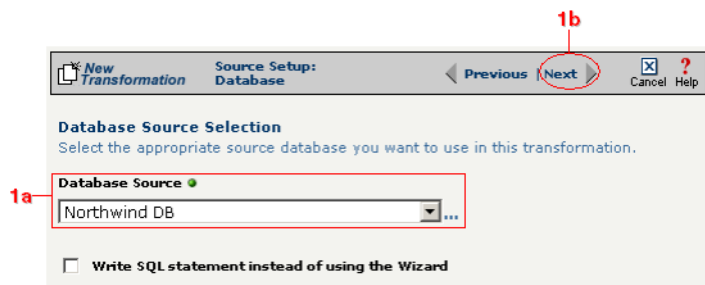


Figure 11-3. Choose the appropriate database from the **Database Source** drop-down menu if you want the Transformation Wizard to help you access your database without having to type any SQL.

Within Option 1, you need to specify how you will access information from your source database. Choose one of two options:

Option 1a: Only a single table in the source database will be accessed.

1. Enter part or all of the table's name. If you want to view all the database's items, leave the field blank.
2. Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
3. Click the **Search** button to view the list of items that match your name search.

4. Select the appropriate item in the **Available Item(s)** field, then click the right arrow button.
5. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

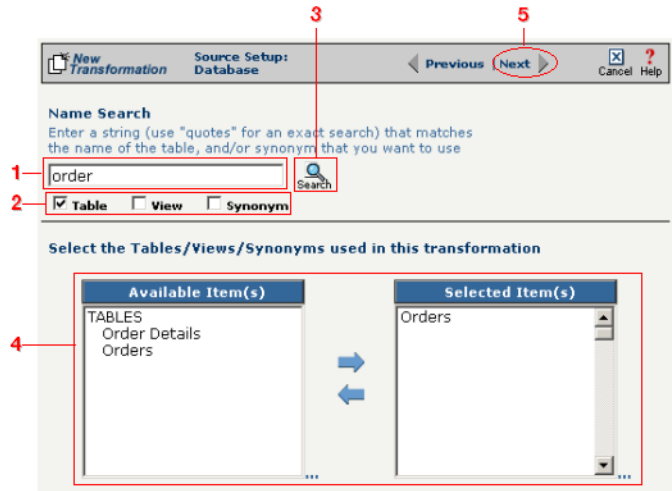


Figure 11-4. Select the single table you want to access from the **Available Tables** field.

The next screen is where you specify how many times you will use the single table (or view/synonym) you selected for your source.

1. (Optional) If you will use this table more than once, change the **Times Used** field to the appropriate number.
2. Compare your work to below, then click **Next** to continue.

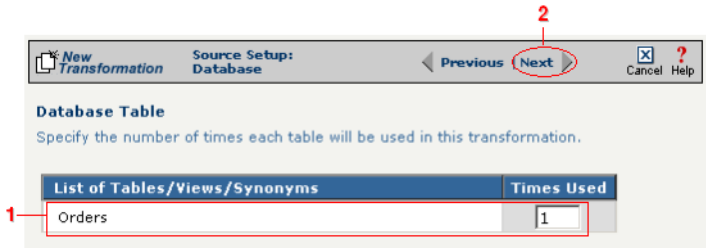


Figure 11-5. Use this screen to specify how many times the source table will be used.

The next screen lets you add a WHERE clause to filter your query:

1. Enter an appropriate WHERE SQL statement in the Where Clause.
2. (Optional) If you want to review your database table's fields, select the **View Field List** checkbox. The list will appear in a table at the bottom of the screen.
3. Click the **Next** button in the toolbar to continue.

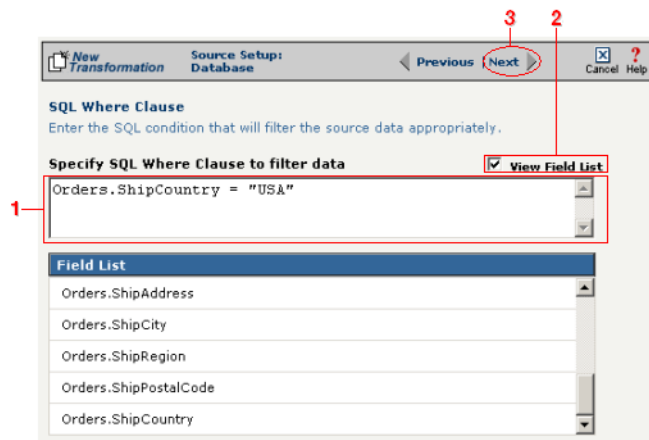

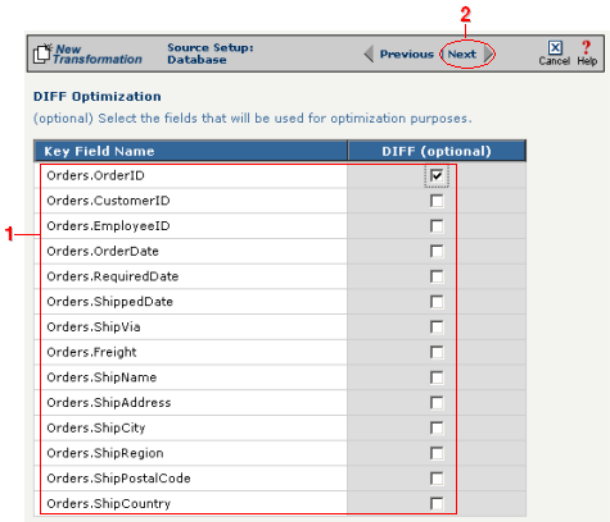


Figure 11-6. This optional screen lets you add a WHERE SQL clause to filter your information.

 **Tip:** For more information about DIFF and optimization, see “Optimization Options (DIFF)” on page 10-5.

This next screen lets you set your source to take advantage of an operation’s DIFF function. If you want this source information to be optimized by filtering out redundant data, select the field(s) that you want to use for filtering in this screen.

1. Click the checkbox that corresponds to the appropriate key field name.
2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.



Key Field Name	DIFF (optional)
Orders.OrderID	<input checked="" type="checkbox"/>
Orders.CustomerID	<input type="checkbox"/>
Orders.EmployeeID	<input type="checkbox"/>
Orders.OrderDate	<input type="checkbox"/>
Orders.RequiredDate	<input type="checkbox"/>
Orders.ShippedDate	<input type="checkbox"/>
Orders.ShipVia	<input type="checkbox"/>
Orders.Freight	<input type="checkbox"/>
Orders.ShipName	<input type="checkbox"/>
Orders.ShipAddress	<input type="checkbox"/>
Orders.ShipCity	<input type="checkbox"/>
Orders.ShipRegion	<input type="checkbox"/>
Orders.ShipPostalCode	<input type="checkbox"/>
Orders.ShipCountry	<input type="checkbox"/>

Figure 11-7. If you need to set a database field to act as an optimization filter using DIFF functionality, select the appropriate field in this screen.

Note: You won't see this screen if your source database table has no primary key.

Tip: for more information about the Update Field Value, see "Update Field Value" on page 11-6 in the *Syncx Integration Appliance Reference Guide*.

When your source database table has at least one primary key, this next screen gives you the option to select a database field as an update key.


1. (Optional) Use the **Update Field Value** field to update the value of the fields that match your filter criteria.
- ! **Caution!** This value will replace the source element's current value with whatever you enter in this field.
2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

Update Field Name	Update Field Value
Orders.OrderID	Primary Key
Orders.CustomerID	
Orders.EmployeeID	
Orders.OrderDate	
Orders.RequiredDate	
Orders.ShippedDate	
Orders.ShipVia	
Orders.Freight	
Orders.ShipName	
Orders.ShipAddress	
Orders.ShipCity	
Orders.ShipRegion	
Orders.ShipPostalCode	
Orders.ShipCountry	

Figure 11-8. If you need to set a database field to act as an update key, select the appropriate field in this screen.

You have finished defining your Option 1a source (using the Transformation Wizard to specify a single source table).

Option 1b: More than one table in the source database will be accessed.

 **Note:** Skip these steps if you chose to follow Option 1a above.

1. Enter part or all of the tables names. If you want to view all the database's items, leave the field blank.
2. Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
3. Click the **Search** button to view the list of items that match your name search.
4. Select the appropriate items in the **Available Item(s)** field, then click the right arrow button.
5. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

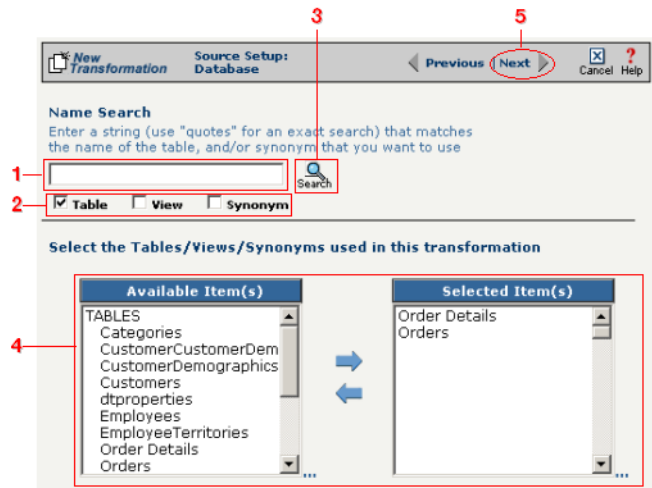



Figure 11-9. Select the appropriate tables you want to access from the **Available Item(s)** field.

 **Note:** Skip these steps if you chose to follow Option 1a.

The next screen is where you specify how many times you will use each table (or view/synonym) you selected for your source.

1. (Optional) If you will use each table more than once, change the **Times Used** field to the appropriate number.
2. Compare your work to below, then click **Next** to continue.

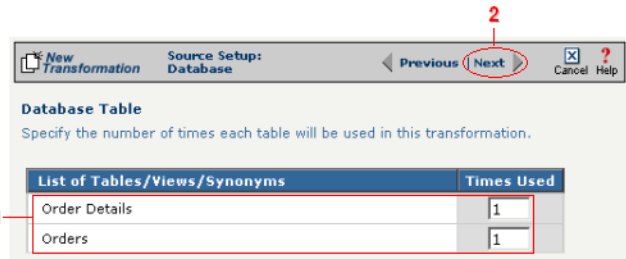



Figure 11-10. Use this screen in the Transformation Wizard to specify how many times each item will be used in the transformation.

 **Note:** Skip these steps if you chose to follow Option 1a.

Because you chose Option 1b (accessing more than one database table), you need to declare the tables' respective relationships:

1. Select the item in the **Parent** drop-down menu that you want to be the parent structure (i.e., at the top level of your data hierarchy).
2. Select the item in the **Child** drop-down menu that you want to be the child structure.
3. Select the appropriate database column in the **Parent Fields** window that will be used to reference the child table.
4. Select the appropriate database column in the **Child Fields** window that will be used to reference the parent table.
5. Click the **Add** button. This saves this parent-child relationship. You should see the new relationship appear in the **Parent – Child Field Relationships** table.
6. (Optional) If you have more child structures, click the **New** button and repeat the previous steps for each additional child.
7. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

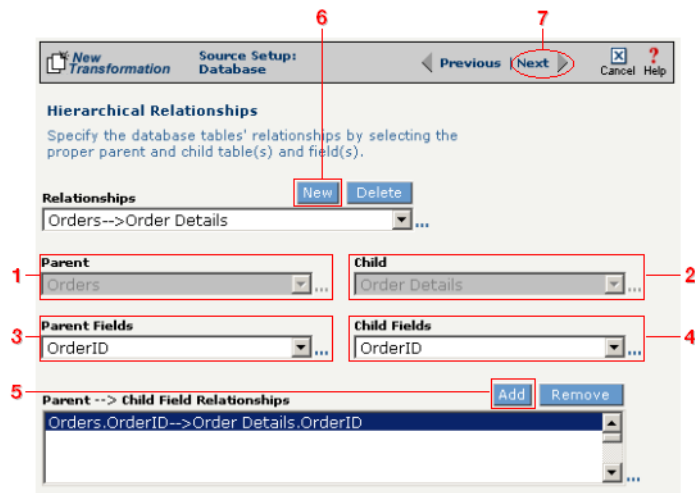



Figure 11-11. Use this screen in the Transformation Wizard to define the relationship between the different database tables.

 **Note:** Skip these steps if you chose to follow Option 1a.

In the **Nature of Data** screen, you need to indicate whether or not each child table's data must be present.

1. Select the appropriate radio button for each parent-child relationship:
 - a. Select **1 to N** if there will be at least 1 child to each parent entry.
 - b. Select **1** if there will always be a one-to-one parent-child relationship.
 - c. Select **0 to N** if there could be none, one, or more children for each parent.
 - d. Select **0 or 1** if there could be either no children or 1 child for each parent.
2. Compare your work to the figure below, then click **Next** to continue.

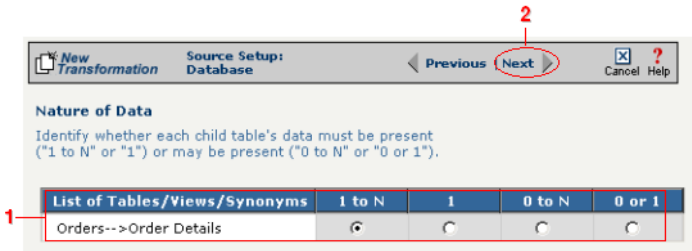



Figure 11-12. Use the Nature of Data screen to identify the number of child entries that are supported for each parent-child relationship.

 **Note:** Skip these steps if you chose to follow Option 1a.

The next screen lets you add a WHERE clause to filter your query:

1. Enter an appropriate WHERE SQL statement in the desired field's corresponding **Filter Condition** field.
2. (Optional) You can have the filtered output be sorted either ascending or descending by selecting the appropriate value from the **Sort** drop-down menu.
3. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

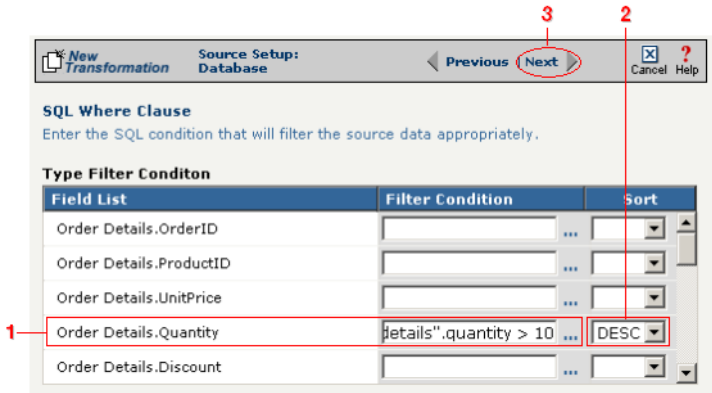



Figure 11-13. This optional screen lets you add a WHERE SQL clause to filter your information.

You have finished defining your Option 1b source (using the Transformation Wizard to specify a source with multiple tables).

 **Note:** Skip these steps if you chose to follow Option 1a or 1b above.

Option 2: You are familiar with SQL and want to enter your SQL query directly

1. Select the **Write SQL Statement** checkbox.
2. Enter your SQL query in the **SQL Statement** field.
3. (Optional) You can test the validity of your SQL statement by clicking the **Test SQL** button.
4. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

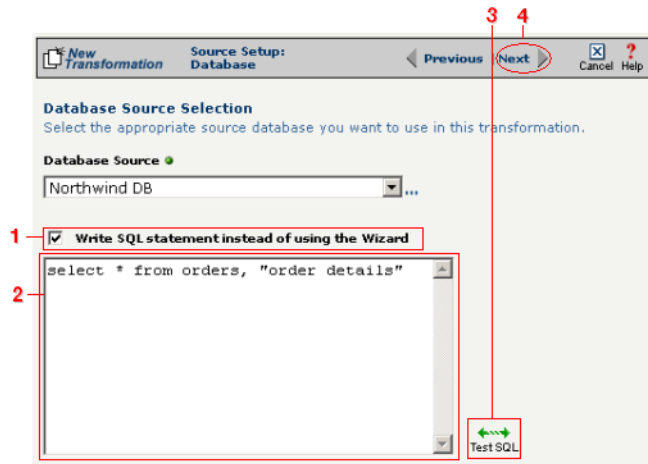




Figure 11-14. Click the **Write SQL Statement** checkbox if you are familiar with SQL and you want to type your statement directly into the **SQL Statement** field.

 **Note:** Skip these steps if you chose to follow Option 1a or 1b above.

 **Tip:** For more information about DIFF and optimization, see “Optimization Options (DIFF)” on page 10-5.

This next screen lets you set your source to take advantage of an operation’s DIFF function. If you want this source information to be optimized by filtering out redundant data, select the field(s) that you want to use for filtering in this screen.

1. Click the checkbox that corresponds to the appropriate key field name.
2. Compare your work to the figure shown below, then click the **Next** button to continue.

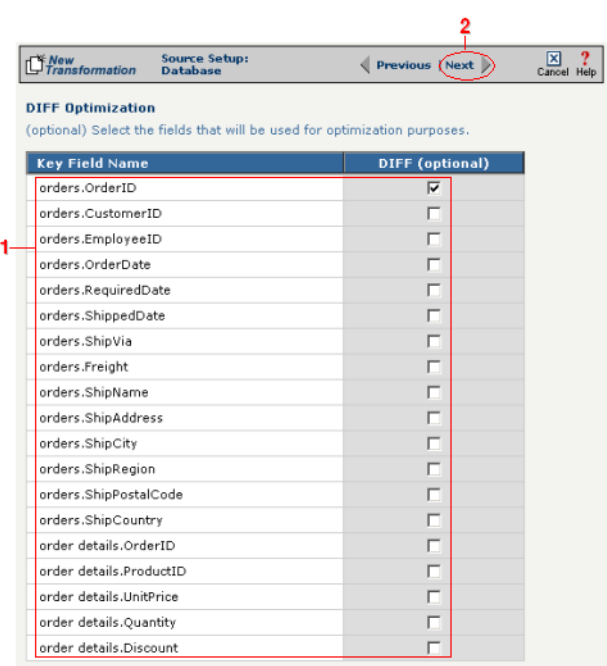


Figure 11-15. If you need to set a database field to act as an optimization filter using DIFF functionality, select the appropriate field in this screen.

You have finished defining your Option 2 source (directly entering the appropriate SQL statement).

Select Target Information (CRbuilder Process)

- ❶ Select the appropriate CRbuilder process from the drop-down menu.
- ❷ Select the process' initial task that you want to use to initiate from the drop-down menu.
- ❸ Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

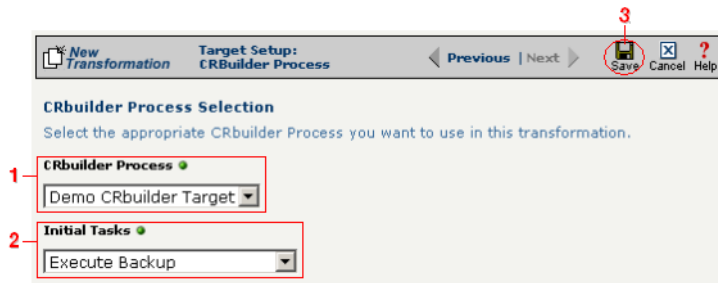


Figure 11-16. Select the name of the appropriate CRbuilder process and the desired initial task from their respective drop-down menu.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for instructions on mapping your new transformation.

How to Transform from a Database to a Database

Tip: Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Note: Make sure you've completed steps 1-3 above before attempting to define your transformation.

Summary of Steps

Follow these steps to transform information from a database to a database.

- 1 Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- 2 Create Your Source Definition (see “How to Create a Database Source Definition” on page 7-2 for details)
- 3 Create Your Target Definition (see “How to Create a Database Target Definition” on page 8-4 for details)
- 4 Use the Transformation Wizard to Build Your Transformation (see below for details)
- 5 Map the Source and Target Fields (see Chapter 17 for details)
- 6 Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

Use the Transformation Wizard to Build Your Transformation

- 1 Click the **Definitions** button in the navigation bar.
- 2 Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- 3 Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

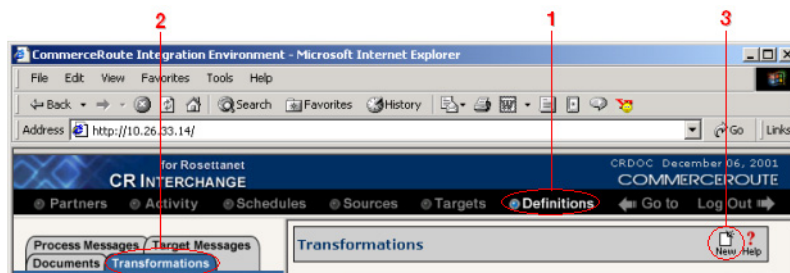


Figure 11-17. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- ④ Enter an appropriate name for your new transformation in the **Transformation Name** field.
- ⑤ Select “Database” from both the **Source** and **Target** drop-down menus.
- ⑥ Compare your work to Figure 11-18 shown below, then click the **Next** button in the toolbar to continue.

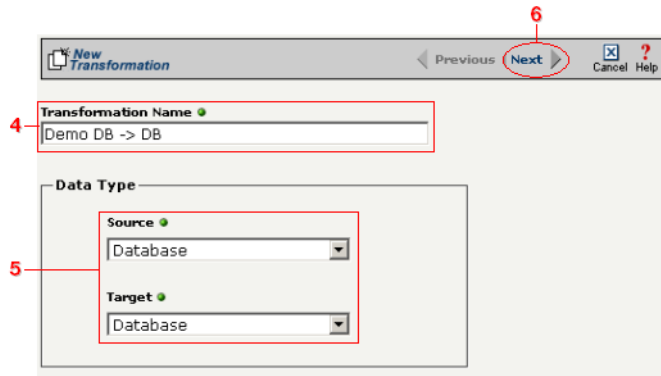


Figure 11-18. Give your new transformation definition an appropriate name, then choose “Database” for your Source and Target.

Select Source Information (Database)

- ❶ In the next screen of the Transformation Wizard, select the name of the Source that holds the database information you want to transform from the **Data Source** drop-down menu.
- ❷ Choose how you will get information from your database. You have two options:

Option 1: Use the Transformation Wizard to help you access your database without typing SQL

- a. Select the appropriate database definition from the **Database Source** drop-down menu.
- b. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

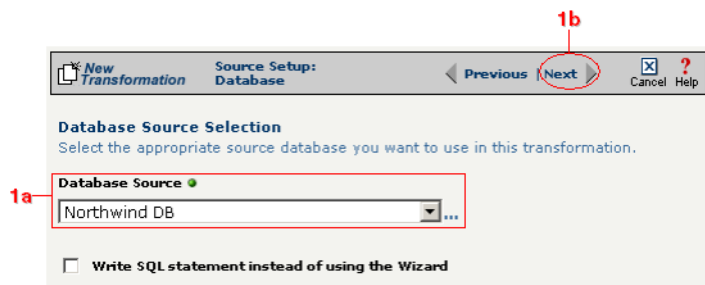


Figure 11-19. Choose the appropriate database from the **Database Source** drop-down menu if you want the Transformation Wizard to help you access your database without having to type any SQL.

Within Option 1, you need to specify how you will access information from your source database. Choose one of two options:

Option 1a: Only a single table in the source database will be accessed.

1. Enter part or all of the table's name. If you want to view all the database's items, leave the field blank.
2. Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
3. Click the **Search** button to view the list of items that match your name search.

4. Select the appropriate item in the **Available Item(s)** field, then click the right arrow button.
5. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

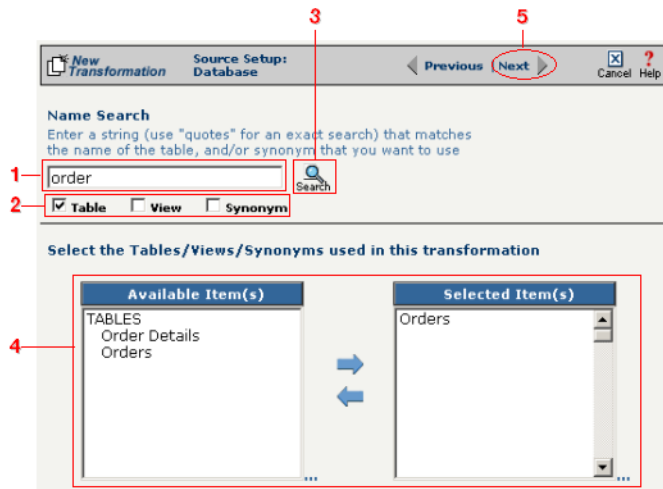


Figure 11-20. Select the single table you want to access from the **Available Tables** field.

The next screen is where you specify how many times you will use the single table (or view/synonym) you selected for your source.

1. (Optional) If you will use this table more than once, change the **Times Used** field to the appropriate number.
2. Compare your work to below, then click **Next** to continue.

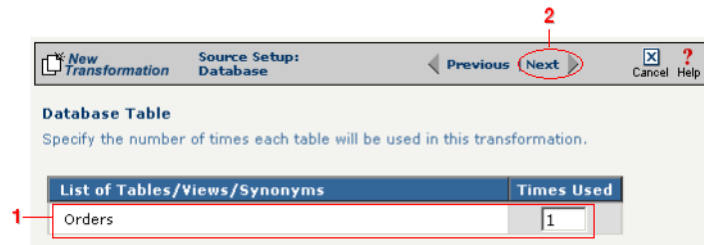


Figure 11-21. Use this screen to specify how many times the source table will be used.

The next screen lets you add a WHERE clause to filter your query:

1. Enter an appropriate WHERE SQL statement in the Where Clause.
2. (Optional) If you want to review your database table's fields, select the **View Field List** checkbox. The list will appear in a table at the bottom of the screen.
3. Click the **Next** button in the toolbar to continue.

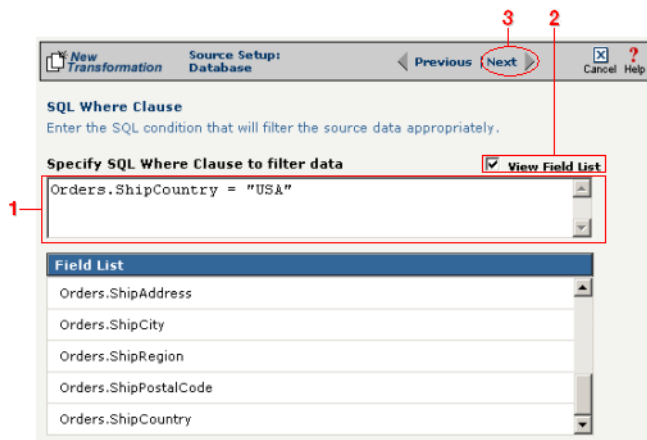

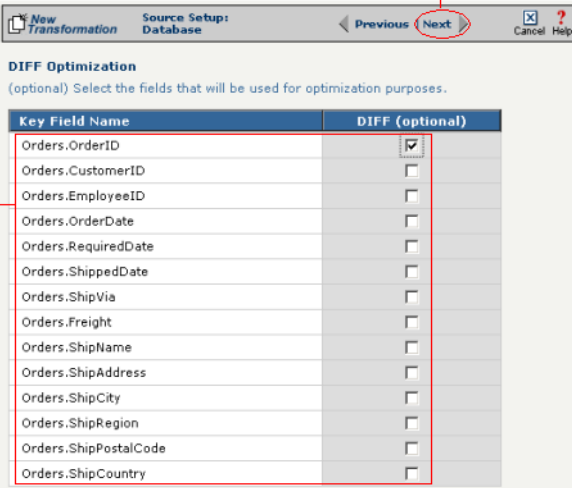


Figure 11-22. This optional screen lets you add a WHERE SQL clause to filter your information.

 **Tip:** For more information about DIFF and optimization, see “Optimization Options (DIFF)” on page 10-5.

This next screen lets you set your source to take advantage of an operation’s DIFF function. If you want this source information to be optimized by filtering out redundant data, select the field(s) that you want to use for filtering in this screen.

1. Click the checkbox that corresponds to the appropriate key field name.
2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.



DIFF Optimization
(optional) Select the fields that will be used for optimization purposes.

Key Field Name	DIFF (optional)
Orders.OrderID	<input checked="" type="checkbox"/>
Orders.CustomerID	<input type="checkbox"/>
Orders.EmployeeID	<input type="checkbox"/>
Orders.OrderDate	<input type="checkbox"/>
Orders.RequiredDate	<input type="checkbox"/>
Orders.ShippedDate	<input type="checkbox"/>
Orders.ShipVia	<input type="checkbox"/>
Orders.Freight	<input type="checkbox"/>
Orders.ShipName	<input type="checkbox"/>
Orders.ShipAddress	<input type="checkbox"/>
Orders.ShipCity	<input type="checkbox"/>
Orders.ShipRegion	<input type="checkbox"/>
Orders.ShipPostalCode	<input type="checkbox"/>
Orders.ShipCountry	<input type="checkbox"/>

Figure 11-23. If you need to set a database field to act as an optimization filter using DIFF functionality, select the appropriate field in this screen.

Note: You won't see this screen if your source database table has no primary key.

Tip: for more information about the Update Field Value, see "Update Field Value" on page 11-6 in the *Syncx Integration Appliance Reference Guide*.

When your source database table has at least one primary key, this next screen gives you the option to select a database field as an update key.

1. (Optional) Use the **Update Field Value** field to update the value of the fields that match your filter criteria.
- ! **Caution!** This value will replace the source element's current value with whatever you enter in this field.
2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

Update Source Data
(optional) Select fields to update and enter their new values.


Note: In situations where you want to filter out rows of data that has already been transformed entering an update field value will replace the existing field value with a new value (such as "USED"). You can then filter out these "USED" rows the next time this transformation is activated.

Update Field Name	Update Field Value
Orders.OrderID	Primary Key
Orders.CustomerID	
Orders.EmployeeID	
Orders.OrderDate	
Orders.RequiredDate	
Orders.ShippedDate	
Orders.ShipVia	
Orders.Freight	
Orders.ShipName	
Orders.ShipAddress	
Orders.ShipCity	
Orders.ShipRegion	
Orders.ShipPostalCode	
Orders.ShipCountry	

Figure 11-24. If you need to set a database field to act as an update key, select the appropriate field in this screen.

You have finished defining your Option 1a source (using the Transformation Wizard to specify a single source table).

Option 1b: More than one table in the source database will be accessed.

 **Note:** Skip these steps if you chose to follow Option 1a above.

1. Enter part or all of the tables names. If you want to view all the database's items, leave the field blank.
2. Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
3. Click the **Search** button to view the list of items that match your name search.
4. Select the appropriate items in the **Available Item(s)** field, then click the right arrow button.
5. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

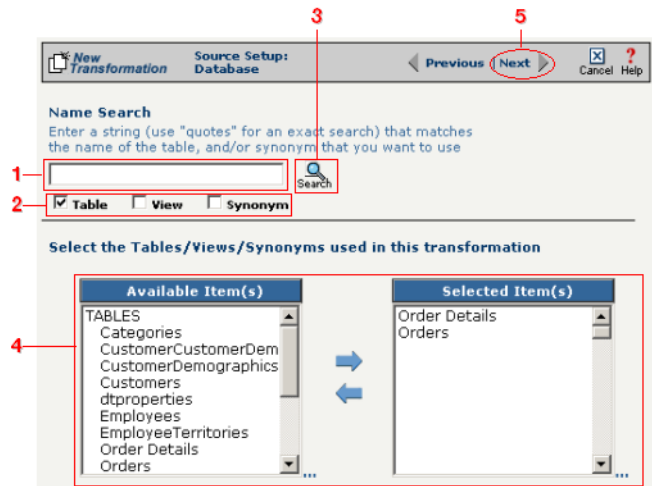



Figure 11-25. Select the appropriate tables you want to access from the **Available Item(s)** field.

 **Note:** Skip these steps if you chose to follow Option 1a.

The next screen is where you specify how many times you will use each table (or view/synonym) you selected for your source.

1. (Optional) If you will use each table more than once, change the **Times Used** field to the appropriate number.
2. Compare your work to below, then click **Next** to continue.

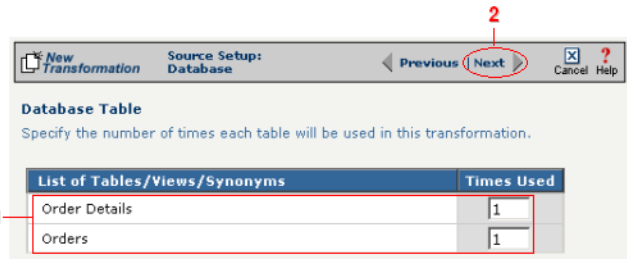


Figure 11-26. Use this screen in the Transformation Wizard to specify how many times each item will be used in the transformation.

Note: Skip these steps if you chose to follow Option 1a.

Because you chose Option 1b (accessing more than one database table), you need to declare the tables' respective relationships:

1. Select the item in the **Parent** drop-down menu that you want to be the parent structure (i.e., at the top level of your data hierarchy).
2. Select the item in the **Child** drop-down menu that you want to be the child structure.
3. Select the appropriate database column in the **Parent Fields** window that will be used to reference the child table.
4. Select the appropriate database column in the **Child Fields** window that will be used to reference the parent table.
5. Click the **Add** button. This saves this parent-child relationship. You should see the new relationship appear in the **Parent – Child Field Relationships** table.
6. (Optional) If you have more child structures, click the **New** button and repeat the previous steps for each additional child.
7. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

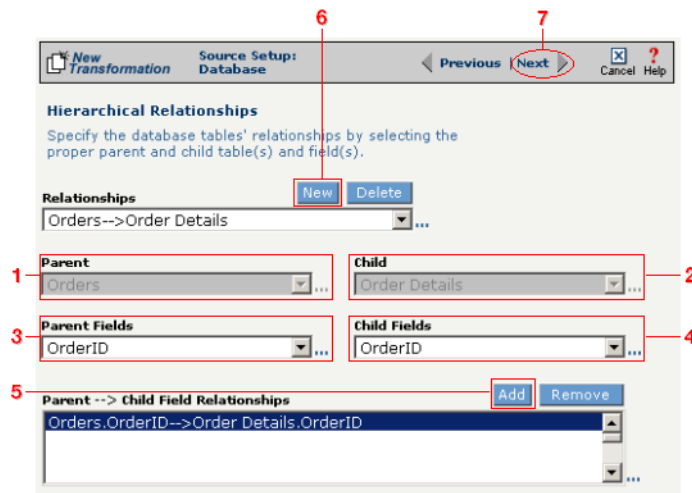



Figure 11-27. Use this screen in the Transformation Wizard to define the relationship between the different database tables.

 **Note:** Skip these steps if you chose to follow Option 1a.

In the **Nature of Data** screen, you need to indicate whether or not each child table's data must be present.

1. Select the appropriate radio button for each parent-child relationship:
 - a. Select **1 to N** if there will be at least 1 child to each parent entry.
 - b. Select **1** if there will always be a one-to-one parent-child relationship.
 - c. Select **0 to N** if there could be none, one, or more children for each parent.
 - d. Select **0 or 1** if there could be either no children or 1 child for each parent.
2. Compare your work to the figure below, then click **Next** to continue.

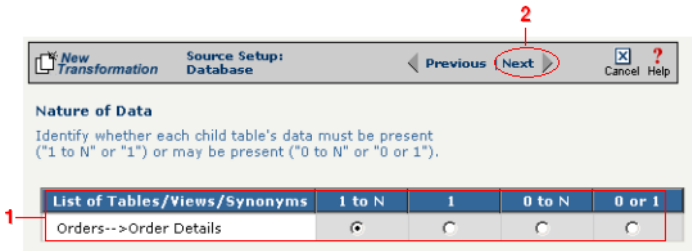



Figure 11-28. Use the Nature of Data screen to identify the number of child entries that are supported for each parent-child relationship.

 **Note:** Skip these steps if you chose to follow Option 1a.

The next screen lets you add a WHERE clause to filter your query:

1. Enter an appropriate WHERE SQL statement in the desired field's corresponding **Filter Condition** field.
2. (Optional) You can have the filtered output be sorted either ascending or descending by selecting the appropriate value from the **Sort** drop-down menu.
3. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

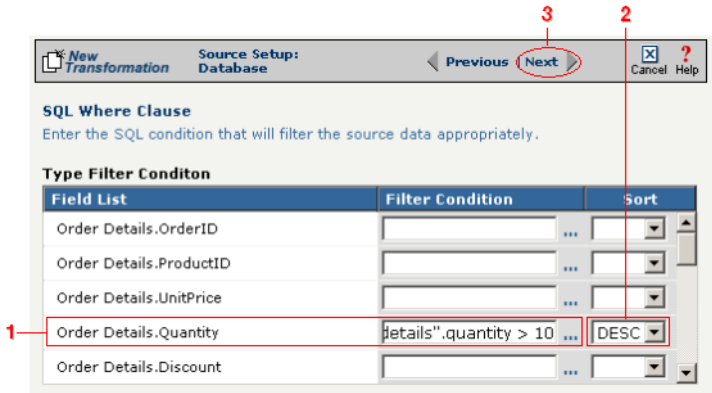



Figure 11-29. This optional screen lets you add a WHERE SQL clause to filter your information.

You have finished defining your Option 1b source (using the Transformation Wizard to specify a source with multiple tables).

 **Note:** Skip these steps if you chose to follow Option 1a or 1b above.

Option 2: You are familiar with SQL and want to enter your SQL query directly

1. Select the **Write SQL Statement** checkbox.
2. Enter your SQL query in the **SQL Statement** field.
3. (Optional) You can test the validity of your SQL statement by clicking the **Test SQL** button.
4. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

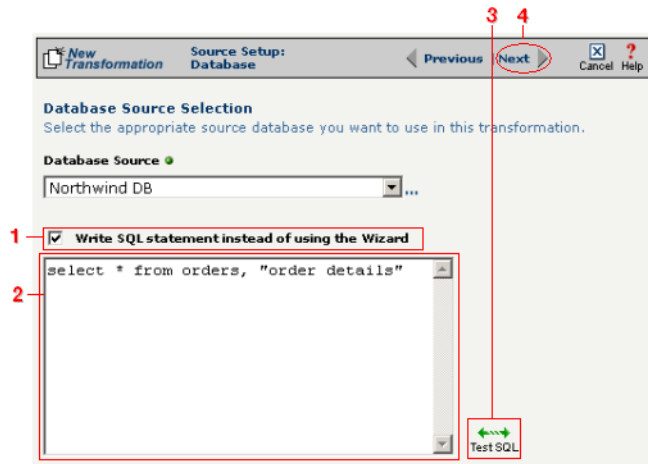




Figure 11-30. Click the **Write SQL Statement** checkbox if you are familiar with SQL and you want to type your statement directly into the **SQL Statement** field.

 **Note:** Skip these steps if you chose to follow Option 1a or 1b above.

 **Tip:** For more information about DIFF and optimization, see “Optimization Options (DIFF)” on page 10-5.

This next screen lets you set your source to take advantage of an operation’s DIFF function. If you want this source information to be optimized by filtering out redundant data, select the field(s) that you want to use for filtering in this screen.

1. Click the checkbox that corresponds to the appropriate key field name.
2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

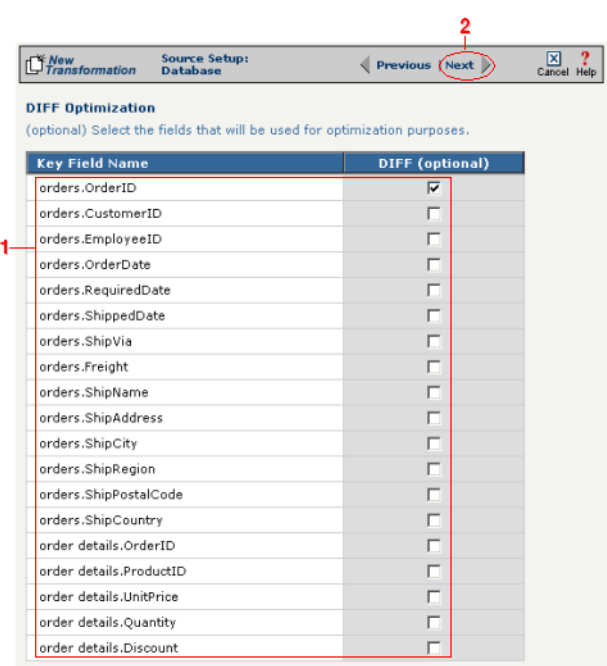


Figure 11-31. If you need to set a database field to act as an optimization filter using DIFF functionality, select the appropriate field in this screen.

You have finished defining your Option 2 source (directly entering the appropriate SQL statement).

Select Target Information (Database)

- ❶ Select the name of the data target that you defined as your Target Definition from the **Database Target** drop-down menu.
- ❷ Click the **Next** button in the toolbar to continue (see the figure below).

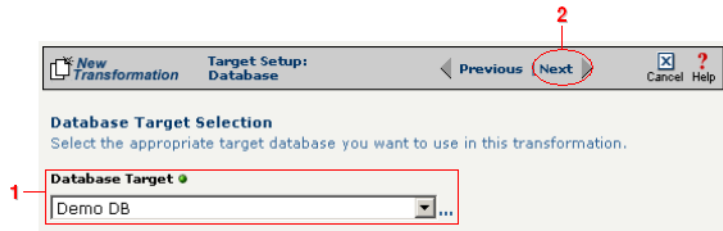


Figure 11-32. Choose which data source you will use as your target database from the **Database Target** drop-down menu.

Next, you need to specify how you will write information to your target database. Follow the option that is appropriate for your transformation:

Option 1: Only a single table in the target database will be accessed

- ❶ Enter part or all of the table's name. If you want to view all the database's items, leave the field blank.
- ❷ Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
- ❸ Click the **Search** button to view the list of items that match your name search.
- ❹ Select the appropriate item in the **Available Item(s)** field, then click the right arrow button.
- ❺ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

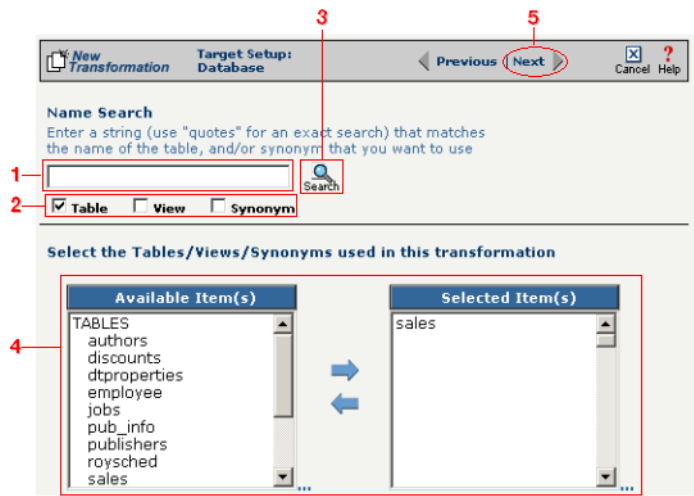


Figure 11-33. Choose the single table you want to access from the **Available Tables** field.

The next screen is where you specify how many times you will use the single table (or view/synonym) you selected for your target.

1. (Optional) If you will use this table more than once, change the **Times Used** field to the appropriate number.
2. Compare your work to below, then click **Next** to continue.


New Transformation Target Setup: Database

Previous **Next** Cancel Help

Database Table
Specify the number of times each table will be used in this transformation.

List of Tables/Views/Synonyms	Times Used
sales	1

Figure 11-34. Use this screen to specify how many times the target table will be used.

 **Note:** You won't see this screen if your database table has no primary key.

When your database table has at least one primary key, this next screen gives you the option to select a database field as an update key.

1. (Optional) Use the **Update Key** field to select the field(s) that will be treated as update keys.
2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

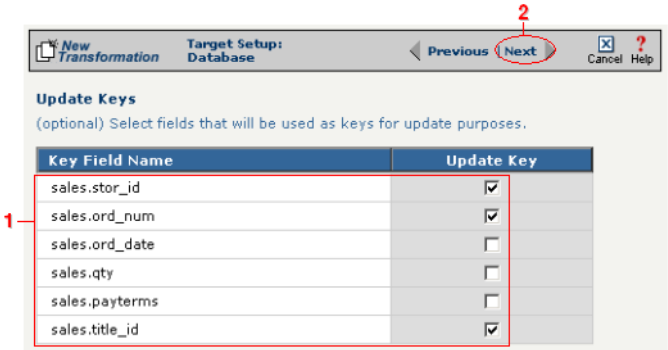




Figure 11-35. If you need to set a database field to act as an update key, select the appropriate field in this screen.

 **Note:** Skip to “Select Insert/Update Mode” on page 11-36 if you chose to follow Option 1 above.

 **Tip:** Hold down the Ctrl key to select multiple tables.

Option 2: More than one table in the target database will be accessed

1. Enter part or all of the tables' names. If you want to view all the database's items, leave the field blank.
2. Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
3. Click the **Search** button to view the list of items that match your name search.
4. Select the appropriate items in the **Available Item(s)** field, then click the right arrow button.
5. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

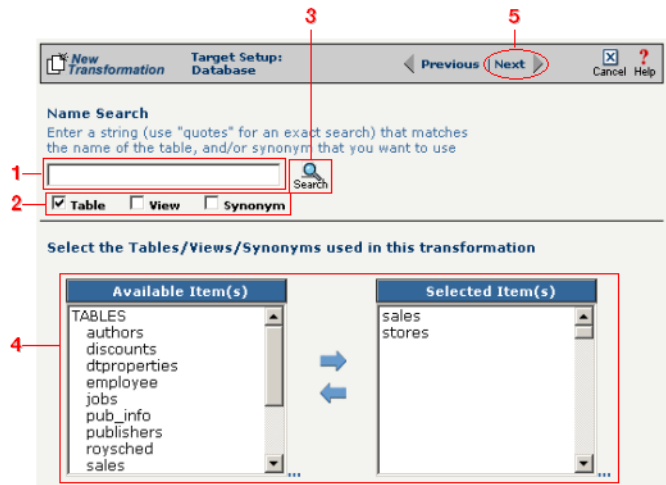


Figure 11-36. Select the appropriate tables you want to access from the **Available Tables** field.

Because you chose Option 2 (accessing more than one database table), you need to declare the tables' respective relationships:

1. Select the item in the **Parent** drop-down menu that you want to be the parent structure (i.e., at the top level of your data hierarchy).
2. Select the item in the **Child** drop-down menu that you want to be the child structure.
3. Select the appropriate database column in the **Parent Fields** window that will be used to reference the child table.
4. Select the appropriate database column in the **Child Fields** window that will be used to reference the parent table.
5. Click the **Add** button. This saves this parent-child relationship. You should see the new relationship appear in the **Parent – Child Field Relationships** table.
6. (Optional) If you have more child structures, click the **New** button and repeat the previous steps for each additional child.
7. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

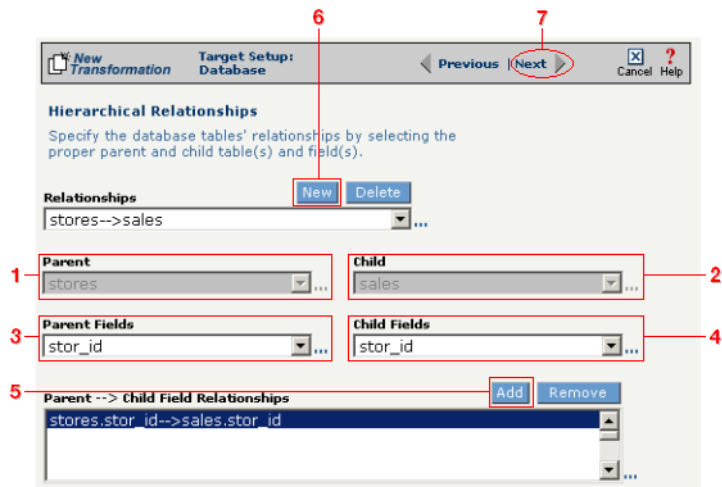


Figure 11-37. Use this screen in the Transformation Wizard to define the relationship between the different database tables.

In the **Nature of Data** screen, you need to indicate whether or not each child table's data must be present.

1. Select the appropriate radio button for each parent-child relationship:
 - a. Select **1 to N** if there will be at least 1 child to each parent entry.
 - b. Select **1** if there will always be a one-to-one parent-child relationship.
 - c. Select **0 to N** if there could be none, one, or more children for each parent.
 - d. Select **0 or 1** if there could be either no children or 1 child for each parent.
2. Compare your work to the figure below, then click **Next** to continue.

The screenshot shows the 'Nature of Data' dialog box. At the top, there are buttons for 'Previous' and 'Next' (highlighted with a red circle and a red '2'). Below the title bar, the text reads: 'Nature of Data' and 'Identify whether each child table's data must be present ("1 to N" or "1") or may be present ("0 to N" or "0 or 1").' Below this is a table with the following structure:

List of Tables/Views/Synonyms	1 to N	1	0 to N	0 or 1
stores-->sales	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

A red box highlights the 'Next' button and the row for 'stores-->sales'. A red '1' points to the 'List of Tables/Views/Synonyms' column header.

Figure 11-38. Use the Nature of Data screen to identify the number of child entries that are supported for each parent-child relationship.

Note: You won't see this screen if your database table has no primary key.

When your database table has at least one primary key, this next screen gives you the option to select a database field as an update key.

- 1. (Optional) Select the checkbox(es) in the **Update Key** column that correspond to the field(s) that will be treated as update keys.
- 2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

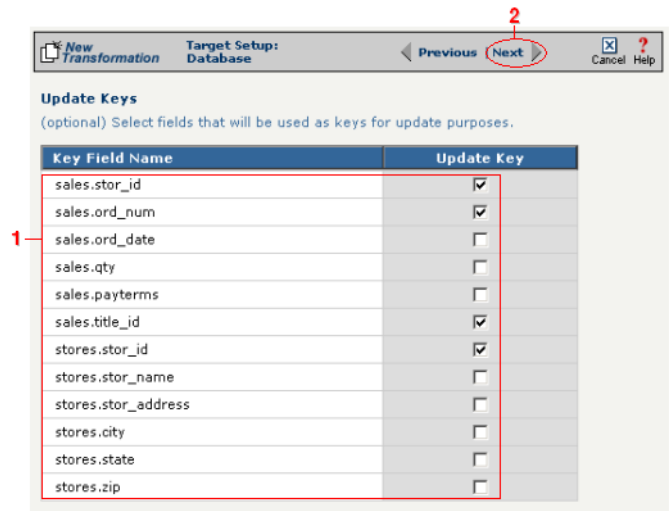



Figure 11-39. If you need to set a database field to act as an update key, select the appropriate field in this screen.

You have now completed Option 2.

Select Insert/Update Mode

In this last screen of the Transformation Wizard, you define how the Syncx Integration Appliance will handle new or existing records when it loads data from your source to your target database.

- 1. Select one of the four options described below:
 - a. **Insert/Update:** the appliance will first attempt to insert any new record it encounters. If a record already exists, it will then update that record.
 - b. **Insert Only:** the appliance will attempt to insert a new record only. No

 **Note:** The options that include Update are only available if you chose at least one field in the **Update Key** screen.

updates will be permitted.

- c. **Update Only:** the appliance will attempt to update an existing record. No new records will be created.
- d. **Update/Insert:** the appliance will first attempt to update a record. It will create a new record if none exists.

- ② Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

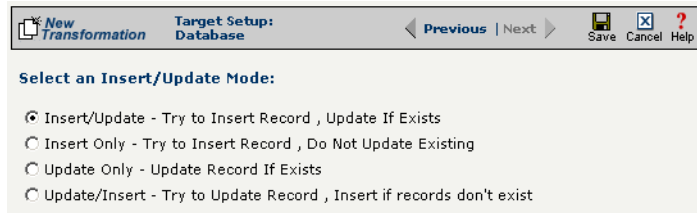



Figure 11-40. Choose which of the four insert/update options is appropriate for your transformation.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for instructions on mapping your new transformation.

How to Transform from a Database to an EDI Document


 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from a database to an EDI document.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition (see “How to Create a Database Source Definition” on page 7-2 for details).
- ❸ Create Your Target Definition.
 - a. See “How to Create an FTP Target Definition” on page 8-10 if your target EDI document will be stored on an FTP server.
 - b. See “How to Create a File Share Target Definition” on page 8-7 if your target EDI document will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Target Definition” on page 8-14 if your target EDI document will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Target Definition” on page 8-20 if your target EDI document will be stored on an SCP server.
- ❹ Use the Transformation Wizard to Build Your Transformation (see below for details).
- ❺ Map the Source and Target Fields (see Chapter 17 for details).
- ❻ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details).

Use the Transformation Wizard to Build Your Transformation

 **Note:** Make sure you’ve completed steps 1-3 above before attempting to define your transformation.

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

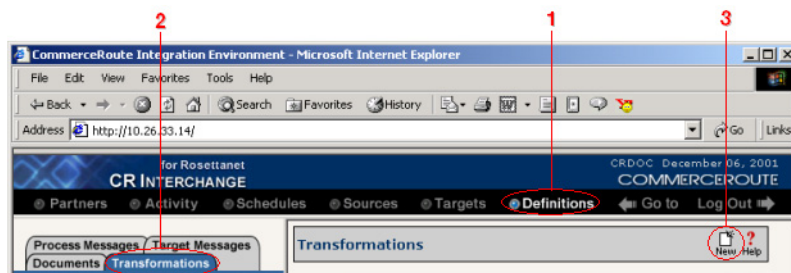


Figure 11-41. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- ④ Enter an appropriate name for your new transformation in the **Transformation Name** field.
- ⑤ Select “Database” from the **Source** and “EDI” from the **Target** drop-down menu.
- ⑥ Click the **Next** button in the toolbar to continue.

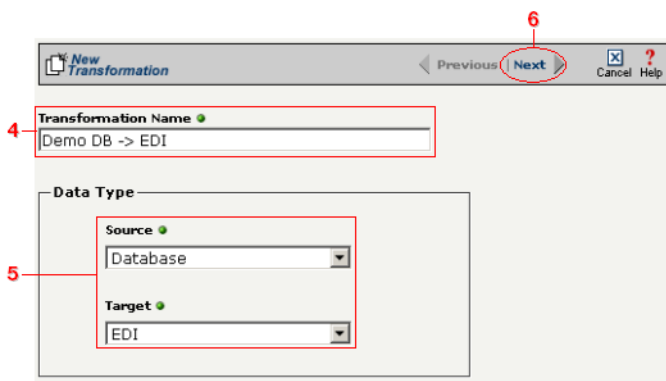


Figure 11-42. Give your new transformation definition an appropriate name, then choose “Database” for your Source and “EDI” for your Target.

Select Source Information (Database)

- ❶ In the next screen of the Transformation Wizard, select the name of the Source that holds the database information you want to transform from the **Data Source** drop-down menu.
- ❷ Choose how you will get information from your database. You have two options:

Option 1: Use the Transformation Wizard to help you access your database without typing SQL

- a. Select the appropriate database definition from the **Database Source** drop-down menu.
- b. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

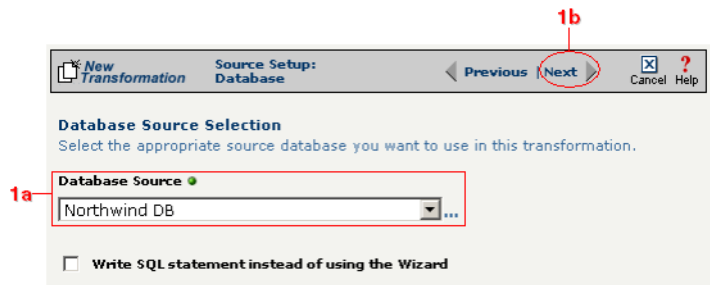


Figure 11-43. Choose the appropriate database from the **Database Source** drop-down menu if you want the Transformation Wizard to help you access your database without having to type any SQL.

Within Option 1, you need to specify how you will access information from your source database. Choose one of two options:

Option 1a: Only a single table in the source database will be accessed.

1. Enter part or all of the table's name. If you want to view all the database's items, leave the field blank.
2. Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
3. Click the **Search** button to view the list of items that match your name search.

- 4. Select the appropriate item in the **Available Item(s)** field, then click the right arrow button.
- 5. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

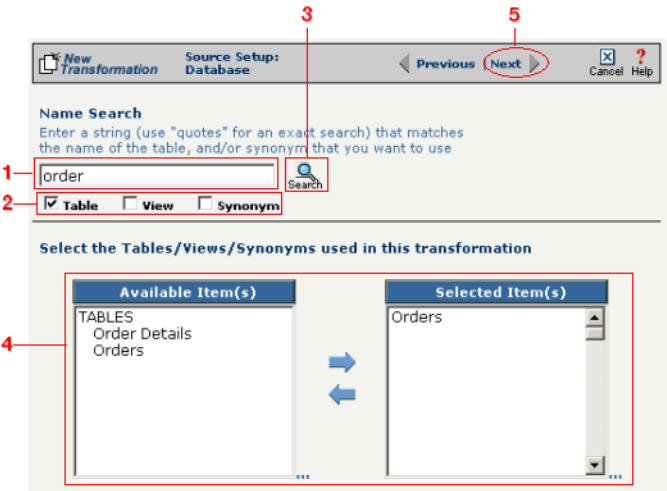


Figure 11-44. Select the single table you want to access from the **Available Tables** field.

The next screen is where you specify how many times you will use the single table (or view/synonym) you selected for your source.

- 1. (Optional) If you will use this table more than once, change the **Times Used** field to the appropriate number.
- 2. Compare your work to below, then click **Next** to continue.

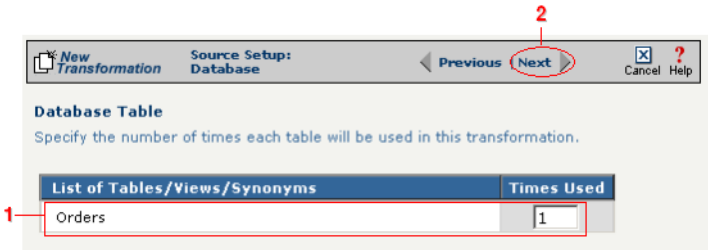


Figure 11-45. Use this screen to specify how many times the source table will be used.

The next screen lets you add a WHERE clause to filter your query:

1. Enter an appropriate WHERE SQL statement in the Where Clause.
2. (Optional) If you want to review your database table's fields, select the **View Field List** checkbox. The list will appear in a table at the bottom of the screen.
3. Click the **Next** button in the toolbar to continue.

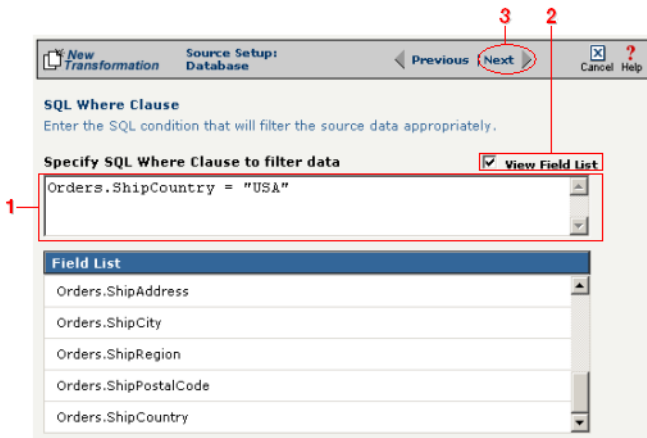

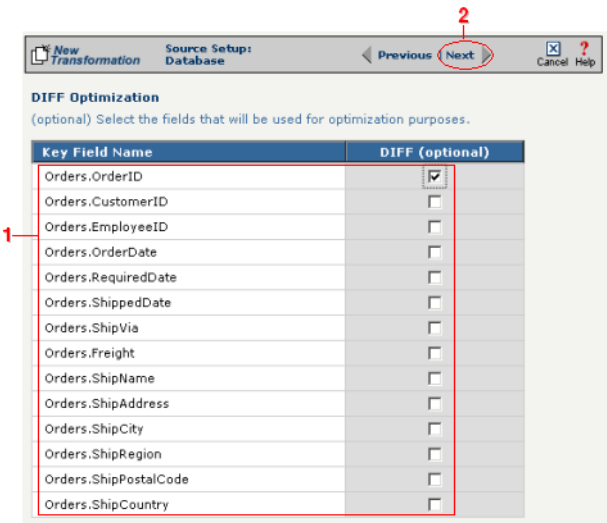


Figure 11-46. This optional screen lets you add a WHERE SQL clause to filter your information.

 **Tip:** For more information about DIFF and optimization, see “Optimization Options (DIFF)” on page 10-5.


This next screen lets you set your source to take advantage of an operation’s DIFF function. If you want this source information to be optimized by filtering out redundant data, select the field(s) that you want to use for filtering in this screen.


1. Click the checkbox that corresponds to the appropriate key field name.
2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.



Key Field Name	DIFF (optional)
Orders.OrderID	<input checked="" type="checkbox"/>
Orders.CustomerID	<input type="checkbox"/>
Orders.EmployeeID	<input type="checkbox"/>
Orders.OrderDate	<input type="checkbox"/>
Orders.RequiredDate	<input type="checkbox"/>
Orders.ShippedDate	<input type="checkbox"/>
Orders.ShipVia	<input type="checkbox"/>
Orders.Freight	<input type="checkbox"/>
Orders.ShipName	<input type="checkbox"/>
Orders.ShipAddress	<input type="checkbox"/>
Orders.ShipCity	<input type="checkbox"/>
Orders.ShipRegion	<input type="checkbox"/>
Orders.ShipPostalCode	<input type="checkbox"/>
Orders.ShipCountry	<input type="checkbox"/>

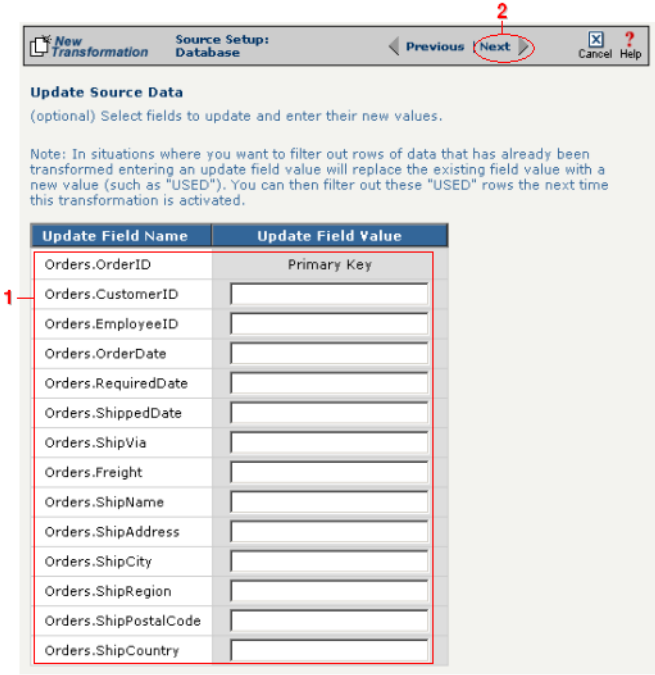
Figure 11-47. If you need to set a database field to act as an optimization filter using DIFF functionality, select the appropriate field in this screen.

 **Note:** You won't see this screen if your source database table has no primary key.

 **Tip:** for more information about the Update Field Value, see "Update Field Value" on page 11-6 in the *Syncx Integration Appliance Reference Guide*.

When your source database table has at least one primary key, this next screen gives you the option to select a database field as an update key.

1. (Optional) Use the **Update Field Value** field to update the value of the fields that match your filter criteria.
- ! **Caution!** This value will replace the source element's current value with whatever you enter in this field.
2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.




Update Field Name	Update Field Value
Orders.OrderID	Primary Key
Orders.CustomerID	
Orders.EmployeeID	
Orders.OrderDate	
Orders.RequiredDate	
Orders.ShippedDate	
Orders.ShipVia	
Orders.Freight	
Orders.ShipName	
Orders.ShipAddress	
Orders.ShipCity	
Orders.ShipRegion	
Orders.ShipPostalCode	
Orders.ShipCountry	

Figure 11-48. If you need to set a database field to act as an update key, select the appropriate field in this screen.

You have finished defining your Option 1a source (using the Transformation Wizard to specify a single source table).

Option 1b: More than one table in the source database will be accessed.

 **Note:** Skip these steps if you chose to follow Option 1a above.

1. Enter part or all of the tables names. If you want to view all the database's items, leave the field blank.
2. Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
3. Click the **Search** button to view the list of items that match your name search.
4. Select the appropriate items in the **Available Item(s)** field, then click the right arrow button.
5. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

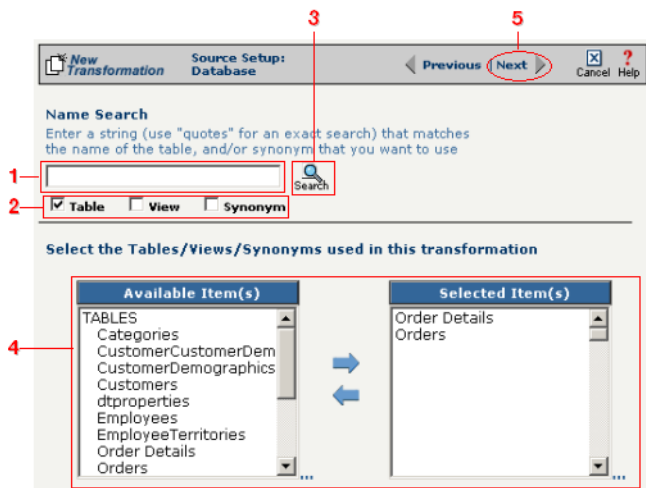



Figure 11-49. Select the appropriate tables you want to access from the **Available Item(s)** field.

 **Note:** Skip these steps if you chose to follow Option 1a.

The next screen is where you specify how many times you will use each table (or view/synonym) you selected for your source.

1. (Optional) If you will use each table more than once, change the **Times Used** field to the appropriate number.
2. Compare your work to below, then click **Next** to continue.

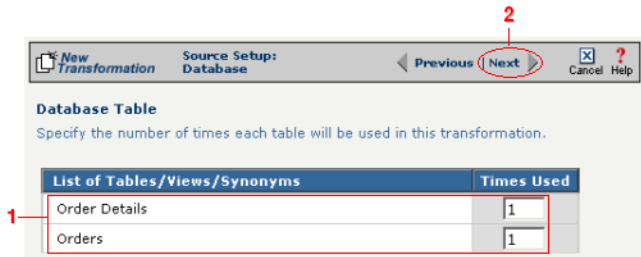



Figure 11-50. Use this screen in the Transformation Wizard to specify how many times each item will be used in the transformation.

 **Note:** Skip these steps if you chose to follow Option 1a.

Because you chose Option 1b (accessing more than one database table), you need to declare the tables' respective relationships:

1. Select the item in the **Parent** drop-down menu that you want to be the parent structure (i.e., at the top level of your data hierarchy).
2. Select the item in the **Child** drop-down menu that you want to be the child structure.
3. Select the appropriate database column in the **Parent Fields** window that will be used to reference the child table.
4. Select the appropriate database column in the **Child Fields** window that will be used to reference the parent table.
5. Click the **Add** button. This saves this parent-child relationship. You should see the new relationship appear in the **Parent – Child Field Relationships** table.
6. (Optional) If you have more child structures, click the **New** button and repeat the previous steps for each additional child.
7. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

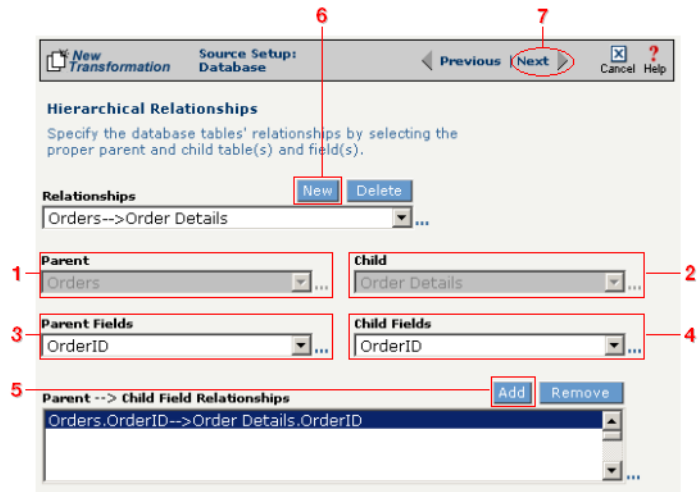


Figure 11-51. Use this screen in the Transformation Wizard to define the relationship between the different database tables.

Note: Skip these steps if you chose to follow Option 1a.

In the **Nature of Data** screen, you need to indicate whether or not each child table's data must be present.

1. Select the appropriate radio button for each parent-child relationship:
 - a. Select **1 to N** if there will be at least 1 child to each parent entry.
 - b. Select **1** if there will always be a one-to-one parent-child relationship.
 - c. Select **0 to N** if there could be none, one, or more children for each parent.
 - d. Select **0 or 1** if there could be either no children or 1 child for each parent.
2. Compare your work to the figure below, then click **Next** to continue.

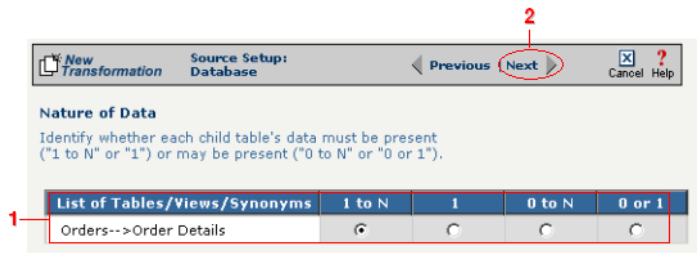



Figure 11-52. Use the Nature of Data screen to identify the number of child entries that are supported for each parent-child relationship.

 **Note:** Skip these steps if you chose to follow Option 1a.

The next screen lets you add a WHERE clause to filter your query:

1. Enter an appropriate WHERE SQL statement in the desired field's corresponding **Filter Condition** field.
2. (Optional) You can have the filtered output be sorted either ascending or descending by selecting the appropriate value from the **Sort** drop-down menu.
3. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

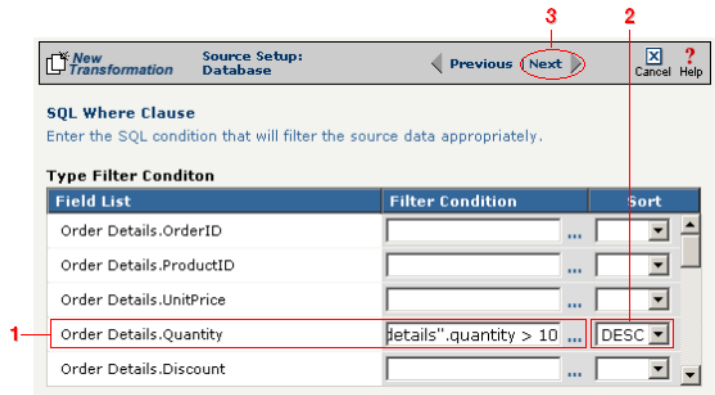



Figure 11-53. This optional screen lets you add a WHERE SQL clause to filter your information.

You have finished defining your Option 1b source (using the Transformation Wizard to specify a source with multiple tables).

 **Note:** Skip these steps if you chose to follow Option 1a or 1b above.

Option 2: You are familiar with SQL and want to enter your SQL query directly

1. Select the **Write SQL Statement** checkbox.
2. Enter your SQL query in the **SQL Statement** field.
3. (Optional) You can test the validity of your SQL statement by clicking the **Test SQL** button.
4. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

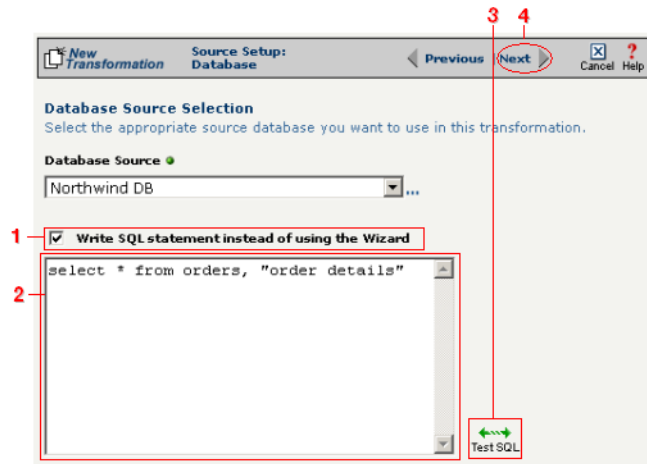




Figure 11-54. Click the **Write SQL Statement** checkbox if you are familiar with SQL and you want to type your statement directly into the **SQL Statement** field.

 **Note:** Skip these steps if you chose to follow Option 1a or 1b above.

 **Tip:** For more information about DIFF and optimization, see “Optimization Options (DIFF)” on page 10-5.

This next screen lets you set your source to take advantage of an operation’s DIFF function. If you want this source information to be optimized by filtering out redundant data, select the field(s) that you want to use for filtering in this screen.

1. Click the checkbox that corresponds to the appropriate key field name.
2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

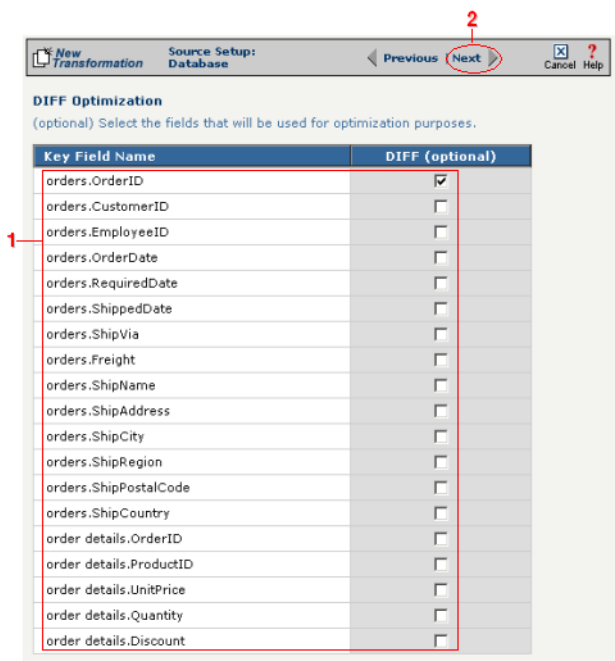



Figure 11-55. If you need to set a database field to act as an optimization filter using DIFF functionality, select the appropriate field in this screen.

You have finished defining your Option 2 source (directly entering the appropriate SQL statement).

 **Tip:** for more information about SEF files, see “What’s an SEF File?” on page 11-14 in the *Syncx Integration Appliance Reference Guide*.

Select Target Information (EDI)

You have two options for selecting the appropriate target EDI file. Follow the scenario that describes where your target EDI document's SEF file is located:

Option1: You are using an EDI file whose definition is already loaded into the appliance

- ❶ Click the **Select an existing SEF** radio button.
- ❷ Select the appropriate EDI folder (that matches the EDI standard and version you want to use) from the drop-down list.
- ❸ Choose the appropriate EDI document from the scrollable list below (e.g., 850 if you want to use the Purchase Order form).
- ❹ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

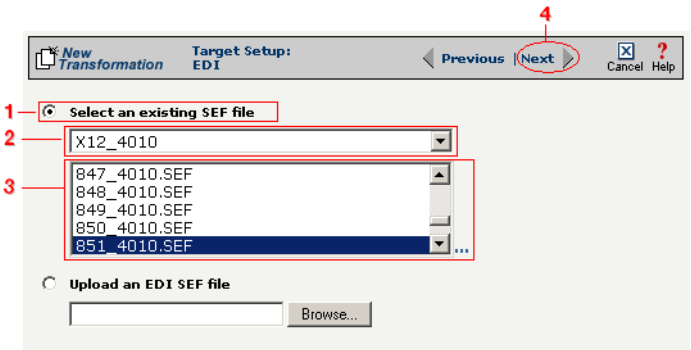



Figure 11-56. Click the **Select an existing SEF** radio button if your EDI document definition has already been loaded into the system.

 **Note:** Skip to “(Optional) Select Target EDI Options” below if you chose to follow Option 1 above.

Option 2: You need to use an EDI file whose definition has not yet been loaded into the appliance

- ❶ Choose the **Upload an EDI SEF file** radio button.
- ❷ Click **Browse** and navigate to the location of your EDI file whose definition (SEF file) you want to add to the appliance.
- ❸ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

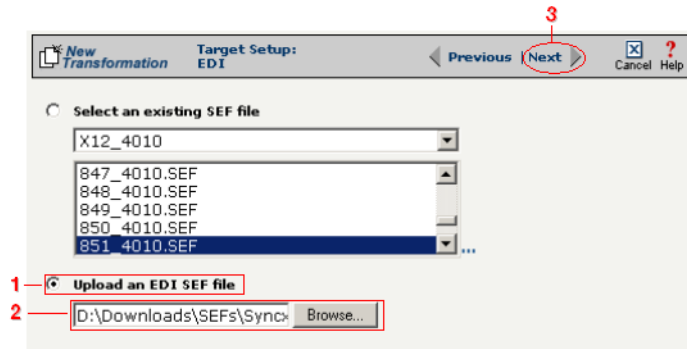



Figure 11-57. Click the **Upload an EDI SEF file** radio button if you need to copy a new EDI definition to the Syncx appliance.

(Optional) Select Target EDI Options

This screen is where you can set all the appropriate default values for your target EDI document. In most cases, you will leave the default settings as they are. You may optionally change them, however, if you want to change how the system will format the EDI information.

- ❶ Select the **CRLF Formatted** checkbox if a text editor has wrapped your EDI document by inserting CRLF's (carriage return line feed characters).
- ❷ Enter a new character in the **Data Segment Terminator** field that will define the end of a record in the EDI file.
- ❸ Enter a new character in the **Data Element Terminator** field that will define the end of a field in the EDI file.
- ❹ Enter a new character in the **Composite Data Element Terminator** field that will define the end of data types that are “compound” or composed of other data elements. For example, a data element of “date” could be composed of month, day, and year elements.

 **Tip:** See “CRLF Formatting” on page 11-16 in the *Syncx Integration Appliance Reference Guide* for more information on **CRLF Formatted**.

- 5 Enter a new value in the **Release Indicator** field. This tells the system to read a character as a character, not as a command.
- 6 Use the Default buttons only if you want to reset your EDI options:
 - a. If you want to reset all the previous values back to their default X-12 settings, click **Reset X-12 Default**.
 - b. If you want to reset all the previous values back to their last default settings, click **Reset Last Default**.
- 7 Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

New Transformation Target Setup: EDI

Previous | Next | **Save** | Cancel | Help

Default Values:
Specify which character(s) should be used for each control character.
(For 'carriage return line feed', please enter 'CRLF')

2 Data Segment Terminator: ~

3 Data Element Terminator: *

4 Composite Data Element Terminator: !

5 Release Indicator: \


6a Reset X12 Default 6b Reset Last Saved

Figure 11-58. Use this screen if you need to change any of your Target EDI document's default values.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, "Transformation Mapping" for instructions on mapping your new transformation.

How to Transform from an EDI Document to a Database

 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.


Summary of Steps

Follow these steps to transform information from a text file to a database.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See “How to Create an FTP Source Definition” on page 7-8 if your source EDI document will be stored on an FTP server.
 - b. See “How to Create a File Share Source Definition” on page 7-5 if your source EDI document will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Source Definition” on page 7-11 if your source EDI document will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Source Definition” on page 7-13 if your source EDI document will be stored on an SCP server.
- ❸ Create Your Target Definition (see “How to Create a Database Target Definition” on page 8-4 for details)
- ❹ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❺ Map the Source and Target Fields (see Chapter 17 for details)
- ❻ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

Use the Transformation Wizard to Build Your Transformation

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

 **Note:** Make sure you've completed steps 1-3 above before attempting to define your transformation.

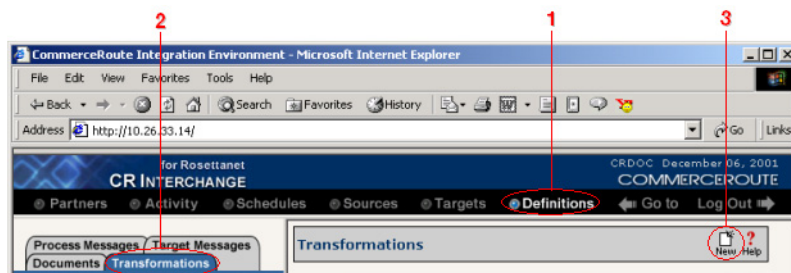


Figure 11-59. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- ④ Enter an appropriate name for your new transformation in the **Transformation Name** field.
- ⑤ Select “EDI” from the **Source** and “Database” from the **Target** drop-down menu.
- ⑥ Click the **Next** button in the toolbar to continue.

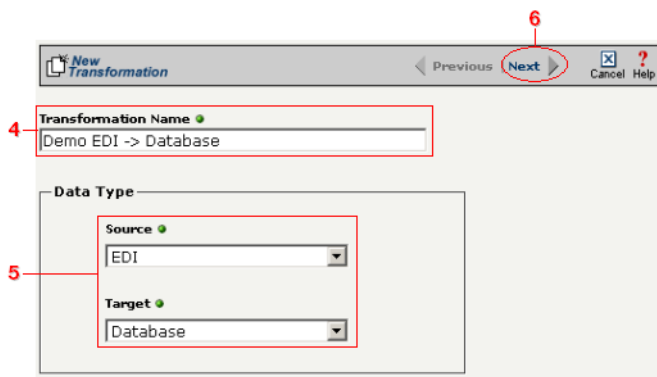


Figure 11-60. Give your new transformation definition an appropriate name, then choose “EDI” for your Source and “Database” for your Target.

Tip: for more information about SEF files, see “What’s an SEF File?” on page 11-14 in the *Syncx Integration Appliance Reference Guide*.

Select Source Information (EDI)

You have two options for selecting the appropriate source EDI file. Follow the scenario that describes where your source EDI document’s SEF file is located:

Option 1: You are using an EDI file whose definition is already loaded into the appliance

- ❶ Click the **Select an existing SEF** radio button.
- ❷ Select the appropriate EDI folder (that matches the EDI standard and version you want to use) from the drop-down list.
- ❸ Choose the appropriate EDI document from the scrollable list below (e.g., 850 if you want to use the Purchase Order form).
- ❹ Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

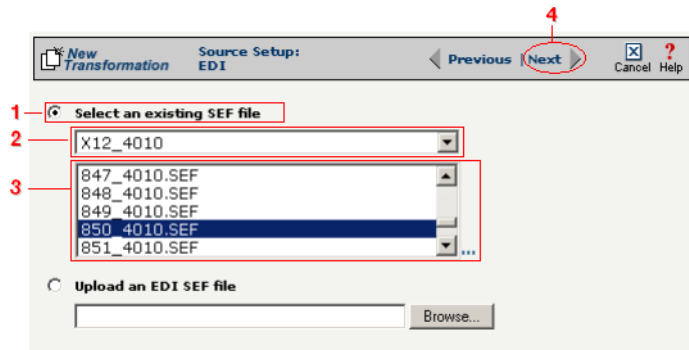


Figure 11-61. Click the **Select an existing SEF** radio button if your EDI document definition has already been loaded into the system.

Note: Skip these steps if you chose to follow Option 1 above.

Option 2: You need to use an EDI file whose definition has not yet been loaded into the appliance

- ❶ Choose the **Upload an EDI SEF file** radio button.
- ❷ Click **Browse** and navigate to and select the location of your EDI file whose definition (SEF file) you want to add to the appliance to load it into the associated field.
- ❸ Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

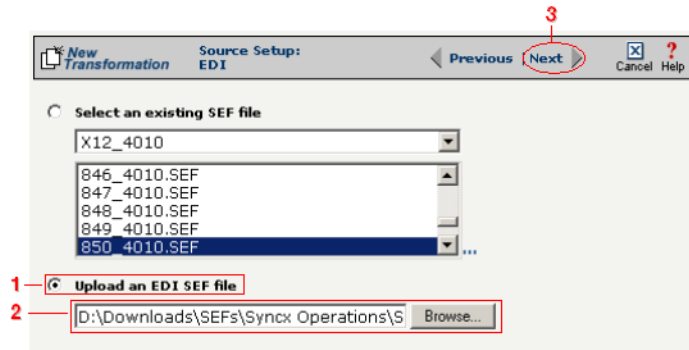



Figure 11-62. Click the **Upload an EDI SEF file** radio button if you need to copy a new EDI definition to the Syncx appliance.

(Optional) Select Source EDI Options

This screen is where you can set all the appropriate default values for your source EDI document. In most cases, you will leave the default settings as they are. You may optionally change them, however, if you want to change how the system will format the EDI information.

 **Tip:** See “CRLF Formatting” on page 11-16 in the *Syncx Integration Appliance Reference Guide* for more information on **CRLF Formatted**.

- ❶ Select the **Source documents have been formatted with CRLFs** checkbox if a text editor has wrapped your EDI document by inserting CRLF's (carriage return line feed characters).
- ❷ Enter a character in the **Data Segment Terminator** field that will define the end of a record in the EDI file.
- ❸ Enter a character in the **Data Element Terminator** field that will define the end of a field in the EDI file.
- ❹ Enter a character in the **Composite Data Element Terminator** field that will define the end of data types that are "compound" or composed of other data elements. For example, a data element of "date" could be composed of month, day, and year elements.
- ❺ Enter a value in the **Release Indicator** field. This tells the system to read a character as a character, not as a command.
- ❻ Use the Default buttons only if you want to reset your EDI options:
 - a. If you want to reset all the previous values back to their default X-12 settings, click **Reset X-12 Default**.
 - b. If you want to reset all the previous values back to their last default

settings, click **Reset Last Default**.

- 7 Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

New Transformation Source Setup: EDI

Previous Next Cancel Help

EDI Options

1 ☐ Source document has been formatted with CRLFs

Default Values:
Specify which character(s) should be used for each control character.
(For 'carriage return line feed', please enter 'CRLF')

2 Data Segment Terminator: ~

3 Data Element Terminator: *

4 Composite Data Element Terminator: |

5 Release Indicator: \

6a Reset X12 Default 6b Reset Last Saved

Figure 11-63. Use this screen if you need to change any of your source EDI document's default values.

Select Target Information (Database)

- 1 Select the name of the data target that you defined as your Target Definition from the **Database Target** drop-down menu.
- 2 Click the **Next** button in the toolbar to continue (see the figure below).

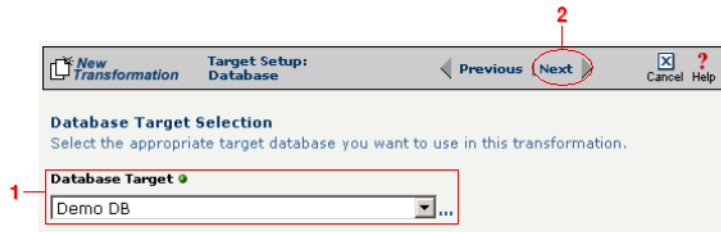


Figure 11-64. Choose which data source you will use as your target database from the **Database Target** drop-down menu.

Next, you need to specify how you will write information to your target database. Follow the option that is appropriate for your transformation:

Option 1: Only a single table in the target database will be accessed

1. Enter part or all of the table's name. If you want to view all the database's items, leave the field blank.
2. Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
3. Click the **Search** button to view the list of items that match your name search.
4. Select the appropriate item in the **Available Item(s)** field, then click the right arrow button.
5. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

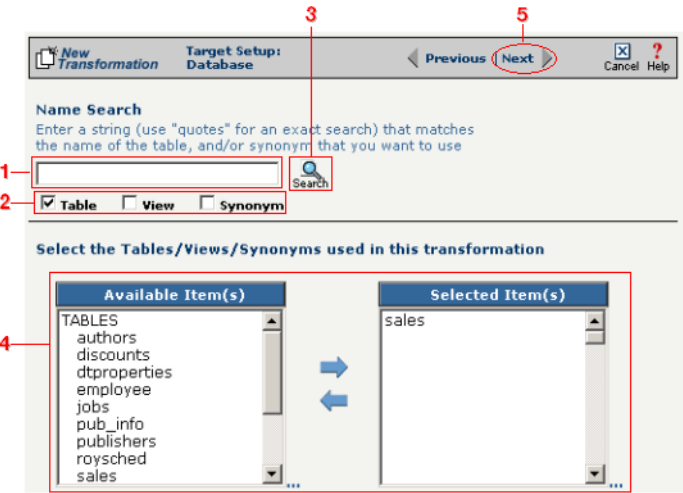



Figure 11-65. Choose the single table you want to access from the **Available Tables** field.

The next screen is where you specify how many times you will use the single table (or view/synonym) you selected for your target.

1. (Optional) If you will use this table more than once, change the **Times Used** field to the appropriate number.
2. Compare your work to below, then click **Next** to continue.

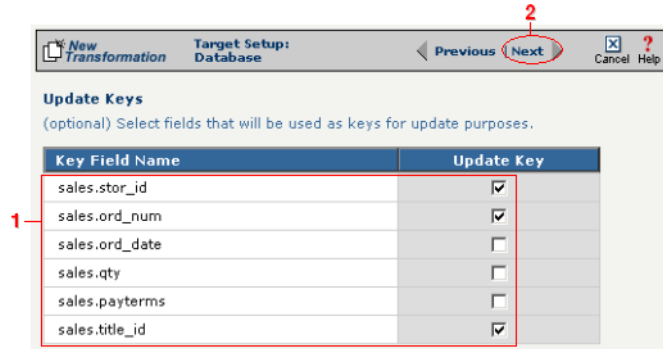
List of Tables/Views/Synonyms	Times Used
sales	1

Figure 11-66. Use this screen to specify how many times the target table will be used.

 **Note:** You won't see this screen if your database table has no primary key.


When your database table has at least one primary key, this next screen gives you the option to select a database field as an update key.


1. (Optional) Use the **Update Key** field to select the field(s) that will be treated as update keys.
2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.



Key Field Name	Update Key
sales.stor_id	<input checked="" type="checkbox"/>
sales.ord_num	<input checked="" type="checkbox"/>
sales.ord_date	<input type="checkbox"/>
sales.qty	<input type="checkbox"/>
sales.payterms	<input type="checkbox"/>
sales.title_id	<input checked="" type="checkbox"/>

Figure 11-67. If you need to set a database field to act as an update key, select the appropriate field in this screen.

 **Note:** Skip to “Select Insert/Update Mode” on page 11-36 if you chose to follow Option 1 above.

 **Tip:** Hold down the Ctrl key to select multiple tables.

Option 2: More than one table in the target database will be accessed

1. Enter part or all of the tables' names. If you want to view all the database's items, leave the field blank.
2. Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
3. Click the **Search** button to view the list of items that match your name search.
4. Select the appropriate items in the **Available Item(s)** field, then click the right arrow button.
5. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

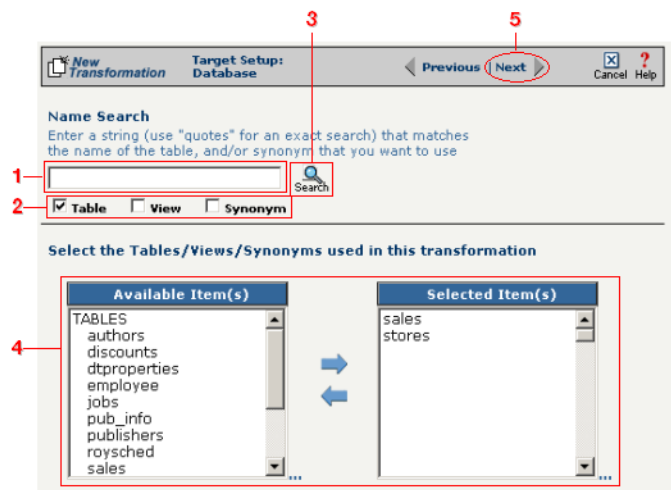


Figure 11-68. Select the appropriate tables you want to access from the **Available Tables** field.

Because you chose Option 2 (accessing more than one database table), you need to declare the tables' respective relationships:

1. Select the item in the **Parent** drop-down menu that you want to be the parent structure (i.e., at the top level of your data hierarchy).
2. Select the item in the **Child** drop-down menu that you want to be the child structure.
3. Select the appropriate database column in the **Parent Fields** window that will be used to reference the child table.
4. Select the appropriate database column in the **Child Fields** window that will be used to reference the parent table.
5. Click the **Add** button. This saves this parent-child relationship. You should see the new relationship appear in the **Parent – Child Field Relationships** table.
6. (Optional) If you have more child structures, click the **New** button and repeat the previous steps for each additional child.
7. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

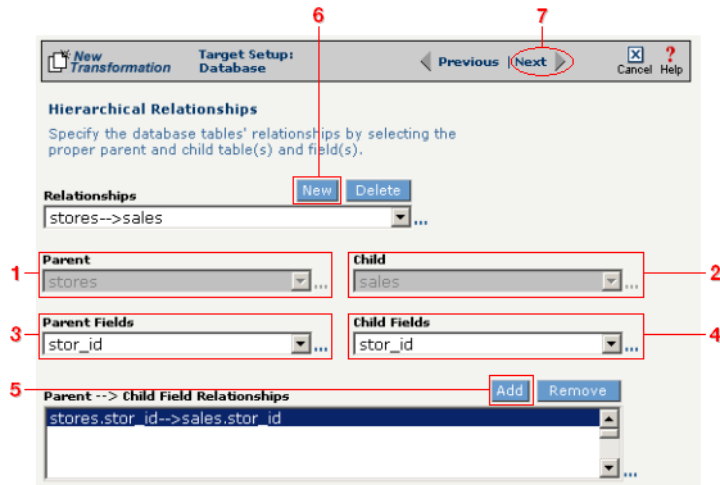


Figure 11-69. Use this screen in the Transformation Wizard to define the relationship between the different database tables.

In the **Nature of Data** screen, you need to indicate whether or not each child table's data must be present.

1. Select the appropriate radio button for each parent-child relationship:
 - a. Select **1 to N** if there will be at least 1 child to each parent entry.
 - b. Select **1** if there will always be a one-to-one parent-child relationship.
 - c. Select **0 to N** if there could be none, one, or more children for each parent.
 - d. Select **0 or 1** if there could be either no children or 1 child for each parent.
2. Compare your work to the figure below, then click **Next** to continue.

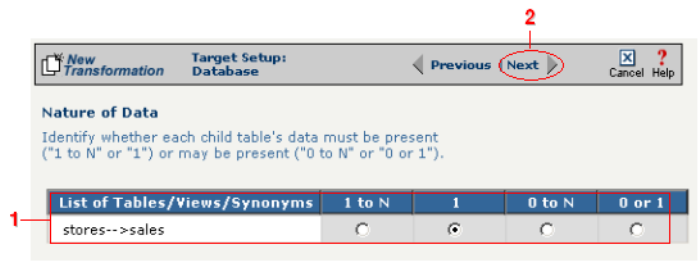



Figure 11-70. Use the Nature of Data screen to identify the number of child entries that are supported for each parent-child relationship.

 **Note:** You won't see this screen if your database table has no primary key.

When your database table has at least one primary key, this next screen gives you the option to select a database field as an update key.

1. (Optional) Select the checkbox(es) in the **Update Key** column that correspond to the field(s) that will be treated as update keys.
2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

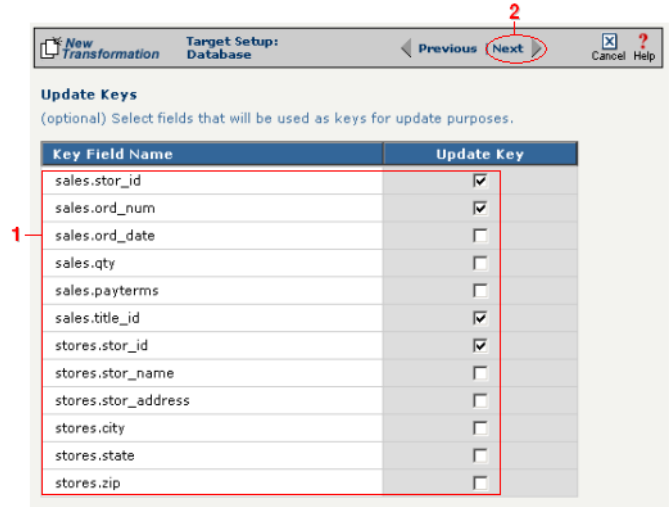



Figure 11-71. If you need to set a database field to act as an update key, select the appropriate field in this screen.

You have now completed Option 2.

Select Insert/Update Mode

In this last screen of the Transformation Wizard, you define how the Syncx Integration Appliance will handle new or existing records when it loads data from your source to your target database.

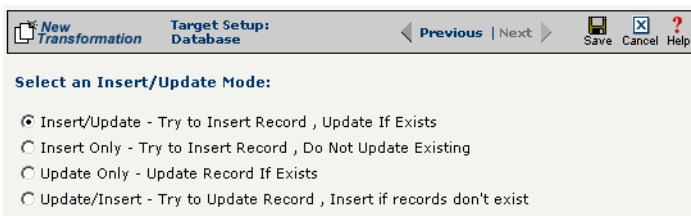
1. Select one of the four options described below:
 - a. **Insert/Update:** the appliance will first attempt to insert any new record it encounters. If a record already exists, it will then update that record.
 - b. **Insert Only:** the appliance will attempt to insert a new record only. No

 **Note:** The options that include Update are only available if you chose at least one field in the **Update Key** screen.

updates will be permitted.

- c. **Update Only:** the appliance will attempt to update an existing record. No new records will be created.
- d. **Update/Insert:** the appliance will first attempt to update a record. It will create a new record if none exists.

- 2 Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.



New Transformation Target Setup: Database

◀ Previous | Next ▶ Save Cancel Help

Select an Insert/Update Mode:

- ☒ Insert/Update - Try to Insert Record , Update If Exists
- ☐ Insert Only - Try to Insert Record , Do Not Update Existing
- ☐ Update Only - Update Record If Exists
- ☐ Update/Insert - Try to Update Record , Insert if records don't exist

Figure 11-72. Choose which of the four insert/update options is appropriate for your transformation.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for instructions on mapping your new transformation.

How to Transform from a Database to RosettaNet



Tip: Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from a database to an XML document.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition (see “How to Create a Database Source Definition” on page 7-2 for details)
- ❸ Create Your Target Definition
 - a. See Chapter 3, “RosettaNet Trading Partner Definitions,” in the *Public Processes Guide* if you haven’t already defined your RosettaNet trading partner.
 - b. See Chapter 4, “RosettaNet Partner Interface Processes,” in the *Public Processes Guide* if you haven’t already added the appropriate PIP to your RosettaNet trading partner.
 - c. See Chapter 5, “Partner Interface Agreements,” in the *Public Processes Guide* if you haven’t already defined the appropriate PIA within your trading partner’s PIP.
- ❹ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❺ Map the Source and Target Fields (see Chapter 17 for details)
- ❻ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

Use the Transformation Wizard to Build Your Transformation



Note: Make sure you’ve completed steps 1-3 above before attempting to define your transformation.

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

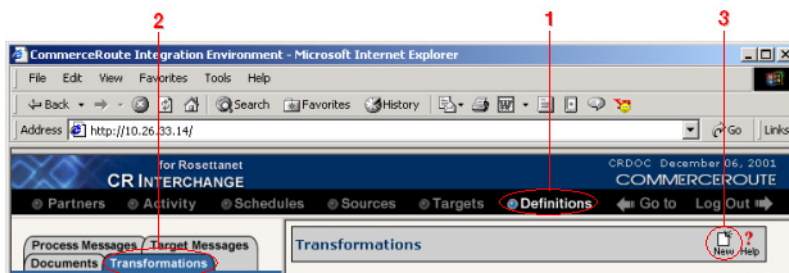


Figure 11-73. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- 4 Enter an appropriate name for your new transformation in the **Transformation Name** field.
- 5 Select “Database” from the **Source** drop-down menu and “RosettaNet” from the **Target** drop-down menu.
- 6 Click the **Next** button in the toolbar to continue.

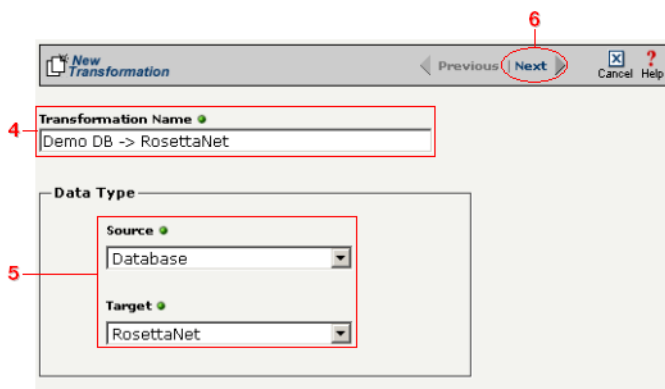


Figure 11-74. Give your new transformation definition an appropriate name, then choose “Database” for your Source and “RosettaNet” for your Target.

Select Source Information (Database)

- ❶ In the next screen of the Transformation Wizard, select the name of the Source that holds the database information you want to transform from the **Data Source** drop-down menu.
- ❷ Choose how you will get information from your database. You have two options:

Option 1: Use the Transformation Wizard to help you access your database without typing SQL

- a. Select the appropriate database definition from the **Database Source** drop-down menu.
- b. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

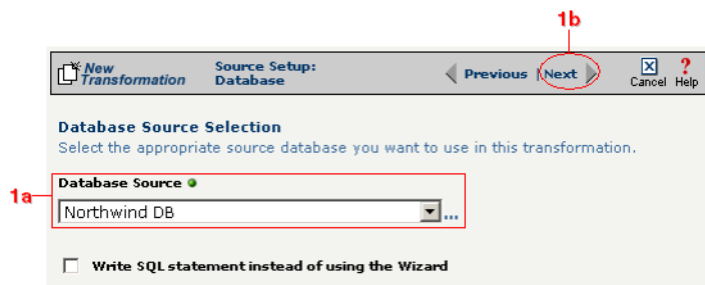


Figure 11-75. Choose the appropriate database from the **Database Source** drop-down menu if you want the Transformation Wizard to help you access your database without having to type any SQL.

Within Option 1, you need to specify how you will access information from your source database. Choose one of two options:

Option 1a: Only a single table in the source database will be accessed.

1. Enter part or all of the table's name. If you want to view all the database's items, leave the field blank.
2. Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
3. Click the **Search** button to view the list of items that match your name search.

4. Select the appropriate item in the **Available Item(s)** field, then click the right arrow button.
5. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

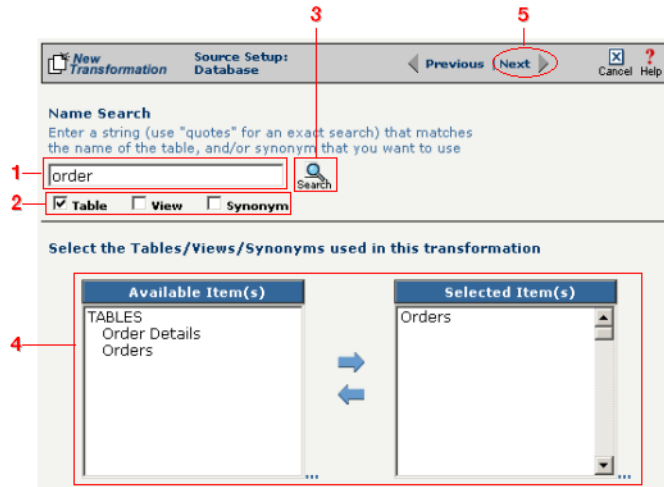


Figure 11-76. Select the single table you want to access from the **Available Tables** field.

The next screen is where you specify how many times you will use the single table (or view/synonym) you selected for your source.

1. (Optional) If you will use this table more than once, change the **Times Used** field to the appropriate number.
2. Compare your work to below, then click **Next** to continue.

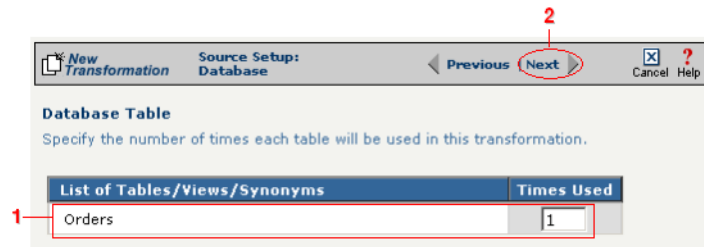


Figure 11-77. Use this screen to specify how many times the source table will be used.

The next screen lets you add a WHERE clause to filter your query:

1. Enter an appropriate WHERE SQL statement in the Where Clause.
2. (Optional) If you want to review your database table's fields, select the **View Field List** checkbox. The list will appear in a table at the bottom of the screen.
3. Click the **Next** button in the toolbar to continue.

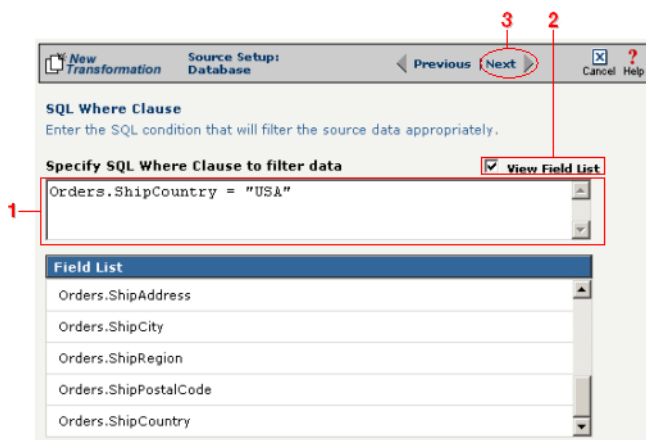

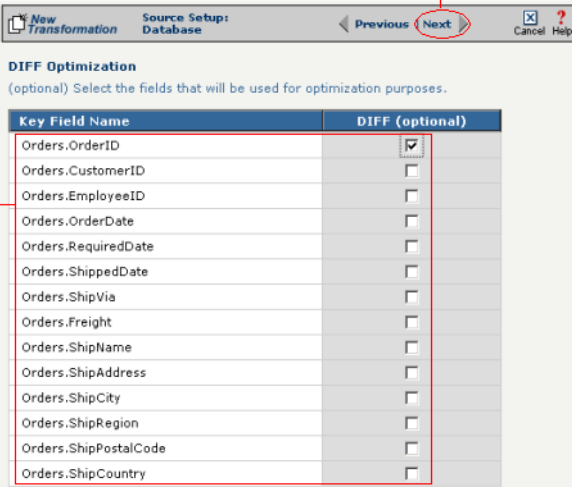


Figure 11-78. This optional screen lets you add a WHERE SQL clause to filter your information.

 **Tip:** For more information about DIFF and optimization, see “Optimization Options (DIFF)” on page 10-5.


This next screen lets you set your source to take advantage of an operation’s DIFF function. If you want this source information to be optimized by filtering out redundant data, select the field(s) that you want to use for filtering in this screen.


1. Click the checkbox that corresponds to the appropriate key field name.
2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.



Key Field Name	DIFF (optional)
Orders.OrderID	<input checked="" type="checkbox"/>
Orders.CustomerID	<input type="checkbox"/>
Orders.EmployeeID	<input type="checkbox"/>
Orders.OrderDate	<input type="checkbox"/>
Orders.RequiredDate	<input type="checkbox"/>
Orders.ShippedDate	<input type="checkbox"/>
Orders.ShipVia	<input type="checkbox"/>
Orders.Freight	<input type="checkbox"/>
Orders.ShipName	<input type="checkbox"/>
Orders.ShipAddress	<input type="checkbox"/>
Orders.ShipCity	<input type="checkbox"/>
Orders.ShipRegion	<input type="checkbox"/>
Orders.ShipPostalCode	<input type="checkbox"/>
Orders.ShipCountry	<input type="checkbox"/>


Figure 11-79. If you need to set a database field to act as an optimization filter using DIFF functionality, select the appropriate field in this screen.

 **Note:** You won't see this screen if your source database table has no primary key.

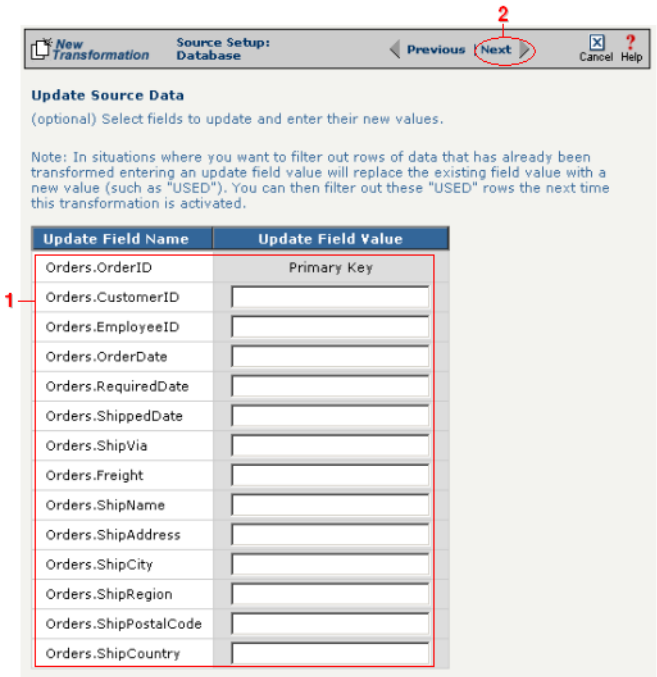
 **Tip:** for more information about the Update Field Value, see "Update Field Value" on page 11-6 in the *Syncx Integration Appliance Reference Guide*.

When your source database table has at least one primary key, this next screen gives you the option to select a database field as an update key.

- 1. (Optional) Use the **Update Field Value** field to update the value of the fields that match your filter criteria.

 **Caution!** This value will replace the source element's current value with whatever you enter in this field.

- 2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.




Update Field Name	Update Field Value
Orders.OrderID	Primary Key
Orders.CustomerID	
Orders.EmployeeID	
Orders.OrderDate	
Orders.RequiredDate	
Orders.ShippedDate	
Orders.ShipVia	
Orders.Freight	
Orders.ShipName	
Orders.ShipAddress	
Orders.ShipCity	
Orders.ShipRegion	
Orders.ShipPostalCode	
Orders.ShipCountry	

Figure 11-80. If you need to set a database field to act as an update key, select the appropriate field in this screen.

You have finished defining your Option 1a source (using the Transformation Wizard to specify a single source table).

Option 1b: More than one table in the source database will be accessed.

 **Note:** Skip these steps if you chose to follow Option 1a above.

1. Enter part or all of the tables names. If you want to view all the database's items, leave the field blank.
2. Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
3. Click the **Search** button to view the list of items that match your name search.
4. Select the appropriate items in the **Available Item(s)** field, then click the right arrow button.
5. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

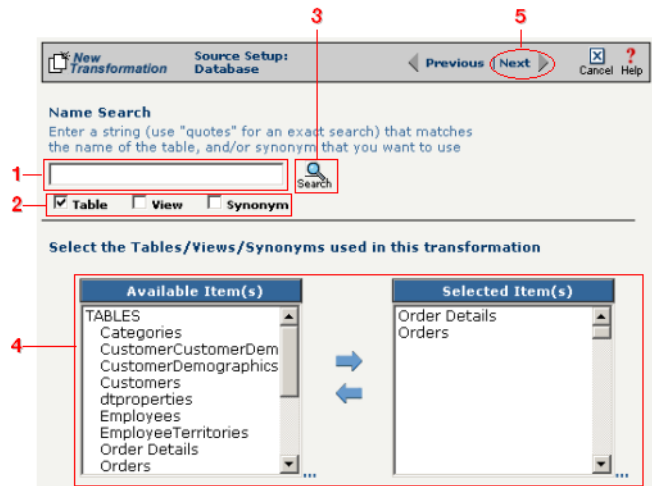



Figure 11-81. Select the appropriate tables you want to access from the **Available Item(s)** field.

 **Note:** Skip these steps if you chose to follow Option 1a.

The next screen is where you specify how many times you will use each table (or view/synonym) you selected for your source.

1. (Optional) If you will use each table more than once, change the **Times Used** field to the appropriate number.
2. Compare your work to below, then click **Next** to continue.

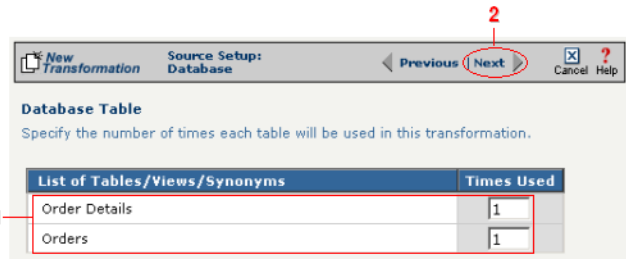



Figure 11-82. Use this screen in the Transformation Wizard to specify how many times each item will be used in the transformation.

 **Note:** Skip these steps if you chose to follow Option 1a.

Because you chose Option 1b (accessing more than one database table), you need to declare the tables' respective relationships:

1. Select the item in the **Parent** drop-down menu that you want to be the parent structure (i.e., at the top level of your data hierarchy).
2. Select the item in the **Child** drop-down menu that you want to be the child structure.
3. Select the appropriate database column in the **Parent Fields** window that will be used to reference the child table.
4. Select the appropriate database column in the **Child Fields** window that will be used to reference the parent table.
5. Click the **Add** button. This saves this parent-child relationship. You should see the new relationship appear in the **Parent – Child Field Relationships** table.
6. (Optional) If you have more child structures, click the **New** button and repeat the previous steps for each additional child.
7. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

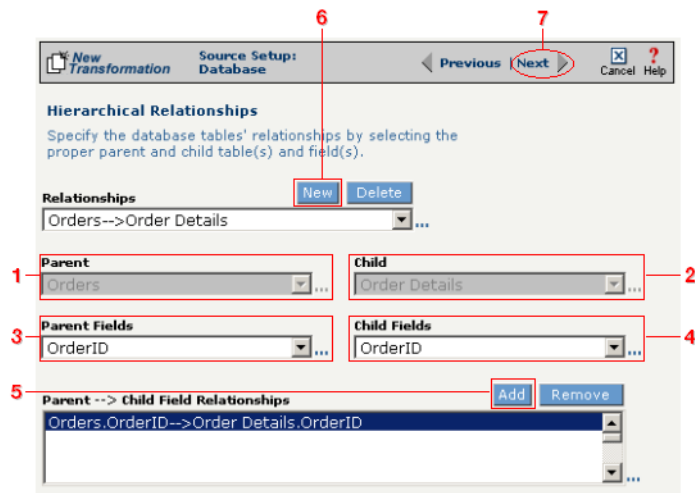



Figure 11-83. Use this screen in the Transformation Wizard to define the relationship between the different database tables.

 **Note:** Skip these steps if you chose to follow Option 1a.

In the **Nature of Data** screen, you need to indicate whether or not each child table's data must be present.

1. Select the appropriate radio button for each parent-child relationship:
 - a. Select **1 to N** if there will be at least 1 child to each parent entry.
 - b. Select **1** if there will always be a one-to-one parent-child relationship.
 - c. Select **0 to N** if there could be none, one, or more children for each parent.
 - d. Select **0 or 1** if there could be either no children or 1 child for each parent.
2. Compare your work to the figure below, then click **Next** to continue.

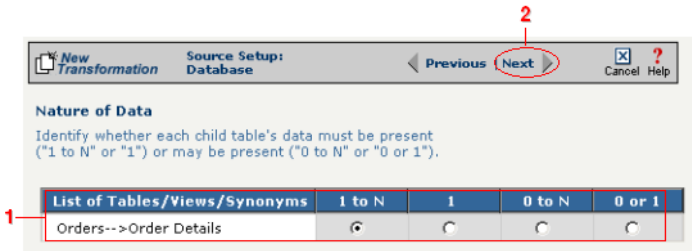



Figure 11-84. Use the Nature of Data screen to identify the number of child entries that are supported for each parent-child relationship.

 **Note:** Skip these steps if you chose to follow Option 1a.

The next screen lets you add a WHERE clause to filter your query:

1. Enter an appropriate WHERE SQL statement in the desired field's corresponding **Filter Condition** field.
2. (Optional) You can have the filtered output be sorted either ascending or descending by selecting the appropriate value from the **Sort** drop-down menu.
3. Compare your work to the figure shown below, then click the **Next** button to continue.

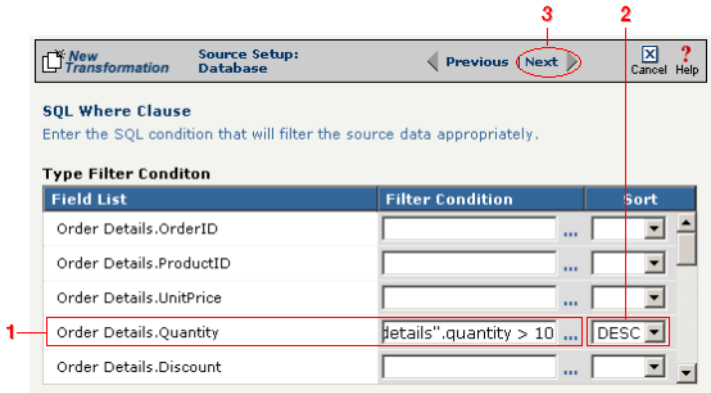



Figure 11-85. This optional screen lets you add a WHERE SQL clause to filter your information.

You have finished defining your Option 1b source (using the Transformation Wizard to specify a source with multiple tables).

 **Note:** Skip these steps if you chose to follow Option 1a or 1b above.

Option 2: You are familiar with SQL and want to enter your SQL query directly

1. Select the **Write SQL Statement** checkbox.
2. Enter your SQL query in the **SQL Statement** field.
3. (Optional) You can test the validity of your SQL statement by clicking the **Test SQL** button.
4. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

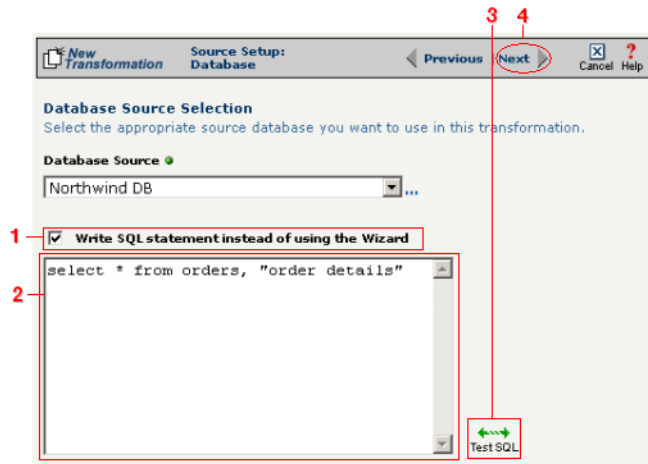




Figure 11-86. Click the **Write SQL Statement** checkbox if you are familiar with SQL and you want to type your statement directly into the **SQL Statement** field.

 **Note:** Skip these steps if you chose to follow Option 1a or 1b above.

 **Tip:** For more information about DIFF and optimization, see “Optimization Options (DIFF)” on page 10-5.

This next screen lets you set your source to take advantage of an operation’s DIFF function. If you want this source information to be optimized by filtering out redundant data, select the field(s) that you want to use for filtering in this screen.

1. Click the checkbox that corresponds to the appropriate key field name.
2. Compare your work to the figure shown below, then click the **Next** button to continue.

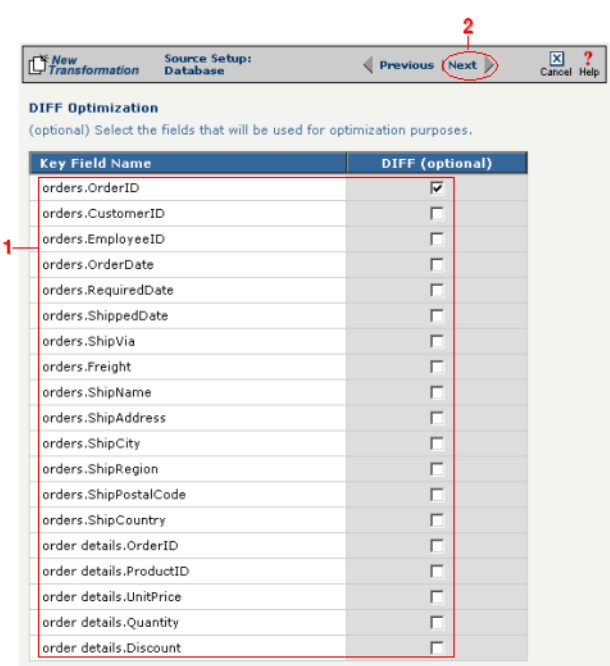


Figure 11-87. If you need to set a database field to act as an optimization filter using DIFF functionality, select the appropriate field in this screen.

You have finished defining your Option 2 source (directly entering the appropriate SQL statement).


Tip: for more information about RosettaNet trading partners, PIPs, and PIAs, see Chapter 3, Chapter 4, and Chapter 5, respectively, in the *Public Processes Guide*.

Select Target Information (RosettaNet)

- ❶ In the next screen of the Transformation Wizard, select the RosettaNet trading partner definition that you want to use for this transformation from the **Trading Partner** drop-down menu.
- ❷ Select which trading partner's PIP you want to use from the **PIP** drop-down menu.
- ❸ Select which PIA in the previously selected PIP you want to use from the **PIA** drop-down menu.
- ❹ Compare your work to the figure below, then click the **Next** button to continue.

The screenshot shows a dialog box titled "RosettaNet Trading Partner, PIP, PIA Selection". The subtitle is "Select the appropriate Trading Partner, PIP and PIA." There are three dropdown menus: "Trading Partner" with "CRDOC" selected, "PIP" with "3A4 (ver) V02.00" selected, and "PIA" with "R1DEV Exchange" selected. Red numbers 1, 2, and 3 are placed to the left of each dropdown menu. A red number 4 is placed above the "Next" button in the top right corner of the dialog box.

Figure 11-88. Use this screen to select the trading partner, PIP, and finally PIA that you want to use as the target for this transformation.

 **Tip:** for more information about RosettaNet trading partners, PIPs, and PIAs, see “How to Configure Roles and Services” on page 5-22 in the *Public Processes Guide*.

- 1 In the next screen of the Transformation Wizard, select which activity is appropriate for this transformation from the **Activity** drop-down menu.
- 2 Select the appropriate role this source will play from the **Role** drop-down menu.
- 3 Compare your definition to that shown in the figure below, then click **Save** to save your work and exit out of the Transformation Wizard.

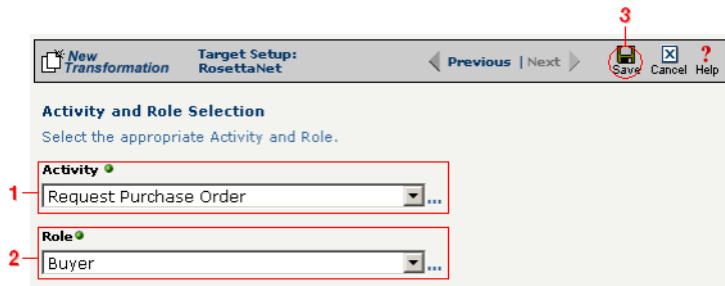



Figure 11-89. Specify the target RosettaNet’s activity and role.

What’s Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for instructions on mapping your new transformation.

How to Transform from RosettaNet to a Database


 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from an XML document to a database.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See Chapter 3, “RosettaNet Trading Partner Definitions,” in the *Public Processes Guide* if you haven’t already defined your RosettaNet trading partner.
 - b. See Chapter 4, “RosettaNet Partner Interface Processes,” in the *Public Processes Guide* if you haven’t already added the appropriate PIP to your RosettaNet trading partner.
 - c. See Chapter 5, “Partner Interface Agreements,” in the *Public Processes Guide* if you haven’t already defined the appropriate PIA within your trading partner’s PIP.
- ❸ Create Your Target Definition (see “How to Create a Database Target Definition” on page 8-4 for details)
- ❹ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❺ Map the Source and Target Fields (see Chapter 17 for details)
- ❻ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

Use the Transformation Wizard to Build Your Transformation

 **Note:** Make sure you’ve completed steps 1-3 above before attempting to define your transformation.

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

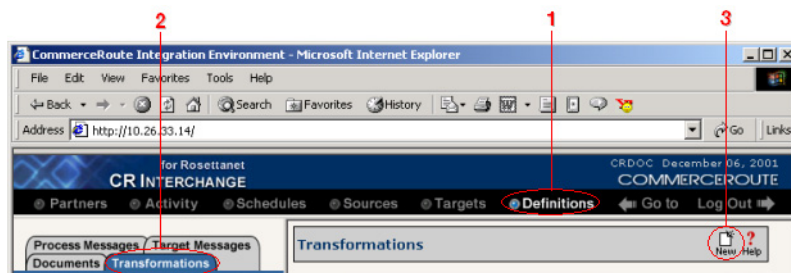


Figure 11-90. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- ④ Enter an appropriate name for your new transformation in the **Transformation Name** field.
- ⑤ Select “RosettaNet” from the **Source** drop-down menu and “Database” from the **Target** drop-down menu.
- ⑥ Click the **Next** button in the toolbar to continue.

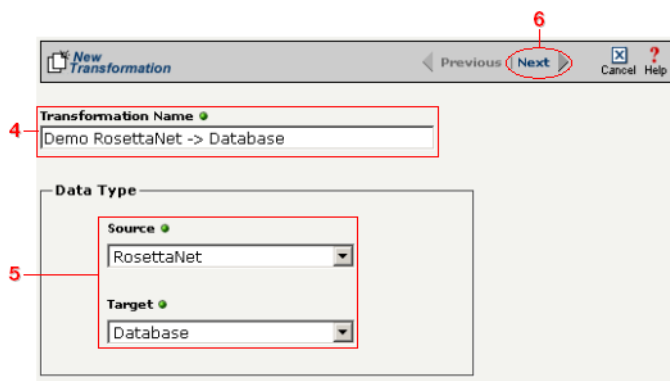

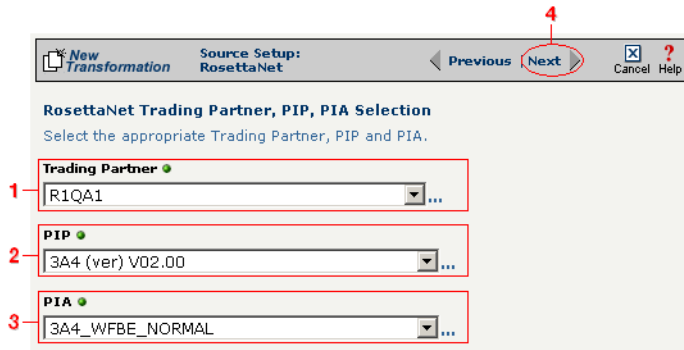


Figure 11-91. Give your new transformation definition an appropriate name, then choose “RosettaNet” for your Source and “Database” for your Target.

 **Tip:** for more information about RosettaNet trading partners, PIPs, and PIAs, see Chapter 3, Chapter 4, and Chapter 5, respectively, in the *Public Processes Guide*.


Select Source Information (RosettaNet)

- ❶ In the next screen of the Transformation Wizard, select the RosettaNet trading partner definition that you want to use for this transformation from the **Trading Partner** drop-down menu.
- ❷ Select which trading partner's PIP you want to use from the **PIP** drop-down menu.
- ❸ Select which PIA in the previously selected PIP you want to use from the **PIA** drop-down menu.
- ❹ Compare your work to the figure below, then click the **Next** button to continue.

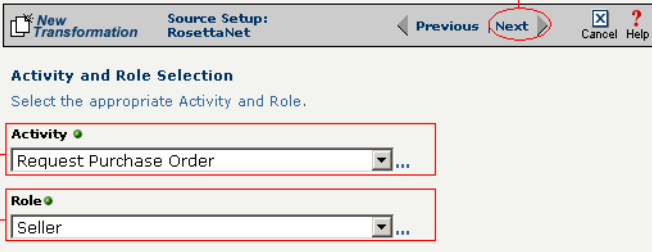


The screenshot shows a dialog box titled "RosettaNet Trading Partner, PIP, PIA Selection". The subtitle is "Select the appropriate Trading Partner, PIP and PIA." There are three dropdown menus: "Trading Partner" with "R1QA1" selected, "PIP" with "3A4 (ver) V02.00" selected, and "PIA" with "3A4_WFBE_NORMAL" selected. Red numbers 1, 2, and 3 are placed to the left of each dropdown menu. A red number 4 is placed above the "Next" button in the top right corner of the dialog box.

Figure 11-92. Use this screen to select the trading partner, PIP, and finally PIA that you want to use as the source for this transformation.

 **Tip:** for more information about RosettaNet trading partners, PIPs, and PIAs, see “How to Configure Roles and Services” on page 5-22 in the *Public Processes Guide*.

- ❶ In the next screen of the Transformation Wizard, select which activity is appropriate for this transformation from the **Activity** drop-down menu.
- ❷ Select the appropriate role this source will play from the **Role** drop-down menu.
- ❸ Compare your work to the figure below, then click the **Next** button to continue.



The screenshot shows a software window titled "New Transformation" with a tab labeled "Source Setup: RosettaNet". At the top, there are navigation buttons: "Previous", "Next" (which is circled in red and labeled with a red "3"), "Cancel", and "Help". Below the navigation bar, the section "Activity and Role Selection" is displayed with the instruction "Select the appropriate Activity and Role." There are two dropdown menus. The first, labeled "Activity" with a green dot, has "Request Purchase Order" selected and is highlighted with a red box and a red "1". The second, labeled "Role" with a green dot, has "Seller" selected and is highlighted with a red box and a red "2".

Figure 11-93. Specify the source RosettaNet’s activity and role.

Select Target Information (Database)

- ❶ Select the name of the data target that you defined as your Target Definition from the **Database Target** drop-down menu.
- ❷ Click the **Next** button in the toolbar to continue (see the figure below).

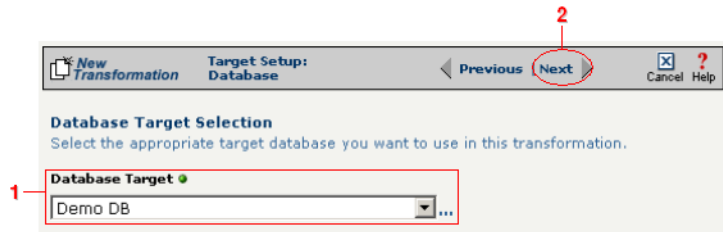


Figure 11-94. Choose which data source you will use as your target database from the **Database Target** drop-down menu.

Next, you need to specify how you will write information to your target database. Follow the option that is appropriate for your transformation:

Option 1: Only a single table in the target database will be accessed

- ❶ Enter part or all of the table's name. If you want to view all the database's items, leave the field blank.
- ❷ Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
- ❸ Click the **Search** button to view the list of items that match your name search.
- ❹ Select the appropriate item in the **Available Item(s)** field, then click the right arrow button.
- ❺ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

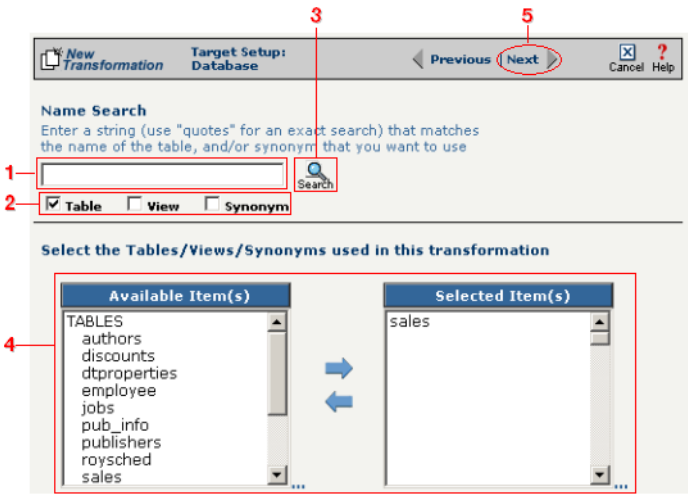


Figure 11-95. Choose the single table you want to access from the **Available Tables** field.

The next screen is where you specify how many times you will use the single table (or view/synonym) you selected for your target.

1. (Optional) If you will use this table more than once, change the **Times Used** field to the appropriate number.
2. Compare your work to below, then click **Next** to continue.

The screenshot shows a software window titled 'New Transformation' with a tab labeled 'Target Setup: Database'. At the top right are buttons for 'Previous', 'Next' (circled in red with a red '2' above it), 'Cancel', and 'Help'. Below this is a section titled 'Database Table' with the instruction 'Specify the number of times each table will be used in this transformation.' Underneath is a table with two columns: 'List of Tables/Views/Synonyms' and 'Times Used'. The first row of the table has 'sales' in the first column and '1' in the second column. A red '1' is placed to the left of the 'sales' entry.

List of Tables/Views/Synonyms	Times Used
sales	1

Figure 11-96. Use this screen to specify how many times the target table will be used.

Note: You won't see this screen if your database table has no primary key.

When your database table has at least one primary key, this next screen gives you the option to select a database field as an update key.

1. (Optional) Use the **Update Key** field to select the field(s) that will be treated as update keys.
2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

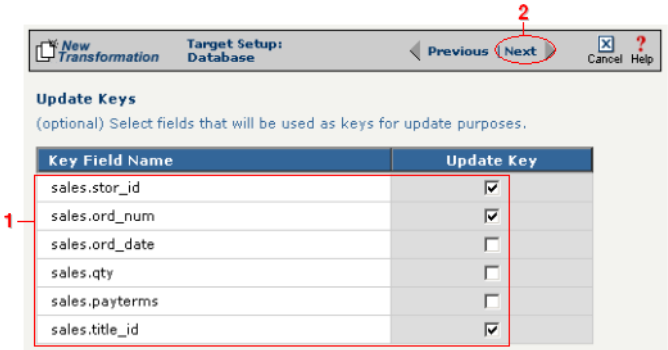


Figure 11-97. If you need to set a database field to act as an update key, select the appropriate field in this screen.

Note: Skip to “Select Insert/Update Mode” on page 11-36 if you chose to follow Option 1 above.

Tip: Hold down the Ctrl key to select multiple tables.

Option 2: More than one table in the target database will be accessed

1. Enter part or all of the tables' names. If you want to view all the database's items, leave the field blank.
2. Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
3. Click the **Search** button to view the list of items that match your name search.
4. Select the appropriate items in the **Available Item(s)** field, then click the right arrow button.
5. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

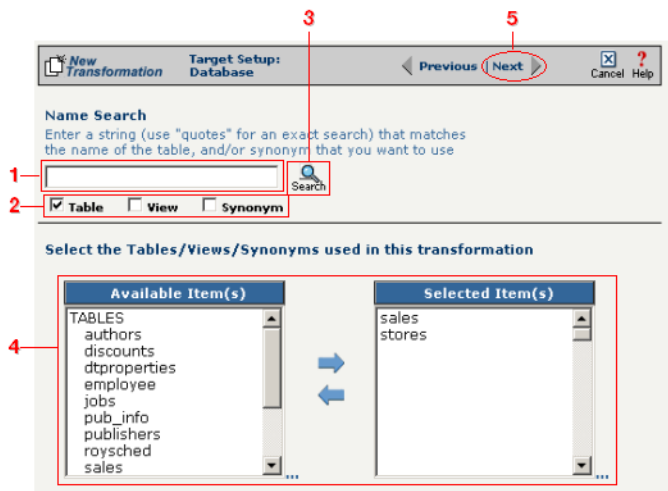


Figure 11-98. Select the appropriate tables you want to access from the **Available Tables** field.

Because you chose Option 2 (accessing more than one database table), you need to declare the tables' respective relationships:

1. Select the item in the **Parent** drop-down menu that you want to be the parent structure (i.e., at the top level of your data hierarchy).
2. Select the item in the **Child** drop-down menu that you want to be the child structure.
3. Select the appropriate database column in the **Parent Fields** window that will be used to reference the child table.
4. Select the appropriate database column in the **Child Fields** window that will be used to reference the parent table.
5. Click the **Add** button. This saves this parent-child relationship. You should see the new relationship appear in the **Parent – Child Field Relationships** table.
6. (Optional) If you have more child structures, click the **New** button and repeat the previous steps for each additional child.
7. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

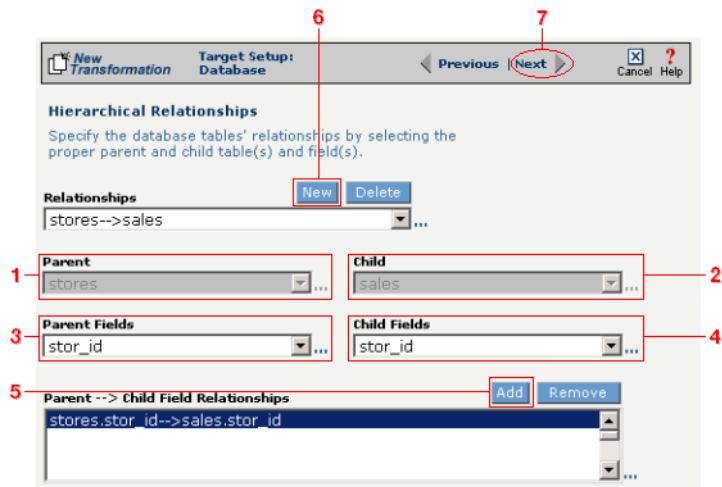


Figure 11-99. Use this screen in the Transformation Wizard to define the relationship between the different database tables.

In the **Nature of Data** screen, you need to indicate whether or not each child table's data must be present.

1. Select the appropriate radio button for each parent-child relationship:
 - a. Select **1 to N** if there will be at least 1 child to each parent entry.
 - b. Select **1** if there will always be a one-to-one parent-child relationship.
 - c. Select **0 to N** if there could be none, one, or more children for each parent.
 - d. Select **0 or 1** if there could be either no children or 1 child for each parent.
2. Compare your work to the figure below, then click **Next** to continue.

The screenshot shows the 'Nature of Data' screen in a database transformation tool. The title bar indicates 'New Transformation' and 'Target Setup: Database'. The main heading is 'Nature of Data' with a subtext: 'Identify whether each child table's data must be present ("1 to N" or "1") or may be present ("0 to N" or "0 or 1").' Below this is a table with the following structure:

List of Tables/Views/Synonyms	1 to N	1	0 to N	0 or 1
stores-->sales	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

The 'Next' button in the top right corner is circled in red, and a red arrow points to it from the number '2' above it. A red arrow points to the 'stores-->sales' row from the number '1' to its left.

Figure 11-100. Use the Nature of Data screen to identify the number of child entries that are supported for each parent-child relationship.

Note: You won't see this screen if your database table has no primary key.

When your database table has at least one primary key, this next screen gives you the option to select a database field as an update key.

- 1. (Optional) Select the checkbox(es) in the **Update Key** column that correspond to the field(s) that will be treated as update keys.
- 2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

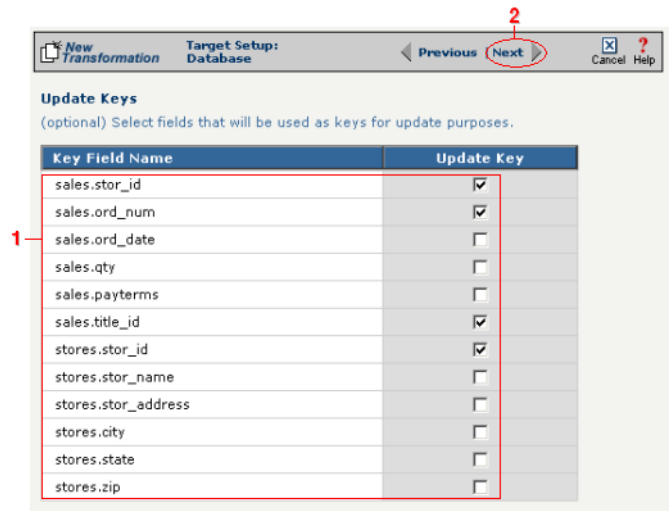



Figure 11-101. If you need to set a database field to act as an update key, select the appropriate field in this screen.

You have now completed Option 2.

Select Insert/Update Mode

In this last screen of the Transformation Wizard, you define how the Syncx Integration Appliance will handle new or existing records when it loads data from your source to your target database.

- 1. Select one of the four options described below:
 - a. **Insert/Update:** the appliance will first attempt to insert any new record it encounters. If a record already exists, it will then update that record.
 - b. **Insert Only:** the appliance will attempt to insert a new record only. No

 **Note:** The options that include Update are only available if you chose at least one field in the **Update Key** screen.

updates will be permitted.

- c. **Update Only:** the appliance will attempt to update an existing record. No new records will be created.
- d. **Update/Insert:** the appliance will first attempt to update a record. It will create a new record if none exists.

- ② Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

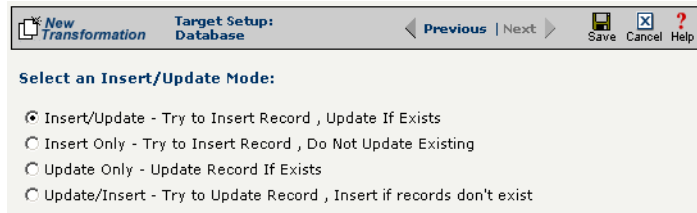


Figure 11-102. Choose which of the four insert/update options is appropriate for your transformation.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for instructions on mapping your new transformation.

How to Transform from a Database to an SAP Environment

Tip: Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from a database to an SAP environment.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition (see “How to Create a Database Source Definition” on page 7-2 for details)
- ❸ Create Your Target Definition (see “How to Create an SAP Target Definition” on page 8-17 for details)
- ❹ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❺ Map the Source and Target Fields (see Chapter 17 for details)
- ❻ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

Use the Transformation Wizard to Build Your Transformation

Note: Make sure you’ve completed steps 1-4 above before attempting to define your transformation.

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

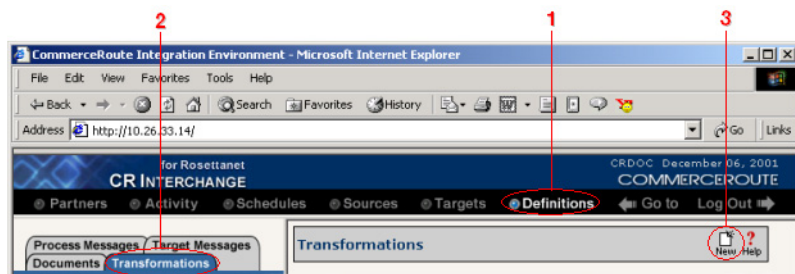


Figure 11-103. To launch the Transformation Wizard, click on the **Transformations** tab in

the **Definitions** screen and click the **New** button in the toolbar.

- ④ Enter an appropriate name for your new transformation in the **Transformation Name** field.
- ⑤ Select “Database” from the **Source** and “SAP” from the **Target** drop-down menu.
- ⑥ Click the **Next** button in the toolbar to continue.

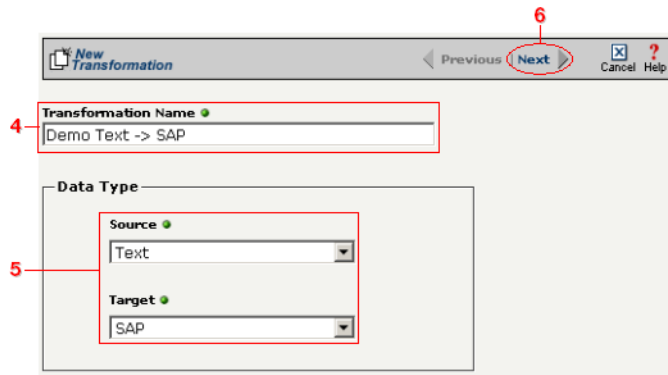


Figure 11-104. Give your new transformation definition an appropriate name, then choose “Database” for your Source and “SAP” for your Target.

Select Source Information (Database)

- ❶ In the next screen of the Transformation Wizard, select the name of the Source that holds the database information you want to transform from the **Data Source** drop-down menu.
- ❷ Choose how you will get information from your database. You have two options:

Option 1: Use the Transformation Wizard to help you access your database without typing SQL

- a. Select the appropriate database definition from the **Database Source** drop-down menu.
- b. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

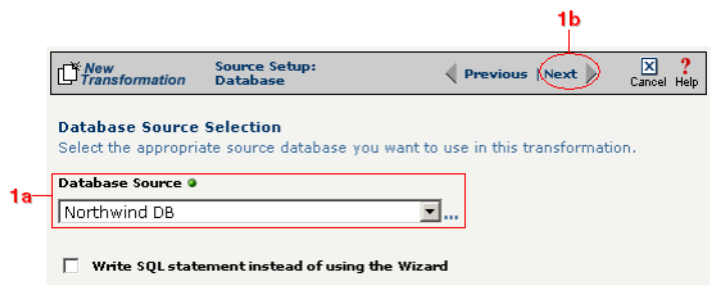


Figure 11-105. Choose the appropriate database from the **Database Source** drop-down menu if you want the Transformation Wizard to help you access your database without having to type any SQL.

Within Option 1, you need to specify how you will access information from your source database. Choose one of two options:

Option 1a: Only a single table in the source database will be accessed.

1. Enter part or all of the table's name. If you want to view all the database's items, leave the field blank.
2. Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
3. Click the **Search** button to view the list of items that match your name search.

- 4. Select the appropriate item in the **Available Item(s)** field, then click the right arrow button.
- 5. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

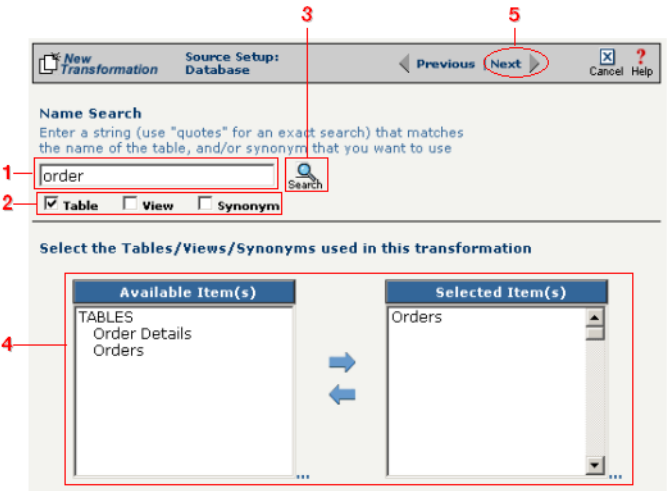


Figure 11-106. Select the single table you want to access from the **Available Tables** field.

The next screen is where you specify how many times you will use the single table (or view/synonym) you selected for your source.

- 1. (Optional) If you will use this table more than once, change the **Times Used** field to the appropriate number.
- 2. Compare your work to below, then click **Next** to continue.

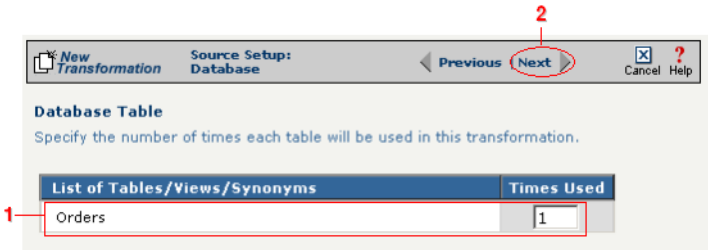


Figure 11-107. Use this screen to specify how many times the source table will be used.

The next screen lets you add a WHERE clause to filter your query:

1. Enter an appropriate WHERE SQL statement in the Where Clause.
2. (Optional) If you want to review your database table's fields, select the **View Field List** checkbox. The list will appear in a table at the bottom of the screen.
3. Click the **Next** button in the toolbar to continue.


SQL Where Clause
Enter the SQL condition that will filter the source data appropriately.

Specify SQL Where Clause to filter data ☒ **View Field List**

Orders.ShipCountry = "USA"

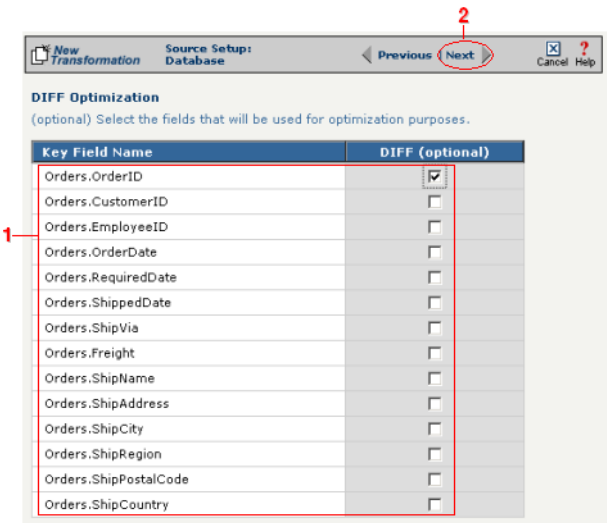
Field List
Orders.ShipAddress
Orders.ShipCity
Orders.ShipRegion
Orders.ShipPostalCode
Orders.ShipCountry

Figure 11-108. This optional screen lets you add a WHERE SQL clause to filter your information.

 **Tip:** For more information about DIFF and optimization, see “Optimization Options (DIFF)” on page 10-5.


This next screen lets you set your source to take advantage of an operation’s DIFF function. If you want this source information to be optimized by filtering out redundant data, select the field(s) that you want to use for filtering in this screen.


1. Click the checkbox that corresponds to the appropriate key field name.
2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.



Key Field Name	DIFF (optional)
Orders.OrderID	<input checked="" type="checkbox"/>
Orders.CustomerID	<input type="checkbox"/>
Orders.EmployeeID	<input type="checkbox"/>
Orders.OrderDate	<input type="checkbox"/>
Orders.RequiredDate	<input type="checkbox"/>
Orders.ShippedDate	<input type="checkbox"/>
Orders.ShipVia	<input type="checkbox"/>
Orders.Freight	<input type="checkbox"/>
Orders.ShipName	<input type="checkbox"/>
Orders.ShipAddress	<input type="checkbox"/>
Orders.ShipCity	<input type="checkbox"/>
Orders.ShipRegion	<input type="checkbox"/>
Orders.ShipPostalCode	<input type="checkbox"/>
Orders.ShipCountry	<input type="checkbox"/>

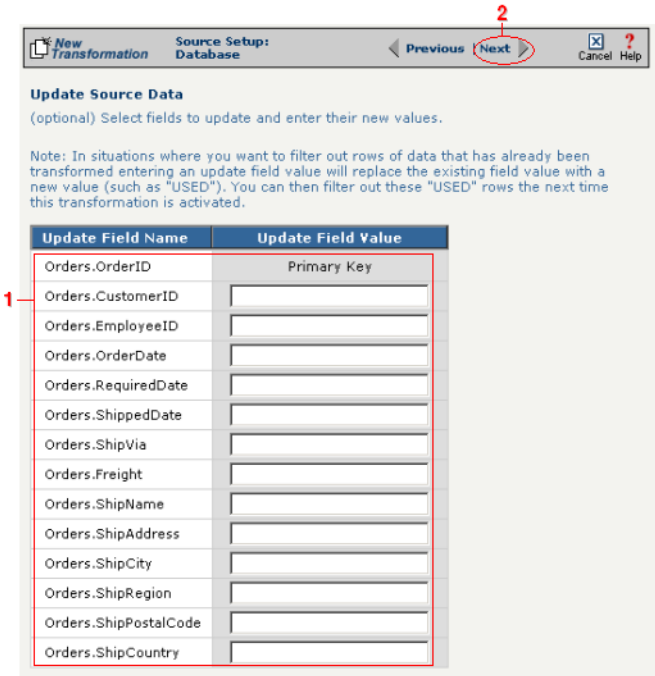
Figure 11-109. If you need to set a database field to act as an optimization filter using DIFF functionality, select the appropriate field in this screen.

 **Note:** You won't see this screen if your source database table has no primary key.

 **Tip:** for more information about the Update Field Value, see "Update Field Value" on page 11-6 in the *Syncx Integration Appliance Reference Guide*.

When your source database table has at least one primary key, this next screen gives you the option to select a database field as an update key.

1. (Optional) Use the **Update Field Value** field to update the value of the fields that match your filter criteria.
- ! **Caution!** This value will replace the source element's current value with whatever you enter in this field.
2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.



Update Field Name	Update Field Value
Orders.OrderID	Primary Key
Orders.CustomerID	
Orders.EmployeeID	
Orders.OrderDate	
Orders.RequiredDate	
Orders.ShippedDate	
Orders.ShipVia	
Orders.Freight	
Orders.ShipName	
Orders.ShipAddress	
Orders.ShipCity	
Orders.ShipRegion	
Orders.ShipPostalCode	
Orders.ShipCountry	

Figure 11-110. If you need to set a database field to act as an update key, select the appropriate field in this screen.

You have finished defining your Option 1a source (using the Transformation Wizard to specify a single source table).

Option 1b: More than one table in the source database will be accessed.

Note: Skip these steps if you chose to follow Option 1a above.

1. Enter part or all of the tables names. If you want to view all the database's items, leave the field blank.
2. Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
3. Click the **Search** button to view the list of items that match your name search.
4. Select the appropriate items in the **Available Item(s)** field, then click the right arrow button.
5. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

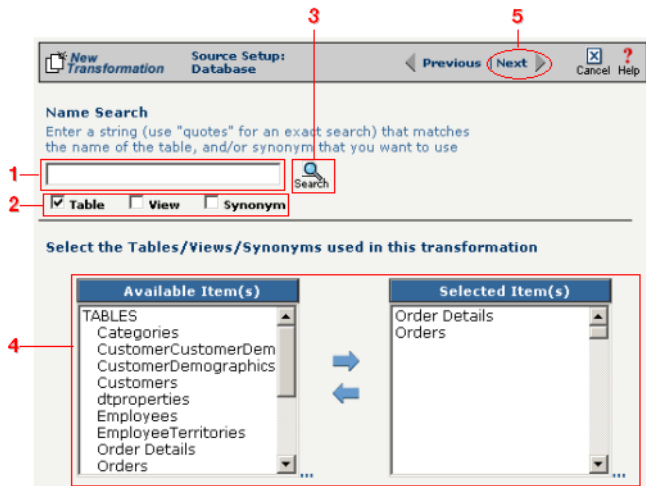


Figure 11-111. Select the appropriate tables you want to access from the **Available Item(s)** field.

Note: Skip these steps if you chose to follow Option 1a.

The next screen is where you specify how many times you will use each table (or view/synonym) you selected for your source.

1. (Optional) If you will use each table more than once, change the **Times Used** field to the appropriate number.
2. Compare your work to below, then click **Next** to continue.

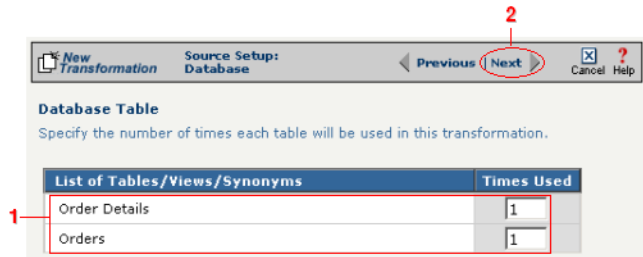



Figure 11-112. Use this screen in the Transformation Wizard to specify how many times each item will be used in the transformation.

 **Note:** Skip these steps if you chose to follow Option 1a.

Because you chose Option 1b (accessing more than one database table), you need to declare the tables' respective relationships:

1. Select the item in the **Parent** drop-down menu that you want to be the parent structure (i.e., at the top level of your data hierarchy).
2. Select the item in the **Child** drop-down menu that you want to be the child structure.
3. Select the appropriate database column in the **Parent Fields** window that will be used to reference the child table.
4. Select the appropriate database column in the **Child Fields** window that will be used to reference the parent table.
5. Click the **Add** button. This saves this parent-child relationship. You should see the new relationship appear in the **Parent – Child Field Relationships** table.
6. (Optional) If you have more child structures, click the **New** button and repeat the previous steps for each additional child.
7. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

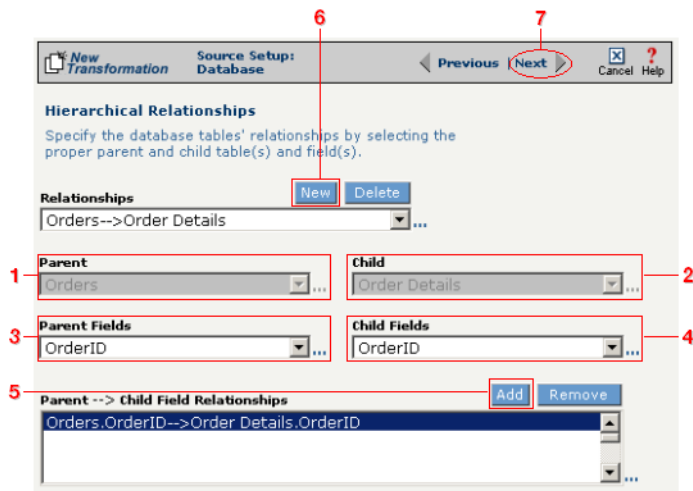


Figure 11-113. Use this screen in the Transformation Wizard to define the relationship between the different database tables.

Note: Skip these steps if you chose to follow Option 1a.

In the **Nature of Data** screen, you need to indicate whether or not each child table's data must be present.

1. Select the appropriate radio button for each parent-child relationship:
 - a. Select **1 to N** if there will be at least 1 child to each parent entry.
 - b. Select **1** if there will always be a one-to-one parent-child relationship.
 - c. Select **0 to N** if there could be none, one, or more children for each parent.
 - d. Select **0 or 1** if there could be either no children or 1 child for each parent.
2. Compare your work to the figure below, then click **Next** to continue.

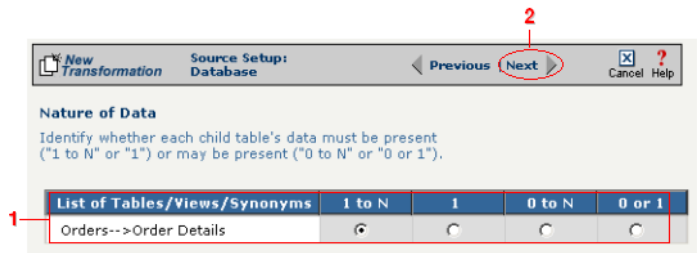



Figure 11-114. Use the Nature of Data screen to identify the number of child entries that are supported for each parent-child relationship.

 **Note:** Skip these steps if you chose to follow Option 1a.

The next screen lets you add a WHERE clause to filter your query:

1. Enter an appropriate WHERE SQL statement in the desired field's corresponding **Filter Condition** field.
2. (Optional) You can have the filtered output be sorted either ascending or descending by selecting the appropriate value from the **Sort** drop-down menu.
3. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

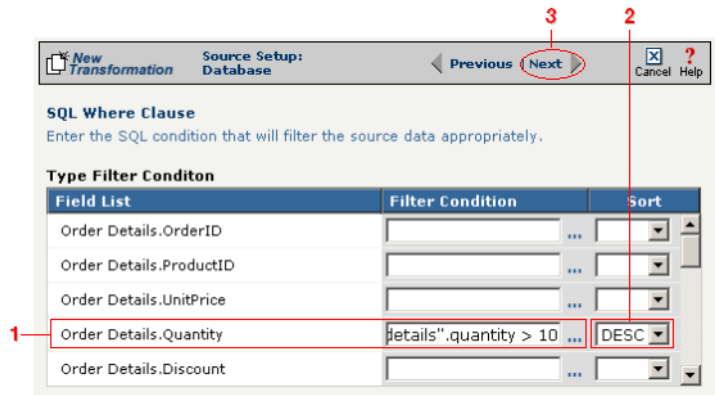



Figure 11-115. This optional screen lets you add a WHERE SQL clause to filter your information.

You have finished defining your Option 1b source (using the Transformation Wizard to specify a source with multiple tables).

 **Note:** Skip these steps if you chose to follow Option 1a or 1b above.

Option 2: You are familiar with SQL and want to enter your SQL query directly

1. Select the **Write SQL Statement** checkbox.
2. Enter your SQL query in the **SQL Statement** field.
3. (Optional) You can test the validity of your SQL statement by clicking the **Test SQL** button.
4. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

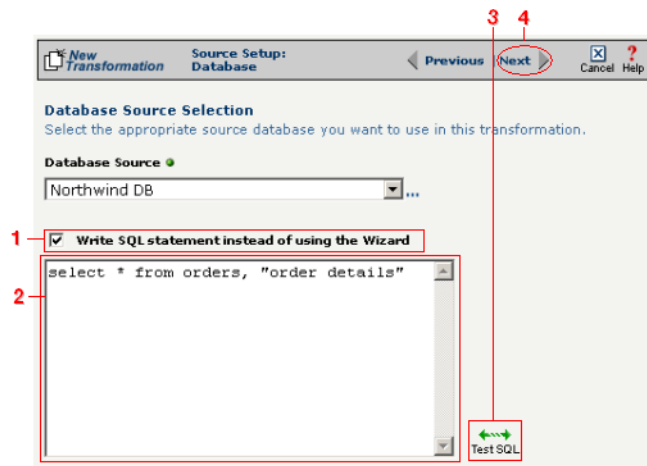




Figure 11-116. Click the **Write SQL Statement** checkbox if you are familiar with SQL and you want to type your statement directly into the **SQL Statement** field.

 **Note:** Skip these steps if you chose to follow Option 1a or 1b above.

 **Tip:** For more information about DIFF and optimization, see “Optimization Options (DIFF)” on page 10-5.

This next screen lets you set your source to take advantage of an operation’s DIFF function. If you want this source information to be optimized by filtering out redundant data, select the field(s) that you want to use for filtering in this screen.

1. Click the checkbox that corresponds to the appropriate key field name.
2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

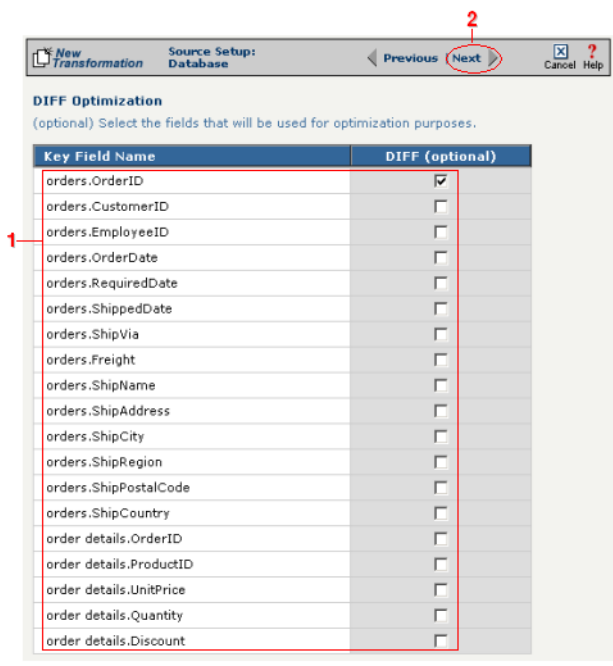


Figure 11-117. If you need to set a database field to act as an optimization filter using DIFF functionality, select the appropriate field in this screen.

You have finished defining your Option 2 source (directly entering the appropriate SQL statement).

Select Target Information (SAP)

Follow the steps below to configure your SAP target for transformation mapping:

- 1 Select the appropriate SAP target that you defined from the **SAP Target** drop-down list.
- 2 Click the **Next** button in the toolbar to continue.

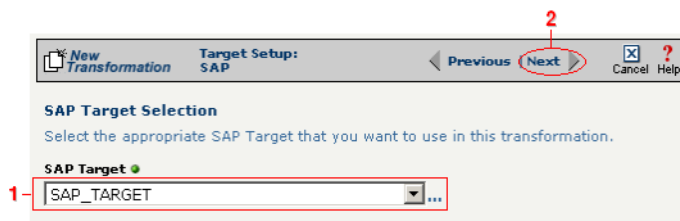




Figure 11-118. Choose the appropriate SAP target from the **SAP Target** drop-down list.

 **Tip:** SAP-provided BAPI function names always start with the letters “BAPI”. You can also use the asterick (*) character as a wild card when searching for the function name.

 **Tip:** If you are certain that the selected function performs a “commit” internally, performance can be improved by deselecting the checkbox.

Select RFC/BAPI Function

In this next screen, you need to select the appropriate RFC or BAPI function that should be used.

- ❶ Type in the complete name of the function, or enter any substring of the function name.
- ❷ Click the **Search** button to search the SAP environment for all formulas that match the name (or partial name) you entered. Note that this search may take several seconds.
- ❸ When the function search has completed, the **Select RFC/BAPI Function** drop-down menu appears, displaying all the functions that contain the string you entered in step 1 above. Select the appropriate function from the drop-down menu.
- ❹ (Optional) Select the **Commit Work** checkbox to ensure that a “commit” is performed on the SAP environment after the function has run. (We recommend leaving this selected, as it guarantees that a commit is performed, regardless of whether the function does this or not.)
- ❺ Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

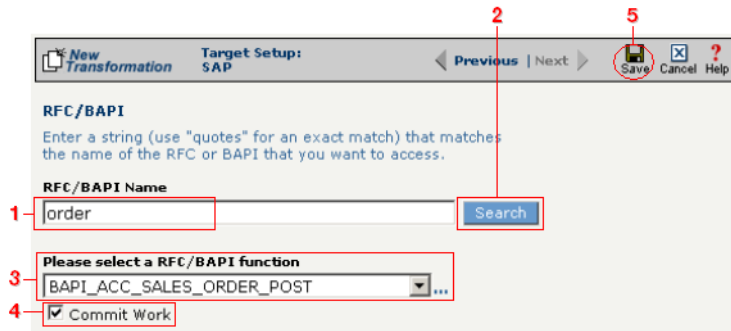



Figure 11-119. Use this screen to select the appropriate SAP RFC or BAPI function to run against your SAP environment.

What’s Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for

instructions on mapping your new transformation.

How to Transform from a Database to a Text File

 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps


Follow these steps to transform information from a database to a text file.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition (see “How to Create a Database Source Definition” on page 7-2 for details)
- ❸ Create Your Target Definition
 - a. See “How to Create an FTP Target Definition” on page 8-10 if your target text file will be stored on an FTP server.
 - b. See “How to Create a File Share Target Definition” on page 8-7 if your target text file will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Target Definition” on page 8-14 if your target text file will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Target Definition” on page 8-20 if your target text file will be stored on an SCP server.
- ❹ Create Your Target Document Definition (see Chapter 9 for details)
- ❺ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❻ Map the Source and Target Fields (see Chapter 17 for details)
- ❼ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

Use the Transformation Wizard to Build Your Transformation

Follow these steps to transform information from a database to a text file.

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

 **Note:** Make sure you've completed steps 1-4 above before attempting to define your transformation.

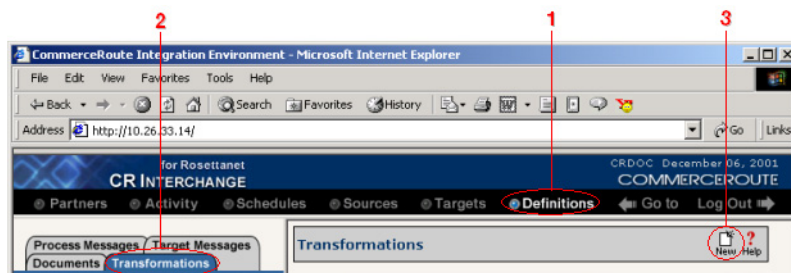


Figure 11-120. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- ④ Enter an appropriate name for your new transformation in the **Transformation Name** field.
- ⑤ Select “Database” from the **Source** drop-down menu and “Text” from the **Target** drop-down menu.
- ⑥ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

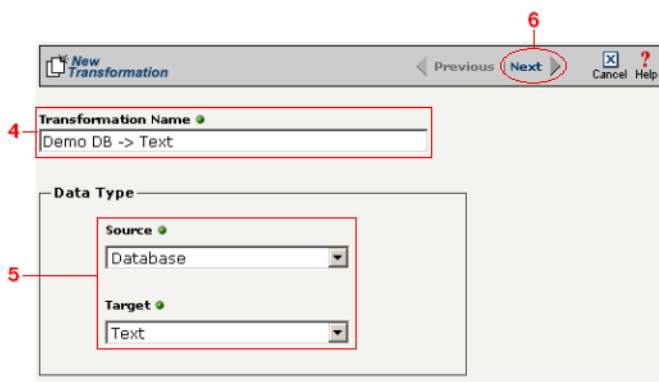


Figure 11-121. Give your new transformation definition an appropriate name, then choose “Database” for your Source and “Text” for your Target.

Select Source Information (Database)

- ❶ In the next screen of the Transformation Wizard, select the name of the Source that holds the database information you want to transform from the **Data Source** drop-down menu.
- ❷ Choose how you will get information from your database. You have two options:

Option 1: Use the Transformation Wizard to help you access your database without typing SQL

- a. Select the appropriate database definition from the **Database Source** drop-down menu.
- b. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

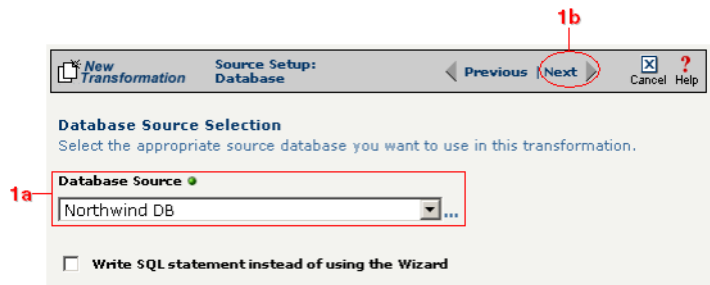


Figure 11-122. Choose the appropriate database from the **Database Source** drop-down menu if you want the Transformation Wizard to help you access your database without having to type any SQL.

Within Option 1, you need to specify how you will access information from your source database. Choose one of two options:

Option 1a: Only a single table in the source database will be accessed.

1. Enter part or all of the table's name. If you want to view all the database's items, leave the field blank.
2. Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
3. Click the **Search** button to view the list of items that match your name search.

4. Select the appropriate item in the **Available Item(s)** field, then click the right arrow button.
5. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

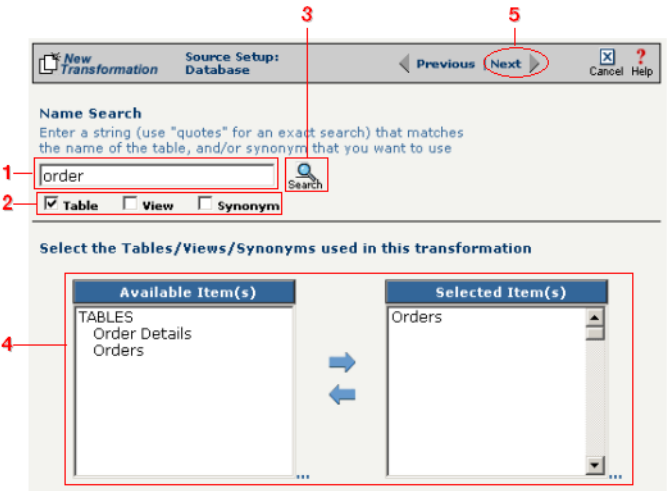


Figure 11-123. Select the single table you want to access from the **Available Tables** field.

The next screen is where you specify how many times you will use the single table (or view/synonym) you selected for your source.

1. (Optional) If you will use this table more than once, change the **Times Used** field to the appropriate number.
2. Compare your work to below, then click **Next** to continue.

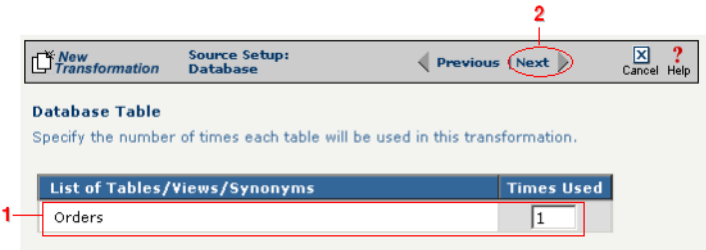


Figure 11-124. Use this screen to specify how many times the source table will be used.

The next screen lets you add a WHERE clause to filter your query:

1. Enter an appropriate WHERE SQL statement in the Where Clause.
2. (Optional) If you want to review your database table's fields, select the **View Field List** checkbox. The list will appear in a table at the bottom of the screen.
3. Click the **Next** button in the toolbar to continue.

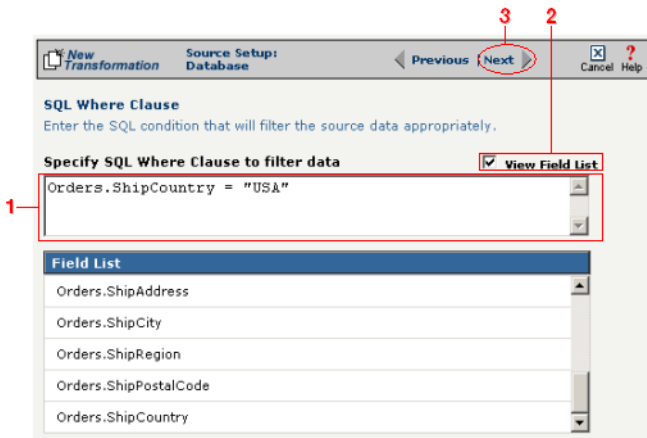

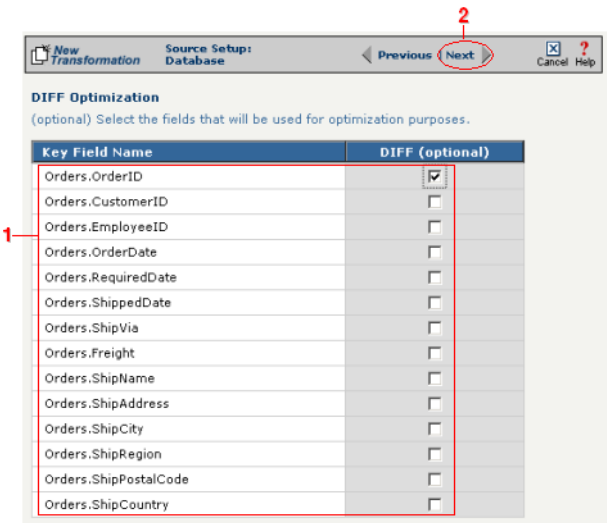


Figure 11-125. This optional screen lets you add a WHERE SQL clause to filter your information.

 **Tip:** For more information about DIFF and optimization, see “Optimization Options (DIFF)” on page 10-5.


This next screen lets you set your source to take advantage of an operation’s DIFF function. If you want this source information to be optimized by filtering out redundant data, select the field(s) that you want to use for filtering in this screen.


1. Click the checkbox that corresponds to the appropriate key field name.
2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.



Key Field Name	DIFF (optional)
Orders.OrderID	<input checked="" type="checkbox"/>
Orders.CustomerID	<input type="checkbox"/>
Orders.EmployeeID	<input type="checkbox"/>
Orders.OrderDate	<input type="checkbox"/>
Orders.RequiredDate	<input type="checkbox"/>
Orders.ShippedDate	<input type="checkbox"/>
Orders.ShipVia	<input type="checkbox"/>
Orders.Freight	<input type="checkbox"/>
Orders.ShipName	<input type="checkbox"/>
Orders.ShipAddress	<input type="checkbox"/>
Orders.ShipCity	<input type="checkbox"/>
Orders.ShipRegion	<input type="checkbox"/>
Orders.ShipPostalCode	<input type="checkbox"/>
Orders.ShipCountry	<input type="checkbox"/>


Figure 11-126. If you need to set a database field to act as an optimization filter using DIFF functionality, select the appropriate field in this screen.

 **Note:** You won't see this screen if your source database table has no primary key.

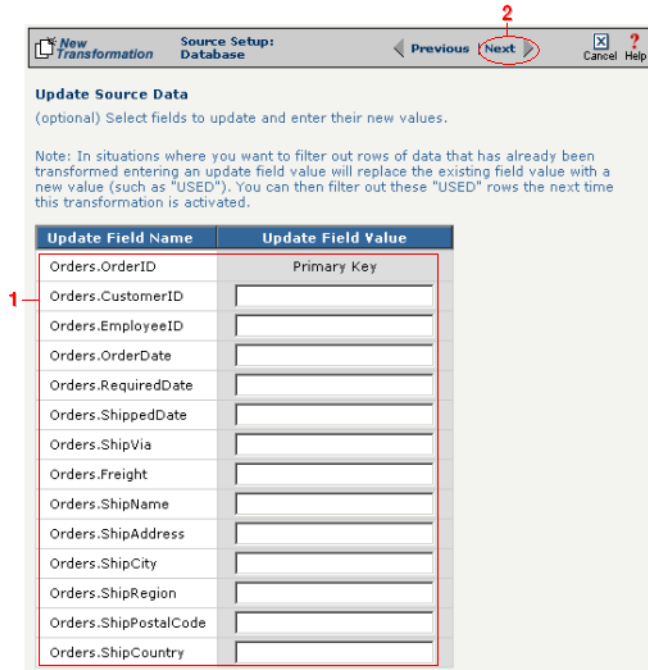
 **Tip:** for more information about the Update Field Value, see "Update Field Value" on page 11-6 in the *Syncx Integration Appliance Reference Guide*.

When your source database table has at least one primary key, this next screen gives you the option to select a database field as an update key.

1. (Optional) Use the **Update Field Value** field to update the value of the fields that match your filter criteria.

 **Caution!** This value will replace the source element's current value with whatever you enter in this field.

2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.



Update Source Data
(optional) Select fields to update and enter their new values.


Note: In situations where you want to filter out rows of data that has already been transformed entering an update field value will replace the existing field value with a new value (such as "USED"). You can then filter out these "USED" rows the next time this transformation is activated.

Update Field Name	Update Field Value
Orders.OrderID	Primary Key
Orders.CustomerID	
Orders.EmployeeID	
Orders.OrderDate	
Orders.RequiredDate	
Orders.ShippedDate	
Orders.ShipVia	
Orders.Freight	
Orders.ShipName	
Orders.ShipAddress	
Orders.ShipCity	
Orders.ShipRegion	
Orders.ShipPostalCode	
Orders.ShipCountry	

Figure 11-127. If you need to set a database field to act as an update key, select the appropriate field in this screen.

You have finished defining your Option 1a source (using the Transformation Wizard to specify a single source table).

Option 1b: More than one table in the source database will be accessed.

 **Note:** Skip these steps if you chose to follow Option 1a above.

1. Enter part or all of the tables names. If you want to view all the database's items, leave the field blank.
2. Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
3. Click the **Search** button to view the list of items that match your name search.
4. Select the appropriate items in the **Available Item(s)** field, then click the right arrow button.
5. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

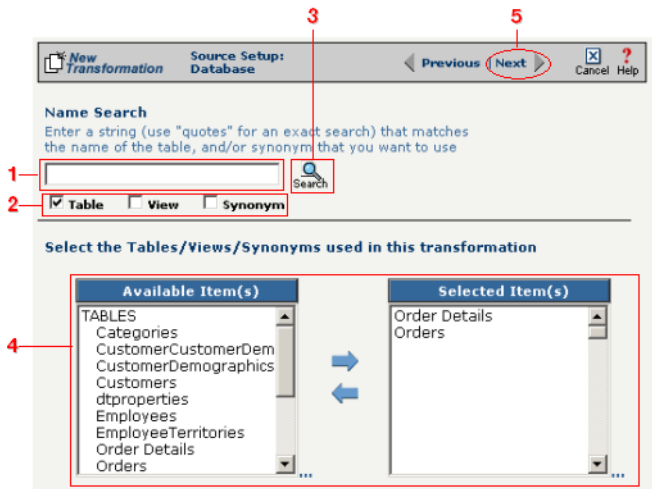



Figure 11-128. Select the appropriate tables you want to access from the **Available Item(s)** field.

 **Note:** Skip these steps if you chose to follow Option 1a.

The next screen is where you specify how many times you will use each table (or view/synonym) you selected for your source.

1. (Optional) If you will use each table more than once, change the **Times Used** field to the appropriate number.
2. Compare your work to below, then click **Next** to continue.

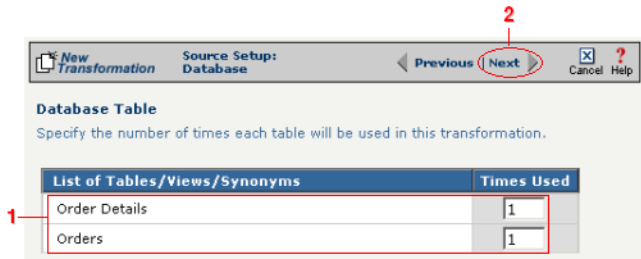



Figure 11-129. Use this screen in the Transformation Wizard to specify how many times each item will be used in the transformation.

 **Note:** Skip these steps if you chose to follow Option 1a.

Because you chose Option 1b (accessing more than one database table), you need to declare the tables' respective relationships:

1. Select the item in the **Parent** drop-down menu that you want to be the parent structure (i.e., at the top level of your data hierarchy).
2. Select the item in the **Child** drop-down menu that you want to be the child structure.
3. Select the appropriate database column in the **Parent Fields** window that will be used to reference the child table.
4. Select the appropriate database column in the **Child Fields** window that will be used to reference the parent table.
5. Click the **Add** button. This saves this parent-child relationship. You should see the new relationship appear in the **Parent – Child Field Relationships** table.
6. (Optional) If you have more child structures, click the **New** button and repeat the previous steps for each additional child.
7. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

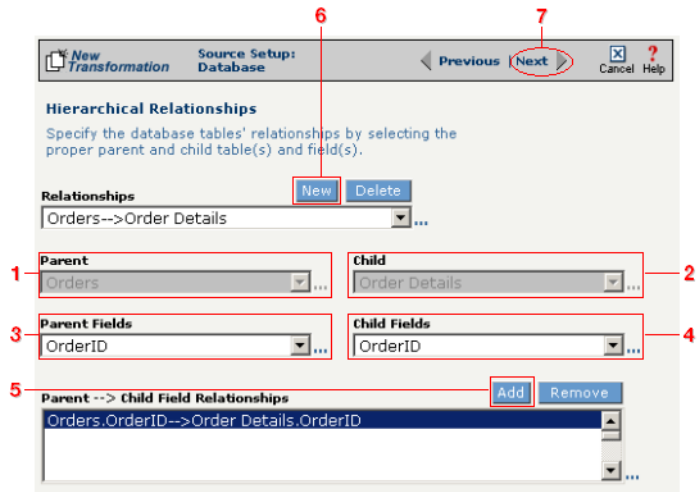


Figure 11-130. Use this screen in the Transformation Wizard to define the relationship between the different database tables.

Note: Skip these steps if you chose to follow Option 1a.

In the **Nature of Data** screen, you need to indicate whether or not each child table's data must be present.

1. Select the appropriate radio button for each parent-child relationship:
 - a. Select **1 to N** if there will be at least 1 child to each parent entry.
 - b. Select **1** if there will always be a one-to-one parent-child relationship.
 - c. Select **0 to N** if there could be none, one, or more children for each parent.
 - d. Select **0 or 1** if there could be either no children or 1 child for each parent.
2. Compare your work to the figure below, then click **Next** to continue.

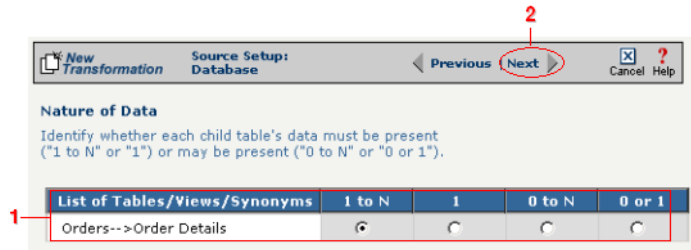



Figure 11-131. Use the Nature of Data screen to identify the number of child entries that are supported for each parent-child relationship.

 **Note:** Skip these steps if you chose to follow Option 1a.

The next screen lets you add a WHERE clause to filter your query:

1. Enter an appropriate WHERE SQL statement in the desired field's corresponding **Filter Condition** field.
2. (Optional) You can have the filtered output be sorted either ascending or descending by selecting the appropriate value from the **Sort** drop-down menu.
3. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

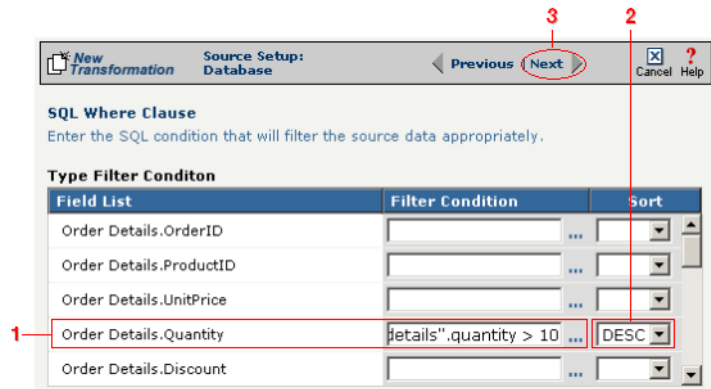


Figure 11-132. This optional screen lets you add a WHERE SQL clause to filter your information.

You have finished defining your Option 1b source (using the Transformation Wizard to specify a source with multiple tables).

Note: Skip these steps if you chose to follow Option 1a or 1b above.

Option 2: You are familiar with SQL and want to enter your SQL query directly

1. Select the **Write SQL Statement** checkbox.
2. Enter your SQL query in the **SQL Statement** field.
3. (Optional) You can test the validity of your SQL statement by clicking the **Test SQL** button.
4. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

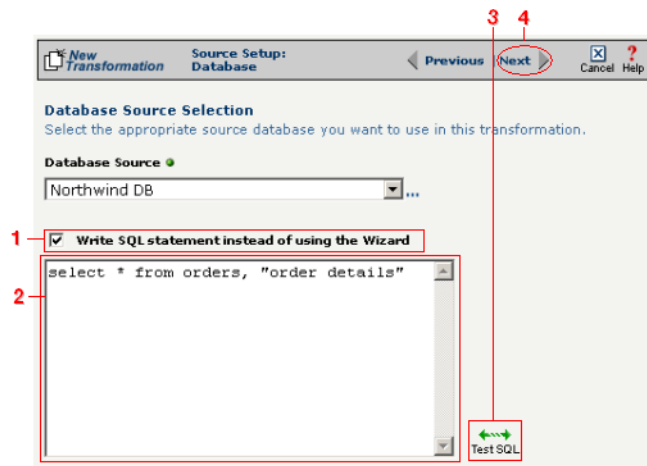


Figure 11-133. Click the **Write SQL Statement** checkbox if you are familiar with SQL and you want to type your statement directly into the **SQL Statement** field.

Note: Skip these steps if you chose to follow Option 1a or 1b above.

Tip: For more information about DIFF and optimization, see “Optimization Options (DIFF)” on page 10-5.

This next screen lets you set your source to take advantage of an operation’s DIFF function. If you want this source information to be optimized by filtering out redundant data, select the field(s) that you want to use for filtering in this screen.

1. Click the checkbox that corresponds to the appropriate key field name.
2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

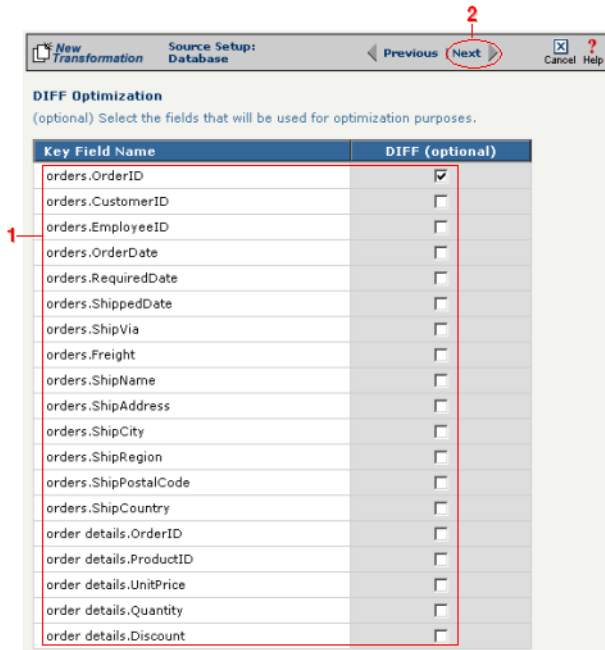



Figure 11-134. If you need to set a database field to act as an optimization filter using DIFF functionality, select the appropriate field in this screen.

You have finished defining your Option 2 source (directly entering the appropriate SQL statement).

 **Tip:** for more information about document definitions, see Chapter 9, “Creating Document Definitions.”

Select Target Information (Text)

- 1 In the next screen of the Transformation Wizard, select the document definition that you want to hold the transformed text from the **Select a Document** drop-down menu.
- 2 Compare your definition to that shown in the figure below, then click **Save** to save your work and exit out of the Transformation Wizard.

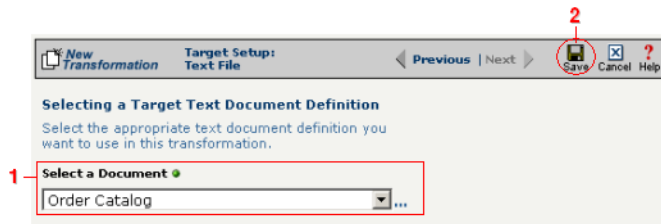


Figure 11-135. Select the document definition you want to use as your target.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for instructions on mapping your new transformation.

How to Transform from a Text File to a Database



Tip: Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from a text file to a database.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See “How to Create an FTP Source Definition” on page 7-8 if your source text file will be stored on an FTP server.
 - b. See “How to Create a File Share Source Definition” on page 7-5 if your source text file will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Source Definition” on page 7-11 if your source text file will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Source Definition” on page 7-13 if your source text file will be stored on an SCP server.
- ❸ Create Your Target Definition (see “How to Create a Database Target Definition” on page 8-4 for details)
- ❹ Create Your Source Document Definition (see Chapter 9 for details)
- ❺ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❻ Map the Source and Target Fields (see Chapter 17 for details)
- ❼ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

Use the Transformation Wizard to Build Your Transformation

Follow these steps to transform information from a text file to a database.

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).



Note: Make sure you've completed steps 1-4 above before attempting to define your transformation.

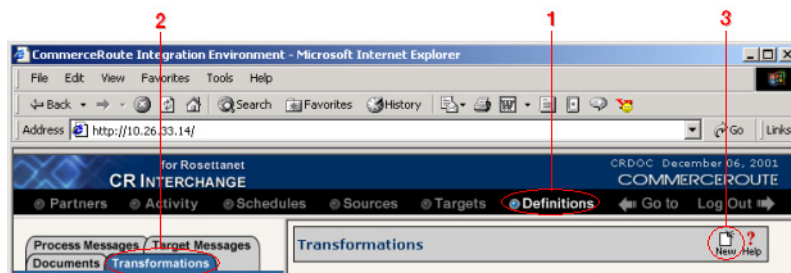


Figure 11-136. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- ④ Enter an appropriate name for your new transformation in the **Transformation Name** field.
- ⑤ Select “Text” from the **Source** and “Database” from the **Target** drop-down menu.
- ⑥ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

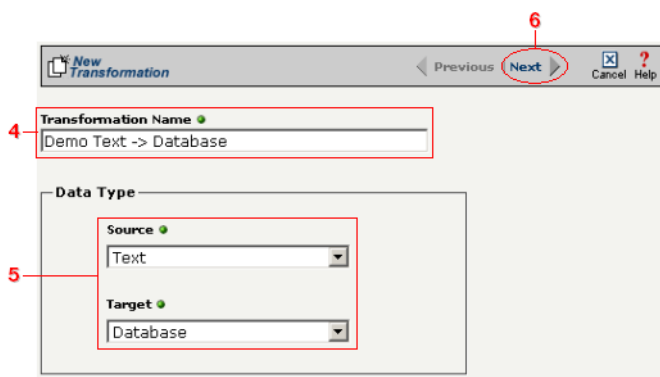


Figure 11-137. Give your new transformation definition an appropriate name, then choose “Text” for your Source and “Database” for your Target.

Tip: for more information about document definitions, see Chapter 9, “Creating Document Definitions.”

Select Source Information (Text)

- 1 In the next screen of the Transformation Wizard, select the document you want to use as a source from the **Text Document Definition** drop-down menu.
- 2 Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

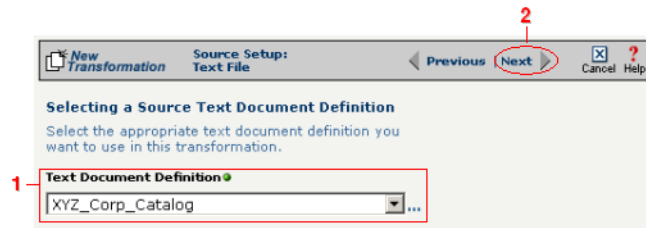


Figure 11-138. Choose which document definition you want to use as your source document.

Tip: DIFF is only available for complex text files. For more information about DIFF and optimization, see “Optimization Options (DIFF)” on page 10-5.

If the text file you chose for your source is a complex text type, an additional screen appears that lets you set your source to take advantage of an operation’s DIFF function. If you want this transformation to be optimized by filtering out redundant data, select the field(s) that you want to use for filtering in this screen.

- 1 Click the checkbox that corresponds to the appropriate key field name.
- 2 Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

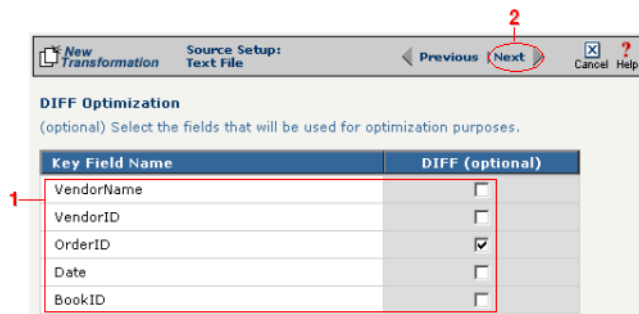


Figure 11-139. If your text file is a complex file and you need to set a field to act as an optimization filter using DIFF functionality, select the appropriate field in this screen.

Select Target Information (Database)

- 1 Select the name of the data target that you defined as your Target Definition from the **Database Target** drop-down menu.
- 2 Click the **Next** button in the toolbar to continue (see the figure below).

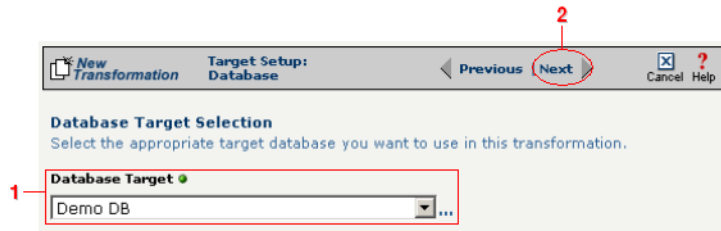


Figure 11-140. Choose which data source you will use as your target database from the **Database Target** drop-down menu.

Next, you need to specify how you will write information to your target database. Follow the option that is appropriate for your transformation:

Option 1: Only a single table in the target database will be accessed

1. Enter part or all of the table's name. If you want to view all the database's items, leave the field blank.
2. Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
3. Click the **Search** button to view the list of items that match your name search.
4. Select the appropriate item in the **Available Item(s)** field, then click the right arrow button.
5. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

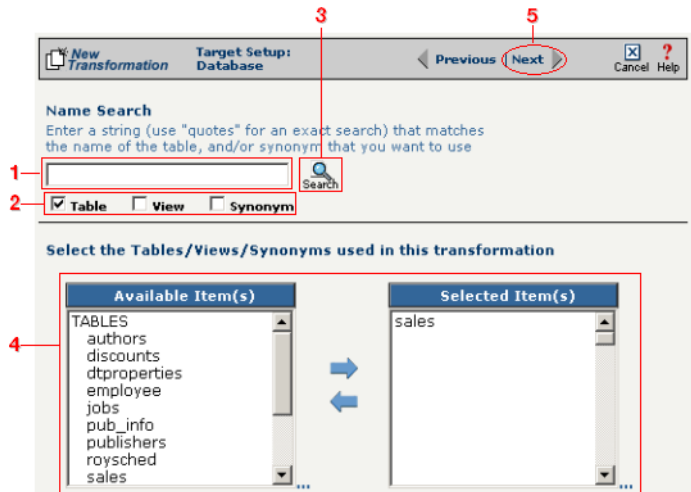


Figure 11-141. Choose the single table you want to access from the **Available Tables** field.

The next screen is where you specify how many times you will use the single table (or view/synonym) you selected for your target.

- 1. (Optional) If you will use this table more than once, change the **Times Used** field to the appropriate number.
- 2. Compare your work to below, then click **Next** to continue.

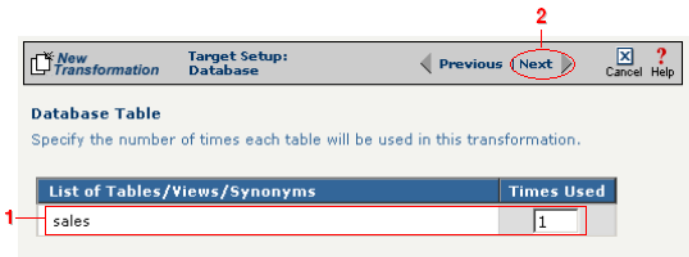

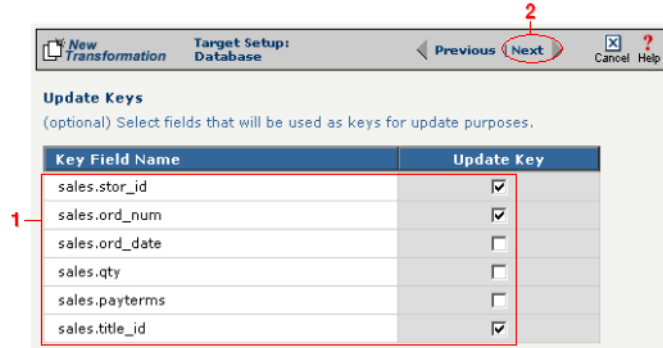


Figure 11-142. Use this screen to specify how many times the target table will be used.

 **Note:** You won't see this screen if your database table has no primary key.


When your database table has at least one primary key, this next screen gives you the option to select a database field as an update key.


1. (Optional) Use the **Update Key** field to select the field(s) that will be treated as update keys.
2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.



Key Field Name	Update Key
sales.stor_id	<input checked="" type="checkbox"/>
sales.ord_num	<input checked="" type="checkbox"/>
sales.ord_date	<input type="checkbox"/>
sales.qty	<input type="checkbox"/>
sales.payterms	<input type="checkbox"/>
sales.title_id	<input checked="" type="checkbox"/>

Figure 11-143. If you need to set a database field to act as an update key, select the appropriate field in this screen.

 **Note:** Skip to “Select Insert/Update Mode” on page 11-36 if you chose to follow Option 1 above.

 **Tip:** Hold down the Ctrl key to select multiple tables.

Option 2: More than one table in the target database will be accessed

1. Enter part or all of the tables' names. If you want to view all the database's items, leave the field blank.
2. Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
3. Click the **Search** button to view the list of items that match your name search.
4. Select the appropriate items in the **Available Item(s)** field, then click the right arrow button.
5. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

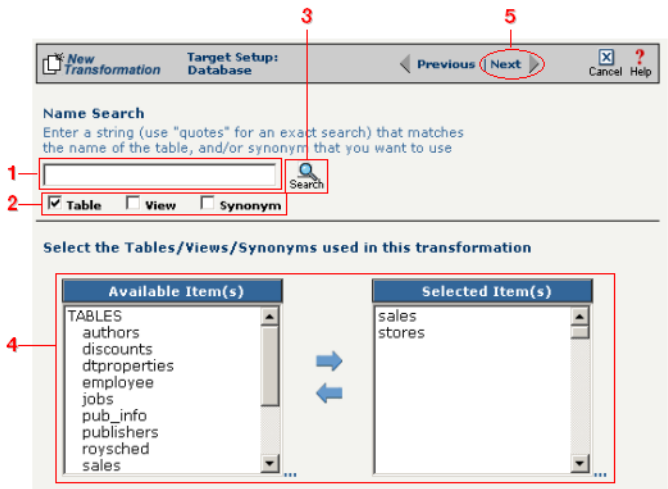


Figure 11-144. Select the appropriate tables you want to access from the **Available Tables** field.

Because you chose Option 2 (accessing more than one database table), you need to declare the tables' respective relationships:

1. Select the item in the **Parent** drop-down menu that you want to be the parent structure (i.e., at the top level of your data hierarchy).
2. Select the item in the **Child** drop-down menu that you want to be the child structure.
3. Select the appropriate database column in the **Parent Fields** window that will be used to reference the child table.
4. Select the appropriate database column in the **Child Fields** window that will be used to reference the parent table.
5. Click the **Add** button. This saves this parent-child relationship. You should see the new relationship appear in the **Parent – Child Field Relationships** table.
6. (Optional) If you have more child structures, click the **New** button and repeat the previous steps for each additional child.
7. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

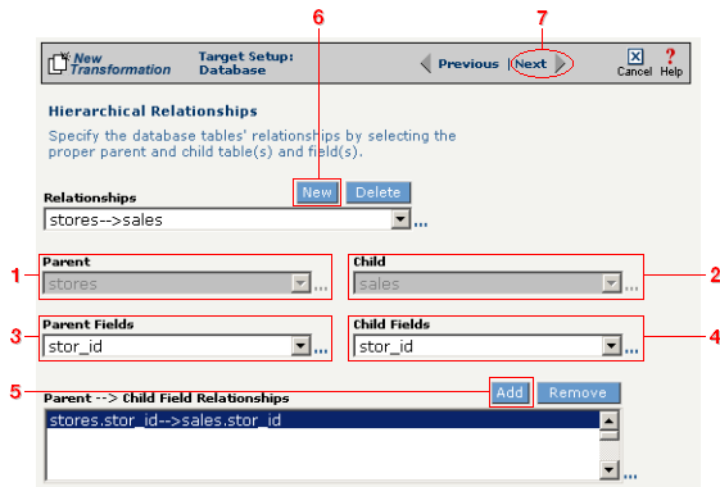


Figure 11-145. Use this screen in the Transformation Wizard to define the relationship between the different database tables.

In the **Nature of Data** screen, you need to indicate whether or not each child table's data must be present.

1. Select the appropriate radio button for each parent-child relationship:
 - a. Select **1 to N** if there will be at least 1 child to each parent entry.
 - b. Select **1** if there will always be a one-to-one parent-child relationship.
 - c. Select **0 to N** if there could be none, one, or more children for each parent.
 - d. Select **0 or 1** if there could be either no children or 1 child for each parent.
2. Compare your work to the figure below, then click **Next** to continue.

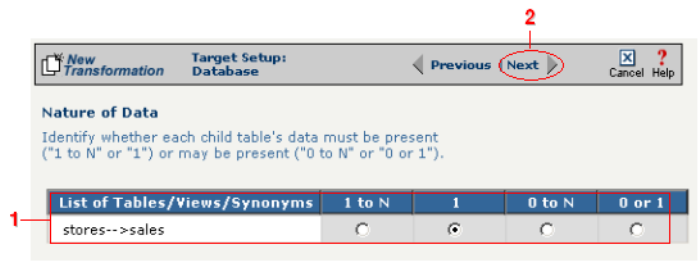

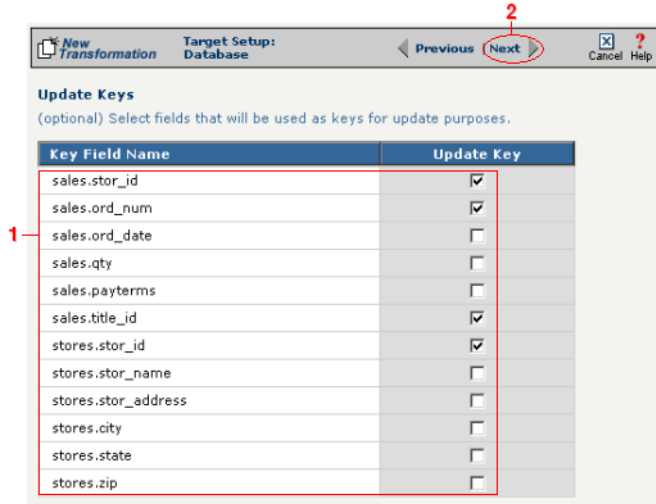


Figure 11-146. Use the Nature of Data screen to identify the number of child entries that are supported for each parent-child relationship.

 **Note:** You won't see this screen if your database table has no primary key.

When your database table has at least one primary key, this next screen gives you the option to select a database field as an update key.

1. (Optional) Select the checkbox(es) in the **Update Key** column that correspond to the field(s) that will be treated as update keys.
2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.



Update Keys
(optional) Select fields that will be used as keys for update purposes.

Key Field Name	Update Key
sales.stor_id	<input checked="" type="checkbox"/>
sales.ord_num	<input checked="" type="checkbox"/>
sales.ord_date	<input type="checkbox"/>
sales.qty	<input type="checkbox"/>
sales.payterms	<input type="checkbox"/>
sales.title_id	<input checked="" type="checkbox"/>
stores.stor_id	<input checked="" type="checkbox"/>
stores.stor_name	<input type="checkbox"/>
stores.stor_address	<input type="checkbox"/>
stores.city	<input type="checkbox"/>
stores.state	<input type="checkbox"/>
stores.zip	<input type="checkbox"/>


Figure 11-147. If you need to set a database field to act as an update key, select the appropriate field in this screen.

You have now completed Option 2.

Select Insert/Update Mode

In this last screen of the Transformation Wizard, you define how the Syncx Integration Appliance will handle new or existing records when it loads data from your source to your target database.

1. Select one of the four options described below:
 - a. **Insert/Update:** the appliance will first attempt to insert any new record it encounters. If a record already exists, it will then update that record.
 - b. **Insert Only:** the appliance will attempt to insert a new record only. No

 **Note:** The options that include Update are only available if you chose at least one field in the **Update Key** screen.

updates will be permitted.

- c. **Update Only:** the appliance will attempt to update an existing record. No new records will be created.
- d. **Update/Insert:** the appliance will first attempt to update a record. It will create a new record if none exists.

- 2 Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

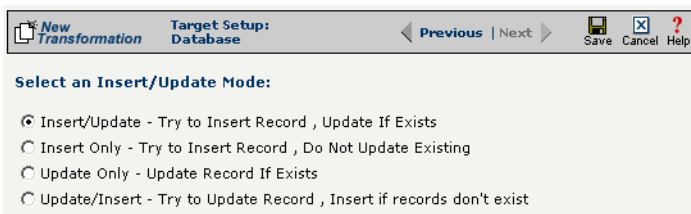


Figure 11-148. Choose which of the four insert/update options is appropriate for your transformation.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for instructions on mapping your new transformation.

How to Transform from a Database to an XML Document



Tip: Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from a database to an XML document.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition (see “How to Create a Database Source Definition” on page 7-2 for details)
- ❸ Create Your Target Definition
 - a. See “How to Create an FTP Target Definition” on page 8-10 if your target XML document will be stored on an FTP server.
 - b. See “How to Create a File Share Target Definition” on page 8-7 if your target XML document will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Target Definition” on page 8-14 if your target XML document will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Target Definition” on page 8-20 if your target XML document will be stored on an SCP server.
- ❹ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❺ Map the Source and Target Fields (see Chapter 17 for details)
- ❻ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

Use the Transformation Wizard to Build Your Transformation

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).



Note: Make sure you've completed steps 1-3 above before attempting to define your transformation.

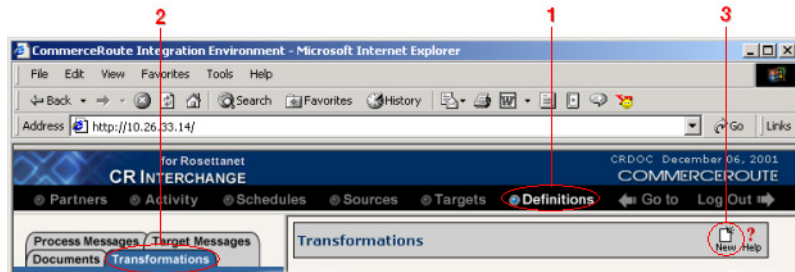


Figure 11-149. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- 4 Enter an appropriate name for your new transformation in the **Transformation Name** field.
- 5 Select “Database” from the **Source** and “XML” from the **Target** drop-down menu.
- 6 Click the **Next** button in the toolbar to continue.

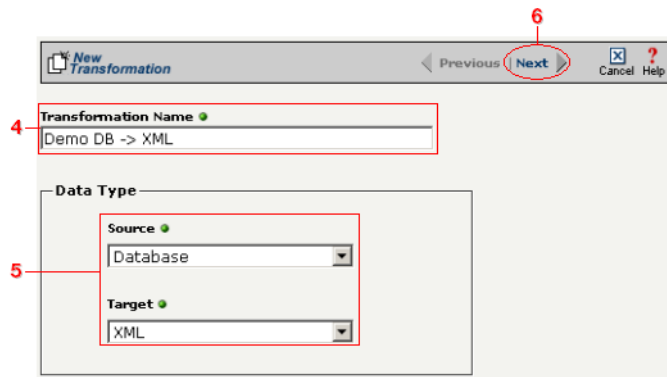


Figure 11-150. Give your new transformation definition an appropriate name, then choose “Database” for your Source and “XML” for your Target.

Select Source Information (Database)

- ❶ In the next screen of the Transformation Wizard, select the name of the Source that holds the database information you want to transform from the **Data Source** drop-down menu.
- ❷ Choose how you will get information from your database. You have two options:

Option 1: Use the Transformation Wizard to help you access your database without typing SQL

- a. Select the appropriate database definition from the **Database Source** drop-down menu.
- b. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

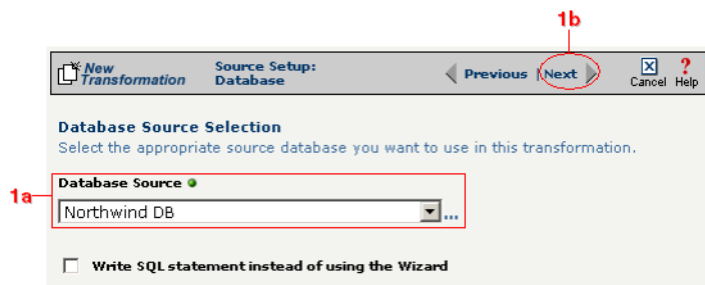


Figure 11-151. Choose the appropriate database from the **Database Source** drop-down menu if you want the Transformation Wizard to help you access your database without having to type any SQL.

Within Option 1, you need to specify how you will access information from your source database. Choose one of two options:

Option 1a: Only a single table in the source database will be accessed.

1. Enter part or all of the table's name. If you want to view all the database's items, leave the field blank.
2. Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
3. Click the **Search** button to view the list of items that match your name search.

4. Select the appropriate item in the **Available Item(s)** field, then click the right arrow button.
5. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

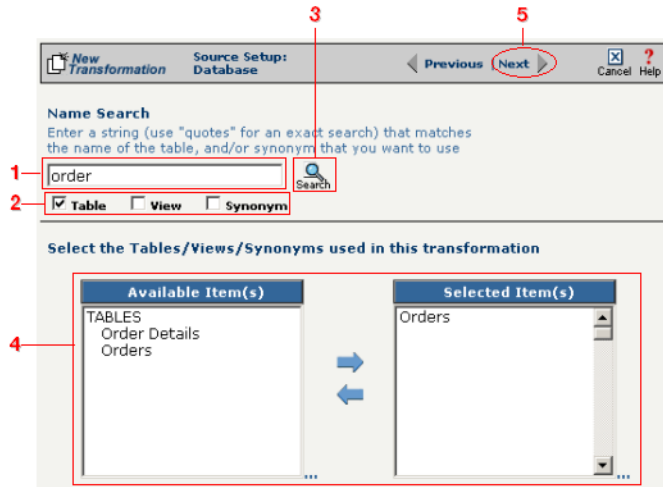


Figure 11-152. Select the single table you want to access from the **Available Tables** field.

The next screen is where you specify how many times you will use the single table (or view/synonym) you selected for your source.

1. (Optional) If you will use this table more than once, change the **Times Used** field to the appropriate number.
2. Compare your work to below, then click **Next** to continue.

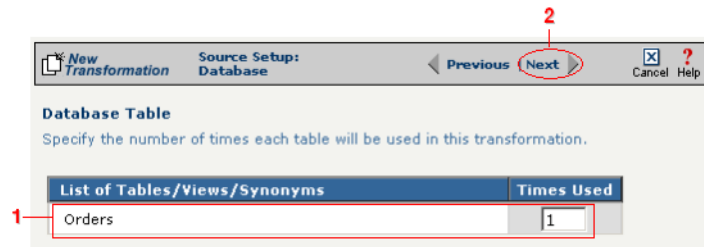


Figure 11-153. Use this screen to specify how many times the source table will be used.

The next screen lets you add a WHERE clause to filter your query:

1. Enter an appropriate WHERE SQL statement in the Where Clause.
2. (Optional) If you want to review your database table's fields, select the **View Field List** checkbox. The list will appear in a table at the bottom of the screen.
3. Click the **Next** button in the toolbar to continue.

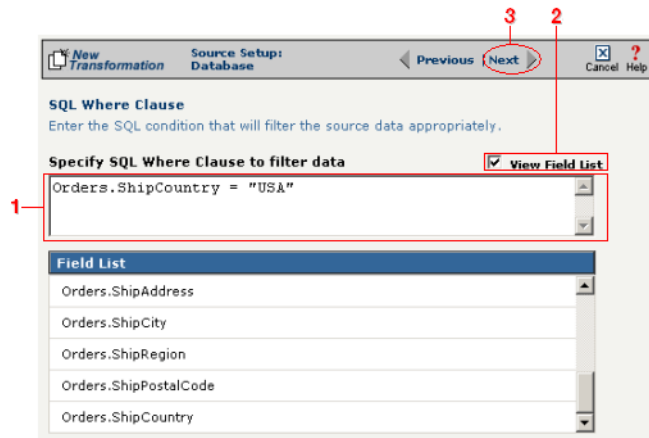

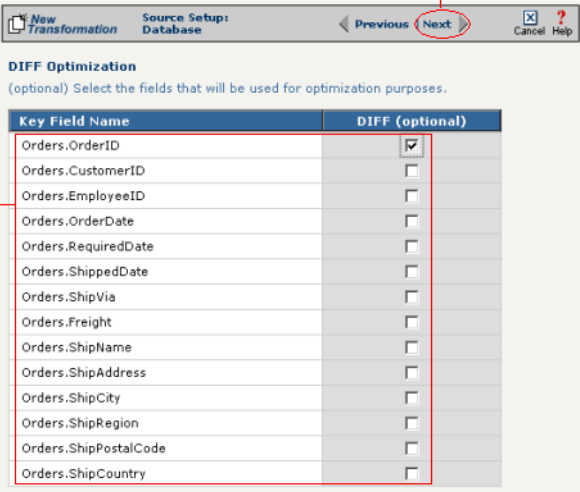


Figure 11-154. This optional screen lets you add a WHERE SQL clause to filter your information.

 **Tip:** For more information about DIFF and optimization, see “Optimization Options (DIFF)” on page 10-5.


This next screen lets you set your source to take advantage of an operation’s DIFF function. If you want this source information to be optimized by filtering out redundant data, select the field(s) that you want to use for filtering in this screen.


1. Click the checkbox that corresponds to the appropriate key field name.
2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.




Key Field Name	DIFF (optional)
Orders.OrderID	<input checked="" type="checkbox"/>
Orders.CustomerID	<input type="checkbox"/>
Orders.EmployeeID	<input type="checkbox"/>
Orders.OrderDate	<input type="checkbox"/>
Orders.RequiredDate	<input type="checkbox"/>
Orders.ShippedDate	<input type="checkbox"/>
Orders.ShipVia	<input type="checkbox"/>
Orders.Freight	<input type="checkbox"/>
Orders.ShipName	<input type="checkbox"/>
Orders.ShipAddress	<input type="checkbox"/>
Orders.ShipCity	<input type="checkbox"/>
Orders.ShipRegion	<input type="checkbox"/>
Orders.ShipPostalCode	<input type="checkbox"/>
Orders.ShipCountry	<input type="checkbox"/>

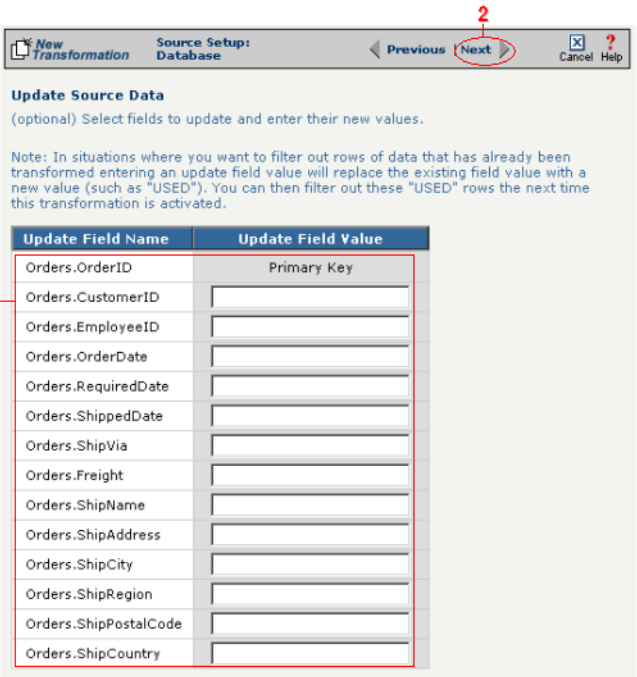
Figure 11-155. If you need to set a database field to act as an optimization filter using DIFF functionality, select the appropriate field in this screen.

 **Note:** You won't see this screen if your source database table has no primary key.

 **Tip:** for more information about the Update Field Value, see "Update Field Value" on page 11-6 in the *Syncx Integration Appliance Reference Guide*.

When your source database table has at least one primary key, this next screen gives you the option to select a database field as an update key.

1. (Optional) Use the **Update Field Value** field to update the value of the fields that match your filter criteria.
 **Caution!** This value will replace the source element's current value with whatever you enter in this field.
2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.




Update Field Name	Update Field Value
Orders.OrderID	Primary Key
Orders.CustomerID	
Orders.EmployeeID	
Orders.OrderDate	
Orders.RequiredDate	
Orders.ShippedDate	
Orders.ShipVia	
Orders.Freight	
Orders.ShipName	
Orders.ShipAddress	
Orders.ShipCity	
Orders.ShipRegion	
Orders.ShipPostalCode	
Orders.ShipCountry	

Figure 11-156. If you need to set a database field to act as an update key, select the appropriate field in this screen.

You have finished defining your Option 1a source (using the Transformation Wizard to specify a single source table).

Option 1b: More than one table in the source database will be accessed.

 **Note:** Skip these steps if you chose to follow Option 1a above.

1. Enter part or all of the tables names. If you want to view all the database's items, leave the field blank.
2. Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
3. Click the **Search** button to view the list of items that match your name search.
4. Select the appropriate items in the **Available Item(s)** field, then click the right arrow button.
5. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

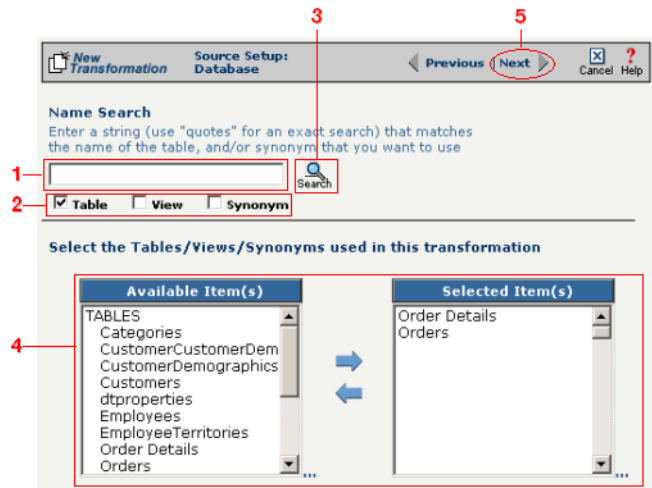



Figure 11-157. Select the appropriate tables you want to access from the **Available Item(s)** field.

 **Note:** Skip these steps if you chose to follow Option 1a.

The next screen is where you specify how many times you will use each table (or view/synonym) you selected for your source.

1. (Optional) If you will use each table more than once, change the **Times Used** field to the appropriate number.
2. Compare your work to below, then click **Next** to continue.

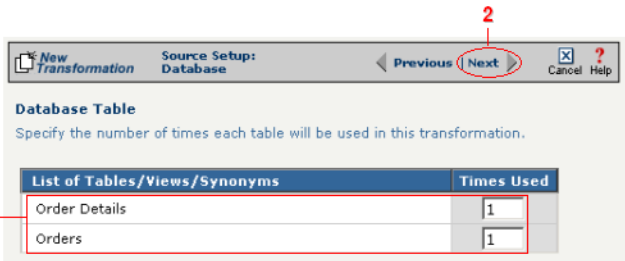



Figure 11-158. Use this screen in the Transformation Wizard to specify how many times each item will be used in the transformation.

 **Note:** Skip these steps if you chose to follow Option 1a.

Because you chose Option 1b (accessing more than one database table), you need to declare the tables' respective relationships:

1. Select the item in the **Parent** drop-down menu that you want to be the parent structure (i.e., at the top level of your data hierarchy).
2. Select the item in the **Child** drop-down menu that you want to be the child structure.
3. Select the appropriate database column in the **Parent Fields** window that will be used to reference the child table.
4. Select the appropriate database column in the **Child Fields** window that will be used to reference the parent table.
5. Click the **Add** button. This saves this parent-child relationship. You should see the new relationship appear in the **Parent – Child Field Relationships** table.
6. (Optional) If you have more child structures, click the **New** button and repeat the previous steps for each additional child.
7. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

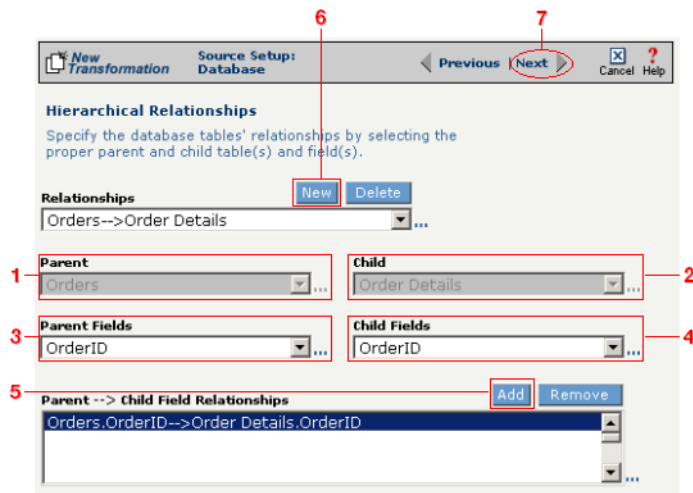



Figure 11-159. Use this screen in the Transformation Wizard to define the relationship between the different database tables.

 **Note:** Skip these steps if you chose to follow Option 1a.

In the **Nature of Data** screen, you need to indicate whether or not each child table's data must be present.

1. Select the appropriate radio button for each parent-child relationship:
 - a. Select **1 to N** if there will be at least 1 child to each parent entry.
 - b. Select **1** if there will always be a one-to-one parent-child relationship.
 - c. Select **0 to N** if there could be none, one, or more children for each parent.
 - d. Select **0 or 1** if there could be either no children or 1 child for each parent.
2. Compare your work to the figure below, then click **Next** to continue.

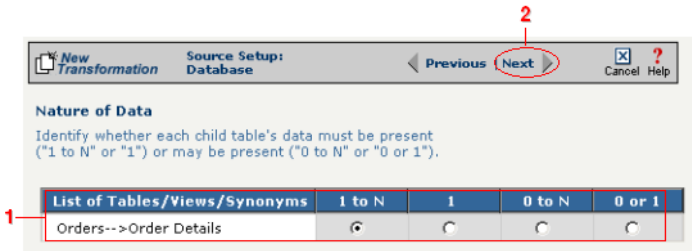



Figure 11-160. Use the Nature of Data screen to identify the number of child entries that are supported for each parent-child relationship.

 **Note:** Skip these steps if you chose to follow Option 1a.

The next screen lets you add a WHERE clause to filter your query:

1. Enter an appropriate WHERE SQL statement in the desired field's corresponding **Filter Condition** field.
2. (Optional) You can have the filtered output be sorted either ascending or descending by selecting the appropriate value from the **Sort** drop-down menu.
3. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

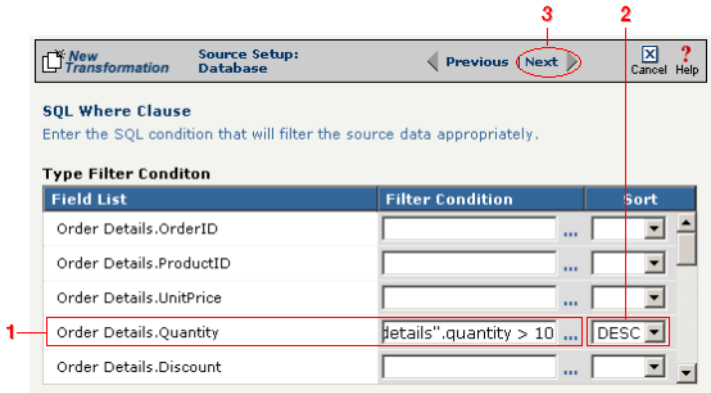



Figure 11-161. This optional screen lets you add a WHERE SQL clause to filter your information.

You have finished defining your Option 1b source (using the Transformation Wizard to specify a source with multiple tables).

 **Note:** Skip these steps if you chose to follow Option 1a or 1b above.

Option 2: You are familiar with SQL and want to enter your SQL query directly

1. Select the **Write SQL Statement** checkbox.
2. Enter your SQL query in the **SQL Statement** field.
3. (Optional) You can test the validity of your SQL statement by clicking the **Test SQL** button.
4. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

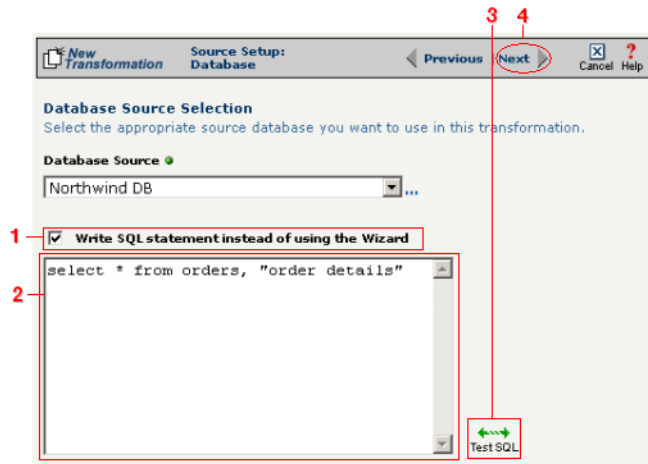




Figure 11-162. Click the **Write SQL Statement** checkbox if you are familiar with SQL and you want to type your statement directly into the **SQL Statement** field.

 **Note:** Skip these steps if you chose to follow Option 1a or 1b above.

 **Tip:** For more information about DIFF and optimization, see “Optimization Options (DIFF)” on page 10-5.

This next screen lets you set your source to take advantage of an operation’s DIFF function. If you want this source information to be optimized by filtering out redundant data, select the field(s) that you want to use for filtering in this screen.

1. Click the checkbox that corresponds to the appropriate key field name.
2. Compare your work to the figure shown below, then click the **Next** button to continue.

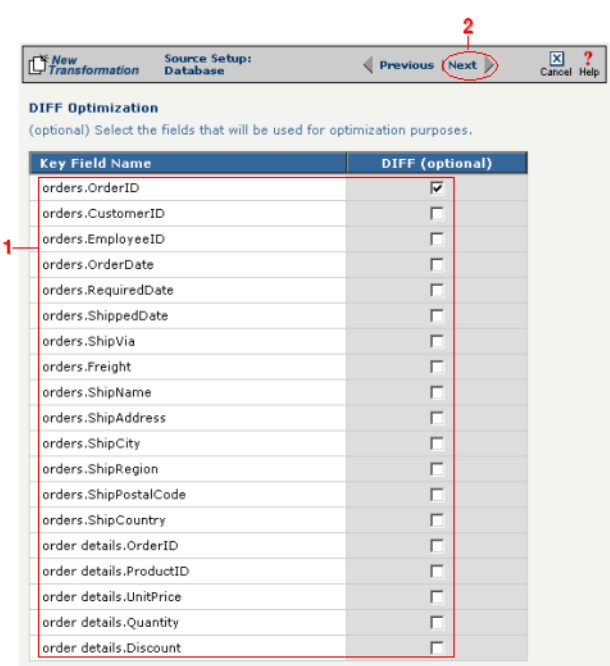


Figure 11-163. If you need to set a database field to act as an optimization filter using DIFF functionality, select the appropriate field in this screen.

You have finished defining your Option 2 source (directly entering the appropriate SQL statement).

Tip: for more information about DTD files, see “What’s a DTD File?” on page 11-42 in the *Syncx Integration Appliance Reference Guide*.

Select Target Information (XML)


You have two scenarios for loading your XML document. Follow the option that describes where your XML document's DTD file is located:

Option 1: You are using an XML document whose definition is already loaded into the appliance

- ❶ Click the **Select an XML DTD** radio button.
- ❷ Select the appropriate XML folder from the drop-down list.
- ❸ Choose the appropriate DTD file from the scrollable list below the drop-down list.
- ❹ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.
- ❺ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

The screenshot shows the 'New Transformation' dialog box with the 'Source Setup: XML' tab. The 'Select an XML DTD' radio button is selected. Below it, a dropdown menu shows 'Custom' selected, and a scrollable list below it shows 'PurchaseOrder.dtd' selected. The 'Next' button in the toolbar is highlighted with a red circle and a red number 5. A red number 1 points to the 'Select an XML DTD' radio button. A red number 2 points to the 'Custom' dropdown. A red number 3 points to the 'PurchaseOrder.dtd' list item. A red number 4 points to the 'Specify the root name: (Optional)' text box.

Figure 11-164. Click the **Select an XML DTD** radio button if your XML document definition has already been loaded into the system.

 **Note:** Skip these steps if you chose to follow Option 1 above.

Option 2: You need to use an XML document whose definition has not yet been loaded into the appliance

- ❶ Choose the **Upload an XML DTD** radio button.
- ❷ Click **Browse** and navigate to the location of your DTD file that you want to add to the appliance.
- ❸ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.
- ❹ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

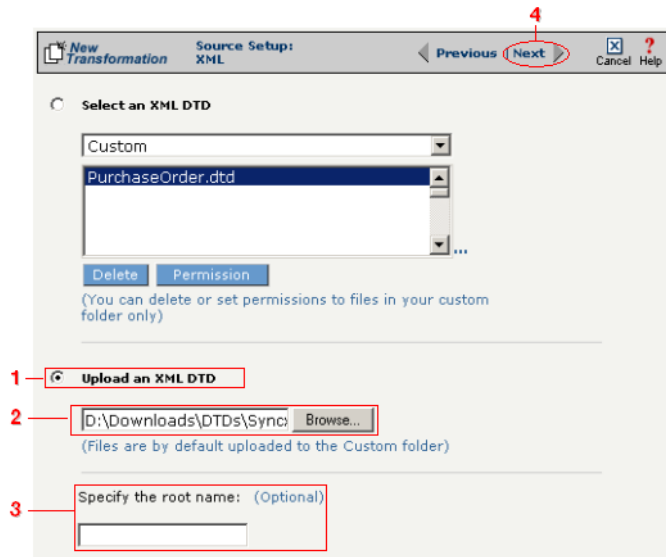


Figure 11-165. Click the **Upload an XML DTD** radio button if you need to copy a new DTD to the Syncx appliance.

Select Target XML DTD Options

You have three choices for where you will copy your DTD file. Click on the option that describes where your XML document's DTD file should be stored:

Option 1: Copy the DTD file to the same folder as your XML file

- ❶ Select the **Copy DTD file to folder where...** radio button.
- ❷ Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

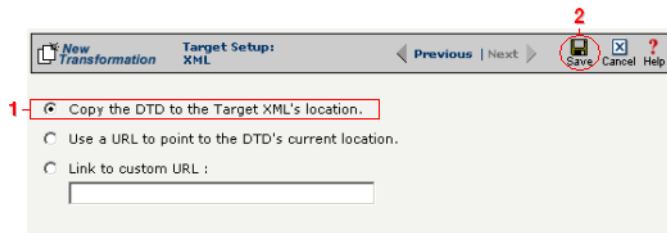


Figure 11-166. Click the **Copy DTD file to folder where...** radio button if you want to copy your DTD to the same folder as your XML document.

Option 2: Make the DTD file's location appear as the current URL in the XML document's header

- ❶ Select the **Use a URL to point to the DTD's Current Location** radio button.
- ❷ Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

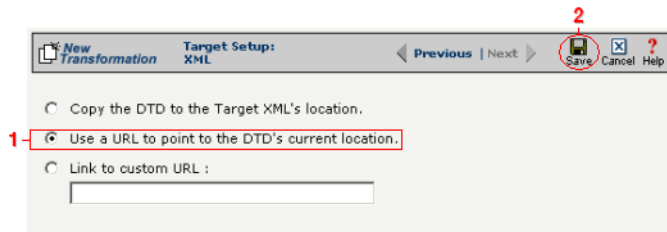




Figure 11-167. If you want to make your DTD file's location appear as the current URL in the XML document's header, click the **Link to Current URL** radio button.

 **Note:** Skip these steps if you chose to follow Option 1 above or Option 3 below.

 **Note:** Skip these steps if you chose to follow Option 1 or 2 above.

Option 3: Make the DTD file's location appear as a custom URL in the XML document's header

- ❶ Select the **Link to Custom URL** radio button and enter the custom URL in the corresponding field.
- ❷ Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

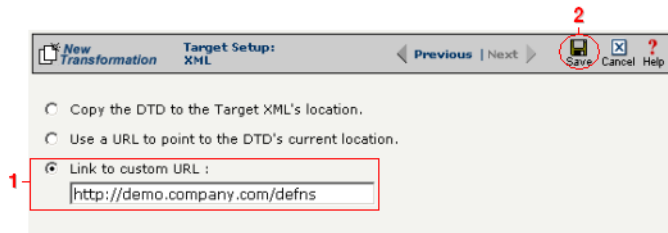



Figure 11-168. Click the **Link to Custom URL** radio button and enter the new URL in the corresponding field if you want to make your DTD file's location appear as a custom URL in the XML document's header.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for instructions on mapping your new transformation.

How to Transform from an XML Document to a Database

 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.


Summary of Steps

Follow these steps to transform information from an XML document to a database.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See “How to Create an FTP Source Definition” on page 7-8 if your source XML document will be stored on an FTP server.
 - b. See “How to Create a File Share Source Definition” on page 7-5 if your source XML document will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Source Definition” on page 7-11 if your source text file will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Source Definition” on page 7-13 if your source text file will be stored on an SCP server.
- ❸ Create Your Target Definition (see “How to Create a Database Target Definition” on page 8-4 for details)
- ❹ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❺ Map the Source and Target Fields (see Chapter 17 for details)
- ❻ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

Use the Transformation Wizard to Build Your Transformation

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

 **Note:** Make sure you've completed steps 1-3 above before attempting to define your transformation.

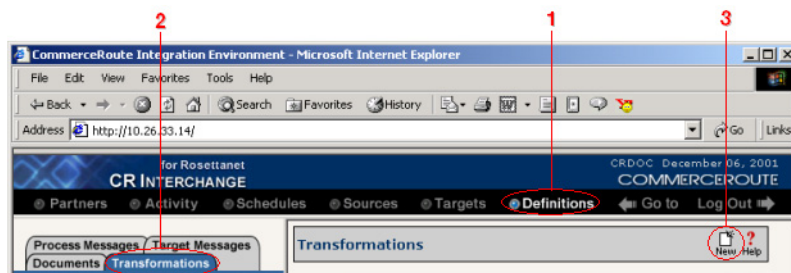


Figure 11-169. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- ④ Enter an appropriate name for your new transformation in the **Transformation Name** field.
- ⑤ Select “XML” from the **Source** and “Database” from the **Target** drop-down menu.
- ⑥ Click the **Next** button in the toolbar to continue.

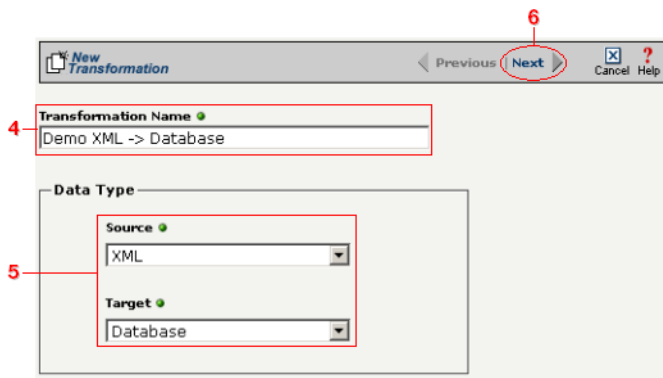


Figure 11-170. Give your new transformation definition an appropriate name, then choose “XML” for your Source and “Database” for your Target.

Tip: for more information about DTD files, see “What’s a DTD File?” on page 11-42 in the *Syncx Integration Appliance Reference Guide*.

Select Source Information (XML)

You have two choices for loading your XML document. Follow the option that describes where your XML document's DTD file is located:

Option 1: You are using an XML document whose definition is already loaded into the appliance

- ❶ Click the **Select an XML DTD** radio button.
- ❷ Select the appropriate XML folder from the drop-down list.
- ❸ Choose the appropriate DTD file from the scrollable list below the drop-down list.
- ❹ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.
- ❺ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

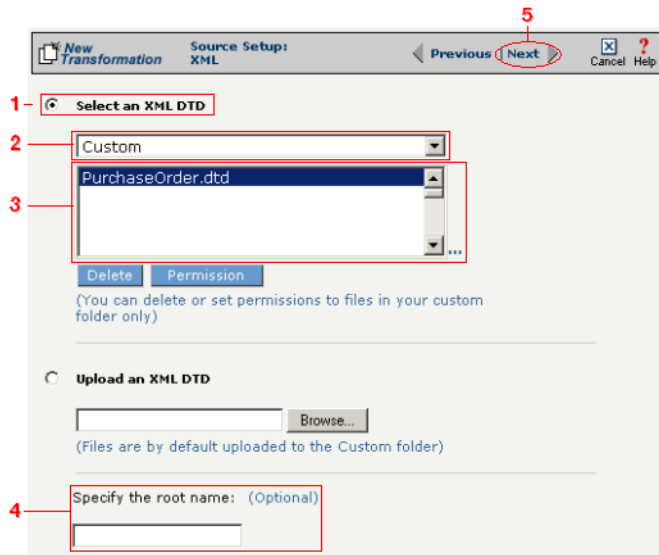



Figure 11-171. Click the **Select an XML DTD** radio button if your XML document definition has already been loaded into the system.

 **Note:** Skip these steps if you chose to follow Option 1 above.

Option 2: You need to use an XML document whose definition has not yet been loaded into the appliance

- ❶ Choose the **Upload an XML DTD** radio button.
- ❷ Click **Browse** and navigate to the location of your DTD file that you want to add to the appliance.
- ❸ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.
- ❹ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.

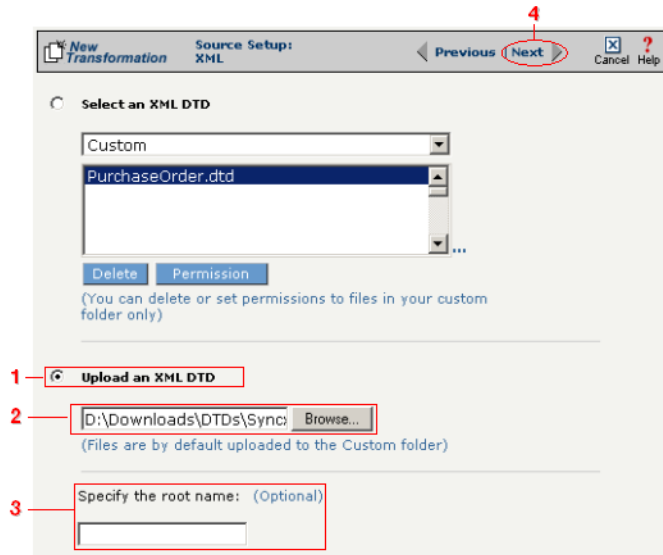


Figure 11-172. Click the **Upload an XML DTD** radio button if you need to copy a new DTD to the Syncx appliance.

Select Target Information (Database)

- ❶ Select the name of the data target that you defined as your Target Definition from the **Database Target** drop-down menu.
- ❷ Click the **Next** button in the toolbar to continue (see the figure below).

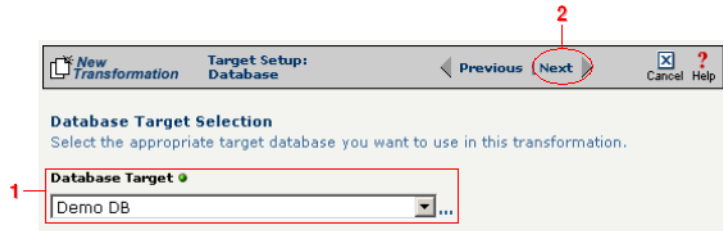


Figure 11-173. Choose which data source you will use as your target database from the **Database Target** drop-down menu.

Next, you need to specify how you will write information to your target database. Follow the option that is appropriate for your transformation:

Option 1: Only a single table in the target database will be accessed

- ❶ Enter part or all of the table's name. If you want to view all the database's items, leave the field blank.
- ❷ Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
- ❸ Click the **Search** button to view the list of items that match your name search.
- ❹ Select the appropriate item in the **Available Item(s)** field, then click the right arrow button.
- ❺ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

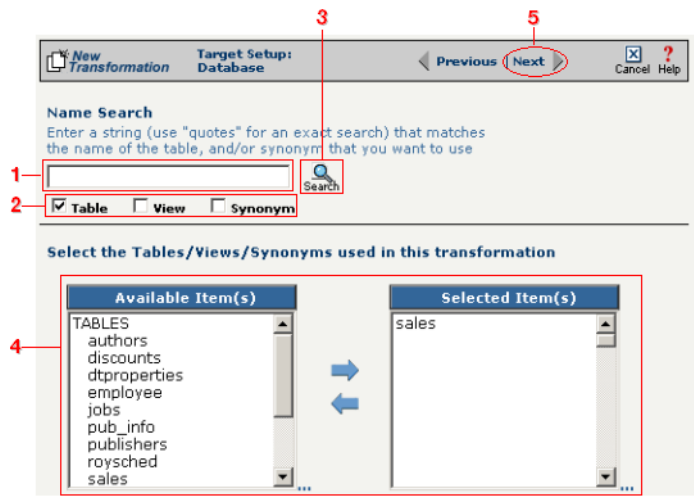


Figure 11-174. Choose the single table you want to access from the **Available Tables** field.

The next screen is where you specify how many times you will use the single table (or view/synonym) you selected for your target.

1. (Optional) If you will use this table more than once, change the **Times Used** field to the appropriate number.
2. Compare your work to below, then click **Next** to continue.

The screenshot shows a software window titled 'New Transformation' with a tab labeled 'Target Setup: Database'. At the top right are buttons for 'Previous', 'Next' (circled in red with a red '2' above it), 'Cancel', and 'Help'. Below the title bar, the text 'Database Table' is followed by the instruction 'Specify the number of times each table will be used in this transformation.' A table with two columns, 'List of Tables/Views/Synonyms' and 'Times Used', is displayed. The first row contains the text 'sales' in the first column and the number '1' in the second column. A red '1' is placed to the left of the 'sales' text.

List of Tables/Views/Synonyms	Times Used
sales	1

Figure 11-175. Use this screen to specify how many times the target table will be used.

Note: You won't see this screen if your database table has no primary key.

When your database table has at least one primary key, this next screen gives you the option to select a database field as an update key.

- 1. (Optional) Use the **Update Key** field to select the field(s) that will be treated as update keys.
- 2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

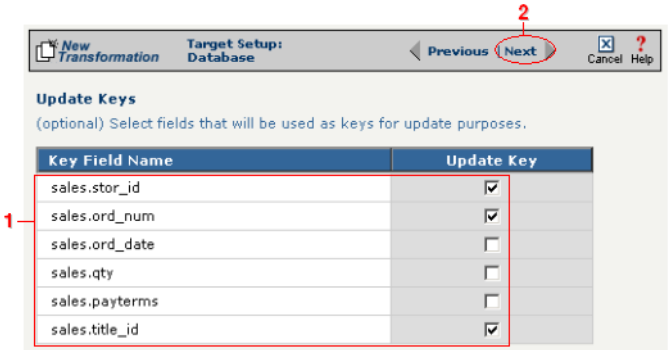


Figure 11-176. If you need to set a database field to act as an update key, select the appropriate field in this screen.

Note: Skip to “Select Insert/Update Mode” on page 11-36 if you chose to follow Option 1 above.

Tip: Hold down the Ctrl key to select multiple tables.

Option 2: More than one table in the target database will be accessed

- 1. Enter part or all of the tables' names. If you want to view all the database's items, leave the field blank.
- 2. Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
- 3. Click the **Search** button to view the list of items that match your name search.
- 4. Select the appropriate items in the **Available Item(s)** field, then click the right arrow button.
- 5. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

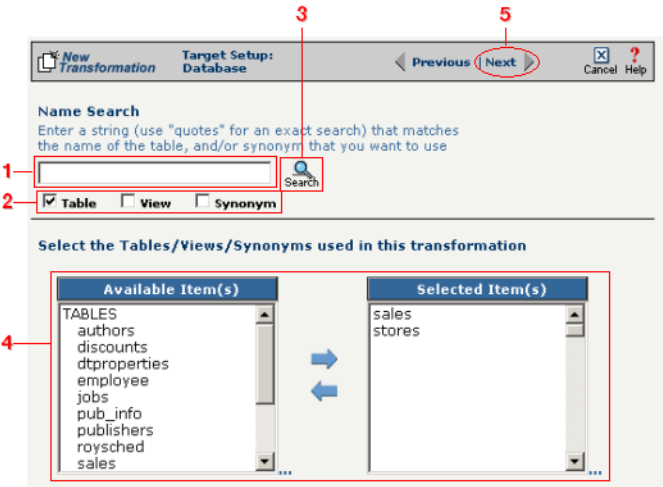


Figure 11-177. Select the appropriate tables you want to access from the **Available Tables** field.

Because you chose Option 2 (accessing more than one database table), you need to declare the tables' respective relationships:

1. Select the item in the **Parent** drop-down menu that you want to be the parent structure (i.e., at the top level of your data hierarchy).
2. Select the item in the **Child** drop-down menu that you want to be the child structure.
3. Select the appropriate database column in the **Parent Fields** window that will be used to reference the child table.
4. Select the appropriate database column in the **Child Fields** window that will be used to reference the parent table.
5. Click the **Add** button. This saves this parent-child relationship. You should see the new relationship appear in the **Parent – Child Field Relationships** table.
6. (Optional) If you have more child structures, click the **New** button and repeat the previous steps for each additional child.
7. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

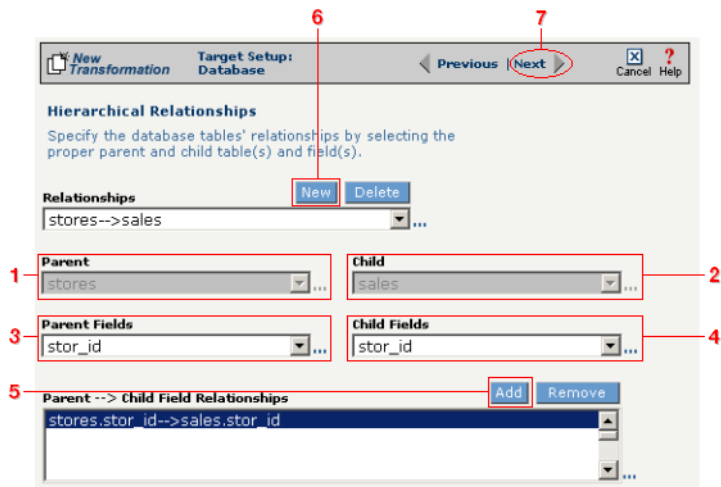


Figure 11-178. Use this screen in the Transformation Wizard to define the relationship between the different database tables.

In the **Nature of Data** screen, you need to indicate whether or not each child table's data must be present.

1. Select the appropriate radio button for each parent-child relationship:
 - a. Select **1 to N** if there will be at least 1 child to each parent entry.
 - b. Select **1** if there will always be a one-to-one parent-child relationship.
 - c. Select **0 to N** if there could be none, one, or more children for each parent.
 - d. Select **0 or 1** if there could be either no children or 1 child for each parent.
2. Compare your work to the figure below, then click **Next** to continue.

The screenshot shows the 'Nature of Data' dialog box. At the top, there's a title bar with 'New Transformation' and 'Target Setup: Database'. Below that, the 'Nature of Data' section asks to 'Identify whether each child table's data must be present ("1 to N" or "1") or may be present ("0 to N" or "0 or 1")'. A table lists the relationship 'stores-->sales' with four radio button options: '1 to N' (selected), '1' (selected), '0 to N', and '0 or 1'. A red box highlights the 'Next' button in the top right corner.

List of Tables/Views/Synonyms	1 to N	1	0 to N	0 or 1
stores-->sales	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure 11-179. Use the Nature of Data screen to identify the number of child entries that are supported for each parent-child relationship.

Note: You won't see this screen if your database table has no primary key.

When your database table has at least one primary key, this next screen gives you the option to select a database field as an update key.

- 1. (Optional) Select the checkbox(es) in the **Update Key** column that correspond to the field(s) that will be treated as update keys.
- 2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

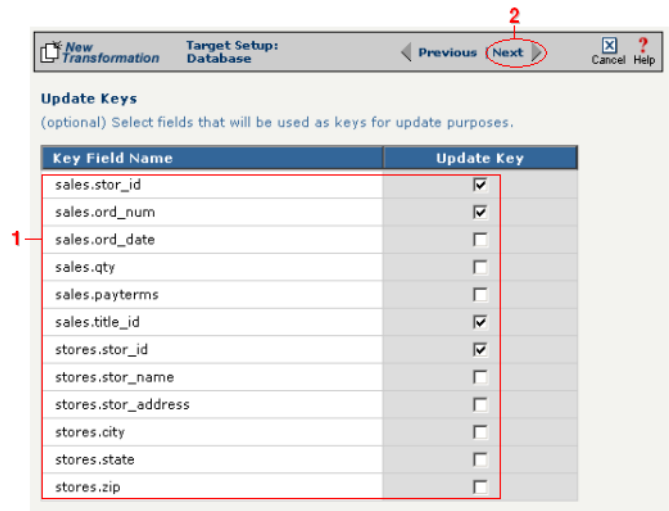



Figure 11-180. If you need to set a database field to act as an update key, select the appropriate field in this screen.

You have now completed Option 2.

Select Insert/Update Mode

In this last screen of the Transformation Wizard, you define how the Syncx Integration Appliance will handle new or existing records when it loads data from your source to your target database.

- 1. Select one of the four options described below:
 - a. **Insert/Update:** the appliance will first attempt to insert any new record it encounters. If a record already exists, it will then update that record.
 - b. **Insert Only:** the appliance will attempt to insert a new record only. No

 **Note:** The options that include Update are only available if you chose at least one field in the **Update Key** screen.

updates will be permitted.

- c. **Update Only:** the appliance will attempt to update an existing record. No new records will be created.
- d. **Update/Insert:** the appliance will first attempt to update a record. It will create a new record if none exists.

- ② Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

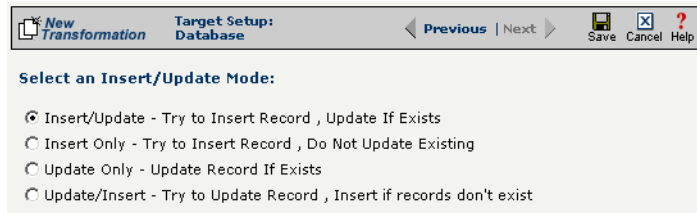


Figure 11-181. Choose which of the four insert/update options is appropriate for your transformation.


What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for instructions on mapping your new transformation.

Chapter 12

Transforming EDI

Overview


 **Tip:** For more information about how Syncx 6200 Series Appliance works with EDI documents, see “About EDI” on page 11-14 in the *Reference Guide*.


This chapter describes how to transform information in EDI documents to or from all supported data types. The complete list of EDI transformations is shown below, followed by step-by-step instructions for each transformation combination.

Appliance EDI Transformations

- EDI to EDI
- Text to EDI
- EDI to Text
- EDI to Database
- Database to EDI
- EDI to XML
- XML to EDI
- EDI to SAP
- EDI to CRbuilder Process

How to Transform from an EDI Document to a CRbuilder Process

 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

 **Note:** Make sure you've completed steps 1-3 above before attempting to define your transformation.

Summary of Steps

Follow these steps to transform information from an EDI document to a CRbuilder process. Click on any step for detailed instructions:

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See “How to Create an FTP Source Definition” on page 7-8 if your source EDI document will be stored on an FTP server.
 - b. See “How to Create a File Share Source Definition” on page 7-5 if your source EDI document will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Source Definition” on page 7-11 if your source EDI document will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Source Definition” on page 7-13 if your source EDI document will be stored on an SCP server.
- ❸ Create Your Target Definition (see “How to Create a CRbuilder Process Target Definition” on page 8-2 for details)
- ❹ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❺ Map the Source and Target Fields (see Chapter 17 for details)
- ❻ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

Use the Transformation Wizard to Build Your Transformation

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

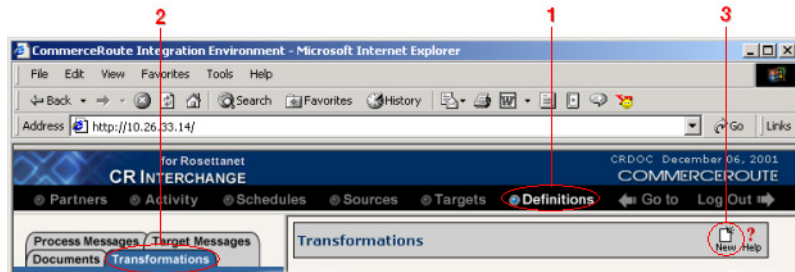


Figure 12-1. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- 4 Enter an appropriate name for your new transformation in the **Transformation Name** field.
- 5 Select “EDI” from the **Source** and “CRbuilder Process” from the **Target** drop-down menu.
- 6 Click the **Next** button in the toolbar to continue.

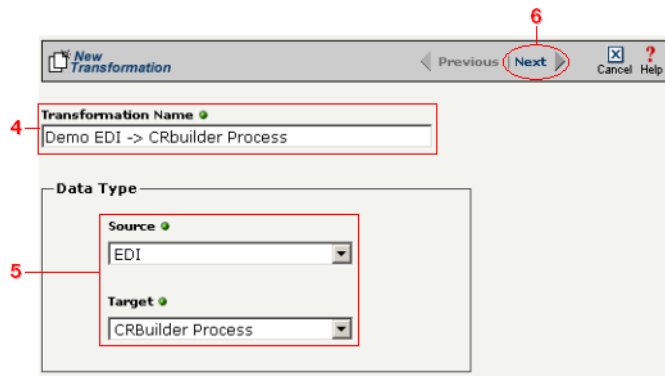


Figure 12-2. Give your new transformation definition an appropriate name, then choose **EDI Document** for your Source and **CRbuilder Process** for your Target.

Tip: for more information about SEF files, see “What’s an SEF File?” on page 11-14 in the *Syncx Integration Appliance Reference Guide*.

Note: Skip these steps if you chose to follow Option 1 above.

Select Source Information (EDI)

You have two options for selecting the appropriate source EDI file. Follow the scenario that describes where your source EDI document's SEF file is located:

Option 1: You are using an EDI file whose definition is already loaded into the appliance

- 1 Click the **Select an existing SEF** radio button.
- 2 Select the appropriate EDI folder (that matches the EDI standard and version you want to use) from the drop-down list.
- 3 Choose the appropriate EDI document from the scrollable list below (e.g., 850 if you want to use the Purchase Order form).
- 4 Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

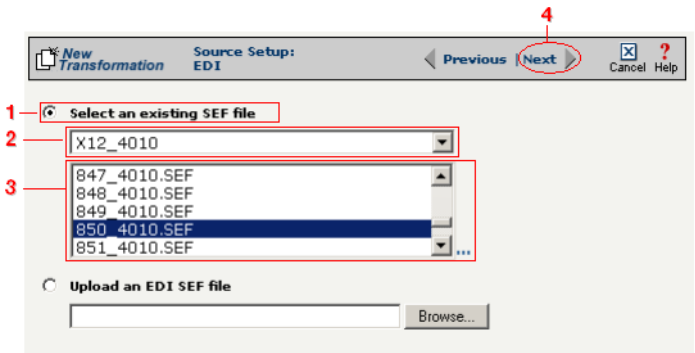


Figure 12-3. Click the **Select an existing SEF** radio button if your EDI document definition has already been loaded into the system.

Option 2: You need to use an EDI file whose definition has not yet been loaded into the appliance

- 1 Choose the **Upload an EDI SEF file** radio button.
- 2 Click **Browse** and navigate to and select the location of your EDI file whose definition (SEF file) you want to add to the appliance to load it into the associated field.
- 3 Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

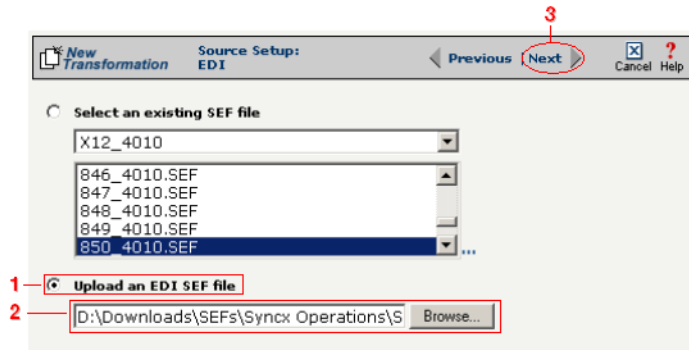



Figure 12-4. Click the **Upload an EDI SEF file** radio button if you need to copy a new EDI definition to the Syncx appliance.

(Optional) Select Source EDI Options

This screen is where you can set all the appropriate default values for your source EDI document. In most cases, you will leave the default settings as they are. You may optionally change them, however, if you want to change how the system will format the EDI information.

 **Tip:** See “CRLF Formatting” on page 11-16 in the *Syncx Integration Appliance Reference Guide* for more information on **CRLF Formatted**.

- ❶ Select the **Source documents have been formatted with CRLFs** checkbox if a text editor has wrapped your EDI document by inserting CRLF's (carriage return line feed characters).
- ❷ Enter a character in the **Data Segment Terminator** field that will define the end of a record in the EDI file.
- ❸ Enter a character in the **Data Element Terminator** field that will define the end of a field in the EDI file.
- ❹ Enter a character in the **Composite Data Element Terminator** field that will define the end of data types that are "compound" or composed of other data elements. For example, a data element of "date" could be composed of month, day, and year elements.
- ❺ Enter a value in the **Release Indicator** field. This tells the system to read a character as a character, not as a command.
- ❻ Use the Default buttons only if you want to reset your EDI options:
 - a. If you want to reset all the previous values back to their default X-12 settings, click **Reset X-12 Default**.
 - b. If you want to reset all the previous values back to their last default

settings, click **Reset Last Default**.

- 7 Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

EDI Options

1 ☐ Source document has been formatted with CRLFs

Default Values:
Specify which character(s) should be used for each control character.
(For 'carriage return line feed', please enter 'CRLF')

2 Data Segment Terminator: ~

3 Data Element Terminator: *

4 Composite Data Element Terminator: |

5 Release Indicator: \

6a Reset X12 Default 6b Reset Last Saved

Figure 12-5. Use this screen if you need to change any of your source EDI document's default values.

Select Target Information (CRbuilder Process)

- ❶ Select the appropriate CRbuilder process from the drop-down menu.
- ❷ Select the process' initial task that you want to use to initiate from the drop-down menu.
- ❸ Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

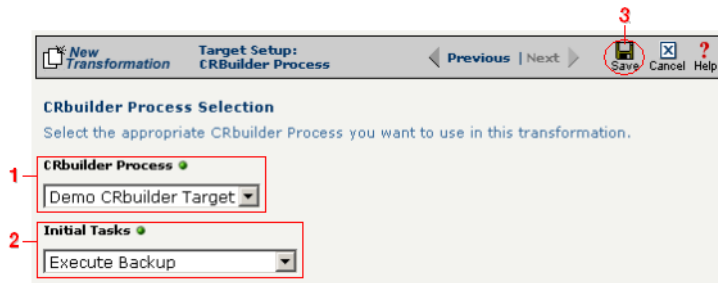


Figure 12-6. Select the name of the appropriate CRbuilder process and the desired initial task from their respective drop-down menu.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for instructions on mapping your new transformation.

How to Transform from an EDI Document to a Database



Tip: Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from a text file to a database.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See “How to Create an FTP Source Definition” on page 7-8 if your source EDI document will be stored on an FTP server.
 - b. See “How to Create a File Share Source Definition” on page 7-5 if your source EDI document will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Source Definition” on page 7-11 if your source EDI document will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Source Definition” on page 7-13 if your source EDI document will be stored on an SCP server.
- ❸ Create Your Target Definition (see “How to Create a Database Target Definition” on page 8-4 for details)
- ❹ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❺ Map the Source and Target Fields (see Chapter 17 for details)
- ❻ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

Use the Transformation Wizard to Build Your Transformation

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).



Note: Make sure you've completed steps 1-3 above before attempting to define your transformation.

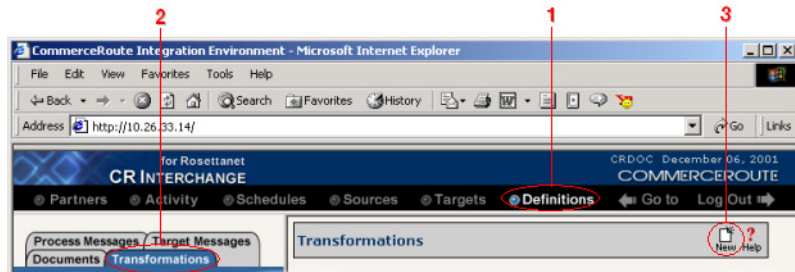


Figure 12-7. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- 4 Enter an appropriate name for your new transformation in the **Transformation Name** field.
- 5 Select “EDI” from the **Source** and “Database” from the **Target** drop-down menu.
- 6 Click the **Next** button in the toolbar to continue.

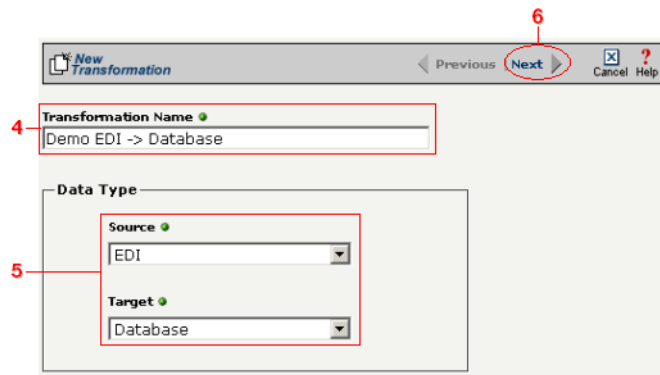




Figure 12-8. Give your new transformation definition an appropriate name, then choose **EDI Document** for your Source and **Database** for your Target.

 **Tip:** for more information about SEF files, see “What’s an SEF File?” on page 11-14 in the *Syncx Integration Appliance Reference Guide*.

 **Note:** Skip these steps if you chose to follow Option 1 above.

Select Source Information (EDI)

You have two options for selecting the appropriate source EDI file. Follow the scenario that describes where your source EDI document's SEF file is located:

Option 1: You are using an EDI file whose definition is already loaded into the appliance

- 1 Click the **Select an existing SEF** radio button.
- 2 Select the appropriate EDI folder (that matches the EDI standard and version you want to use) from the drop-down list.
- 3 Choose the appropriate EDI document from the scrollable list below (e.g., 850 if you want to use the Purchase Order form).
- 4 Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

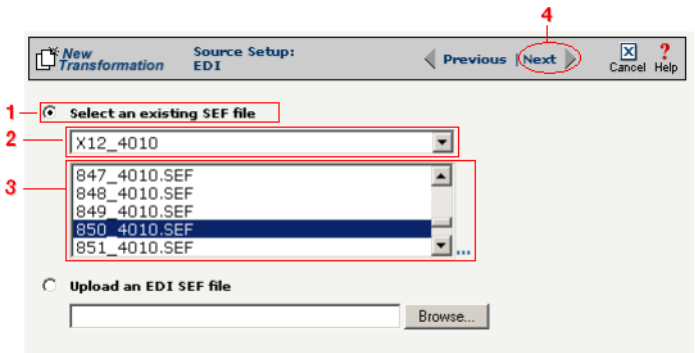


Figure 12-9. Click the **Select an existing SEF** radio button if your EDI document definition has already been loaded into the system.

Option 2: You need to use an EDI file whose definition has not yet been loaded into the appliance

- 1 Choose the **Upload an EDI SEF file** radio button.
- 2 Click **Browse** and navigate to and select the location of your EDI file whose definition (SEF file) you want to add to the appliance to load it into the associated field.
- 3 Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

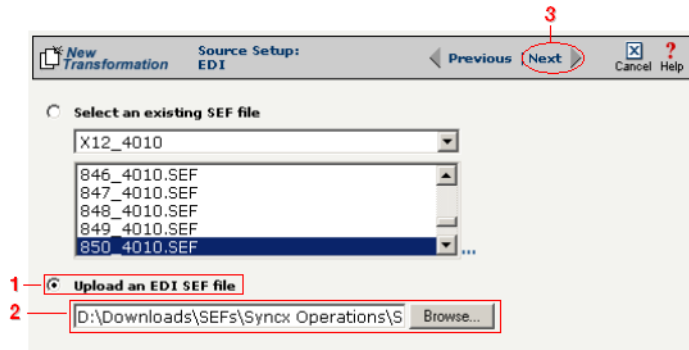



Figure 12-10. Click the **Upload an EDI SEF file** radio button if you need to copy a new EDI definition to the Syncx appliance.

(Optional) Select Source EDI Options

This screen is where you can set all the appropriate default values for your source EDI document. In most cases, you will leave the default settings as they are. You may optionally change them, however, if you want to change how the system will format the EDI information.

 **Tip:** See “CRLF Formatting” on page 11-16 in the *Syncx Integration Appliance Reference Guide* for more information on **CRLF Formatted**.

- ❶ Select the **Source documents have been formatted with CRLFs** checkbox if a text editor has wrapped your EDI document by inserting CRLF's (carriage return line feed characters).
- ❷ Enter a character in the **Data Segment Terminator** field that will define the end of a record in the EDI file.
- ❸ Enter a character in the **Data Element Terminator** field that will define the end of a field in the EDI file.
- ❹ Enter a character in the **Composite Data Element Terminator** field that will define the end of data types that are "compound" or composed of other data elements. For example, a data element of "date" could be composed of month, day, and year elements.
- ❺ Enter a value in the **Release Indicator** field. This tells the system to read a character as a character, not as a command.
- ❻ Use the Default buttons only if you want to reset your EDI options:
 - a. If you want to reset all the previous values back to their default X-12 settings, click **Reset X-12 Default**.
 - b. If you want to reset all the previous values back to their last default

settings, click **Reset Last Default**.

- 7 Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

EDI Options

1 ☐ Source document has been formatted with CRLFs

Default Values:
Specify which character(s) should be used for each control character.
(For 'carriage return line feed', please enter 'CRLF')

2 Data Segment Terminator: ~

3 Data Element Terminator: *

4 Composite Data Element Terminator: |

5 Release Indicator: \

6a Reset X12 Default 6b Reset Last Saved

Figure 12-11. Use this screen if you need to change any of your source EDI document's default values.

Select Target Information (Database)

- ❶ Select the name of the data target that you defined as your Target Definition from the **Database Target** drop-down menu.
- ❷ Click the **Next** button in the toolbar to continue (see the figure below).

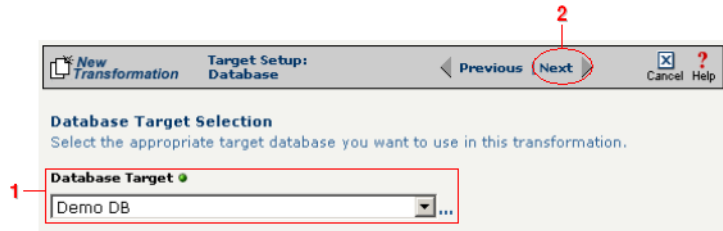


Figure 12-12. Choose which data source you will use as your target database from the **Database Target** drop-down menu.

Next, you need to specify how you will write information to your target database. Follow the option that is appropriate for your transformation:

Option 1: Only a single table in the target database will be accessed

- ❶ Enter part or all of the table's name. If you want to view all the database's items, leave the field blank.
- ❷ Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
- ❸ Click the **Search** button to view the list of items that match your name search.
- ❹ Select the appropriate item in the **Available Item(s)** field, then click the right arrow button.
- ❺ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

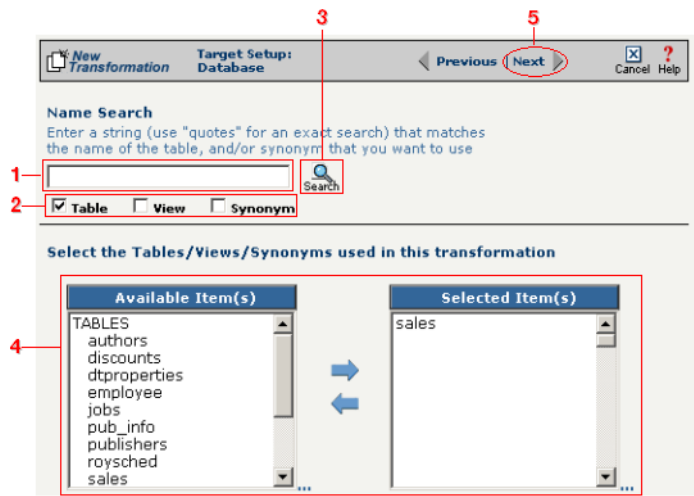


Figure 12-13. Choose the single table you want to access from the **Available Tables** field.


The next screen is where you specify how many times you will use the single table (or view/synonym) you selected for your target.

1. (Optional) If you will use this table more than once, change the **Times Used** field to the appropriate number.
2. Compare your work to below, then click **Next** to continue.

The screenshot shows a software window titled 'New Transformation' with a sub-tab 'Target Setup: Database'. At the top right are buttons for 'Previous', 'Next' (circled in red with a red '2' above it), 'Cancel', and 'Help'. Below this is a section titled 'Database Table' with the instruction 'Specify the number of times each table will be used in this transformation.' A table with two columns, 'List of Tables/Views/Synonyms' and 'Times Used', is displayed. The first row contains the text 'sales' in the first column and the number '1' in the second column. A red '1' is placed to the left of the 'sales' text.

List of Tables/Views/Synonyms	Times Used
sales	1

Figure 12-14. Use this screen to specify how many times the target table will be used.

 **Note:** You won't see this screen if your database table has no primary key.

When your database table has at least one primary key, this next screen gives you the option to select a database field as an update key.

1. (Optional) Use the **Update Key** field to select the field(s) that will be treated as update keys.
2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

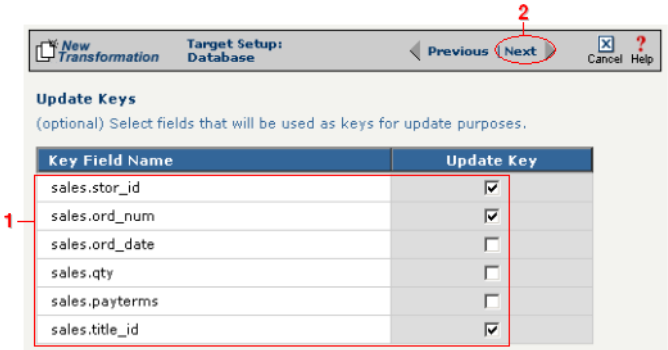




Figure 12-15. If you need to set a database field to act as an update key, select the appropriate field in this screen.

 **Note:** Skip to “Select Insert/Update Mode” on page 12-20 if you chose to follow Option 1 above.

 **Tip:** Hold down the Ctrl key to select multiple tables.

Option 2: More than one table in the target database will be accessed

1. Enter part or all of the tables' names. If you want to view all the database's items, leave the field blank.
2. Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
3. Click the **Search** button to view the list of items that match your name search.
4. Select the appropriate items in the **Available Item(s)** field, then click the right arrow button.
5. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

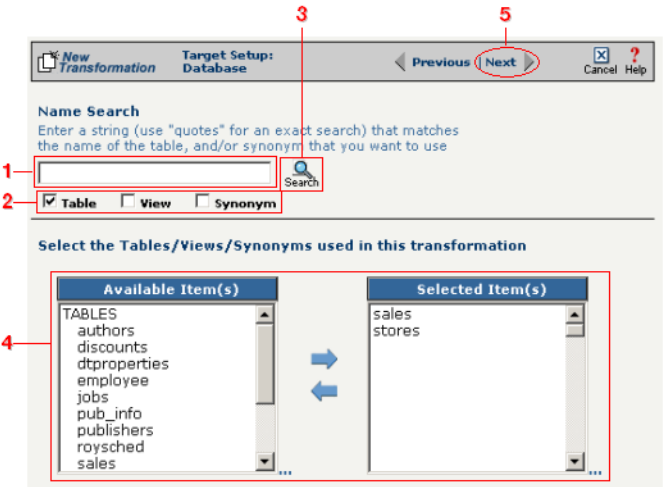


Figure 12-16. Select the appropriate tables you want to access from the **Available Tables** field.

Because you chose Option 2 (accessing more than one database table), you need to declare the tables' respective relationships:

1. Select the item in the **Parent** drop-down menu that you want to be the parent structure (i.e., at the top level of your data hierarchy).
2. Select the item in the **Child** drop-down menu that you want to be the child structure.
3. Select the appropriate database column in the **Parent Fields** window that will be used to reference the child table.
4. Select the appropriate database column in the **Child Fields** window that will be used to reference the parent table.
5. Click the **Add** button. This saves this parent-child relationship. You should see the new relationship appear in the **Parent – Child Field Relationships** table.
6. (Optional) If you have more child structures, click the **New** button and repeat the previous steps for each additional child.
7. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

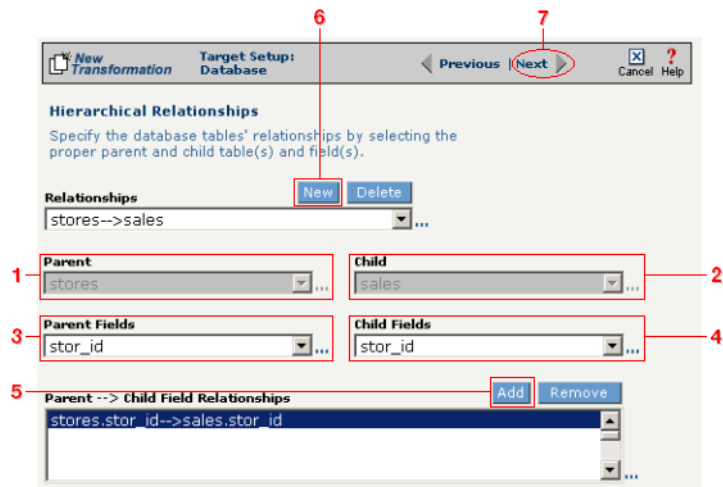


Figure 12-17. Use this screen in the Transformation Wizard to define the relationship between the different database tables.

In the **Nature of Data** screen, you need to indicate whether or not each child table's data must be present.

1. Select the appropriate radio button for each parent-child relationship:
 - a. Select **1 to N** if there will be at least 1 child to each parent entry.
 - b. Select **1** if there will always be a one-to-one parent-child relationship.
 - c. Select **0 to N** if there could be none, one, or more children for each parent.
 - d. Select **0 or 1** if there could be either no children or 1 child for each parent.
2. Compare your work to the figure below, then click **Next** to continue.

The screenshot shows the 'Nature of Data' screen in a database transformation tool. The title bar indicates 'New Transformation' and 'Target Setup: Database'. The main heading is 'Nature of Data' with a sub-instruction: 'Identify whether each child table's data must be present ("1 to N" or "1") or may be present ("0 to N" or "0 or 1").' Below this is a table with five columns: 'List of Tables/Views/Synonyms', '1 to N', '1', '0 to N', and '0 or 1'. The first column contains the text 'stores-->sales'. The '1' column has a radio button selected. The 'Next' button in the top right corner is highlighted with a red circle and a red arrow labeled '2'.

List of Tables/Views/Synonyms	1 to N	1	0 to N	0 or 1
stores-->sales	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure 12-18. Use the Nature of Data screen to identify the number of child entries that are supported for each parent-child relationship.

Note: You won't see this screen if your database table has no primary key.

When your database table has at least one primary key, this next screen gives you the option to select a database field as an update key.

- 1. (Optional) Select the checkbox(es) in the **Update Key** column that correspond to the field(s) that will be treated as update keys.
- 2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

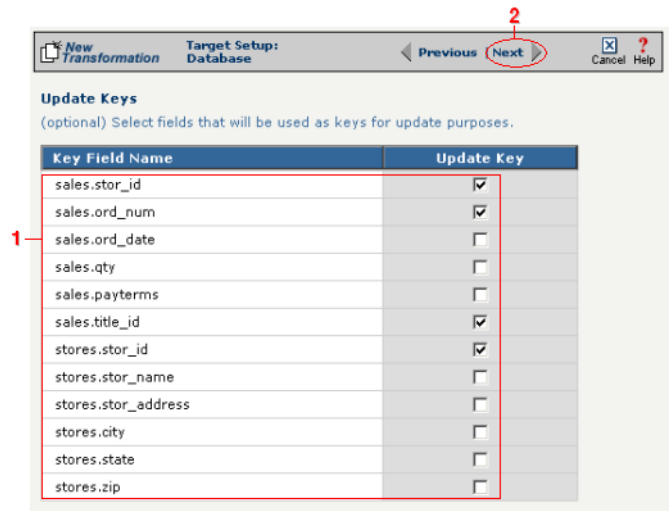



Figure 12-19. If you need to set a database field to act as an update key, select the appropriate field in this screen.

You have now completed Option 2.

Select Insert/Update Mode

In this last screen of the Transformation Wizard, you define how the Syncx Integration Appliance will handle new or existing records when it loads data from your source to your target database.

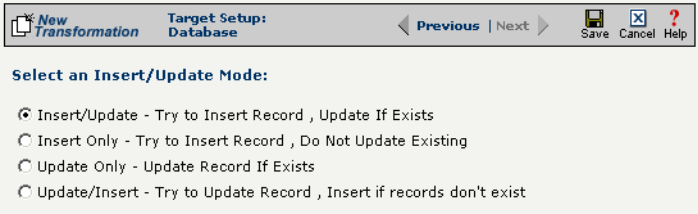
- 1. Select one of the four options described below:
 - a. **Insert/Update:** the appliance will first attempt to insert any new record it encounters. If a record already exists, it will then update that record.
 - b. **Insert Only:** the appliance will attempt to insert a new record only. No

 **Note:** The options that include Update are only available if you chose at least one field in the **Update Key** screen.

updates will be permitted.

- c. **Update Only:** the appliance will attempt to update an existing record. No new records will be created.
- d. **Update/Insert:** the appliance will first attempt to update a record. It will create a new record if none exists.

- ② Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.



New Transformation Target Setup: Database

Previous | Next

Save Cancel Help

Select an Insert/Update Mode:


- ☒ Insert/Update - Try to Insert Record , Update If Exists
- ☐ Insert Only - Try to Insert Record , Do Not Update Existing
- ☐ Update Only - Update Record If Exists
- ☐ Update/Insert - Try to Update Record , Insert if records don't exist

Figure 12-20. Choose which of the four insert/update options is appropriate for your transformation.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for instructions on mapping your new transformation.

How to Transform from a Database to an EDI Document

 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.


Summary of Steps

Follow these steps to transform information from a database to an EDI document.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition (see “How to Create a Database Source Definition” on page 7-2 for details)
- ❸ Create Your Target Definition
 - a. See “How to Create an FTP Target Definition” on page 8-10 if your target EDI document will be stored on an FTP server.
 - b. See “How to Create a File Share Target Definition” on page 8-7 if your target EDI document will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Target Definition” on page 8-14 if your target EDI document will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Target Definition” on page 8-20 if your target EDI document will be stored on an SCP server.
- ❹ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❺ Map the Source and Target Fields (see Chapter 17 for details)
- ❻ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

Use the Transformation Wizard to Build Your Transformation

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

 **Note:** Make sure you've completed steps 1-3 above before attempting to define your transformation.

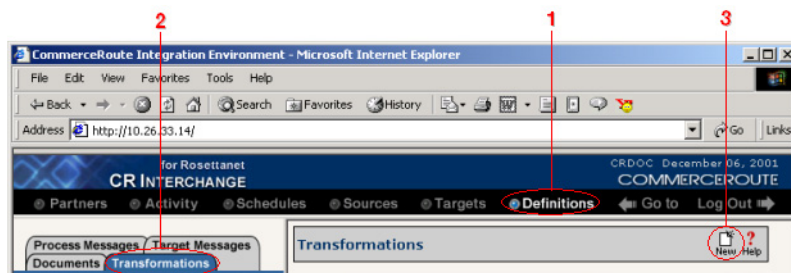


Figure 12-21. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- ④ Enter an appropriate name for your new transformation in the **Transformation Name** field.
- ⑤ Select “Database” from the **Source** and “EDI” from the **Target** drop-down menu.
- ⑥ Click the **Next** button in the toolbar to continue.

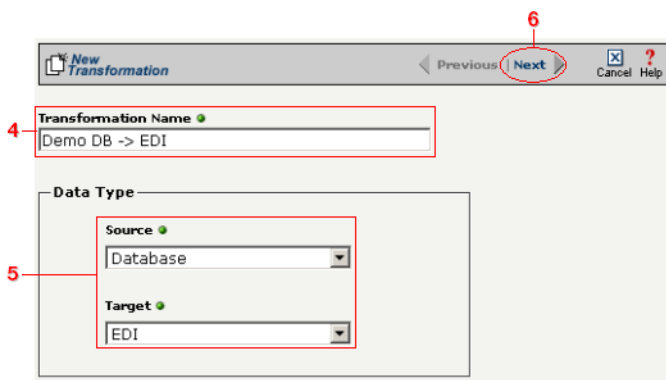


Figure 12-22. Give your new transformation definition an appropriate name, then choose **Database** for your Source and **EDI Document** for your Target.

Select Source Information (Database)

- ❶ In the next screen of the Transformation Wizard, select the name of the Source that holds the database information you want to transform from the **Data Source** drop-down menu.
- ❷ Choose how you will get information from your database. You have two options:

Option 1: Use the Transformation Wizard to help you access your database without typing SQL

- a. Select the appropriate database definition from the **Database Source** drop-down menu.
- b. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

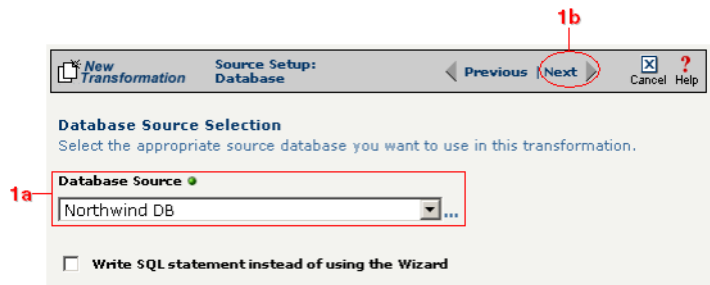


Figure 12-23. Choose the appropriate database from the **Database Source** drop-down menu if you want the Transformation Wizard to help you access your database without having to type any SQL.

Within Option 1, you need to specify how you will access information from your source database. Choose one of two options:

Option 1a: Only a single table in the source database will be accessed.

1. Enter part or all of the table's name. If you want to view all the database's items, leave the field blank.
2. Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
3. Click the **Search** button to view the list of items that match your name search.

4. Select the appropriate item in the **Available Item(s)** field, then click the right arrow button.
5. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

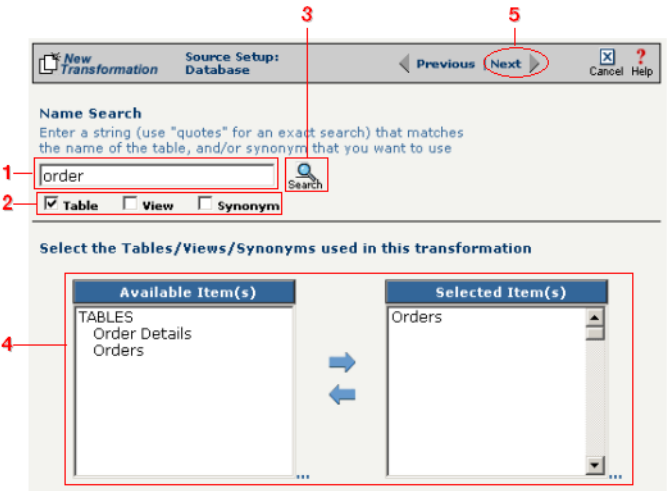


Figure 12-24. Select the single table you want to access from the **Available Tables** field.

The next screen is where you specify how many times you will use the single table (or view/synonym) you selected for your source.

1. (Optional) If you will use this table more than once, change the **Times Used** field to the appropriate number.
2. Compare your work to below, then click **Next** to continue.

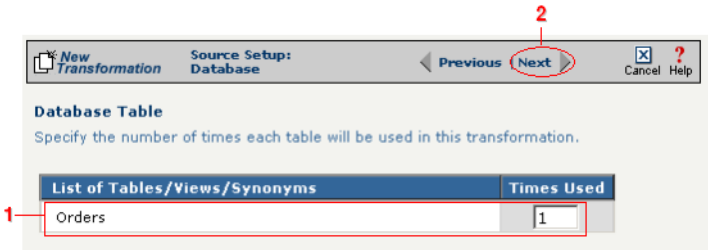


Figure 12-25. Use this screen to specify how many times the source table will be used.

The next screen lets you add a WHERE clause to filter your query:

1. Enter an appropriate WHERE SQL statement in the Where Clause.
2. (Optional) If you want to review your database table's fields, select the **View Field List** checkbox. The list will appear in a table at the bottom of the screen.
3. Click the **Next** button in the toolbar to continue.

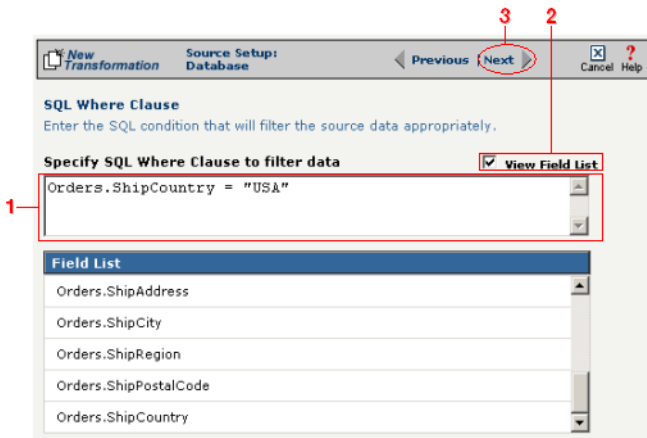

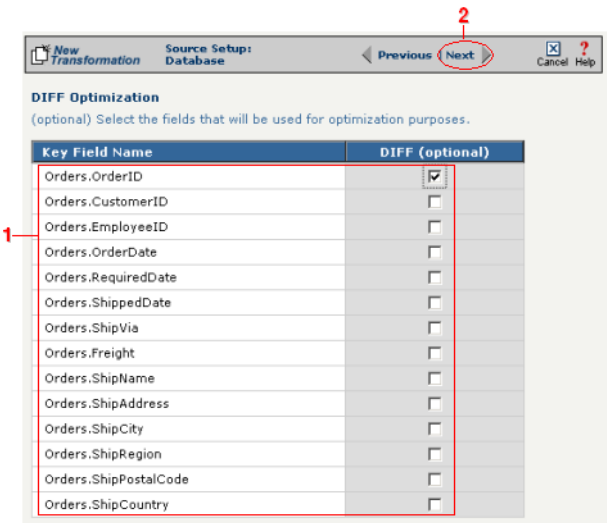


Figure 12-26. This optional screen lets you add a WHERE SQL clause to filter your information.

 **Tip:** For more information about DIFF and optimization, see “Optimization Options (DIFF)” on page 10-5.


This next screen lets you set your source to take advantage of an operation’s DIFF function. If you want this source information to be optimized by filtering out redundant data, select the field(s) that you want to use for filtering in this screen.


1. Click the checkbox that corresponds to the appropriate key field name.
2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.



Key Field Name	DIFF (optional)
Orders.OrderID	<input checked="" type="checkbox"/>
Orders.CustomerID	<input type="checkbox"/>
Orders.EmployeeID	<input type="checkbox"/>
Orders.OrderDate	<input type="checkbox"/>
Orders.RequiredDate	<input type="checkbox"/>
Orders.ShippedDate	<input type="checkbox"/>
Orders.ShipVia	<input type="checkbox"/>
Orders.Freight	<input type="checkbox"/>
Orders.ShipName	<input type="checkbox"/>
Orders.ShipAddress	<input type="checkbox"/>
Orders.ShipCity	<input type="checkbox"/>
Orders.ShipRegion	<input type="checkbox"/>
Orders.ShipPostalCode	<input type="checkbox"/>
Orders.ShipCountry	<input type="checkbox"/>

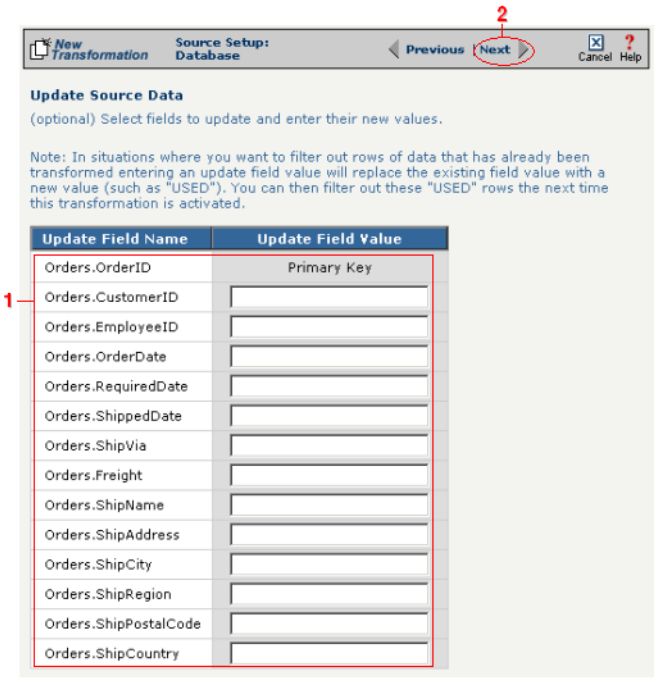
Figure 12-27. If you need to set a database field to act as an optimization filter using DIFF functionality, select the appropriate field in this screen.

 **Note:** You won't see this screen if your source database table has no primary key.

 **Tip:** for more information about the Update Field Value, see "Update Field Value" on page 11-6 in the *Syncx Integration Appliance Reference Guide*.

When your source database table has at least one primary key, this next screen gives you the option to select a database field as an update key.

1. (Optional) Use the **Update Field Value** field to update the value of the fields that match your filter criteria.
- ! **Caution!** This value will replace the source element's current value with whatever you enter in this field.
2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.




Update Field Name	Update Field Value
Orders.OrderID	Primary Key
Orders.CustomerID	
Orders.EmployeeID	
Orders.OrderDate	
Orders.RequiredDate	
Orders.ShippedDate	
Orders.ShipVia	
Orders.Freight	
Orders.ShipName	
Orders.ShipAddress	
Orders.ShipCity	
Orders.ShipRegion	
Orders.ShipPostalCode	
Orders.ShipCountry	

Figure 12-28. If you need to set a database field to act as an update key, select the appropriate field in this screen.

You have finished defining your Option 1a source (using the Transformation Wizard to specify a single source table).

Option 1b: More than one table in the source database will be accessed.

 **Note:** Skip these steps if you chose to follow Option 1a above.

1. Enter part or all of the tables names. If you want to view all the database's items, leave the field blank.
2. Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
3. Click the **Search** button to view the list of items that match your name search.
4. Select the appropriate items in the **Available Item(s)** field, then click the right arrow button.
5. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

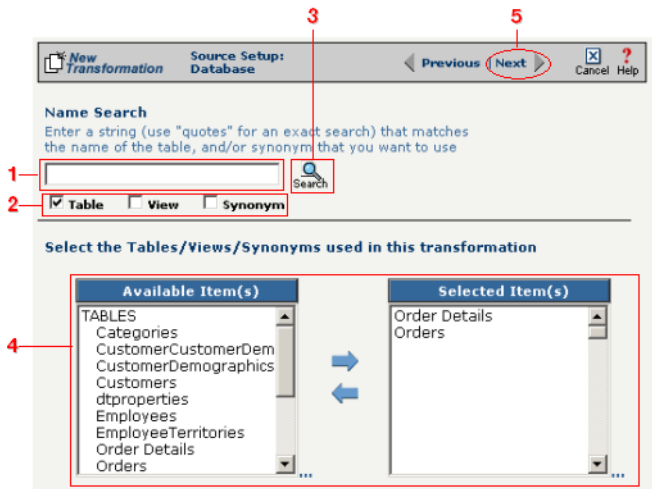



Figure 12-29. Select the appropriate tables you want to access from the **Available Item(s)** field.

 **Note:** Skip these steps if you chose to follow Option 1a.

The next screen is where you specify how many times you will use each table (or view/synonym) you selected for your source.

1. (Optional) If you will use each table more than once, change the **Times Used** field to the appropriate number.
2. Compare your work to below, then click **Next** to continue.

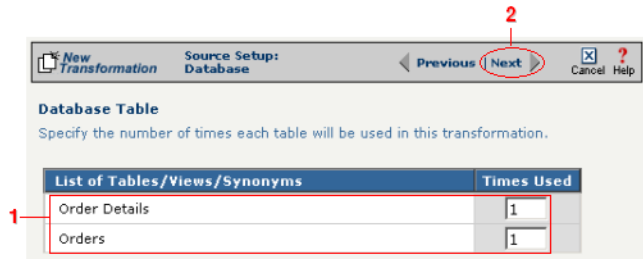



Figure 12-30. Use this screen in the Transformation Wizard to specify how many times each item will be used in the transformation.

 **Note:** Skip these steps if you chose to follow Option 1a.

Because you chose Option 1b (accessing more than one database table), you need to declare the tables' respective relationships:

1. Select the item in the **Parent** drop-down menu that you want to be the parent structure (i.e., at the top level of your data hierarchy).
2. Select the item in the **Child** drop-down menu that you want to be the child structure.
3. Select the appropriate database column in the **Parent Fields** window that will be used to reference the child table.
4. Select the appropriate database column in the **Child Fields** window that will be used to reference the parent table.
5. Click the **Add** button. This saves this parent-child relationship. You should see the new relationship appear in the **Parent – Child Field Relationships** table.
6. (Optional) If you have more child structures, click the **New** button and repeat the previous steps for each additional child.
7. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

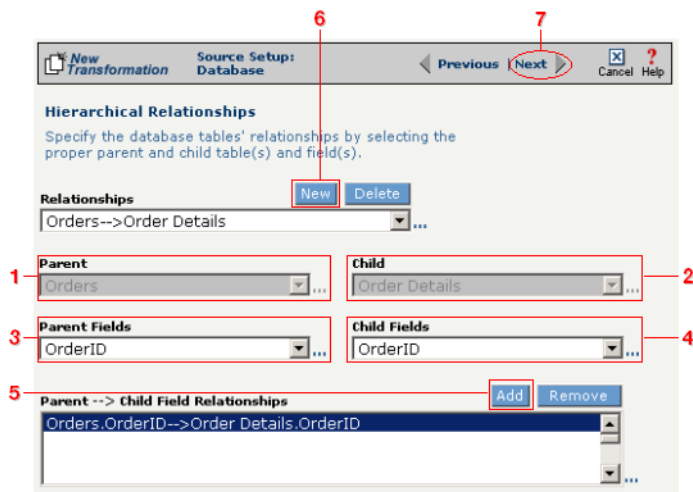


Figure 12-31. Use this screen in the Transformation Wizard to define the relationship between the different database tables.

Note: Skip these steps if you chose to follow Option 1a.

In the **Nature of Data** screen, you need to indicate whether or not each child table's data must be present.

1. Select the appropriate radio button for each parent-child relationship:
 - a. Select **1 to N** if there will be at least 1 child to each parent entry.
 - b. Select **1** if there will always be a one-to-one parent-child relationship.
 - c. Select **0 to N** if there could be none, one, or more children for each parent.
 - d. Select **0 or 1** if there could be either no children or 1 child for each parent.
2. Compare your work to the figure below, then click **Next** to continue.

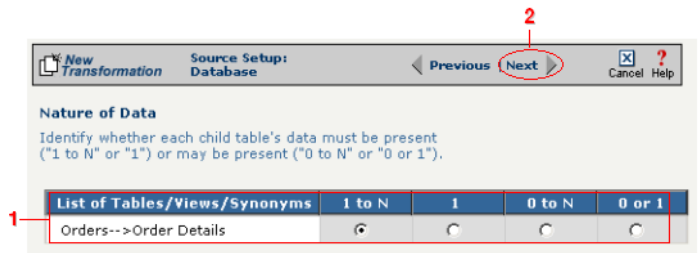



Figure 12-32. Use the Nature of Data screen to identify the number of child entries that are supported for each parent-child relationship.

 **Note:** Skip these steps if you chose to follow Option 1a.

The next screen lets you add a WHERE clause to filter your query:

1. Enter an appropriate WHERE SQL statement in the desired field's corresponding **Filter Condition** field.
2. (Optional) You can have the filtered output be sorted either ascending or descending by selecting the appropriate value from the **Sort** drop-down menu.
3. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

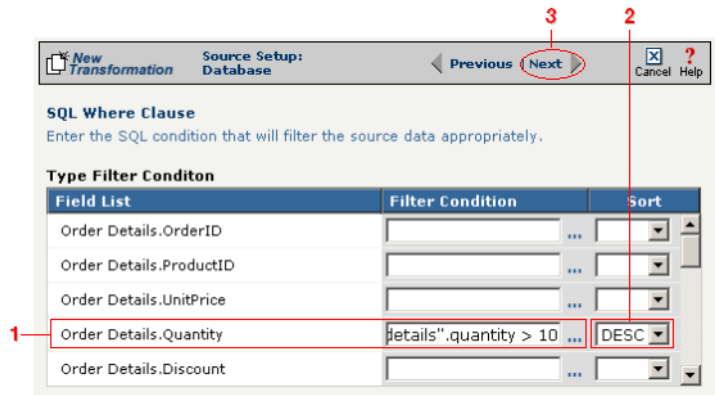



Figure 12-33. This optional screen lets you add a WHERE SQL clause to filter your information.

You have finished defining your Option 1b source (using the Transformation Wizard to specify a source with multiple tables).

 **Note:** Skip these steps if you chose to follow Option 1a or 1b above.

Option 2: You are familiar with SQL and want to enter your SQL query directly

1. Select the **Write SQL Statement** checkbox.
2. Enter your SQL query in the **SQL Statement** field.
3. (Optional) You can test the validity of your SQL statement by clicking the **Test SQL** button.
4. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

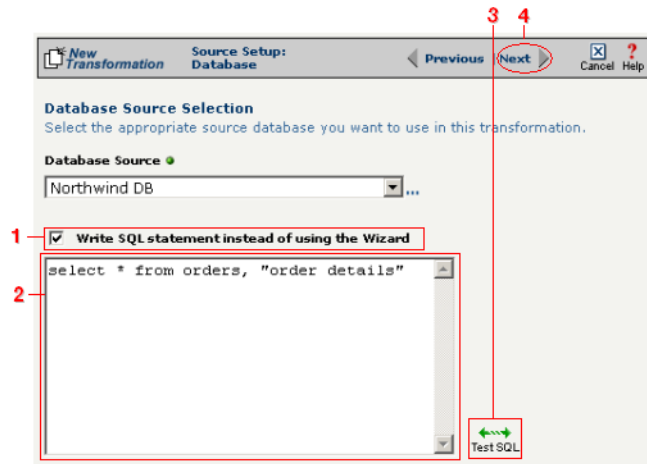




Figure 12-34. Click the **Write SQL Statement** checkbox if you are familiar with SQL and you want to type your statement directly into the **SQL Statement** field.

 **Note:** Skip these steps if you chose to follow Option 1a or 1b above.

 **Tip:** For more information about DIFF and optimization, see “Optimization Options (DIFF)” on page 10-5.

This next screen lets you set your source to take advantage of an operation’s DIFF function. If you want this source information to be optimized by filtering out redundant data, select the field(s) that you want to use for filtering in this screen.

1. Click the checkbox that corresponds to the appropriate key field name.
2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

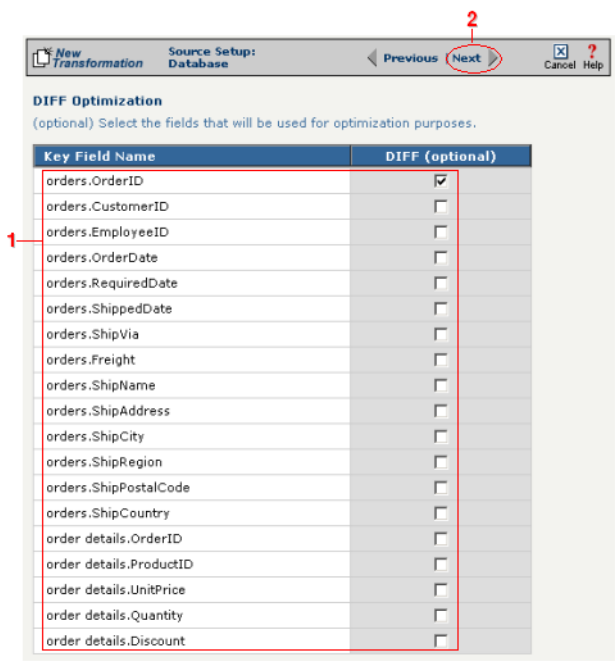



Figure 12-35. If you need to set a database field to act as an optimization filter using DIFF functionality, select the appropriate field in this screen.

You have finished defining your Option 2 source (directly entering the appropriate SQL statement).

 **Tip:** for more information about SEF files, see “What’s an SEF File?” on page 11-14 in the *Syncx Integration Appliance Reference Guide*.

Select Target Information (EDI)

You have two options for selecting the appropriate target EDI file. Follow the scenario that describes where your target EDI document's SEF file is located:

Option1: You are using an EDI file whose definition is already loaded into the appliance

- ❶ Click the **Select an existing SEF** radio button.
- ❷ Select the appropriate EDI folder (that matches the EDI standard and version you want to use) from the drop-down list.
- ❸ Choose the appropriate EDI document from the scrollable list below (e.g., 850 if you want to use the Purchase Order form).
- ❹ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

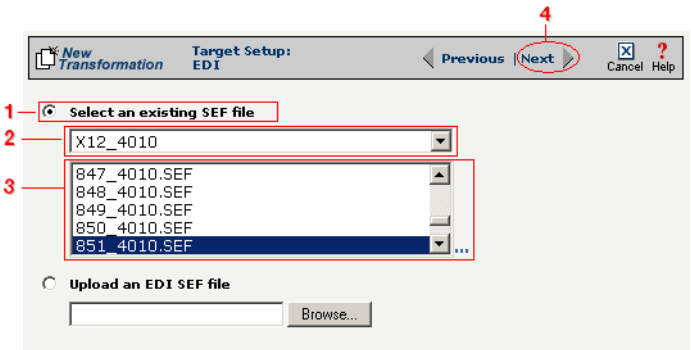



Figure 12-36. Click the **Select an existing SEF** radio button if your EDI document definition has already been loaded into the system.

 **Note:** Skip to “(Optional) Select Target EDI Options” below if you chose to follow Option 1 above.

Option 2: You need to use an EDI file whose definition has not yet been loaded into the appliance

- ❶ Choose the **Upload an EDI SEF file** radio button.
- ❷ Click **Browse** and navigate to the location of your EDI file whose definition (SEF file) you want to add to the appliance.
- ❸ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

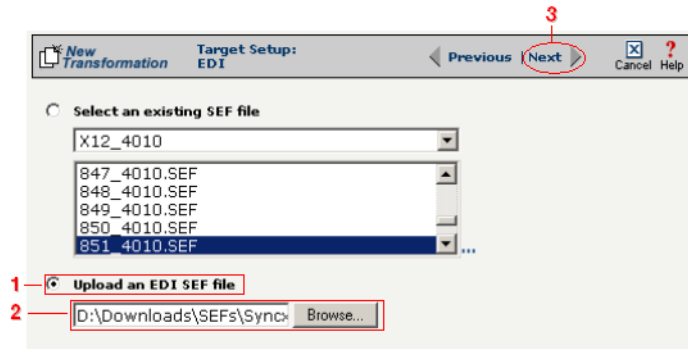



Figure 12-37. Click the **Upload an EDI SEF file** radio button if you need to copy a new EDI definition to the Syncx appliance.

(Optional) Select Target EDI Options

This screen is where you can set all the appropriate default values for your target EDI document. In most cases, you will leave the default settings as they are. You may optionally change them, however, if you want to change how the system will format the EDI information.

- ❶ Select the **CRLF Formatted** checkbox if a text editor has wrapped your EDI document by inserting CRLF's (carriage return line feed characters).
- ❷ Enter a new character in the **Data Segment Terminator** field that will define the end of a record in the EDI file.
- ❸ Enter a new character in the **Data Element Terminator** field that will define the end of a field in the EDI file.
- ❹ Enter a new character in the **Composite Data Element Terminator** field that will define the end of data types that are “compound” or composed of other data elements. For example, a data element of “date” could be composed of month, day, and year elements.

 **Tip:** See “CRLF Formatting” on page 11-16 in the *Syncx Integration Appliance Reference Guide* for more information on **CRLF Formatted**.

- 5 Enter a new value in the **Release Indicator** field. This tells the system to read a character as a character, not as a command.
- 6 Use the Default buttons only if you want to reset your EDI options:
 - a. If you want to reset all the previous values back to their default X-12 settings, click **Reset X-12 Default**.
 - b. If you want to reset all the previous values back to their last default settings, click **Reset Last Default**.
- 7 Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

New Transformation Target Setup: EDI

Previous | Next | **Save** | Cancel | Help

Default Values:
Specify which character(s) should be used for each control character.
(For 'carriage return line feed', please enter 'CRLF')

2 Data Segment Terminator: ~

3 Data Element Terminator: *

4 Composite Data Element Terminator: !

5 Release Indicator: \


6a Reset X12 Default 6b Reset Last Saved

Figure 12-38. Use this screen if you need to change any of your Target EDI document's default values.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, "Transformation Mapping" for instructions on mapping your new transformation.


How to Transform from an EDI Document to an EDI Document

 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from an EDI document to another EDI document.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See “How to Create an FTP Source Definition” on page 7-8 if your source EDI document will be stored on an FTP server.
 - b. See “How to Create a File Share Source Definition” on page 7-5 if your source EDI document will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Source Definition” on page 7-11 if your source EDI document will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Source Definition” on page 7-13 if your source EDI document will be stored on an SCP server.
- ❸ Create Your Target Definition
 - a. See “How to Create an FTP Target Definition” on page 8-10 if your target EDI document will be stored on an FTP server.
 - b. See “How to Create a File Share Target Definition” on page 8-7 if your target EDI document will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Target Definition” on page 8-14 if your target EDI document will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Target Definition” on page 8-20 if your target EDI document will be stored on an SCP server.
- ❹ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❺ Map the Source and Target Fields (see Chapter 17 for details)
- ❻ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

 **Note:** Make sure you've completed steps 1-3 above before attempting to define your transformation.

Use the Transformation Wizard to Build Your Transformation

- 1 Click the **Definitions** button in the navigation bar.
- 2 Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- 3 Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

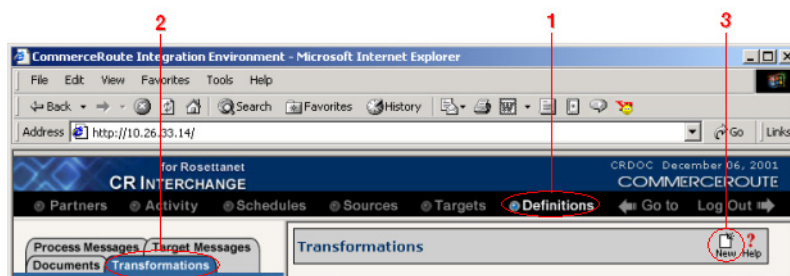


Figure 12-39. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- 4 Enter an appropriate name for your new transformation in the **Transformation Name** field.
- 5 Select “EDI” from both the **Source** and **Target** drop-down menus.
- 6 Click the **Next** button in the toolbar to continue.

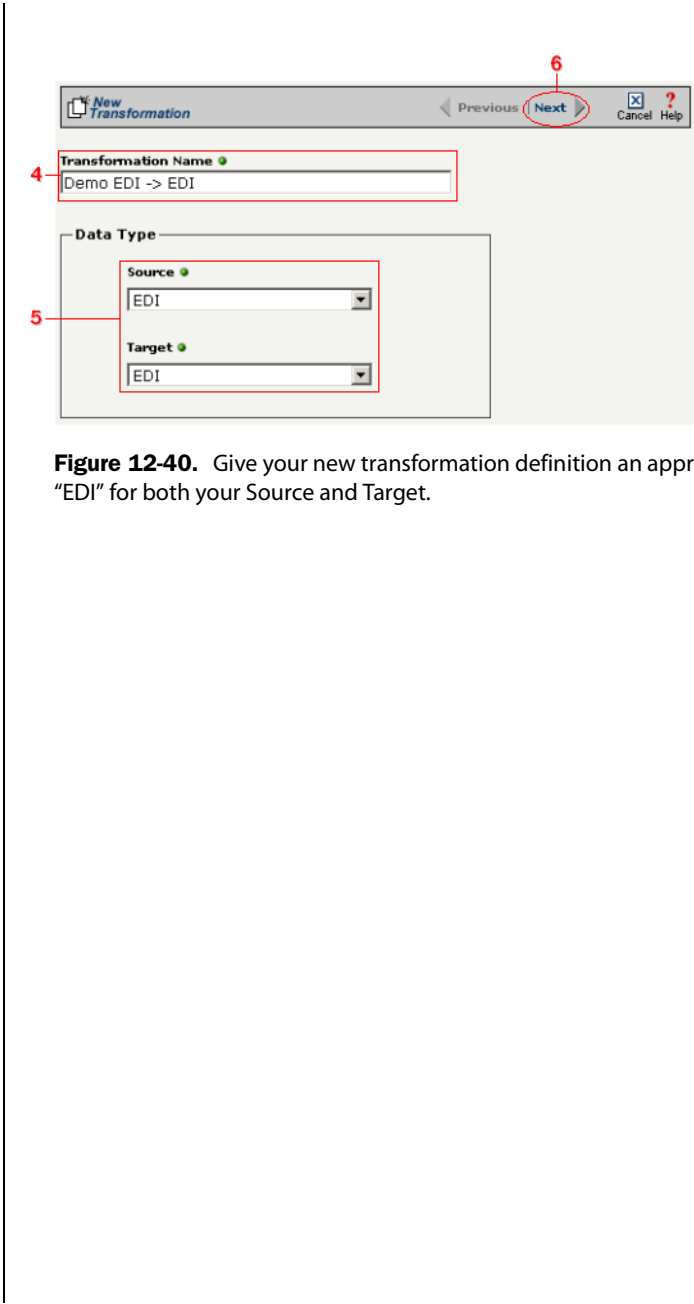




Figure 12-40. Give your new transformation definition an appropriate name, then choose “EDI” for both your Source and Target.

 **Tip:** for more information about SEF files, see “What’s an SEF File?” on page 11-14 in the *Syncx Integration Appliance Reference Guide*.

 **Note:** Skip these steps if you chose to follow Option 1 above.

Select Source Information (EDI)

You have two options for selecting the appropriate source EDI file. Follow the scenario that describes where your source EDI document's SEF file is located:

Option 1: You are using an EDI file whose definition is already loaded into the appliance

- 1 Click the **Select an existing SEF** radio button.
- 2 Select the appropriate EDI folder (that matches the EDI standard and version you want to use) from the drop-down list.
- 3 Choose the appropriate EDI document from the scrollable list below (e.g., 850 if you want to use the Purchase Order form).
- 4 Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

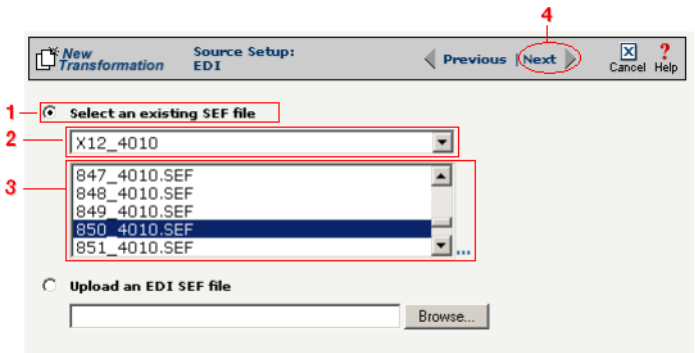


Figure 12-41. Click the **Select an existing SEF** radio button if your EDI document definition has already been loaded into the system.

Option 2: You need to use an EDI file whose definition has not yet been loaded into the appliance

- 1 Choose the **Upload an EDI SEF file** radio button.
- 2 Click **Browse** and navigate to and select the location of your EDI file whose definition (SEF file) you want to add to the appliance to load it into the associated field.
- 3 Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

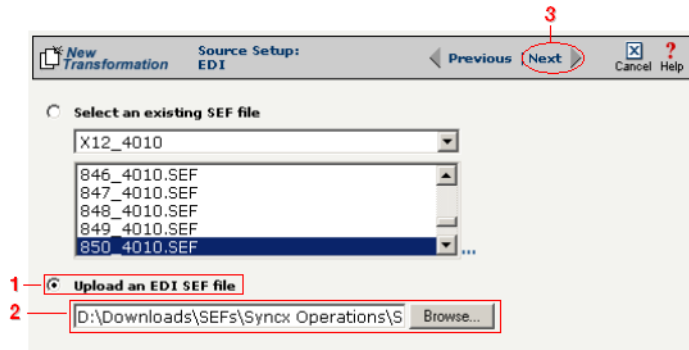



Figure 12-42. Click the **Upload an EDI SEF file** radio button if you need to copy a new EDI definition to the Syncx appliance.

(Optional) Select Source EDI Options

This screen is where you can set all the appropriate default values for your source EDI document. In most cases, you will leave the default settings as they are. You may optionally change them, however, if you want to change how the system will format the EDI information.

 **Tip:** See “CRLF Formatting” on page 11-16 in the *Syncx Integration Appliance Reference Guide* for more information on **CRLF Formatted**.


- ❶ Select the **Source documents have been formatted with CRLFs** checkbox if a text editor has wrapped your EDI document by inserting CRLF's (carriage return line feed characters).
- ❷ Enter a character in the **Data Segment Terminator** field that will define the end of a record in the EDI file.
- ❸ Enter a character in the **Data Element Terminator** field that will define the end of a field in the EDI file.
- ❹ Enter a character in the **Composite Data Element Terminator** field that will define the end of data types that are "compound" or composed of other data elements. For example, a data element of "date" could be composed of month, day, and year elements.
- ❺ Enter a value in the **Release Indicator** field. This tells the system to read a character as a character, not as a command.
- ❻ Use the Default buttons only if you want to reset your EDI options:
 - a. If you want to reset all the previous values back to their default X-12 settings, click **Reset X-12 Default**.
 - b. If you want to reset all the previous values back to their last default

settings, click **Reset Last Default**.

- 7 Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

The screenshot shows the 'Source Setup: EDI' dialog box. At the top, there is a toolbar with 'Previous', 'Next', 'Cancel', and 'Help' buttons. The 'Next' button is circled in red and labeled with a red '7'. Below the toolbar, the 'EDI Options' section contains a checkbox labeled '1' with the text 'Source document has been formatted with CRLFs'. Below this, the 'Default Values' section has a blue instruction: 'Specify which character(s) should be used for each control character. (For 'carriage return line feed', please enter 'CRLF')'. There are four text input fields, each with a red number and a label: '2 Data Segment Terminator:' (containing '~'), '3 Data Element Terminator:' (containing '*'), '4 Composite Data Element Terminator:' (containing '|'), and '5 Release Indicator:' (containing '\'). At the bottom, there are two buttons: 'Reset X12 Default' (labeled with a red '6a') and 'Reset Last Saved' (labeled with a red '6b').

Figure 12-43. Use this screen if you need to change any of your source EDI document's default values.

 **Tip:** for more information about SEF files, see “What’s an SEF File?” on page 11-14 in the *Syncx Integration Appliance Reference Guide*.

Select Target Information (EDI)

You have two options for selecting the appropriate target EDI file. Follow the scenario that describes where your target EDI document's SEF file is located:

Option1: You are using an EDI file whose definition is already loaded into the appliance

- ❶ Click the **Select an existing SEF** radio button.
- ❷ Select the appropriate EDI folder (that matches the EDI standard and version you want to use) from the drop-down list.
- ❸ Choose the appropriate EDI document from the scrollable list below (e.g., 850 if you want to use the Purchase Order form).
- ❹ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

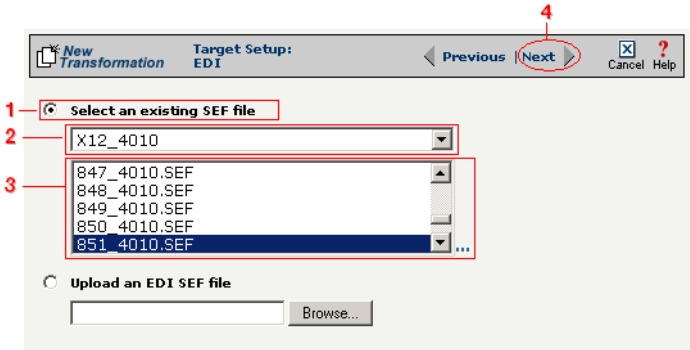


Figure 12-44. Click the **Select an existing SEF** radio button if your EDI document definition has already been loaded into the system.

Note: Skip to “(Optional) Select Target EDI Options” below if you chose to follow Option 1 above.

Option 2: You need to use an EDI file whose definition has not yet been loaded into the appliance

- ❶ Choose the **Upload an EDI SEF file** radio button.
- ❷ Click **Browse** and navigate to the location of your EDI file whose definition (SEF file) you want to add to the appliance.
- ❸ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

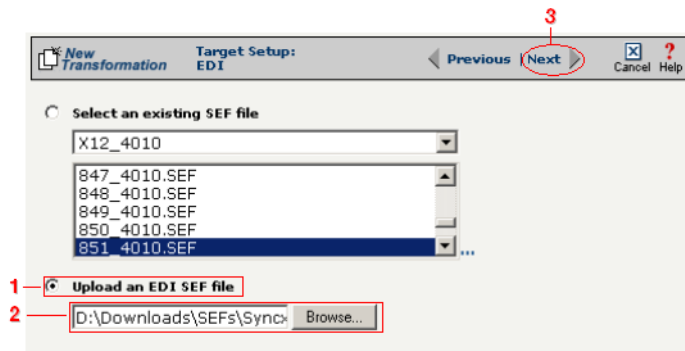


Figure 12-45. Click the **Upload an EDI SEF file** radio button if you need to copy a new EDI definition to the Syncx appliance.

(Optional) Select Target EDI Options

This screen is where you can set all the appropriate default values for your target EDI document. In most cases, you will leave the default settings as they are. You may optionally change them, however, if you want to change how the system will format the EDI information.

- ❶ Select the **CRLF Formatted** checkbox if a text editor has wrapped your EDI document by inserting CRLF's (carriage return line feed characters).
- ❷ Enter a new character in the **Data Segment Terminator** field that will define the end of a record in the EDI file.
- ❸ Enter a new character in the **Data Element Terminator** field that will define the end of a field in the EDI file.
- ❹ Enter a new character in the **Composite Data Element Terminator** field that will define the end of data types that are “compound” or composed of other data elements. For example, a data element of “date” could be composed of month, day, and year elements.

Tip: See “CRLF Formatting” on page 11-16 in the *Syncx Integration Appliance Reference Guide* for more information on **CRLF Formatted**.

- 5 Enter a new value in the **Release Indicator** field. This tells the system to read a character as a character, not as a command.
- 6 Use the Default buttons only if you want to reset your EDI options:
 - a. If you want to reset all the previous values back to their default X-12 settings, click **Reset X-12 Default**.
 - b. If you want to reset all the previous values back to their last default settings, click **Reset Last Default**.
- 7 Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

New Transformation Target Setup: EDI

Default Values:
Specify which character(s) should be used for each control character.
(For 'carriage return line feed', please enter 'CRLF')

2 Data Segment Terminator: ~

3 Data Element Terminator: *

4 Composite Data Element Terminator: |

5 Release Indicator: \

6a Reset X12 Default

6b Reset Last Saved


7 Save Cancel Help

Figure 12-46. Use this screen if you need to change any of your Target EDI document's default values.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, "Transformation Mapping" for instructions on mapping your new transformation.


How to Transform from an EDI Document to RosettaNet

 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from an EDI document to an XML document.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See “How to Create an FTP Source Definition” on page 7-8 if your source EDI document will be stored on an FTP server.
 - b. See “How to Create a File Share Source Definition” on page 7-5 if your source EDI document will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Source Definition” on page 7-11 if your source EDI document will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Source Definition” on page 7-13 if your source EDI document will be stored on an SCP server.
- ❸ Create Your Target Definition
 - a. See Chapter 3, “RosettaNet Trading Partner Definitions,” in the *Public Processes Guide* if you haven’t already defined your RosettaNet trading partner.
 - b. See Chapter 4, “RosettaNet Partner Interface Processes,” in the *Public Processes Guide* if you haven’t already added the appropriate PIP to your RosettaNet trading partner.
 - c. See Chapter 5, “Partner Interface Agreements,” in the *Public Processes Guide* if you haven’t already defined the appropriate PIA within your trading partner’s PIP.
- ❹ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❺ Map the Source and Target Fields (see Chapter 17 for details)
- ❻ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

 **Note:** Make sure you've completed steps 1-3 above before attempting to define your transformation.

Use the Transformation Wizard to Build Your Transformation

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

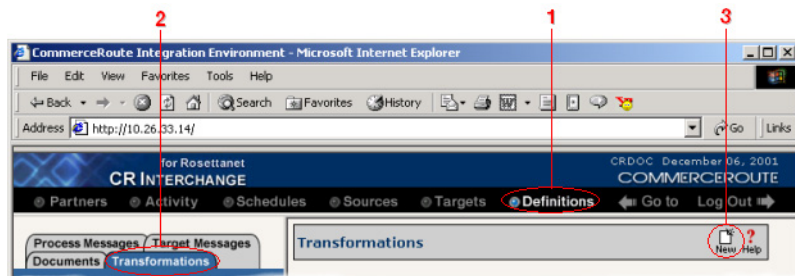


Figure 12-47. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- ❹ Enter an appropriate name for your new transformation in the **Transformation Name** field.
- ❺ Select “EDI” from the **Source** drop-down menu and “RosettaNet” from the **Target** drop-down menu.
- ❻ Click the **Next** button in the toolbar to continue.

The screenshot shows the 'New Transformation' dialog box. At the top, there is a title bar with a document icon and the text 'New Transformation'. Below the title bar, there are navigation buttons: 'Previous', 'Next', 'Cancel', and 'Help'. The 'Next' button is circled in red and has a red number '6' above it. Below the navigation buttons, there is a section labeled 'Transformation Name' with a text input field containing 'Demo EDI -> RosettaNet'. This section is highlighted with a red box and has a red number '4' to its left. Below the 'Transformation Name' section, there is a section labeled 'Data Type' which contains two dropdown menus. The first dropdown menu is labeled 'Source' and has 'EDI' selected. The second dropdown menu is labeled 'Target' and has 'RosettaNet' selected. This entire 'Data Type' section is highlighted with a red box and has a red number '5' to its left.

Figure 12-48. Give your new transformation definition an appropriate name, then choose “EDI” for your Source and “RosettaNet” for your Target.

Tip: for more information about SEF files, see “What’s an SEF File?” on page 11-14 in the *Syncx Integration Appliance Reference Guide*.

Select Source Information (EDI)

You have two options for selecting the appropriate source EDI file. Follow the scenario that describes where your source EDI document’s SEF file is located:

Option 1: You are using an EDI file whose definition is already loaded into the appliance

- ❶ Click the **Select an existing SEF** radio button.
- ❷ Select the appropriate EDI folder (that matches the EDI standard and version you want to use) from the drop-down list.
- ❸ Choose the appropriate EDI document from the scrollable list below (e.g., 850 if you want to use the Purchase Order form).
- ❹ Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

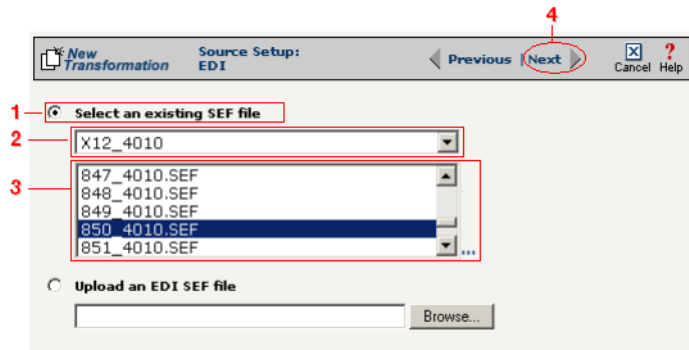


Figure 12-49. Click the **Select an existing SEF** radio button if your EDI document definition has already been loaded into the system.

Note: Skip these steps if you chose to follow Option 1 above.

Option 2: You need to use an EDI file whose definition has not yet been loaded into the appliance

- ❶ Choose the **Upload an EDI SEF file** radio button.
- ❷ Click **Browse** and navigate to and select the location of your EDI file whose definition (SEF file) you want to add to the appliance to load it into the associated field.
- ❸ Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

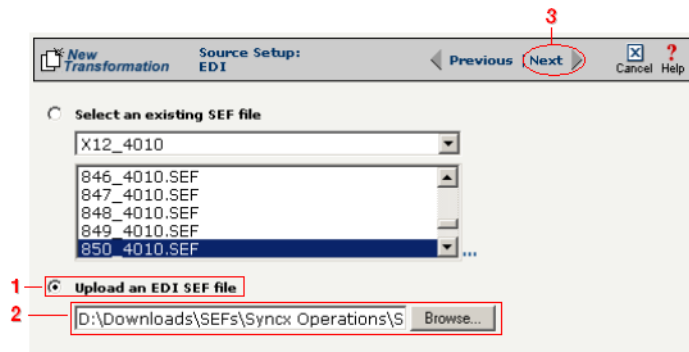



Figure 12-50. Click the **Upload an EDI SEF file** radio button if you need to copy a new EDI definition to the Syncx appliance.

(Optional) Select Source EDI Options

This screen is where you can set all the appropriate default values for your source EDI document. In most cases, you will leave the default settings as they are. You may optionally change them, however, if you want to change how the system will format the EDI information.

 **Tip:** See “CRLF Formatting” on page 11-16 in the *Syncx Integration Appliance Reference Guide* for more information on **CRLF Formatted**.

- ❶ Select the **Source documents have been formatted with CRLFs** checkbox if a text editor has wrapped your EDI document by inserting CRLF's (carriage return line feed characters).
- ❷ Enter a character in the **Data Segment Terminator** field that will define the end of a record in the EDI file.
- ❸ Enter a character in the **Data Element Terminator** field that will define the end of a field in the EDI file.
- ❹ Enter a character in the **Composite Data Element Terminator** field that will define the end of data types that are "compound" or composed of other data elements. For example, a data element of "date" could be composed of month, day, and year elements.
- ❺ Enter a value in the **Release Indicator** field. This tells the system to read a character as a character, not as a command.
- ❻ Use the Default buttons only if you want to reset your EDI options:
 - a. If you want to reset all the previous values back to their default X-12 settings, click **Reset X-12 Default**.
 - b. If you want to reset all the previous values back to their last default

settings, click **Reset Last Default**.

- 7 Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

The screenshot shows the 'New Transformation' dialog box with the 'Source Setup: EDI' tab selected. The 'EDI Options' section contains a checkbox labeled 'Source document has been formatted with CRLFs' with a red '1' next to it. Below this is the 'Default Values' section, which includes a description: 'Specify which character(s) should be used for each control character. (For 'carriage return line feed', please enter 'CRLF')'. There are four text input fields: 'Data Segment Terminator' (labeled 2) with '~', 'Data Element Terminator' (labeled 3) with '*', 'Composite Data Element Terminator' (labeled 4) with '|', and 'Release Indicator' (labeled 5) with '\'. At the bottom of the dialog are two buttons: 'Reset X12 Default' (labeled 6a) and 'Reset Last Saved' (labeled 6b). The top toolbar contains 'Previous' and 'Next' buttons (labeled 7), 'Cancel', and 'Help'.

Figure 12-51. Use this screen if you need to change any of your source EDI document's default values.

Tip: for more information about RosettaNet trading partners, PIPs, and PIAs, see Chapter 3, Chapter 4, and Chapter 5, respectively, in the *Public Processes Guide*.

Select Target Information (RosettaNet)

- ❶ In the next screen of the Transformation Wizard, select the RosettaNet trading partner definition that you want to use for this transformation from the **Trading Partner** drop-down menu.
- ❷ Select which trading partner's PIP you want to use from the **PIP** drop-down menu.
- ❸ Select which PIA in the previously selected PIP you want to use from the **PIA** drop-down menu.
- ❹ Compare your work to the figure below, then click the **Next** button to continue.

The screenshot shows a software window titled "New Transformation" with a subtitle "Target Setup: RosettaNet". Inside the window, there's a section titled "RosettaNet Trading Partner, PIP, PIA Selection" with the instruction "Select the appropriate Trading Partner, PIP and PIA." Below this are three dropdown menus. The first is labeled "Trading Partner" and has "CRDOC" selected. The second is labeled "PIP" and has "3A4 (ver) V02.00" selected. The third is labeled "PIA" and has "R1DEV Exchange" selected. To the right of these menus are three buttons: "Previous", "Next", and "Cancel". The "Next" button is circled in red, and a red arrow points to it from the number "4" above it. To the left of each dropdown menu is a red number: "1" for Trading Partner, "2" for PIP, and "3" for PIA.

Figure 12-1 Use this screen to select the trading partner, PIP, and finally PIA that you want to use as the target for this transformation.

Tip: for more information about RosettaNet trading partners, PIPs, and PIAs, see “How to Configure Roles and Services” on page 5-22 in the *Public Processes Guide*.

- ❶ In the next screen of the Transformation Wizard, select which activity is appropriate for this transformation from the **Activity** drop-down menu.
- ❷ Select the appropriate role this source will play from the **Role** drop-down menu.
- ❸ Compare your definition to that shown in the figure below, then click **Save** to save your work and exit out of the Transformation Wizard.

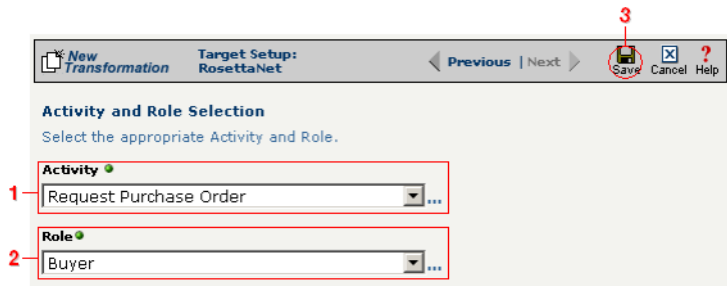



Figure 12-2 Specify the target RosettaNet’s activity and role.

What’s Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for instructions on mapping your new transformation.


How to Transform from RosettaNet to an EDI Document

 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from an XML document to an EDI document.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❸ Create Your Source Definition
 - a. See Chapter 3, “RosettaNet Trading Partner Definitions,” in the *Public Processes Guide* if you haven’t already defined your RosettaNet trading partner.
 - b. See Chapter 4, “RosettaNet Partner Interface Processes,” in the *Public Processes Guide* if you haven’t already added the appropriate PIP to your RosettaNet trading partner.
 - c. See Chapter 5, “Partner Interface Agreements,” in the *Public Processes Guide* if you haven’t already defined the appropriate PIA within your trading partner’s PIP.
- ❹ Create Your Target Definition
 - a. See “How to Create an FTP Target Definition” on page 8-10 if your target EDI document will be stored on an FTP server.
 - b. See “How to Create a File Share Target Definition” on page 8-7 if your target EDI document will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Target Definition” on page 8-14 if your target EDI document will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Target Definition” on page 8-20 if your target EDI document will be stored on an SCP server.
- ❺ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❻ Map the Source and Target Fields (see Chapter 17 for details)
- ❼ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

 **Note:** Make sure you've completed steps 1-4 above before attempting to define your transformation.

Use the Transformation Wizard to Build Your Transformation

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

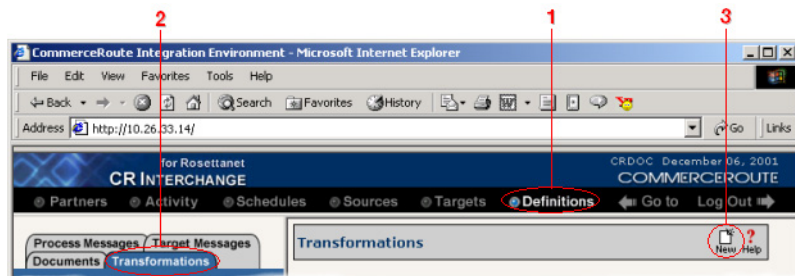


Figure 12-52. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- ❹ Enter an appropriate name for your new transformation in the **Transformation Name** field.
- ❺ Select “RosettaNet” from the **Source** drop-down menu and “EDI” from the **Target** drop-down menu.
- ❻ Click the **Next** button in the toolbar to continue.

The screenshot shows a 'New Transformation' dialog box. At the top, there is a title bar with a document icon and the text 'New Transformation'. Below the title bar, there are navigation buttons: 'Previous', 'Next', 'Cancel', and 'Help'. The 'Next' button is circled in red and has a red number '6' above it. Below the navigation buttons, there is a 'Transformation Name' field with a green checkmark icon to its right. The text 'Demo RosettaNet -> EDI' is entered in this field, and it is enclosed in a red box with a red number '4' to its left. Below the 'Transformation Name' field, there is a 'Data Type' section. Inside this section, there are two dropdown menus. The first is labeled 'Source' with a green checkmark icon to its right, and it has 'RosettaNet' selected. The second is labeled 'Target' with a green checkmark icon to its right, and it has 'EDI' selected. Both dropdown menus are enclosed in a red box with a red number '5' to its left.

Figure 12-53. Give your new transformation definition an appropriate name, then choose “RosettaNet” for your Source and “EDI” for your Target.


Tip: for more information about RosettaNet trading partners, PIPs, and PIAs, see Chapter 3, Chapter 4, and Chapter 5, respectively, in the *Public Processes Guide*.

Select Source Information (RosettaNet)

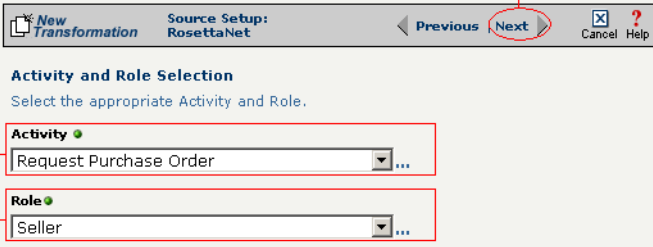
- ❶ In the next screen of the Transformation Wizard, select the RosettaNet trading partner definition that you want to use for this transformation from the **Trading Partner** drop-down menu.
- ❷ Select which trading partner's PIP you want to use from the **PIP** drop-down menu.
- ❸ Select which PIA in the previously selected PIP you want to use from the **PIA** drop-down menu.
- ❹ Compare your work to the figure below, then click the **Next** button to continue.

The screenshot shows a software window titled "New Transformation" with a subtitle "Source Setup: RosettaNet". The window contains a section titled "RosettaNet Trading Partner, PIP, PIA Selection" with the instruction "Select the appropriate Trading Partner, PIP and PIA." Below this are three dropdown menus. The first dropdown, labeled "Trading Partner", has "R1QA1" selected and is marked with a red "1". The second dropdown, labeled "PIP", has "3A4 (ver) V02.00" selected and is marked with a red "2". The third dropdown, labeled "PIA", has "3A4_WFBE_NORMAL" selected and is marked with a red "3". In the top right corner, there are buttons for "Previous", "Next", "Cancel", and "Help". The "Next" button is circled in red and marked with a red "4".

Figure 12-54. Use this screen to select the trading partner, PIP, and finally PIA that you want to use as the source for this transformation.

 **Tip:** for more information about RosettaNet trading partners, PIPs, and PIAs, see “How to Configure Roles and Services” on page 5-22 in the *Public Processes Guide*.

- ❶ In the next screen of the Transformation Wizard, select which activity is appropriate for this transformation from the **Activity** drop-down menu.
- ❷ Select the appropriate role this source will play from the **Role** drop-down menu.
- ❸ Compare your work to the figure below, then click the **Next** button to continue.



The screenshot shows a software window titled "New Transformation" with a tab labeled "Source Setup: RosettaNet". At the top, there are navigation buttons: "Previous", "Next" (which is circled in red and labeled with a red "3"), "Cancel", and "Help". Below the navigation bar, the section "Activity and Role Selection" is displayed with the instruction "Select the appropriate Activity and Role." There are two dropdown menus. The first, labeled "Activity" with a green dot, has "Request Purchase Order" selected and is highlighted with a red box and a red "1". The second, labeled "Role" with a green dot, has "Seller" selected and is highlighted with a red box and a red "2".

Figure 12-55. Specify the source RosettaNet’s activity and role.

Tip: for more information about SEF files, see “What’s an SEF File?” on page 11-14 in the *Syncx Integration Appliance Reference Guide*.

Select Target Information (EDI)

You have two options for selecting the appropriate target EDI file. Follow the scenario that describes where your target EDI document's SEF file is located:

Option1: You are using an EDI file whose definition is already loaded into the appliance

- ❶ Click the **Select an existing SEF** radio button.
- ❷ Select the appropriate EDI folder (that matches the EDI standard and version you want to use) from the drop-down list.
- ❸ Choose the appropriate EDI document from the scrollable list below (e.g., 850 if you want to use the Purchase Order form).
- ❹ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

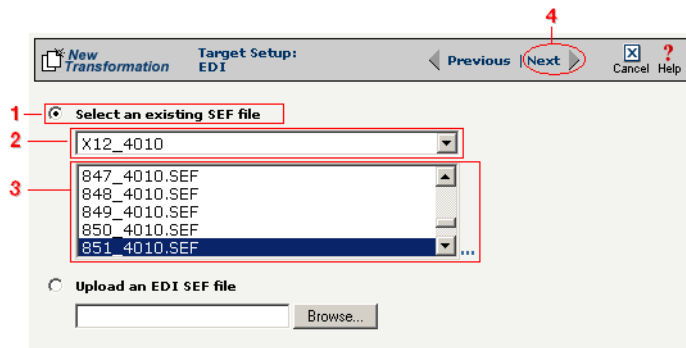


Figure 12-56. Click the **Select an existing SEF** radio button if your EDI document definition has already been loaded into the system.

Note: Skip to “(Optional) Select Target EDI Options” below if you chose to follow Option 1 above.

Option 2: You need to use an EDI file whose definition has not yet been loaded into the appliance

- ❶ Choose the **Upload an EDI SEF file** radio button.
- ❷ Click **Browse** and navigate to the location of your EDI file whose definition (SEF file) you want to add to the appliance.
- ❸ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

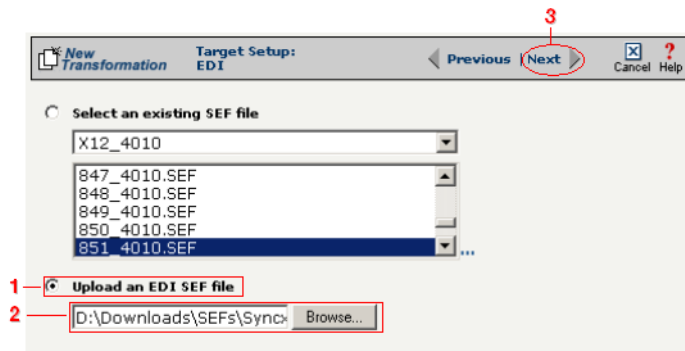


Figure 12-57. Click the **Upload an EDI SEF file** radio button if you need to copy a new EDI definition to the Syncx appliance.

(Optional) Select Target EDI Options

This screen is where you can set all the appropriate default values for your target EDI document. In most cases, you will leave the default settings as they are. You may optionally change them, however, if you want to change how the system will format the EDI information.

- ❶ Select the **CRLF Formatted** checkbox if a text editor has wrapped your EDI document by inserting CRLF's (carriage return line feed characters).
- ❷ Enter a new character in the **Data Segment Terminator** field that will define the end of a record in the EDI file.
- ❸ Enter a new character in the **Data Element Terminator** field that will define the end of a field in the EDI file.
- ❹ Enter a new character in the **Composite Data Element Terminator** field that will define the end of data types that are “compound” or composed of other data elements. For example, a data element of “date” could be composed of month, day, and year elements.

Tip: See “CRLF Formatting” on page 11-16 in the *Syncx Integration Appliance Reference Guide* for more information on **CRLF Formatted**.

- 5 Enter a new value in the **Release Indicator** field. This tells the system to read a character as a character, not as a command.
- 6 Use the Default buttons only if you want to reset your EDI options:
 - a. If you want to reset all the previous values back to their default X-12 settings, click **Reset X-12 Default**.
 - b. If you want to reset all the previous values back to their last default settings, click **Reset Last Default**.
- 7 Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

New Transformation Target Setup: EDI Previous | Next Save Cancel Help

Default Values:
Specify which character(s) should be used for each control character.
(For 'carriage return line feed', please enter 'CRLF')

2 Data Segment Terminator: ~

3 Data Element Terminator: *

4 Composite Data Element Terminator: |

5 Release Indicator: \


6a Reset X12 Default 6b Reset Last Saved

Figure 12-58. Use this screen if you need to change any of your Target EDI document's default values.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, "Transformation Mapping" for instructions on mapping your new transformation.

How to Transform from an EDI Document to an SAP Environment


 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from an EDI document to an SAP environment.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See “How to Create an FTP Source Definition” on page 7-8 if your source EDI document will be stored on an FTP server.
 - b. See “How to Create a File Share Source Definition” on page 7-5 if your source EDI document will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Source Definition” on page 7-11 if your source EDI document will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Source Definition” on page 7-13 if your source EDI document will be stored on an SCP server.
- ❸ Create Your Target Definition (see “How to Create an SAP Target Definition” on page 8-17 for details)
- ❹ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❺ Map the Source and Target Fields (see Chapter 17 for details)
- ❻ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

Use the Transformation Wizard to Build Your Transformation

 **Note:** Make sure you’ve completed steps 1-3 above before attempting to define your transformation.

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

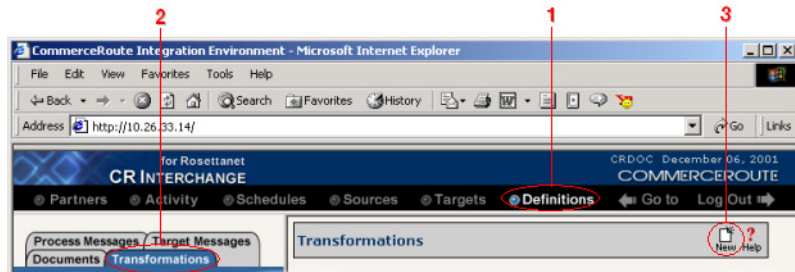


Figure 12-59. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- 4 Enter an appropriate name for your new transformation in the **Transformation Name** field.
- 5 Select “EDI” from the **Source** drop-down menu and “SAP” from the **Target** drop-down menu.
- 6 Click the **Next** button in the toolbar to continue.

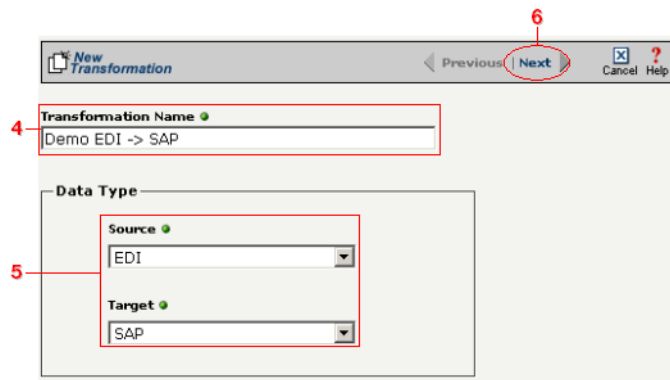


Figure 12-60. Give your new transformation definition an appropriate name, then choose **EDI Document** for your Source and **SAP** for your Target.

Tip: for more information about SEF files, see “What’s an SEF File?” on page 11-14 in the *Syncx Integration Appliance Reference Guide*.

Note: Skip these steps if you chose to follow Option 1 above.

Select Source Information (EDI)

You have two options for selecting the appropriate source EDI file. Follow the scenario that describes where your source EDI document's SEF file is located:

Option 1: You are using an EDI file whose definition is already loaded into the appliance

- 1 Click the **Select an existing SEF** radio button.
- 2 Select the appropriate EDI folder (that matches the EDI standard and version you want to use) from the drop-down list.
- 3 Choose the appropriate EDI document from the scrollable list below (e.g., 850 if you want to use the Purchase Order form).
- 4 Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

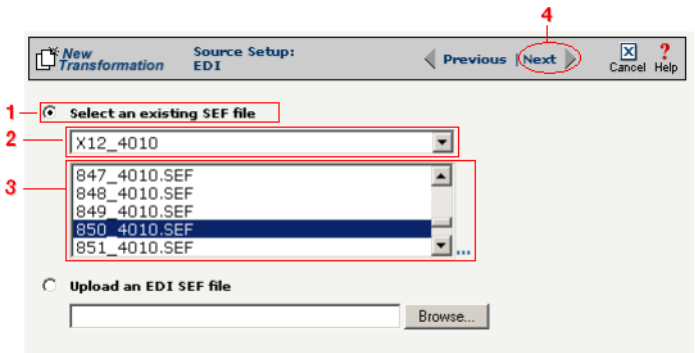


Figure 12-61. Click the **Select an existing SEF** radio button if your EDI document definition has already been loaded into the system.

Option 2: You need to use an EDI file whose definition has not yet been loaded into the appliance

- 1 Choose the **Upload an EDI SEF file** radio button.
- 2 Click **Browse** and navigate to and select the location of your EDI file whose definition (SEF file) you want to add to the appliance to load it into the associated field.
- 3 Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

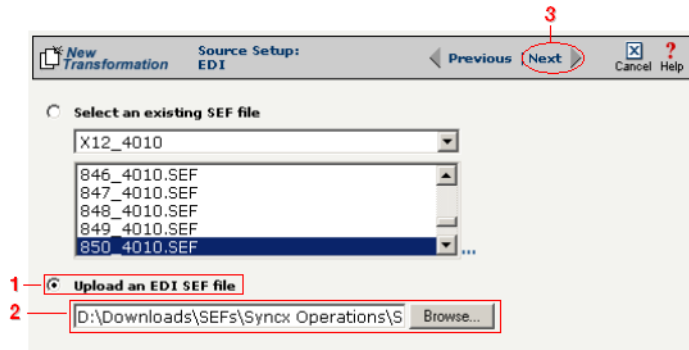



Figure 12-62. Click the **Upload an EDI SEF file** radio button if you need to copy a new EDI definition to the Syncx appliance.

(Optional) Select Source EDI Options

This screen is where you can set all the appropriate default values for your source EDI document. In most cases, you will leave the default settings as they are. You may optionally change them, however, if you want to change how the system will format the EDI information.

 **Tip:** See “CRLF Formatting” on page 11-16 in the *Syncx Integration Appliance Reference Guide* for more information on **CRLF Formatted**.

- ❶ Select the **Source documents have been formatted with CRLFs** checkbox if a text editor has wrapped your EDI document by inserting CRLF's (carriage return line feed characters).
- ❷ Enter a character in the **Data Segment Terminator** field that will define the end of a record in the EDI file.
- ❸ Enter a character in the **Data Element Terminator** field that will define the end of a field in the EDI file.
- ❹ Enter a character in the **Composite Data Element Terminator** field that will define the end of data types that are "compound" or composed of other data elements. For example, a data element of "date" could be composed of month, day, and year elements.
- ❺ Enter a value in the **Release Indicator** field. This tells the system to read a character as a character, not as a command.
- ❻ Use the Default buttons only if you want to reset your EDI options:
 - a. If you want to reset all the previous values back to their default X-12 settings, click **Reset X-12 Default**.
 - b. If you want to reset all the previous values back to their last default

settings, click **Reset Last Default**.

- 7 Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

The screenshot shows the 'New Transformation' dialog box with the 'Source Setup: EDI' tab selected. The 'EDI Options' section contains a checkbox labeled '1' for 'Source document has been formatted with CRLFs'. Below this is the 'Default Values' section, which includes a note: 'Specify which character(s) should be used for each control character. (For 'carriage return line feed', please enter 'CRLF')'. There are four text boxes in this section: 'Data Segment Terminator' (labeled 2) with '~', 'Data Element Terminator' (labeled 3) with '*', 'Composite Data Element Terminator' (labeled 4) with '|', and 'Release Indicator' (labeled 5) with '\'. At the bottom of the dialog are two buttons: 'Reset X12 Default' (labeled 6a) and 'Reset Last Saved' (labeled 6b). The 'Next' button in the top toolbar is circled and labeled 7.

Figure 12-63. Use this screen if you need to change any of your source EDI document's default values.

Select Target Information (SAP)

Follow the steps below to configure your SAP target for transformation mapping:

- 1 Select the appropriate SAP target that you defined from the **SAP Target** drop-down list.
- 2 Click the **Next** button in the toolbar to continue.

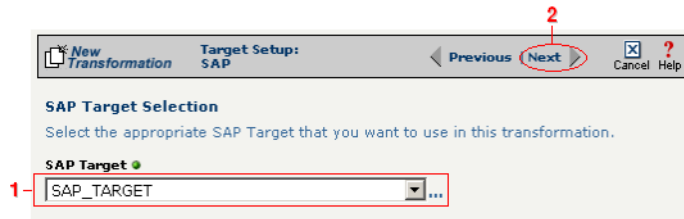




Figure 12-64. Choose the appropriate SAP target from the **SAP Target** drop-down list.

 **Tip:** SAP-provided BAPI function names always start with the letters “BAPI”. You can also use the asterick (*) character as a wild card when searching for the function name.

 **Tip:** If you are certain that the selected function performs a “commit” internally, performance can be improved by deselecting the checkbox.

Select RFC/BAPI Function

In this next screen, you need to select the appropriate RFC or BAPI function that should be used.

- ❶ Type in the complete name of the function, or enter any substring of the function name.
- ❷ Click the **Search** button to search the SAP environment for all formulas that match the name (or partial name) you entered. Note that this search may take several seconds.
- ❸ When the function search has completed, the **Select RFC/BAPI Function** drop-down menu appears, displaying all the functions that contain the string you entered in step 1 above. Select the appropriate function from the drop-down menu.
- ❹ (Optional) Select the **Commit Work** checkbox to ensure that a “commit” is performed on the SAP environment after the function has run. (We recommend leaving this selected, as it guarantees that a commit is performed, regardless of whether the function does this or not.)
- ❺ Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.


Figure 12-65. Use this screen to select the appropriate SAP RFC or BAPI function to run against your SAP environment.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for

instructions on mapping your new transformation.


How to Transform from an EDI Document to a Text File

 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from an EDI document to a text file.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See “How to Create an FTP Source Definition” on page 7-8 if your source EDI document will be stored on an FTP server.
 - b. See “How to Create a File Share Source Definition” on page 7-5 if your source EDI document will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Source Definition” on page 7-11 if your source EDI document will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Source Definition” on page 7-13 if your source EDI document will be stored on an SCP server.
- ❸ Create Your Target Definition
 - a. See “How to Create an FTP Target Definition” on page 8-10 if your target text file will be stored on an FTP server.
 - b. See “How to Create a File Share Target Definition” on page 8-7 if your target text file will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Target Definition” on page 8-14 if your target text file will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Target Definition” on page 8-20 if your target text file will be stored on an SCP server.
- ❹ Create Your Target Document Definition (see Chapter 9 for details)
- ❺ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❻ Map the Source and Target Fields (see Chapter 17 for details)
- ❼ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

 **Note:** Make sure you've completed steps 1-4 above before attempting to define your transformation.

Use the Transformation Wizard to Build Your Transformation

Follow these steps to transform information from an EDI document to a text file.

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

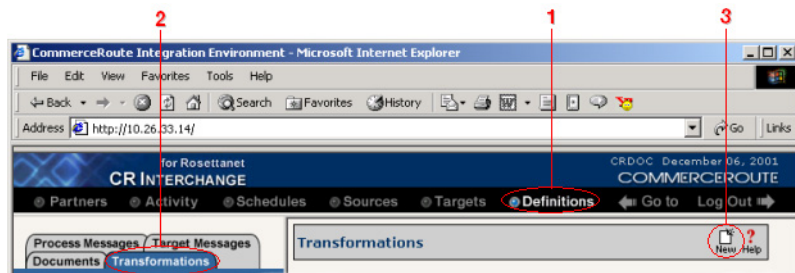


Figure 12-66. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- ❹ Enter an appropriate name for your new transformation in the **Transformation Name** field.
- ❺ Select “EDI” from the **Source** drop-down menu and “Text” from the **Target** drop-down menu.
- ❻ Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

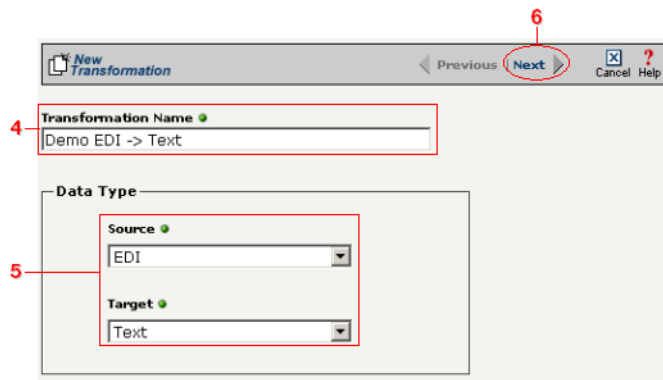


Figure 12-67. Give your new transformation definition an appropriate name, then choose **EDI Document** for your Source and **Text File** for your Target.

Tip: for more information about SEF files, see “What’s an SEF File?” on page 11-14 in the *Syncx Integration Appliance Reference Guide*.

Select Source Information (EDI)

You have two options for selecting the appropriate source EDI file. Follow the scenario that describes where your source EDI document's SEF file is located:

Option 1: You are using an EDI file whose definition is already loaded into the appliance

- ❶ Click the **Select an existing SEF** radio button.
- ❷ Select the appropriate EDI folder (that matches the EDI standard and version you want to use) from the drop-down list.
- ❸ Choose the appropriate EDI document from the scrollable list below (e.g., 850 if you want to use the Purchase Order form).
- ❹ Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

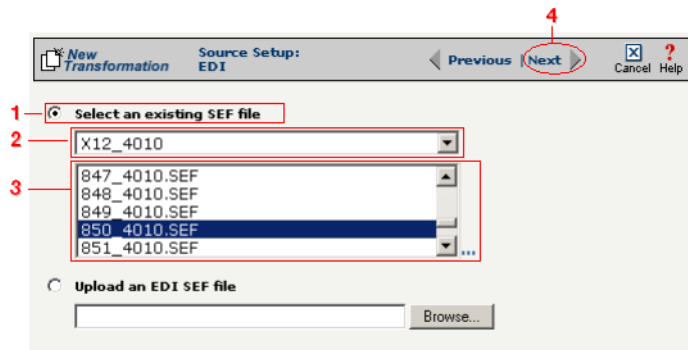


Figure 12-68. Click the **Select an existing SEF** radio button if your EDI document definition has already been loaded into the system.

Note: Skip these steps if you chose to follow Option 1 above.

Option 2: You need to use an EDI file whose definition has not yet been loaded into the appliance

- ❶ Choose the **Upload an EDI SEF file** radio button.
- ❷ Click **Browse** and navigate to and select the location of your EDI file whose definition (SEF file) you want to add to the appliance to load it into the associated field.
- ❸ Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

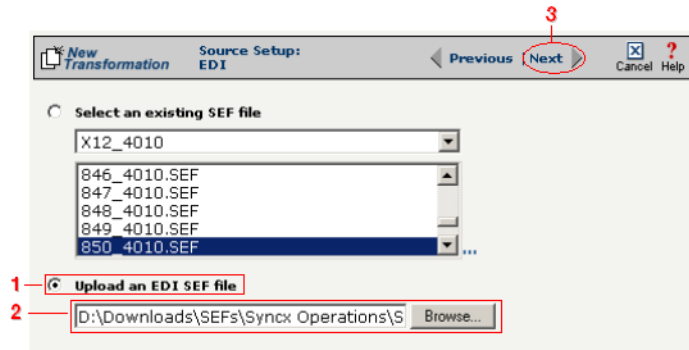


Figure 12-69. Click the **Upload an EDI SEF file** radio button if you need to copy a new EDI definition to the Syncx appliance.

(Optional) Select Source EDI Options

This screen is where you can set all the appropriate default values for your source EDI document. In most cases, you will leave the default settings as they are. You may optionally change them, however, if you want to change how the system will format the EDI information.

Tip: See “CRLF Formatting” on page 11-16 in the *Syncx Integration Appliance Reference Guide* for more information on **CRLF Formatted**.


- ❶ Select the **Source documents have been formatted with CRLFs** checkbox if a text editor has wrapped your EDI document by inserting CRLF's (carriage return line feed characters).
- ❷ Enter a character in the **Data Segment Terminator** field that will define the end of a record in the EDI file.
- ❸ Enter a character in the **Data Element Terminator** field that will define the end of a field in the EDI file.
- ❹ Enter a character in the **Composite Data Element Terminator** field that will define the end of data types that are "compound" or composed of other data elements. For example, a data element of "date" could be composed of month, day, and year elements.
- ❺ Enter a value in the **Release Indicator** field. This tells the system to read a character as a character, not as a command.
- ❻ Use the Default buttons only if you want to reset your EDI options:
 - a. If you want to reset all the previous values back to their default X-12 settings, click **Reset X-12 Default**.
 - b. If you want to reset all the previous values back to their last default

settings, click **Reset Last Default**.

- 7 Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

The screenshot shows the 'New Transformation' dialog box with the 'Source Setup: EDI' tab selected. The 'EDI Options' section contains a checkbox labeled 'Source document has been formatted with CRLFs' with a red '1' next to it. Below this is the 'Default Values' section, which includes a description: 'Specify which character(s) should be used for each control character. (For 'carriage return line feed', please enter 'CRLF')'. There are four text input fields: 'Data Segment Terminator' (labeled 2) with '~', 'Data Element Terminator' (labeled 3) with '*', 'Composite Data Element Terminator' (labeled 4) with '|', and 'Release Indicator' (labeled 5) with '\'. At the bottom of the dialog are two buttons: 'Reset X12 Default' (labeled 6a) and 'Reset Last Saved' (labeled 6b). The top toolbar shows 'Previous', 'Next' (circled with a red '7'), 'Cancel', and 'Help'.

Figure 12-70. Use this screen if you need to change any of your source EDI document's default values.

 **Tip:** for more information about document definitions, see Chapter 9, “Creating Document Definitions.”

Select Target Information (Text)

- ❶ In the next screen of the Transformation Wizard, select the document definition that you want to hold the transformed text from the **Select a Document** drop-down menu.
- ❷ Compare your definition to that shown in the figure below, then click **Save** to save your work and exit out of the Transformation Wizard.

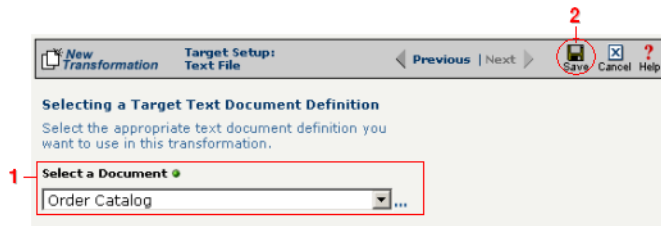



Figure 12-71. Select the document definition you want to use as your target.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for instructions on mapping your new transformation.


How to Transform from a Text File to an EDI Document

 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from a text file to an EDI document.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See “How to Create an FTP Source Definition” on page 7-8 if your source text file will be stored on an FTP server.
 - b. See “How to Create a File Share Source Definition” on page 7-5 if your source text file will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Source Definition” on page 7-11 if your source text file will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Source Definition” on page 7-13 if your source text file will be stored on an SCP server.
- ❸ Create Your Target Definition
 - a. See “How to Create an FTP Target Definition” on page 8-10 if your target EDI document will be stored on an FTP server.
 - b. See “How to Create a File Share Target Definition” on page 8-7 if your target EDI document will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Target Definition” on page 8-14 if your target EDI document will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Target Definition” on page 8-20 if your target EDI document will be stored on an SCP server.
- ❹ Create Your Source Document Definition (see Chapter 9 for details)
- ❺ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❻ Map the Source and Target Fields (see Chapter 17 for details)
- ❼ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

 **Note:** Make sure you've completed steps 1-4 above before attempting to define your transformation.

Use the Transformation Wizard to Build Your Transformation

Follow these steps to transform information from a text file to an EDI document.

- 1 Click the **Definitions** button in the navigation bar.
- 2 Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- 3 Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

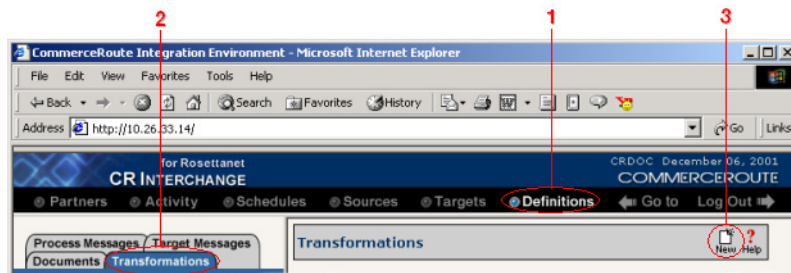


Figure 12-72. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- 4 Enter an appropriate name for your new transformation in the **Transformation Name** field.
- 5 Select “Text” from the **Source** drop-down menu and “EDI” from the **Target** drop-down menu.
- 6 Click the **Next** button in the toolbar to continue (see the figure below).

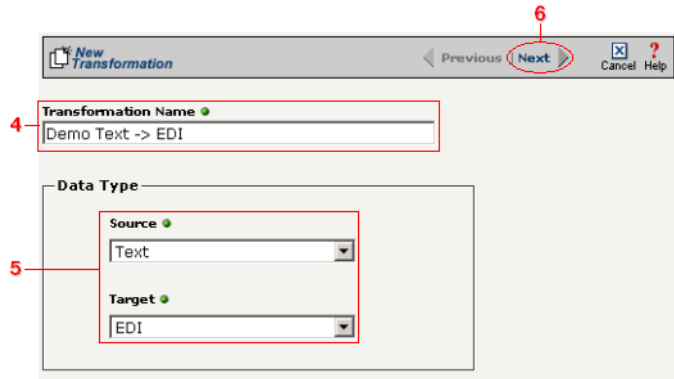


Figure 12-73. Give your new transformation definition an appropriate name, then choose **Text File** for your Source and **EDI Document** for your Target.

Tip: for more information about document definitions, see Chapter 9, “Creating Document Definitions.”

Tip: DIFF is only available for complex text files. For more information about DIFF and optimization, see “Optimization Options (DIFF)” on page 10-5.

Select Source Information (Text)

- 1 In the next screen of the Transformation Wizard, select the document you want to use as a source from the **Text Document Definition** drop-down menu.
- 2 Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

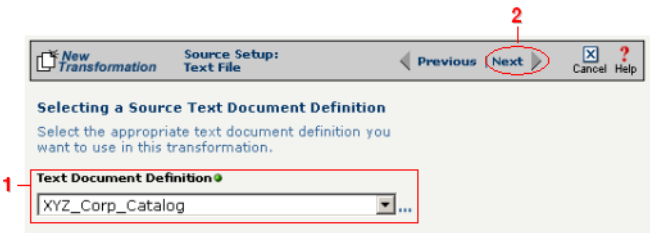


Figure 12-74. Choose which document definition you want to use as your source document.

If the text file you chose for your source is a complex text type, an additional screen appears that lets you set your source to take advantage of an operation’s DIFF function. If you want this transformation to be optimized by filtering out redundant data, select the field(s) that you want to use for filtering in this screen.

- 1 Click the checkbox that corresponds to the appropriate key field name.
- 2 Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

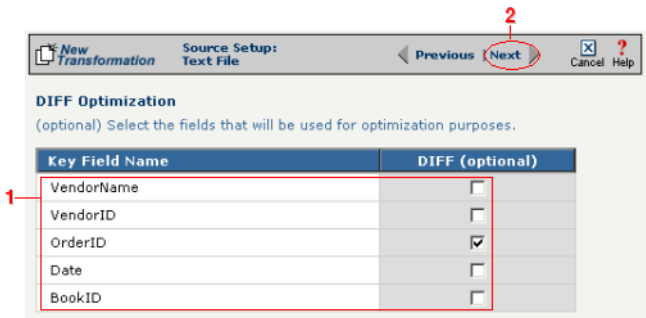


Figure 12-75. If your text file is a complex file and you need to set a field to act as an optimization filter using DIFF functionality, select the appropriate field in this screen.

Tip: for more information about SEF files, see “What’s an SEF File?” on page 11-14 in the *Syncx Integration Appliance Reference Guide*.

Select Target Information (EDI)

You have two options for selecting the appropriate target EDI file. Follow the scenario that describes where your target EDI document's SEF file is located:

Option1: You are using an EDI file whose definition is already loaded into the appliance

- ❶ Click the **Select an existing SEF** radio button.
- ❷ Select the appropriate EDI folder (that matches the EDI standard and version you want to use) from the drop-down list.
- ❸ Choose the appropriate EDI document from the scrollable list below (e.g., 850 if you want to use the Purchase Order form).
- ❹ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

The screenshot shows the 'Target Setup: EDI' window. At the top, there's a toolbar with 'Previous', 'Next' (circled in red with a red '4' above it), 'Cancel', and 'Help'. Below the toolbar, there are two radio buttons: 'Select an existing SEF file' (labeled with a red '1') and 'Upload an EDI SEF file'. The 'Select an existing SEF file' option is selected. Below it, there's a dropdown menu (labeled with a red '2') showing 'X12_4010'. Below the dropdown is a scrollable list (labeled with a red '3') containing the following items: '847_4010.SEF', '848_4010.SEF', '849_4010.SEF', '850_4010.SEF', and '851_4010.SEF'. The '851_4010.SEF' item is selected. At the bottom, there's a text input field and a 'Browse...' button under the 'Upload an EDI SEF file' radio button.

Figure 12-76. Click the **Select an existing SEF** radio button if your EDI document definition has already been loaded into the system.

Note: Skip to “(Optional) Select Target EDI Options” below if you chose to follow Option 1 above.

Option 2: You need to use an EDI file whose definition has not yet been loaded into the appliance

- ❶ Choose the **Upload an EDI SEF file** radio button.
- ❷ Click **Browse** and navigate to the location of your EDI file whose definition (SEF file) you want to add to the appliance.
- ❸ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

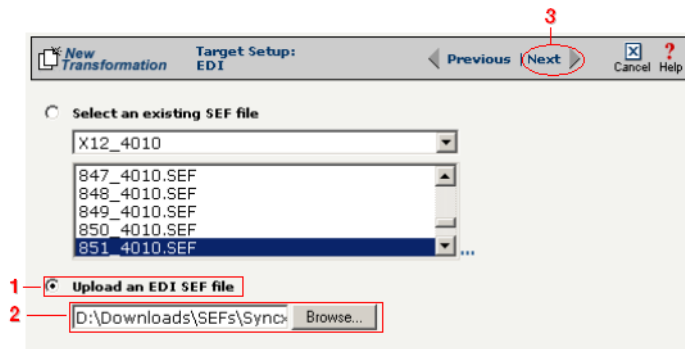


Figure 12-77. Click the **Upload an EDI SEF file** radio button if you need to copy a new EDI definition to the Syncx appliance.

(Optional) Select Target EDI Options

This screen is where you can set all the appropriate default values for your target EDI document. In most cases, you will leave the default settings as they are. You may optionally change them, however, if you want to change how the system will format the EDI information.

- ❶ Select the **CRLF Formatted** checkbox if a text editor has wrapped your EDI document by inserting CRLF’s (carriage return line feed characters).
- ❷ Enter a new character in the **Data Segment Terminator** field that will define the end of a record in the EDI file.
- ❸ Enter a new character in the **Data Element Terminator** field that will define the end of a field in the EDI file.
- ❹ Enter a new character in the **Composite Data Element Terminator** field that will define the end of data types that are “compound” or composed of other data elements. For example, a data element of “date” could be composed of month, day, and year elements.

Tip: See “CRLF Formatting” on page 11-16 in the *Syncx Integration Appliance Reference Guide* for more information on **CRLF Formatted**.

- 5 Enter a new value in the **Release Indicator** field. This tells the system to read a character as a character, not as a command.
- 6 Use the Default buttons only if you want to reset your EDI options:
 - a. If you want to reset all the previous values back to their default X-12 settings, click **Reset X-12 Default**.
 - b. If you want to reset all the previous values back to their last default settings, click **Reset Last Default**.
- 7 Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

New Transformation Target Setup: EDI Previous | Next Save Cancel Help

Default Values:
Specify which character(s) should be used for each control character.
(For 'carriage return line feed', please enter 'CRLF')

2 Data Segment Terminator: ~

3 Data Element Terminator: *

4 Composite Data Element Terminator: |

5 Release Indicator: \


6a Reset X12 Default 6b Reset Last Saved

Figure 12-78. Use this screen if you need to change any of your Target EDI document's default values.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, "Transformation Mapping" for instructions on mapping your new transformation.


How to Transform from an EDI Document to an XML Document

 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from an EDI document to an XML document.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See “How to Create an FTP Source Definition” on page 7-8 if your source EDI document will be stored on an FTP server.
 - b. See “How to Create a File Share Source Definition” on page 7-5 if your source EDI document will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Source Definition” on page 7-11 if your source EDI document will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Source Definition” on page 7-13 if your source EDI document will be stored on an SCP server.
- ❸ Create Your Target Definition
 - a. See “How to Create an FTP Target Definition” on page 8-10 if your target XML document will be stored on an FTP server.
 - b. See “How to Create a File Share Target Definition” on page 8-7 if your target XML document will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Target Definition” on page 8-14 if your target XML document will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Target Definition” on page 8-20 if your target XML document will be stored on an SCP server.
- ❹ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❺ Map the Source and Target Fields (see Chapter 17 for details)
- ❻ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

 **Note:** Make sure you've completed steps 1-3 above before attempting to define your transformation.

Use the Transformation Wizard to Build Your Transformation

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

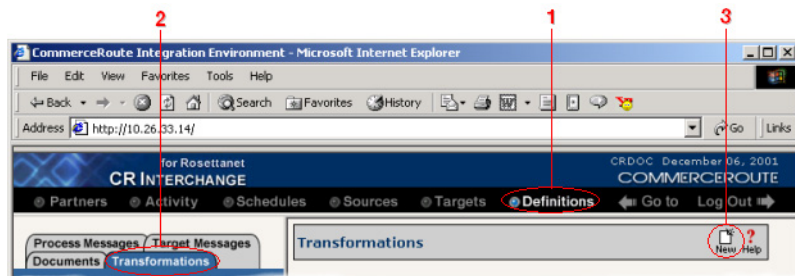


Figure 12-79. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- ❹ Enter an appropriate name for your new transformation in the **Transformation Name** field.
- ❺ Select “EDI” from the **Source** drop-down menu and “XML” from the **Target** drop-down menu.
- ❻ Click the **Next** button in the toolbar to continue.

The screenshot shows a 'New Transformation' dialog box. At the top, there is a title bar with a document icon, the text 'New Transformation', and navigation buttons: 'Previous', 'Next' (circled in red with a red '6' above it), 'Cancel', and 'Help'. Below the title bar, there is a 'Transformation Name' field with a green checkmark icon, containing the text 'Demo EDI -> XML'. This field is highlighted with a red box and a red '4' to its left. Below this is a 'Data Type' section. Inside this section, there are two dropdown menus. The first is labeled 'Source' with a green checkmark icon, and it contains the text 'EDI'. The second is labeled 'Target' with a green checkmark icon, and it contains the text 'XML'. Both dropdown menus are highlighted with a red box and a red '5' to its left. The 'Next' button is also highlighted with a red circle and a red '6' above it.

Figure 12-80. Give your new transformation definition an appropriate name, then choose **EDI Document** for your Source and **XML Document** for your Target.

Tip: for more information about SEF files, see “What’s an SEF File?” on page 11-14 in the *Syncx Integration Appliance Reference Guide*.

Select Source Information (EDI)

You have two options for selecting the appropriate source EDI file. Follow the scenario that describes where your source EDI document’s SEF file is located:

Option 1: You are using an EDI file whose definition is already loaded into the appliance

- ❶ Click the **Select an existing SEF** radio button.
- ❷ Select the appropriate EDI folder (that matches the EDI standard and version you want to use) from the drop-down list.
- ❸ Choose the appropriate EDI document from the scrollable list below (e.g., 850 if you want to use the Purchase Order form).
- ❹ Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

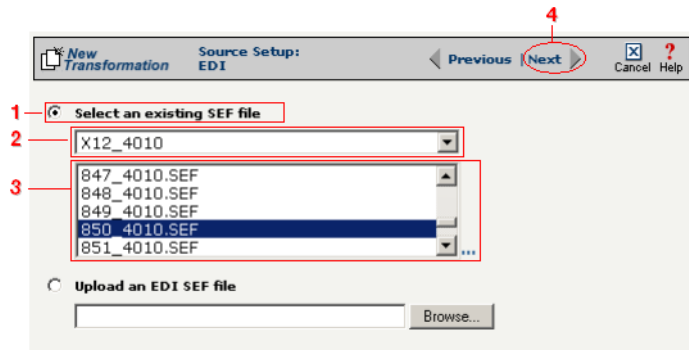


Figure 12-81. Click the **Select an existing SEF** radio button if your EDI document definition has already been loaded into the system.

Note: Skip these steps if you chose to follow Option 1 above.

Option 2: You need to use an EDI file whose definition has not yet been loaded into the appliance

- ❶ Choose the **Upload an EDI SEF file** radio button.
- ❷ Click **Browse** and navigate to and select the location of your EDI file whose definition (SEF file) you want to add to the appliance to load it into the associated field.
- ❸ Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

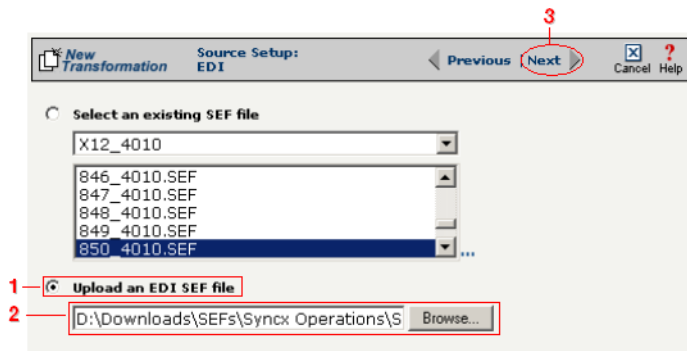


Figure 12-82. Click the **Upload an EDI SEF file** radio button if you need to copy a new EDI definition to the Syncx appliance.

(Optional) Select Source EDI Options

This screen is where you can set all the appropriate default values for your source EDI document. In most cases, you will leave the default settings as they are. You may optionally change them, however, if you want to change how the system will format the EDI information.

Tip: See “CRLF Formatting” on page 11-16 in the *Syncx Integration Appliance Reference Guide* for more information on **CRLF Formatted**.

- ❶ Select the **Source documents have been formatted with CRLFs** checkbox if a text editor has wrapped your EDI document by inserting CRLF's (carriage return line feed characters).
- ❷ Enter a character in the **Data Segment Terminator** field that will define the end of a record in the EDI file.
- ❸ Enter a character in the **Data Element Terminator** field that will define the end of a field in the EDI file.
- ❹ Enter a character in the **Composite Data Element Terminator** field that will define the end of data types that are "compound" or composed of other data elements. For example, a data element of "date" could be composed of month, day, and year elements.
- ❺ Enter a value in the **Release Indicator** field. This tells the system to read a character as a character, not as a command.
- ❻ Use the Default buttons only if you want to reset your EDI options:
 - a. If you want to reset all the previous values back to their default X-12 settings, click **Reset X-12 Default**.
 - b. If you want to reset all the previous values back to their last default

settings, click **Reset Last Default**.

- 7 Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

EDI Options

1 ☐ Source document has been formatted with CRLFs

Default Values:
Specify which character(s) should be used for each control character.
(For 'carriage return line feed', please enter 'CRLF')

2 Data Segment Terminator: ~

3 Data Element Terminator: *

4 Composite Data Element Terminator: |

5 Release Indicator: \r\n

6a Reset X12 Default

6b Reset Last Saved

Figure 12-83. Use this screen if you need to change any of your source EDI document's default values.

Tip: for more information about DTD files, see “What’s a DTD File?” on page 11-42 in the *Syncx Integration Appliance Reference Guide*.

Select Target Information (XML)


You have two scenarios for loading your XML document. Follow the option that describes where your XML document's DTD file is located:

Option 1: You are using an XML document whose definition is already loaded into the appliance

- ❶ Click the **Select an XML DTD** radio button.
- ❷ Select the appropriate XML folder from the drop-down list.
- ❸ Choose the appropriate DTD file from the scrollable list below the drop-down list.
- ❹ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.
- ❺ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

The screenshot shows the 'New Transformation' dialog box with the 'Source Setup: XML' tab active. The 'Select an XML DTD' radio button is selected. Below it, a dropdown menu shows 'Custom' selected, and a scrollable list below it shows 'PurchaseOrder.dtd' selected. The 'Next' button in the toolbar is circled in red. Red numbers 1 through 5 point to the radio button, the dropdown, the list, the root name field, and the Next button respectively.

Figure 12-84. Click the **Select an XML DTD** radio button if your XML document definition has already been loaded into the system.

 **Note:** Skip these steps if you chose to follow Option 1 above.

Option 2: You need to use an XML document whose definition has not yet been loaded into the appliance

- ❶ Choose the **Upload an XML DTD** radio button.
- ❷ Click **Browse** and navigate to the location of your DTD file that you want to add to the appliance.
- ❸ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.
- ❹ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

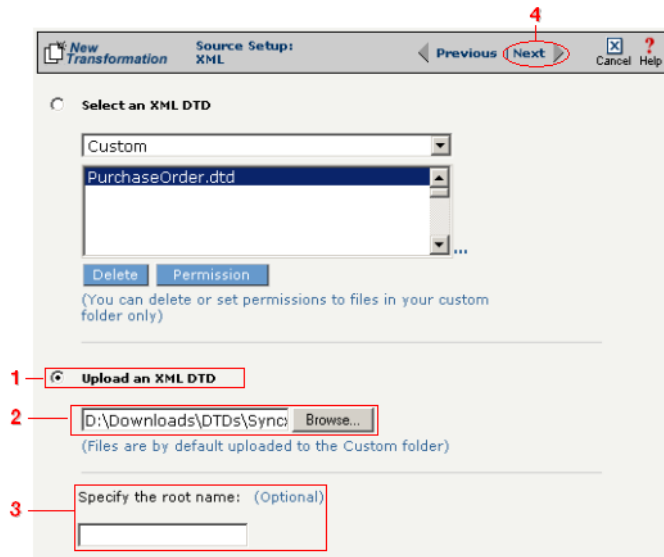


Figure 12-85. Click the **Upload an XML DTD** radio button if you need to copy a new DTD to the Syncx appliance.

Select Target XML DTD Options

You have three choices for where you will copy your DTD file. Click on the option that describes where your XML document's DTD file should be stored:

Option 1: Copy the DTD file to the same folder as your XML file

- ❶ Select the **Copy DTD file to folder where...** radio button.
- ❷ Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

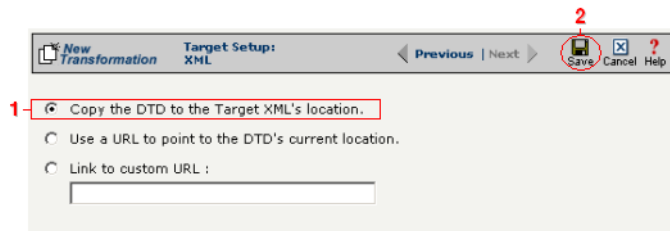


Figure 12-86. Click the **Copy DTD file to folder where...** radio button if you want to copy your DTD to the same folder as your XML document.

Option 2: Make the DTD file's location appear as the current URL in the XML document's header

- ❶ Select the **Use a URL to point to the DTD's Current Location** radio button.
- ❷ Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

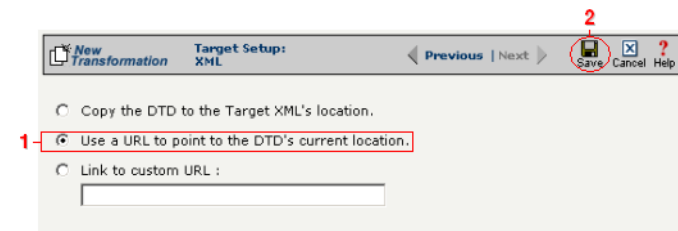



Figure 12-87. If you want to make your DTD file's location appear as the current URL in the XML document's header, click the **Link to Current URL** radio button.

Note: Skip these steps if you chose to follow Option 1 above or Option 3 below.

 **Note:** Skip these steps if you chose to follow Option 1 or 2 above.

Option 3: Make the DTD file's location appear as a custom URL in the XML document's header

- ❶ Select the **Link to Custom URL** radio button and enter the custom URL in the corresponding field.
- ❷ Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

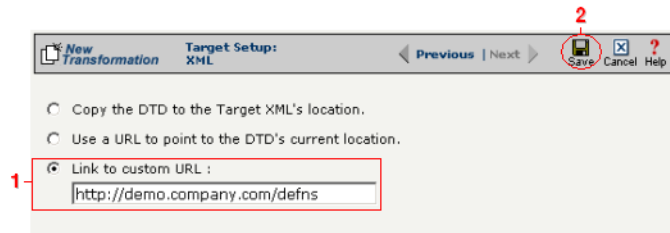



Figure 12-88. Click the **Link to Custom URL** radio button and enter the new URL in the corresponding field if you want to make your DTD file's location appear as a custom URL in the XML document's header.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for instructions on mapping your new transformation.


How to Transform from an XML Document to an EDI Document

 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from an XML document to an EDI document.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See “How to Create an FTP Source Definition” on page 7-8 if your source XML document will be stored on an FTP server.
 - b. See “How to Create a File Share Source Definition” on page 7-5 if your source XML document will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Source Definition” on page 7-11 if your source XML document will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Source Definition” on page 7-13 if your source XML document will be stored on an SCP server.
- ❸ Create Your Target Definition
 - a. See “How to Create an FTP Target Definition” on page 8-10 if your target EDI document will be stored on an FTP server.
 - b. See “How to Create a File Share Target Definition” on page 8-7 if your target EDI document will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Target Definition” on page 8-14 if your target EDI document will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Target Definition” on page 8-20 if your target EDI document will be stored on an SCP server.
- ❹ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❺ Map the Source and Target Fields (see Chapter 17 for details)
- ❻ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

 **Note:** Make sure you've completed steps 1-3 above before attempting to define your transformation.

Use the Transformation Wizard to Build Your Transformation

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

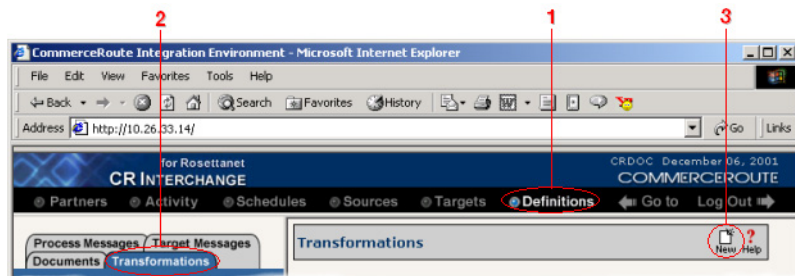


Figure 12-89. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- ❹ Enter an appropriate name for your new transformation in the **Transformation Name** field.
- ❺ Select “XML” from the **Source** drop-down menu and “EDI” from the **Target** drop-down menu.
- ❻ Click the **Next** button in the toolbar to continue.

The screenshot shows the 'New Transformation' dialog box. At the top, there is a title bar with a document icon and the text 'New Transformation'. Below the title bar, there are navigation buttons: 'Previous', 'Next', 'Cancel', and 'Help'. The 'Next' button is highlighted with a red circle and the number 6. The main area of the dialog box contains a 'Transformation Name' field with the text 'Demo XML -> EDI', which is highlighted with a red box and the number 4. Below this is a 'Data Type' section, which is highlighted with a red box and the number 5. Inside the 'Data Type' section, there are two dropdown menus: 'Source' and 'Target'. The 'Source' dropdown is set to 'XML' and the 'Target' dropdown is set to 'EDI'.

Figure 12-90. Give your new transformation definition an appropriate name, then choose **XML Document** for your Source and **EDI Document** for your Target.

Tip: for more information about DTD files, see “What’s a DTD File?” on page 11-42 in the *Syncx Integration Appliance Reference Guide*.

Select Source Information (XML)


You have two choices for loading your XML document. Follow the option that describes where your XML document's DTD file is located:

Option 1: You are using an XML document whose definition is already loaded into the appliance

- ❶ Click the **Select an XML DTD** radio button.
- ❷ Select the appropriate XML folder from the drop-down list.
- ❸ Choose the appropriate DTD file from the scrollable list below the drop-down list.
- ❹ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.
- ❺ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

The screenshot shows the 'New Transformation' dialog box with the 'Source Setup: XML' tab active. The 'Select an XML DTD' radio button is selected. Below it, a dropdown menu shows 'Custom' selected, and a list below it shows 'PurchaseOrder.dtd' selected. The 'Next' button in the toolbar is highlighted with a red circle and a red number 5. Other red numbers point to the 'Select an XML DTD' button (1), the dropdown (2), the list (3), and the 'Specify the root name' field (4).

Figure 12-91. Click the **Select an XML DTD** radio button if your XML document definition has already been loaded into the system.

 **Note:** Skip these steps if you chose to follow Option 1 above.

Option 2: You need to use an XML document whose definition has not yet been loaded into the appliance

- ❶ Choose the **Upload an XML DTD** radio button.
- ❷ Click **Browse** and navigate to the location of your DTD file that you want to add to the appliance.
- ❸ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.
- ❹ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.

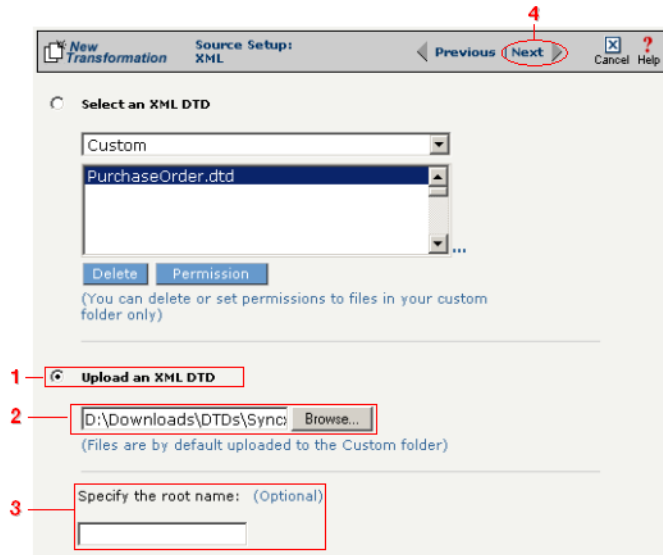


Figure 12-92. Click the **Upload an XML DTD** radio button if you need to copy a new DTD to the Syncx appliance.

Tip: for more information about SEF files, see “What’s an SEF File?” on page 11-14 in the *Syncx Integration Appliance Reference Guide*.

Select Target Information (EDI)

You have two options for selecting the appropriate target EDI file. Follow the scenario that describes where your target EDI document's SEF file is located:

Option1: You are using an EDI file whose definition is already loaded into the appliance

- ❶ Click the **Select an existing SEF** radio button.
- ❷ Select the appropriate EDI folder (that matches the EDI standard and version you want to use) from the drop-down list.
- ❸ Choose the appropriate EDI document from the scrollable list below (e.g., 850 if you want to use the Purchase Order form).
- ❹ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

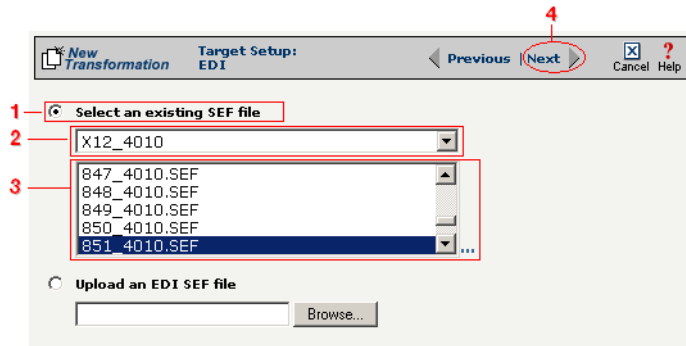


Figure 12-93. Click the **Select an existing SEF** radio button if your EDI document definition has already been loaded into the system.

Note: Skip to “(Optional) Select Target EDI Options” below if you chose to follow Option 1 above.

Option 2: You need to use an EDI file whose definition has not yet been loaded into the appliance

- ❶ Choose the **Upload an EDI SEF file** radio button.
- ❷ Click **Browse** and navigate to the location of your EDI file whose definition (SEF file) you want to add to the appliance.
- ❸ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

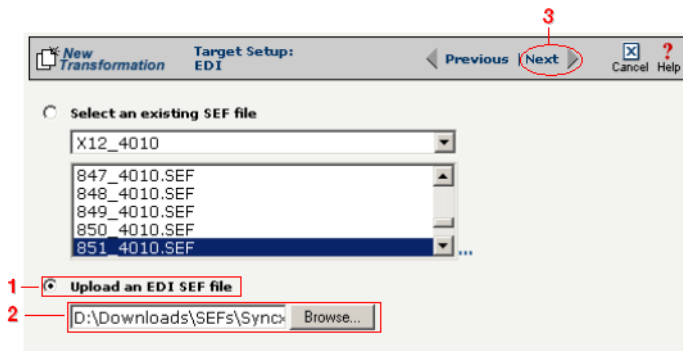


Figure 12-94. Click the **Upload an EDI SEF file** radio button if you need to copy a new EDI definition to the Syncx appliance.

(Optional) Select Target EDI Options

This screen is where you can set all the appropriate default values for your target EDI document. In most cases, you will leave the default settings as they are. You may optionally change them, however, if you want to change how the system will format the EDI information.

- ❶ Select the **CRLF Formatted** checkbox if a text editor has wrapped your EDI document by inserting CRLF's (carriage return line feed characters).
- ❷ Enter a new character in the **Data Segment Terminator** field that will define the end of a record in the EDI file.
- ❸ Enter a new character in the **Data Element Terminator** field that will define the end of a field in the EDI file.
- ❹ Enter a new character in the **Composite Data Element Terminator** field that will define the end of data types that are “compound” or composed of other data elements. For example, a data element of “date” could be composed of month, day, and year elements.

Tip: See “CRLF Formatting” on page 11-16 in the *Syncx Integration Appliance Reference Guide* for more information on **CRLF Formatted**.

- 5 Enter a new value in the **Release Indicator** field. This tells the system to read a character as a character, not as a command.
- 6 Use the Default buttons only if you want to reset your EDI options:
 - a. If you want to reset all the previous values back to their default X-12 settings, click **Reset X-12 Default**.
 - b. If you want to reset all the previous values back to their last default settings, click **Reset Last Default**.
- 7 Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

New Transformation Target Setup: EDI Previous | Next Save Cancel Help

Default Values:
Specify which character(s) should be used for each control character.
(For 'carriage return line feed', please enter 'CRLF')

2 Data Segment Terminator: ~

3 Data Element Terminator: *

4 Composite Data Element Terminator: |

5 Release Indicator: \

Reset X12 Default Reset Last Saved

6a 6b

Figure 12-95. Use this screen if you need to change any of your Target EDI document's default values.


What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, "Transformation Mapping" for instructions on mapping your new transformation.

Chapter 13

Transforming RosettaNet

Overview

 **Note:** RosettaNet is an option available only in some Syncx 6200 Series Appliance Appliances. Your Appliance may or may not display this functionality.

This chapter describes how to transform information using RosettaNet to or from all supported data types. The complete list of RosettaNet transformations is shown below, followed by step-by-step instructions for each combination.

Appliance RosettaNet Transformations

- RosettaNet to CRbuilder Process
- RosettaNet to Database
- Database to RosettaNet
- RosettaNet to EDI
- EDI to RosettaNet
- RosettaNet to SAP
- RosettaNet to Text
- Text to RosettaNet
- RosettaNet to XML
- XML to RosettaNet

How to Transform from RosettaNet to a CRbuilder Process



Tip: Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from an XML document to a text file.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See Chapter 3, “RosettaNet Trading Partner Definitions,” in the *Public Processes Guide* if you haven’t already defined your RosettaNet trading partner.
 - b. See Chapter 4, “RosettaNet Partner Interface Processes,” in the *Public Processes Guide* if you haven’t already added the appropriate PIP to your RosettaNet trading partner.
 - c. See Chapter 5, “Partner Interface Agreements,” in the *Public Processes Guide* if you haven’t already defined the appropriate PIA within your trading partner’s PIP.
- ❸ Create Your Target Definition (see “How to Create a CRbuilder Process Target Definition” on page 8-2 for details)
- ❹ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❺ Map the Source and Target Fields (see Chapter 17 for details)
- ❻ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

Use the Transformation Wizard to Build Your Transformation

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).



Note: Make sure you’ve completed steps 1-3 above before attempting to define your transformation.

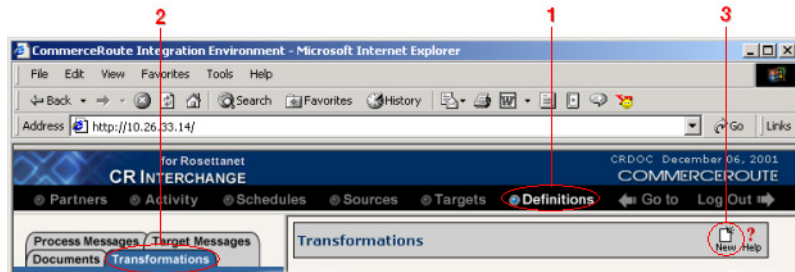


Figure 13-1. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- ④ Enter an appropriate name for your new transformation in the **Transformation Name** field.
- ⑤ Select “RosettaNet” from the **Source** drop-down menu and “CRbuilder Process” from the **Target** drop-down menu.
- ⑥ Click the **Next** button in the toolbar to continue.

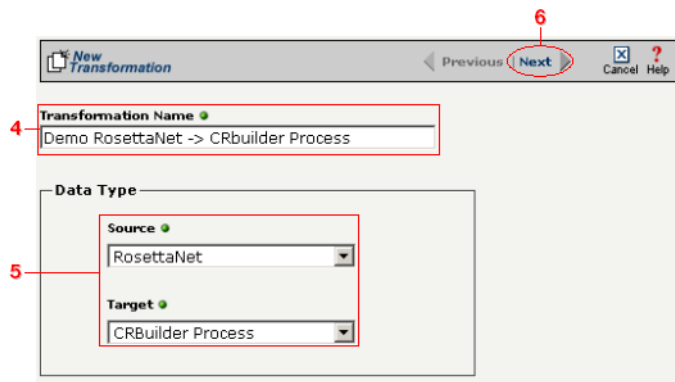


Figure 13-2. Give your new transformation definition an appropriate name, then choose “RosettaNet” for your Source and “CRbuilder Process” for your Target.


Tip: for more information about RosettaNet trading partners, PIPs, and PIAs, see Chapter 3, Chapter 4, and Chapter 5, respectively, in the *Public Processes Guide*.

Select Source Information (RosettaNet)

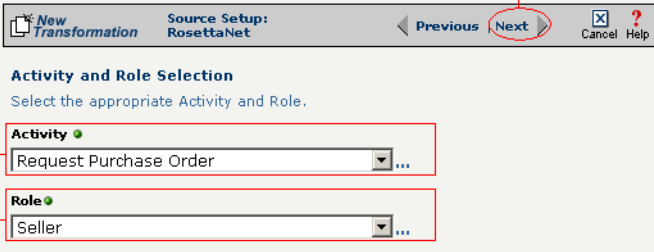
- 1 In the next screen of the Transformation Wizard, select the RosettaNet trading partner definition that you want to use for this transformation from the **Trading Partner** drop-down menu.
- 2 Select which trading partner's PIP you want to use from the **PIP** drop-down menu.
- 3 Select which PIA in the previously selected PIP you want to use from the **PIA** drop-down menu.
- 4 Compare your work to the figure below, then click the **Next** button to continue.

The screenshot shows a software window titled "New Transformation" with a subtitle "Source Setup: RosettaNet". The window contains a section titled "RosettaNet Trading Partner, PIP, PIA Selection" with the instruction "Select the appropriate Trading Partner, PIP and PIA." Below this are three dropdown menus. The first dropdown, labeled "Trading Partner", has "R1QA1" selected and is highlighted with a red box and the number 1. The second dropdown, labeled "PIP", has "3A4 (ver) V02.00" selected and is highlighted with a red box and the number 2. The third dropdown, labeled "PIA", has "3A4_WFBE_NORMAL" selected and is highlighted with a red box and the number 3. In the top right corner, there are buttons for "Previous", "Next", "Cancel", and "Help". The "Next" button is highlighted with a red circle and a red arrow pointing to it with the number 4.

Figure 13-3. Use this screen to select the trading partner, PIP, and finally PIA that you want to use as the source for this transformation.

 **Tip:** for more information about RosettaNet trading partners, PIPs, and PIAs, see “How to Configure Roles and Services” on page 5-22 in the *Public Processes Guide*.

- 1 In the next screen of the Transformation Wizard, select which activity is appropriate for this transformation from the **Activity** drop-down menu.
- 2 Select the appropriate role this source will play from the **Role** drop-down menu.
- 3 Compare your work to the figure below, then click the **Next** button to continue.



The screenshot shows a dialog box titled "New Transformation" with a tab labeled "Source Setup: RosettaNet". At the top right are buttons for "Previous", "Next" (circled in red with a red "3" above it), "Cancel", and "Help". Below the tab is the section "Activity and Role Selection" with the instruction "Select the appropriate Activity and Role." There are two dropdown menus: "Activity" (labeled with a red "1") showing "Request Purchase Order" and "Role" (labeled with a red "2") showing "Seller".

Figure 13-4. Specify the source RosettaNet’s activity and role.

Select Target Information (CRbuilder Process)

- 1 Select the appropriate CRbuilder process from the drop-down menu.
- 2 Select the process' initial task that you want to use to initiate from the drop-down menu.
- 3 Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

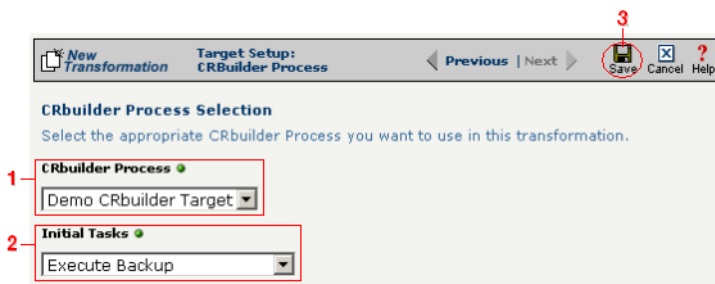



Figure 13-5. Select the name of the appropriate CRbuilder process and the desired initial task from their respective drop-down menu.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for instructions on mapping your new transformation.

How to Transform from RosettaNet to a Database


 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from an XML document to a database.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See Chapter 3, “RosettaNet Trading Partner Definitions,” in the *Public Processes Guide* if you haven’t already defined your RosettaNet trading partner.
 - b. See Chapter 4, “RosettaNet Partner Interface Processes,” in the *Public Processes Guide* if you haven’t already added the appropriate PIP to your RosettaNet trading partner.
 - c. See Chapter 5, “Partner Interface Agreements,” in the *Public Processes Guide* if you haven’t already defined the appropriate PIA within your trading partner’s PIP.
- ❸ Create Your Target Definition (see “How to Create a Database Target Definition” on page 8-4 for details)
- ❹ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❺ Map the Source and Target Fields (see Chapter 17 for details)
- ❻ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

Use the Transformation Wizard to Build Your Transformation

 **Note:** Make sure you’ve completed steps 1-3 above before attempting to define your transformation.

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

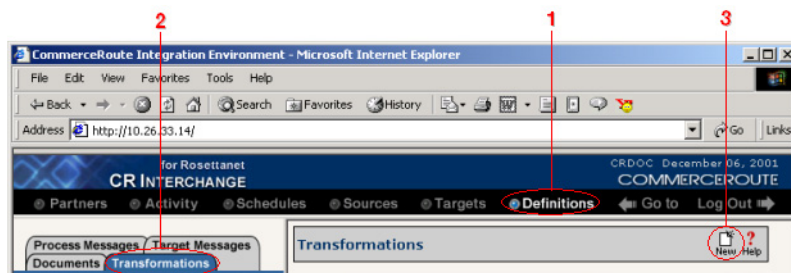


Figure 13-6. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- ④ Enter an appropriate name for your new transformation in the **Transformation Name** field.
- ⑤ Select “RosettaNet” from the **Source** drop-down menu and “Database” from the **Target** drop-down menu.
- ⑥ Click the **Next** button in the toolbar to continue.

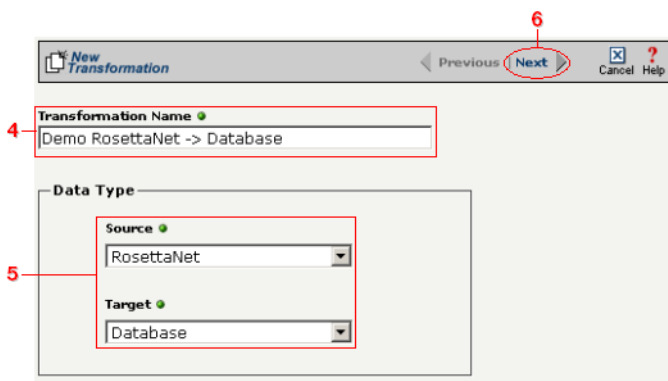

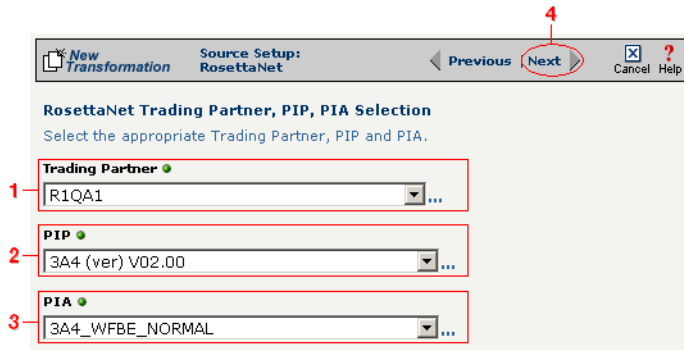


Figure 13-7. Give your new transformation definition an appropriate name, then choose “RosettaNet” for your Source and “Database” for your Target.

 **Tip:** for more information about RosettaNet trading partners, PIPs, and PIAs, see Chapter 3, Chapter 4, and Chapter 5, respectively, in the *Public Processes Guide*.


Select Source Information (RosettaNet)

- ❶ In the next screen of the Transformation Wizard, select the RosettaNet trading partner definition that you want to use for this transformation from the **Trading Partner** drop-down menu.
- ❷ Select which trading partner's PIP you want to use from the **PIP** drop-down menu.
- ❸ Select which PIA in the previously selected PIP you want to use from the **PIA** drop-down menu.
- ❹ Compare your work to the figure below, then click the **Next** button to continue.

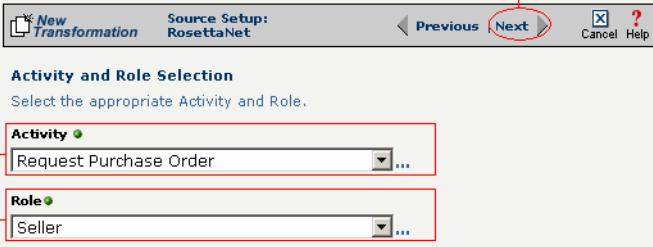


The screenshot shows a dialog box titled "RosettaNet Trading Partner, PIP, PIA Selection". The subtitle is "Select the appropriate Trading Partner, PIP and PIA." There are three dropdown menus: "Trading Partner" with "R1QA1" selected, "PIP" with "3A4 (ver) V02.00" selected, and "PIA" with "3A4_WFBE_NORMAL" selected. Red numbers 1, 2, and 3 are placed to the left of each dropdown menu. A red number 4 is placed above the "Next" button in the top right corner of the dialog box.

Figure 13-8. Use this screen to select the trading partner, PIP, and finally PIA that you want to use as the source for this transformation.

 **Tip:** for more information about RosettaNet trading partners, PIPs, and PIAs, see “How to Configure Roles and Services” on page 5-22 in the *Public Processes Guide*.

- ❶ In the next screen of the Transformation Wizard, select which activity is appropriate for this transformation from the **Activity** drop-down menu.
- ❷ Select the appropriate role this source will play from the **Role** drop-down menu.
- ❸ Compare your work to the figure below, then click the **Next** button to continue.



The screenshot shows a software window titled "New Transformation" with a tab labeled "Source Setup: RosettaNet". At the top, there are navigation buttons: "Previous", "Next" (which is circled in red and labeled with a red "3"), "Cancel", and "Help". Below the navigation bar, the section "Activity and Role Selection" is visible, with the instruction "Select the appropriate Activity and Role." There are two dropdown menus. The first, labeled "Activity" with a green dot, has "Request Purchase Order" selected and is highlighted with a red box and a red "1". The second, labeled "Role" with a green dot, has "Seller" selected and is highlighted with a red box and a red "2".

Figure 13-9. Specify the source RosettaNet’s activity and role.

Select Target Information (Database)

- ❶ Select the name of the data target that you defined as your Target Definition from the **Database Target** drop-down menu.
- ❷ Click the **Next** button in the toolbar to continue (see the figure below).

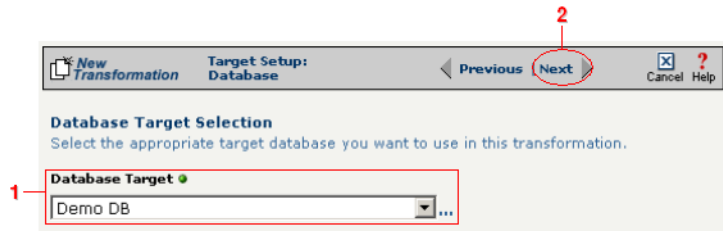


Figure 13-10. Choose which data source you will use as your target database from the **Database Target** drop-down menu.

Next, you need to specify how you will write information to your target database. Follow the option that is appropriate for your transformation:

Option 1: Only a single table in the target database will be accessed

- ❶ Enter part or all of the table's name. If you want to view all the database's items, leave the field blank.
- ❷ Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
- ❸ Click the **Search** button to view the list of items that match your name search.
- ❹ Select the appropriate item in the **Available Item(s)** field, then click the right arrow button.
- ❺ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

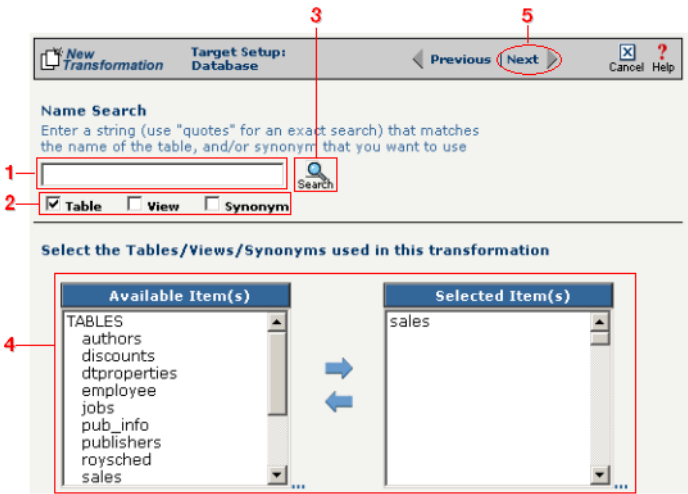


Figure 13-11. Choose the single table you want to access from the **Available Tables** field.


The next screen is where you specify how many times you will use the single table (or view/synonym) you selected for your target.

1. (Optional) If you will use this table more than once, change the **Times Used** field to the appropriate number.
2. Compare your work to below, then click **Next** to continue.

The screenshot shows a software window titled 'New Transformation' with a tab labeled 'Target Setup: Database'. At the top right are buttons for 'Previous', 'Next' (circled in red with a red '2' above it), 'Cancel', and 'Help'. Below this is a section titled 'Database Table' with the instruction 'Specify the number of times each table will be used in this transformation.' Underneath is a table with two columns: 'List of Tables/Views/Synonyms' and 'Times Used'. The first row of the table has 'sales' in the first column and '1' in the second column. A red '1' is placed to the left of the 'sales' text.

List of Tables/Views/Synonyms	Times Used
sales	1

Figure 13-12. Use this screen to specify how many times the target table will be used.

 **Note:** You won't see this screen if your database table has no primary key.

When your database table has at least one primary key, this next screen gives you the option to select a database field as an update key.

1. (Optional) Use the **Update Key** field to select the field(s) that will be treated as update keys.
2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

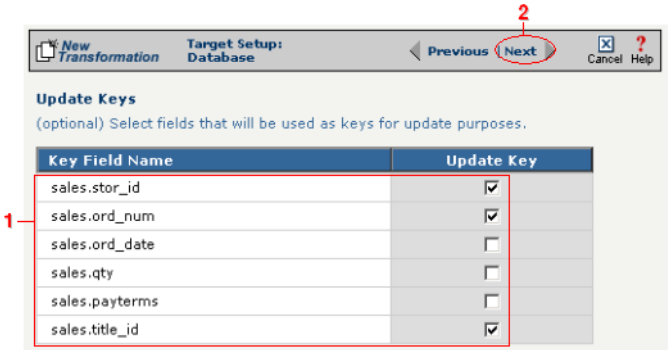




Figure 13-13. If you need to set a database field to act as an update key, select the appropriate field in this screen.

 **Note:** Skip to “Select Insert/Update Mode” on page 13-18 if you chose to follow Option 1 above.

 **Tip:** Hold down the Ctrl key to select multiple tables.

Option 2: More than one table in the target database will be accessed

1. Enter part or all of the tables' names. If you want to view all the database's items, leave the field blank.
2. Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
3. Click the **Search** button to view the list of items that match your name search.
4. Select the appropriate items in the **Available Item(s)** field, then click the right arrow button.
5. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

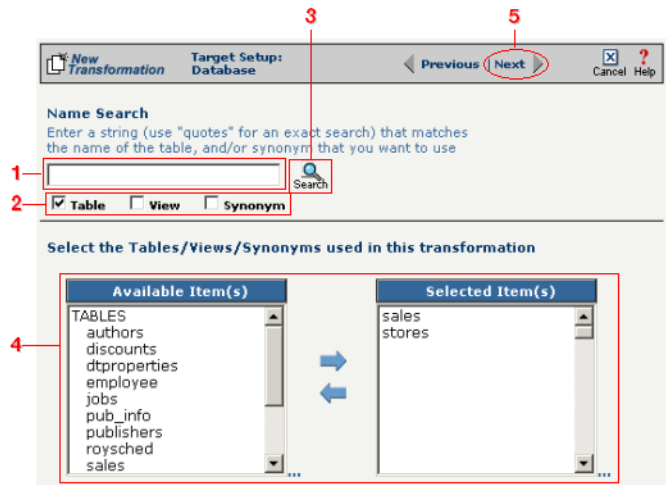


Figure 13-14. Select the appropriate tables you want to access from the **Available Tables** field.

Because you chose Option 2 (accessing more than one database table), you need to declare the tables' respective relationships:

1. Select the item in the **Parent** drop-down menu that you want to be the parent structure (i.e., at the top level of your data hierarchy).
2. Select the item in the **Child** drop-down menu that you want to be the child structure.
3. Select the appropriate database column in the **Parent Fields** window that will be used to reference the child table.
4. Select the appropriate database column in the **Child Fields** window that will be used to reference the parent table.
5. Click the **Add** button. This saves this parent-child relationship. You should see the new relationship appear in the **Parent – Child Field Relationships** table.
6. (Optional) If you have more child structures, click the **New** button and repeat the previous steps for each additional child.
7. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

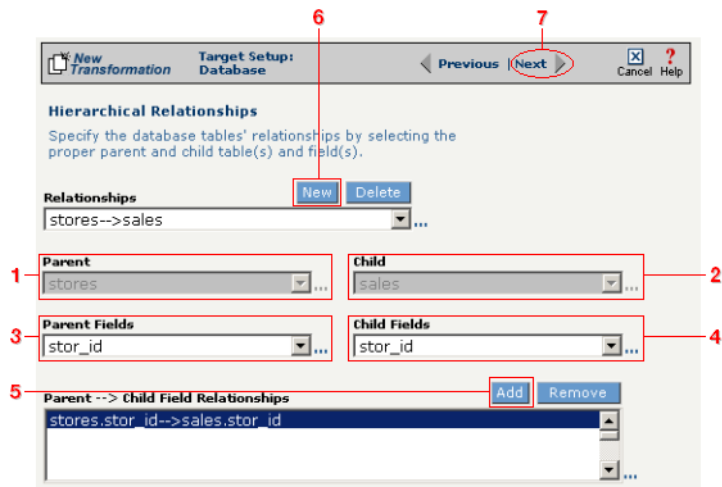


Figure 13-15. Use this screen in the Transformation Wizard to define the relationship between the different database tables.

In the **Nature of Data** screen, you need to indicate whether or not each child table's data must be present.

1. Select the appropriate radio button for each parent-child relationship:
 - a. Select **1 to N** if there will be at least 1 child to each parent entry.
 - b. Select **1** if there will always be a one-to-one parent-child relationship.
 - c. Select **0 to N** if there could be none, one, or more children for each parent.
 - d. Select **0 or 1** if there could be either no children or 1 child for each parent.
2. Compare your work to the figure below, then click **Next** to continue.

The screenshot shows the 'Nature of Data' screen in the 'New Transformation' wizard. The title bar indicates 'New Transformation' and 'Target Setup: Database'. The main heading is 'Nature of Data' with the instruction: 'Identify whether each child table's data must be present ("1 to N" or "1") or may be present ("0 to N" or "0 or 1").' Below this is a table with the following structure:

List of Tables/Views/Synonyms	1 to N	1	0 to N	0 or 1
stores-->sales	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

At the top right, there are navigation buttons: 'Previous', 'Next' (circled in red), 'Cancel', and 'Help'. A red arrow labeled '1' points to the 'stores-->sales' row, and another red arrow labeled '2' points to the 'Next' button.

Figure 13-16. Use the Nature of Data screen to identify the number of child entries that are supported for each parent-child relationship.

Note: You won't see this screen if your database table has no primary key.

When your database table has at least one primary key, this next screen gives you the option to select a database field as an update key.

- 1. (Optional) Select the checkbox(es) in the **Update Key** column that correspond to the field(s) that will be treated as update keys.
- 2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

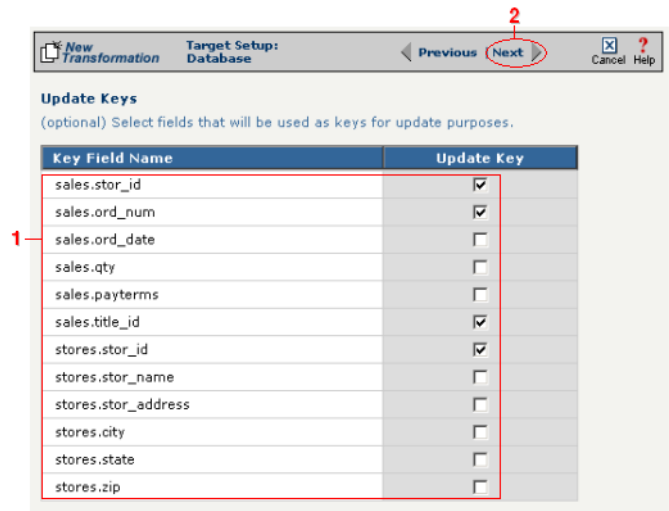



Figure 13-17. If you need to set a database field to act as an update key, select the appropriate field in this screen.

You have now completed Option 2.

Select Insert/Update Mode

In this last screen of the Transformation Wizard, you define how the Syncx Integration Appliance will handle new or existing records when it loads data from your source to your target database.

- 1. Select one of the four options described below:
 - a. **Insert/Update:** the appliance will first attempt to insert any new record it encounters. If a record already exists, it will then update that record.
 - b. **Insert Only:** the appliance will attempt to insert a new record only. No

 **Note:** The options that include Update are only available if you chose at least one field in the **Update Key** screen.

updates will be permitted.

- c. **Update Only:** the appliance will attempt to update an existing record. No new records will be created.
- d. **Update/Insert:** the appliance will first attempt to update a record. It will create a new record if none exists.

- ② Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

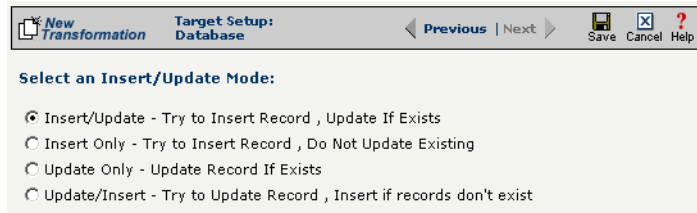



Figure 13-18. Choose which of the four insert/update options is appropriate for your transformation.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for instructions on mapping your new transformation.

How to Transform from a Database to RosettaNet


 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from a database to an XML document.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition (see “How to Create a Database Source Definition” on page 7-2 for details)
- ❸ Create Your Target Definition
 - a. See Chapter 3, “RosettaNet Trading Partner Definitions,” in the *Public Processes Guide* if you haven’t already defined your RosettaNet trading partner.
 - b. See Chapter 4, “RosettaNet Partner Interface Processes,” in the *Public Processes Guide* if you haven’t already added the appropriate PIP to your RosettaNet trading partner.
 - c. See Chapter 5, “Partner Interface Agreements,” in the *Public Processes Guide* if you haven’t already defined the appropriate PIA within your trading partner’s PIP.
- ❹ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❺ Map the Source and Target Fields (see Chapter 17 for details)
- ❻ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

Use the Transformation Wizard to Build Your Transformation

 **Note:** Make sure you’ve completed steps 1-3 above before attempting to define your transformation.

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

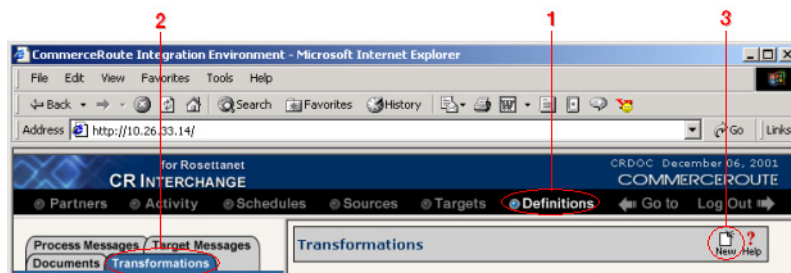


Figure 13-19. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- ④ Enter an appropriate name for your new transformation in the **Transformation Name** field.
- ⑤ Select “Database” from the **Source** drop-down menu and “RosettaNet” from the **Target** drop-down menu.
- ⑥ Click the **Next** button in the toolbar to continue.

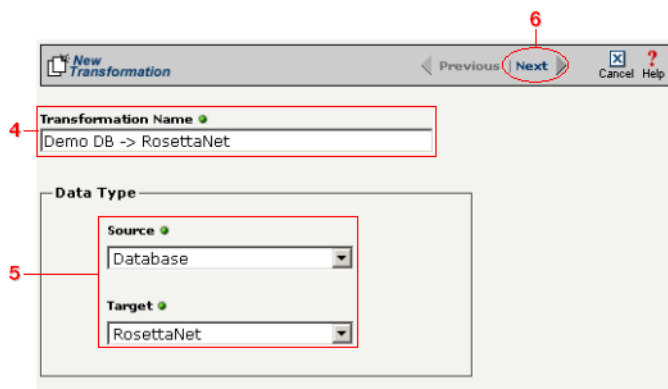


Figure 13-20. Give your new transformation definition an appropriate name, then choose “Database” for your Source and “RosettaNet” for your Target.

Select Source Information (Database)

- ❶ In the next screen of the Transformation Wizard, select the name of the Source that holds the database information you want to transform from the **Data Source** drop-down menu.
- ❷ Choose how you will get information from your database. You have two options:

Option 1: Use the Transformation Wizard to help you access your database without typing SQL

- a. Select the appropriate database definition from the **Database Source** drop-down menu.
- b. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

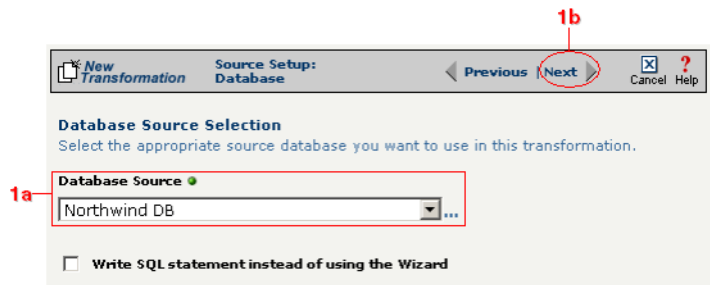


Figure 13-21. Choose the appropriate database from the **Database Source** drop-down menu if you want the Transformation Wizard to help you access your database without having to type any SQL.

Within Option 1, you need to specify how you will access information from your source database. Choose one of two options:

Option 1a: Only a single table in the source database will be accessed.

1. Enter part or all of the table's name. If you want to view all the database's items, leave the field blank.
2. Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
3. Click the **Search** button to view the list of items that match your name search.

4. Select the appropriate item in the **Available Item(s)** field, then click the right arrow button.
5. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

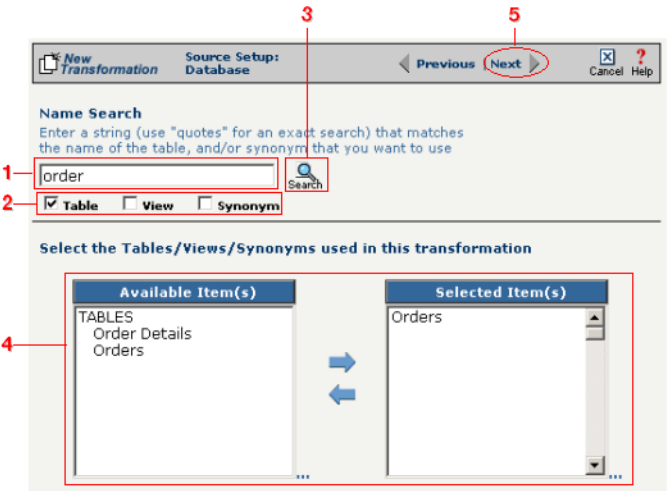


Figure 13-22. Select the single table you want to access from the **Available Tables** field.

The next screen is where you specify how many times you will use the single table (or view/synonym) you selected for your source.

1. (Optional) If you will use this table more than once, change the **Times Used** field to the appropriate number.
2. Compare your work to below, then click **Next** to continue.

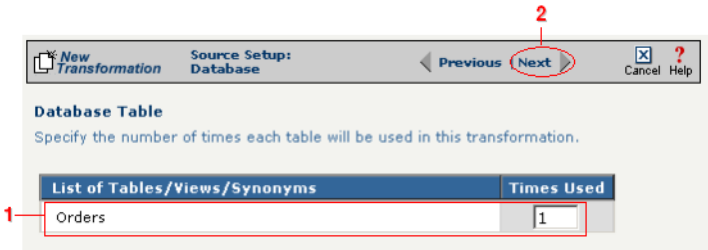


Figure 13-23. Use this screen to specify how many times the source table will be used.

The next screen lets you add a WHERE clause to filter your query:

1. Enter an appropriate WHERE SQL statement in the Where Clause.
2. (Optional) If you want to review your database table's fields, select the **View Field List** checkbox. The list will appear in a table at the bottom of the screen.
3. Click the **Next** button in the toolbar to continue.

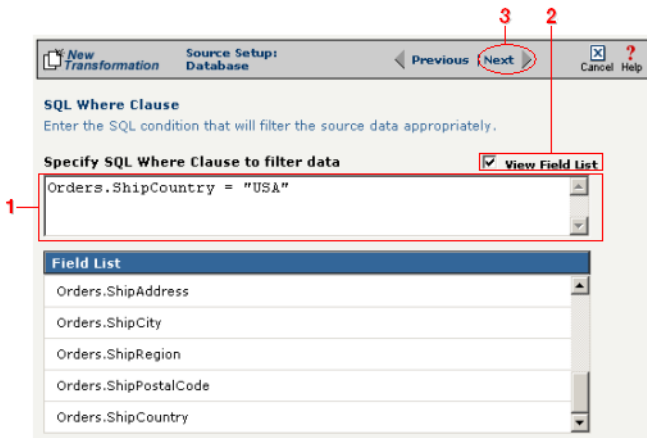

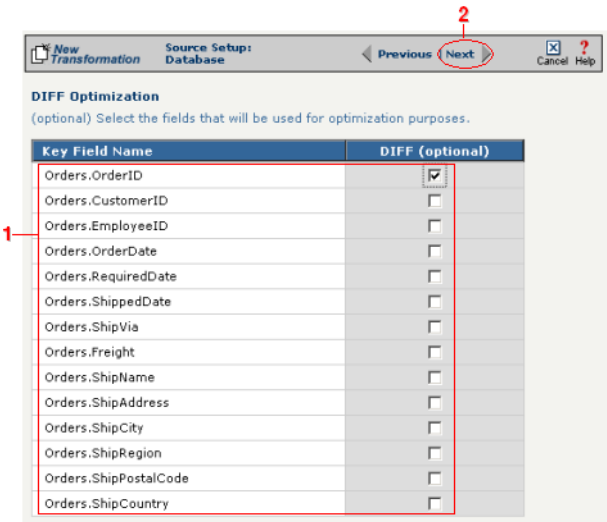


Figure 13-24. This optional screen lets you add a WHERE SQL clause to filter your information.

 **Tip:** For more information about DIFF and optimization, see “Optimization Options (DIFF)” on page 10-5.


This next screen lets you set your source to take advantage of an operation’s DIFF function. If you want this source information to be optimized by filtering out redundant data, select the field(s) that you want to use for filtering in this screen.


1. Click the checkbox that corresponds to the appropriate key field name.
2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.



Key Field Name	DIFF (optional)
Orders.OrderID	<input checked="" type="checkbox"/>
Orders.CustomerID	<input type="checkbox"/>
Orders.EmployeeID	<input type="checkbox"/>
Orders.OrderDate	<input type="checkbox"/>
Orders.RequiredDate	<input type="checkbox"/>
Orders.ShippedDate	<input type="checkbox"/>
Orders.ShipVia	<input type="checkbox"/>
Orders.Freight	<input type="checkbox"/>
Orders.ShipName	<input type="checkbox"/>
Orders.ShipAddress	<input type="checkbox"/>
Orders.ShipCity	<input type="checkbox"/>
Orders.ShipRegion	<input type="checkbox"/>
Orders.ShipPostalCode	<input type="checkbox"/>
Orders.ShipCountry	<input type="checkbox"/>


Figure 13-25. If you need to set a database field to act as an optimization filter using DIFF functionality, select the appropriate field in this screen.

 **Note:** You won't see this screen if your source database table has no primary key.

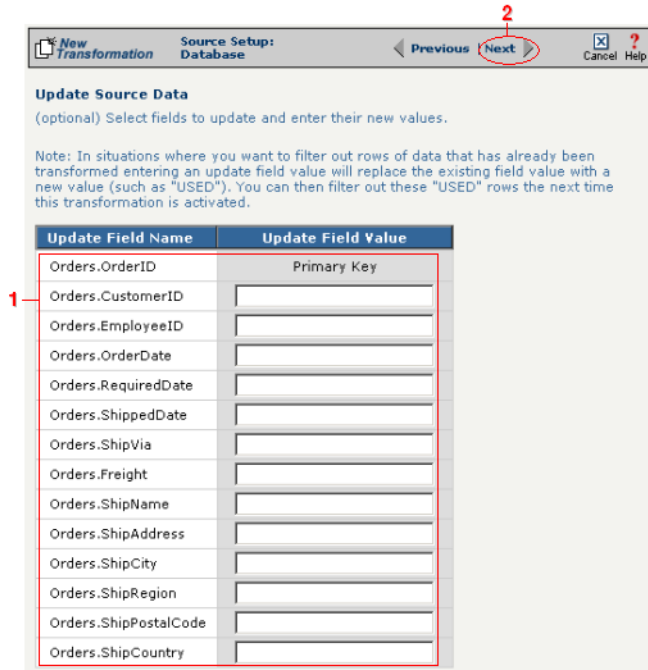
 **Tip:** for more information about the Update Field Value, see "Update Field Value" on page 11-6 in the *Syncx Integration Appliance Reference Guide*.

When your source database table has at least one primary key, this next screen gives you the option to select a database field as an update key.

1. (Optional) Use the **Update Field Value** field to update the value of the fields that match your filter criteria.

 **Caution!** This value will replace the source element's current value with whatever you enter in this field.

2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.



Update Source Data
(optional) Select fields to update and enter their new values.


Note: In situations where you want to filter out rows of data that has already been transformed entering an update field value will replace the existing field value with a new value (such as "USED"). You can then filter out these "USED" rows the next time this transformation is activated.

Update Field Name	Update Field Value
Orders.OrderID	Primary Key
Orders.CustomerID	
Orders.EmployeeID	
Orders.OrderDate	
Orders.RequiredDate	
Orders.ShippedDate	
Orders.ShipVia	
Orders.Freight	
Orders.ShipName	
Orders.ShipAddress	
Orders.ShipCity	
Orders.ShipRegion	
Orders.ShipPostalCode	
Orders.ShipCountry	

Figure 13-26. If you need to set a database field to act as an update key, select the appropriate field in this screen.

You have finished defining your Option 1a source (using the Transformation Wizard to specify a single source table).

Option 1b: More than one table in the source database will be accessed.

 **Note:** Skip these steps if you chose to follow Option 1a above.

1. Enter part or all of the tables names. If you want to view all the database's items, leave the field blank.
2. Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
3. Click the **Search** button to view the list of items that match your name search.
4. Select the appropriate items in the **Available Item(s)** field, then click the right arrow button.
5. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

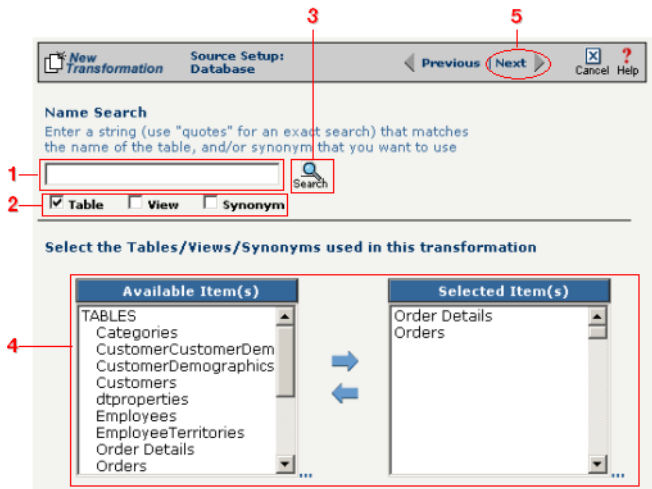



Figure 13-27. Select the appropriate tables you want to access from the **Available Item(s)** field.

 **Note:** Skip these steps if you chose to follow Option 1a.

The next screen is where you specify how many times you will use each table (or view/synonym) you selected for your source.

1. (Optional) If you will use each table more than once, change the **Times Used** field to the appropriate number.
2. Compare your work to below, then click **Next** to continue.

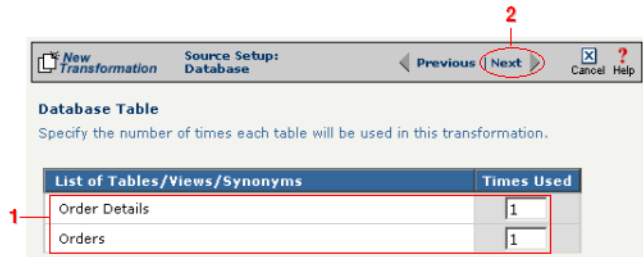



Figure 13-28. Use this screen in the Transformation Wizard to specify how many times each item will be used in the transformation.

 **Note:** Skip these steps if you chose to follow Option 1a.

Because you chose Option 1b (accessing more than one database table), you need to declare the tables' respective relationships:

1. Select the item in the **Parent** drop-down menu that you want to be the parent structure (i.e., at the top level of your data hierarchy).
2. Select the item in the **Child** drop-down menu that you want to be the child structure.
3. Select the appropriate database column in the **Parent Fields** window that will be used to reference the child table.
4. Select the appropriate database column in the **Child Fields** window that will be used to reference the parent table.
5. Click the **Add** button. This saves this parent-child relationship. You should see the new relationship appear in the **Parent – Child Field Relationships** table.
6. (Optional) If you have more child structures, click the **New** button and repeat the previous steps for each additional child.
7. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

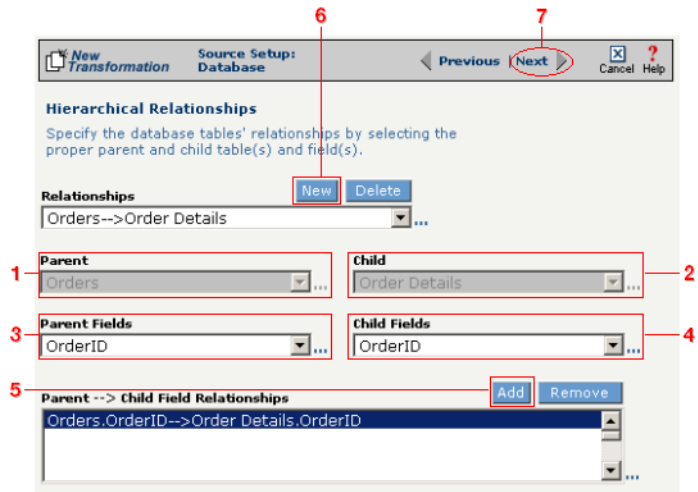


Figure 13-29. Use this screen in the Transformation Wizard to define the relationship between the different database tables.

Note: Skip these steps if you chose to follow Option 1a.

In the **Nature of Data** screen, you need to indicate whether or not each child table's data must be present.

1. Select the appropriate radio button for each parent-child relationship:
 - a. Select **1 to N** if there will be at least 1 child to each parent entry.
 - b. Select **1** if there will always be a one-to-one parent-child relationship.
 - c. Select **0 to N** if there could be none, one, or more children for each parent.
 - d. Select **0 or 1** if there could be either no children or 1 child for each parent.
2. Compare your work to the figure below, then click **Next** to continue.

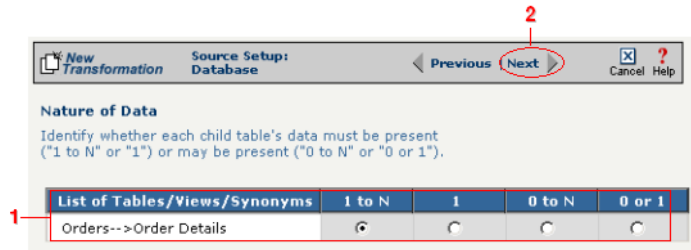


Figure 13-30. Use the Nature of Data screen to identify the number of child entries that are supported for each parent-child relationship.

Note: Skip these steps if you chose to follow Option 1a.

The next screen lets you add a WHERE clause to filter your query:

1. Enter an appropriate WHERE SQL statement in the desired field's corresponding **Filter Condition** field.
2. (Optional) You can have the filtered output be sorted either ascending or descending by selecting the appropriate value from the **Sort** drop-down menu.
3. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

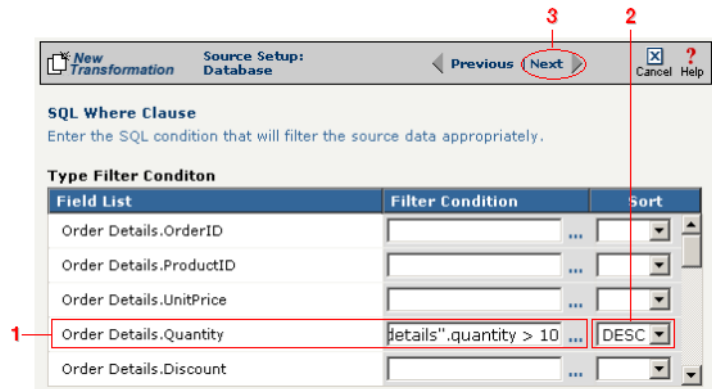



Figure 13-31. This optional screen lets you add a WHERE SQL clause to filter your information.

You have finished defining your Option 1b source (using the Transformation Wizard to specify a source with multiple tables).

 **Note:** Skip these steps if you chose to follow Option 1a or 1b above.

Option 2: You are familiar with SQL and want to enter your SQL query directly

1. Select the **Write SQL Statement** checkbox.
2. Enter your SQL query in the **SQL Statement** field.
3. (Optional) You can test the validity of your SQL statement by clicking the **Test SQL** button.
4. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

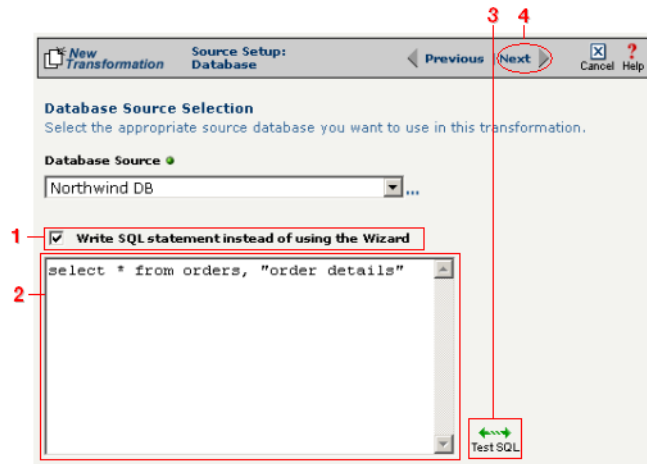




Figure 13-32. Click the **Write SQL Statement** checkbox if you are familiar with SQL and you want to type your statement directly into the **SQL Statement** field.

 **Note:** Skip these steps if you chose to follow Option 1a or 1b above.

 **Tip:** For more information about DIFF and optimization, see “Optimization Options (DIFF)” on page 10-5.

This next screen lets you set your source to take advantage of an operation’s DIFF function. If you want this source information to be optimized by filtering out redundant data, select the field(s) that you want to use for filtering in this screen.

1. Click the checkbox that corresponds to the appropriate key field name.
2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

DIFF Optimization
(optional) Select the fields that will be used for optimization purposes.

Key Field Name	DIFF (optional)
orders.OrderID	<input checked="" type="checkbox"/>
orders.CustomerID	<input type="checkbox"/>
orders.EmployeeID	<input type="checkbox"/>
orders.OrderDate	<input type="checkbox"/>
orders.RequiredDate	<input type="checkbox"/>
orders.ShippedDate	<input type="checkbox"/>
orders.ShipVia	<input type="checkbox"/>
orders.Freight	<input type="checkbox"/>
orders.ShipName	<input type="checkbox"/>
orders.ShipAddress	<input type="checkbox"/>
orders.ShipCity	<input type="checkbox"/>
orders.ShipRegion	<input type="checkbox"/>
orders.ShipPostalCode	<input type="checkbox"/>
orders.ShipCountry	<input type="checkbox"/>
order details.OrderID	<input type="checkbox"/>
order details.ProductID	<input type="checkbox"/>
order details.UnitPrice	<input type="checkbox"/>
order details.Quantity	<input type="checkbox"/>
order details.Discount	<input type="checkbox"/>

Figure 13-33. If you need to set a database field to act as an optimization filter using DIFF functionality, select the appropriate field in this screen.

You have finished defining your Option 2 source (directly entering the appropriate SQL statement).


Tip: for more information about RosettaNet trading partners, PIPs, and PIAs, see Chapter 3, Chapter 4, and Chapter 5, respectively, in the *Public Processes Guide*.

Select Target Information (RosettaNet)

- ❶ In the next screen of the Transformation Wizard, select the RosettaNet trading partner definition that you want to use for this transformation from the **Trading Partner** drop-down menu.
- ❷ Select which trading partner's PIP you want to use from the **PIP** drop-down menu.
- ❸ Select which PIA in the previously selected PIP you want to use from the **PIA** drop-down menu.
- ❹ Compare your work to the figure below, then click the **Next** button to continue.

The screenshot shows a software window titled "New Transformation" with a sub-header "Target Setup: RosettaNet". At the top right are buttons for "Previous", "Next" (circled in red with a red '4' above it), "Cancel", and "Help". Below the header is a section titled "RosettaNet Trading Partner, PIP, PIA Selection" with the instruction "Select the appropriate Trading Partner, PIP and PIA." There are three dropdown menus, each with a red number to its left: 1. "Trading Partner" with "CRDOC" selected. 2. "PIP" with "3A4 (ver) V02.00" selected. 3. "PIA" with "R1DEV Exchange" selected. Each dropdown menu has a small "..." button to its right.

Figure 13-1 Use this screen to select the trading partner, PIP, and finally PIA that you want to use as the target for this transformation.

 **Tip:** for more information about RosettaNet trading partners, PIPs, and PIAs, see “How to Configure Roles and Services” on page 5-22 in the *Public Processes Guide*.

- ❶ In the next screen of the Transformation Wizard, select which activity is appropriate for this transformation from the **Activity** drop-down menu.
- ❷ Select the appropriate role this source will play from the **Role** drop-down menu.
- ❸ Compare your definition to that shown in the figure below, then click **Save** to save your work and exit out of the Transformation Wizard.

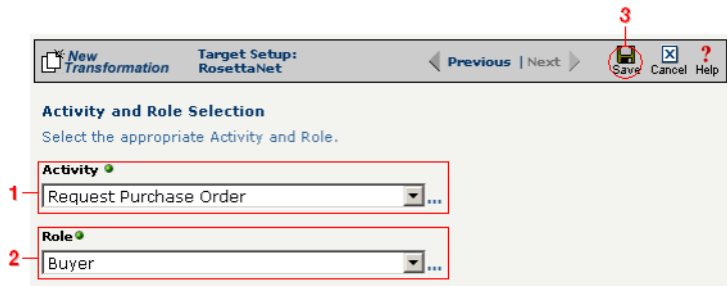



Figure 13-2 Specify the target RosettaNet’s activity and role.

What’s Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for instructions on mapping your new transformation.


How to Transform from RosettaNet to an EDI Document

 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from an XML document to an EDI document.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❸ Create Your Source Definition
 - a. See Chapter 3, “RosettaNet Trading Partner Definitions,” in the *Public Processes Guide* if you haven’t already defined your RosettaNet trading partner.
 - b. See Chapter 4, “RosettaNet Partner Interface Processes,” in the *Public Processes Guide* if you haven’t already added the appropriate PIP to your RosettaNet trading partner.
 - c. See Chapter 5, “Partner Interface Agreements,” in the *Public Processes Guide* if you haven’t already defined the appropriate PIA within your trading partner’s PIP.
- ❹ Create Your Target Definition
 - a. See “How to Create an FTP Target Definition” on page 8-10 if your target EDI document will be stored on an FTP server.
 - b. See “How to Create a File Share Target Definition” on page 8-7 if your target EDI document will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Target Definition” on page 8-14 if your target EDI document will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Target Definition” on page 8-20 if your target EDI document will be stored on an SCP server.
- ❺ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❻ Map the Source and Target Fields (see Chapter 17 for details)
- ❼ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

 **Note:** Make sure you've completed steps 1-4 above before attempting to define your transformation.

Use the Transformation Wizard to Build Your Transformation

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

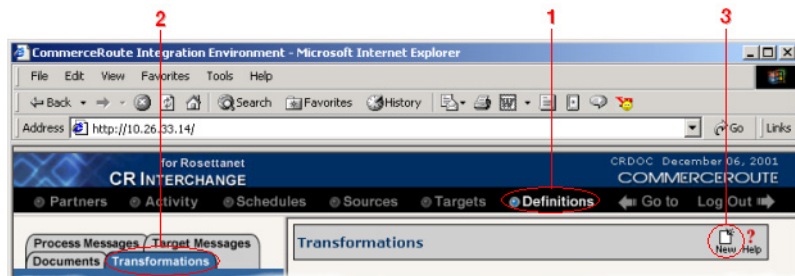


Figure 13-34. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- ❹ Enter an appropriate name for your new transformation in the **Transformation Name** field.
- ❺ Select “RosettaNet” from the **Source** drop-down menu and “EDI” from the **Target** drop-down menu.
- ❻ Click the **Next** button in the toolbar to continue.

The screenshot shows a 'New Transformation' dialog box. At the top, there is a title bar with a document icon and the text 'New Transformation'. Below the title bar, there are navigation buttons: 'Previous', 'Next', 'Cancel', and 'Help'. The 'Next' button is circled in red and has a red number '6' above it. Below the navigation buttons, there is a 'Transformation Name' field with a green checkmark icon to its right. The text 'Demo RosettaNet -> EDI' is entered in this field, and it is enclosed in a red box with a red number '4' to its left. Below the 'Transformation Name' field, there is a 'Data Type' section. Inside this section, there are two dropdown menus. The first is labeled 'Source' with a green checkmark icon to its right, and it has 'RosettaNet' selected. The second is labeled 'Target' with a green checkmark icon to its right, and it has 'EDI' selected. Both dropdown menus are enclosed in a red box with a red number '5' to its left.

Figure 13-35. Give your new transformation definition an appropriate name, then choose “RosettaNet” for your Source and “EDI” for your Target.


Tip: for more information about RosettaNet trading partners, PIPs, and PIAs, see Chapter 3, Chapter 4, and Chapter 5, respectively, in the *Public Processes Guide*.

Select Source Information (RosettaNet)

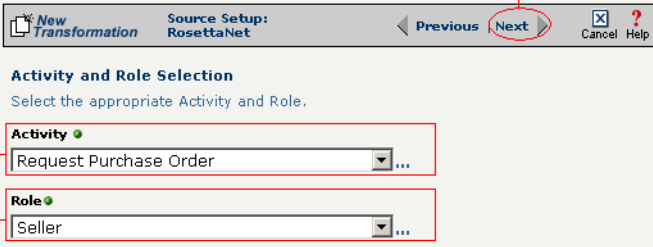
- ❶ In the next screen of the Transformation Wizard, select the RosettaNet trading partner definition that you want to use for this transformation from the **Trading Partner** drop-down menu.
- ❷ Select which trading partner's PIP you want to use from the **PIP** drop-down menu.
- ❸ Select which PIA in the previously selected PIP you want to use from the **PIA** drop-down menu.
- ❹ Compare your work to the figure below, then click the **Next** button to continue.

The screenshot shows a software window titled "New Transformation" with a subtitle "Source Setup: RosettaNet". The window contains a section titled "RosettaNet Trading Partner, PIP, PIA Selection" with the instruction "Select the appropriate Trading Partner, PIP and PIA." Below this are three dropdown menus. The first dropdown, labeled "Trading Partner", has "R1QA1" selected and is marked with a red "1". The second dropdown, labeled "PIP", has "3A4 (ver) V02.00" selected and is marked with a red "2". The third dropdown, labeled "PIA", has "3A4_WFBE_NORMAL" selected and is marked with a red "3". In the top right corner, there are buttons for "Previous", "Next", "Cancel", and "Help". The "Next" button is circled in red and marked with a red "4".

Figure 13-36. Use this screen to select the trading partner, PIP, and finally PIA that you want to use as the source for this transformation.

 **Tip:** for more information about RosettaNet trading partners, PIPs, and PIAs, see “How to Configure Roles and Services” on page 5-22 in the *Public Processes Guide*.

- ❶ In the next screen of the Transformation Wizard, select which activity is appropriate for this transformation from the **Activity** drop-down menu.
- ❷ Select the appropriate role this source will play from the **Role** drop-down menu.
- ❸ Compare your work to the figure below, then click the **Next** button to continue.



The screenshot shows a software window titled "New Transformation" with a tab labeled "Source Setup: RosettaNet". At the top right are buttons for "Previous", "Next", "Cancel", and "Help". The "Next" button is circled in red with a red number 3 above it. Below the title bar, the section "Activity and Role Selection" is displayed with the instruction "Select the appropriate Activity and Role." There are two dropdown menus: "Activity" and "Role". The "Activity" dropdown is highlighted with a red box and a red number 1 to its left, showing "Request Purchase Order" selected. The "Role" dropdown is also highlighted with a red box and a red number 2 to its left, showing "Seller" selected.

Figure 13-37. Specify the source RosettaNet’s activity and role.

Tip: for more information about SEF files, see “What’s an SEF File?” on page 11-14 in the *Syncx Integration Appliance Reference Guide*.

Select Target Information (EDI)

You have two options for selecting the appropriate target EDI file. Follow the scenario that describes where your target EDI document's SEF file is located:

Option1: You are using an EDI file whose definition is already loaded into the appliance

- ❶ Click the **Select an existing SEF** radio button.
- ❷ Select the appropriate EDI folder (that matches the EDI standard and version you want to use) from the drop-down list.
- ❸ Choose the appropriate EDI document from the scrollable list below (e.g., 850 if you want to use the Purchase Order form).
- ❹ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

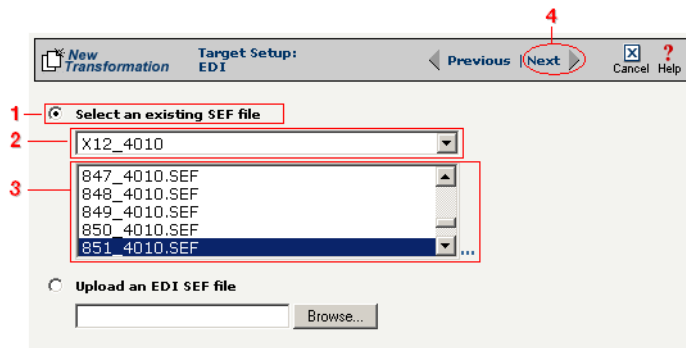


Figure 13-38. Click the **Select an existing SEF** radio button if your EDI document definition has already been loaded into the system.

Note: Skip to “(Optional) Select Target EDI Options” below if you chose to follow Option 1 above.

Option 2: You need to use an EDI file whose definition has not yet been loaded into the appliance

- ❶ Choose the **Upload an EDI SEF file** radio button.
- ❷ Click **Browse** and navigate to the location of your EDI file whose definition (SEF file) you want to add to the appliance.
- ❸ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

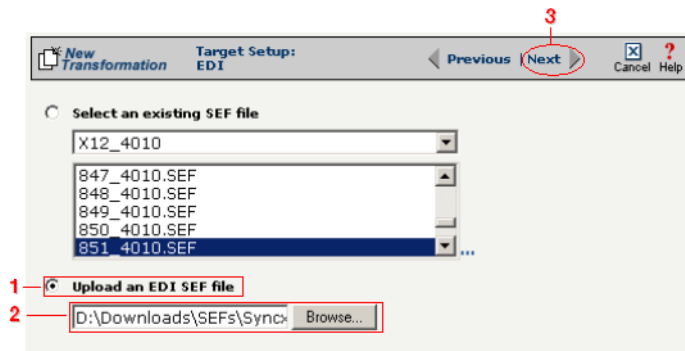


Figure 13-39. Click the **Upload an EDI SEF file** radio button if you need to copy a new EDI definition to the Syncx appliance.

(Optional) Select Target EDI Options

This screen is where you can set all the appropriate default values for your target EDI document. In most cases, you will leave the default settings as they are. You may optionally change them, however, if you want to change how the system will format the EDI information.

- ❶ Select the **CRLF Formatted** checkbox if a text editor has wrapped your EDI document by inserting CRLF's (carriage return line feed characters).
- ❷ Enter a new character in the **Data Segment Terminator** field that will define the end of a record in the EDI file.
- ❸ Enter a new character in the **Data Element Terminator** field that will define the end of a field in the EDI file.
- ❹ Enter a new character in the **Composite Data Element Terminator** field that will define the end of data types that are “compound” or composed of other data elements. For example, a data element of “date” could be composed of month, day, and year elements.

Tip: See “CRLF Formatting” on page 11-16 in the *Syncx Integration Appliance Reference Guide* for more information on **CRLF Formatted**.

- 5 Enter a new value in the **Release Indicator** field. This tells the system to read a character as a character, not as a command.
- 6 Use the Default buttons only if you want to reset your EDI options:
 - a. If you want to reset all the previous values back to their default X-12 settings, click **Reset X-12 Default**.
 - b. If you want to reset all the previous values back to their last default settings, click **Reset Last Default**.
- 7 Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

New Transformation Target Setup: EDI Previous | Next Save Cancel Help

Default Values:
Specify which character(s) should be used for each control character.
(For 'carriage return line feed', please enter 'CRLF')

2 Data Segment Terminator: ~

3 Data Element Terminator: *

4 Composite Data Element Terminator: |

5 Release Indicator: \

Reset X12 Default Reset Last Saved


6a 6b

Figure 13-40. Use this screen if you need to change any of your Target EDI document's default values.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, "Transformation Mapping" for instructions on mapping your new transformation.


How to Transform from an EDI Document to RosettaNet

 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from an EDI document to an XML document.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See “How to Create an FTP Source Definition” on page 7-8 if your source EDI document will be stored on an FTP server.
 - b. See “How to Create a File Share Source Definition” on page 7-5 if your source EDI document will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Source Definition” on page 7-11 if your source EDI document will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Source Definition” on page 7-13 if your source EDI document will be stored on an SCP server.
- ❸ Create Your Target Definition
 - a. See Chapter 3, “RosettaNet Trading Partner Definitions,” in the *Public Processes Guide* if you haven’t already defined your RosettaNet trading partner.
 - b. See Chapter 4, “RosettaNet Partner Interface Processes,” in the *Public Processes Guide* if you haven’t already added the appropriate PIP to your RosettaNet trading partner.
 - c. See Chapter 5, “Partner Interface Agreements,” in the *Public Processes Guide* if you haven’t already defined the appropriate PIA within your trading partner’s PIP.
- ❹ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❺ Map the Source and Target Fields (see Chapter 17 for details)
- ❻ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

 **Note:** Make sure you've completed steps 1-3 above before attempting to define your transformation.

Use the Transformation Wizard to Build Your Transformation

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

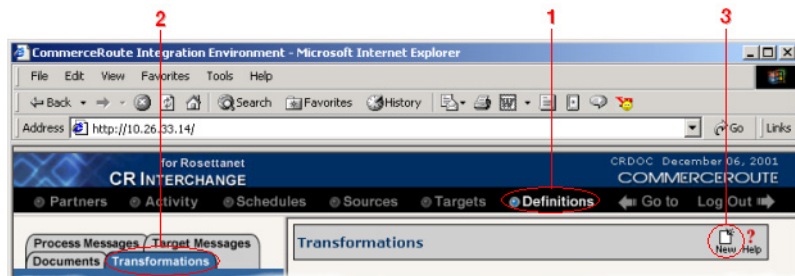


Figure 13-41. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- ❹ Enter an appropriate name for your new transformation in the **Transformation Name** field.
- ❺ Select “EDI” from the **Source** drop-down menu and “RosettaNet” from the **Target** drop-down menu.
- ❻ Click the **Next** button in the toolbar to continue.

The screenshot shows the 'New Transformation' dialog box. At the top, there is a title bar with a document icon and the text 'New Transformation'. Below the title bar, there are navigation buttons: 'Previous', 'Next', 'Cancel', and 'Help'. The 'Next' button is circled in red and has a red number '6' above it. Below the navigation buttons, there is a section labeled 'Transformation Name' with a green status icon. A red box highlights this section, and a red number '4' is to its left. The text 'Demo EDI -> RosettaNet' is entered in the text field. Below this, there is a section labeled 'Data Type'. A red box highlights this section, and a red number '5' is to its left. Inside the 'Data Type' section, there are two dropdown menus. The first is labeled 'Source' with a green status icon, and it has 'EDI' selected. The second is labeled 'Target' with a green status icon, and it has 'RosettaNet' selected.

Figure 13-42. Give your new transformation definition an appropriate name, then choose “EDI” for your Source and “RosettaNet” for your Target.

Tip: for more information about SEF files, see “What’s an SEF File?” on page 11-14 in the *Syncx Integration Appliance Reference Guide*.

Select Source Information (EDI)

You have two options for selecting the appropriate source EDI file. Follow the scenario that describes where your source EDI document’s SEF file is located:

Option 1: You are using an EDI file whose definition is already loaded into the appliance

- ❶ Click the **Select an existing SEF** radio button.
- ❷ Select the appropriate EDI folder (that matches the EDI standard and version you want to use) from the drop-down list.
- ❸ Choose the appropriate EDI document from the scrollable list below (e.g., 850 if you want to use the Purchase Order form).
- ❹ Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

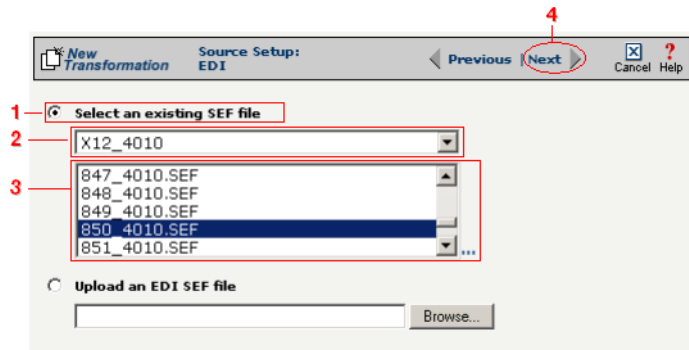


Figure 13-43. Click the **Select an existing SEF** radio button if your EDI document definition has already been loaded into the system.

Note: Skip these steps if you chose to follow Option 1 above.

Option 2: You need to use an EDI file whose definition has not yet been loaded into the appliance

- ❶ Choose the **Upload an EDI SEF file** radio button.
- ❷ Click **Browse** and navigate to and select the location of your EDI file whose definition (SEF file) you want to add to the appliance to load it into the associated field.
- ❸ Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

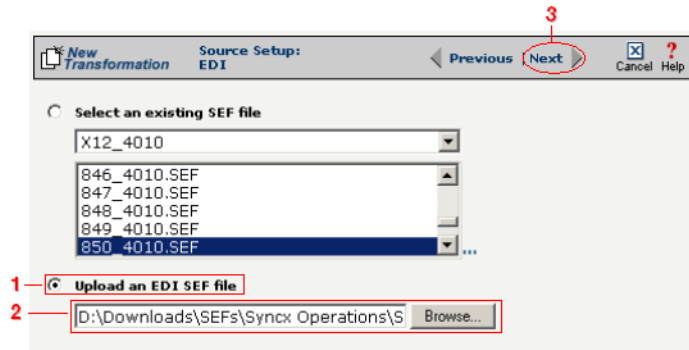


Figure 13-44. Click the **Upload an EDI SEF file** radio button if you need to copy a new EDI definition to the Syncx appliance.

(Optional) Select Source EDI Options

This screen is where you can set all the appropriate default values for your source EDI document. In most cases, you will leave the default settings as they are. You may optionally change them, however, if you want to change how the system will format the EDI information.


Tip: See “CRLF Formatting” on page 11-16 in the *Syncx Integration Appliance Reference Guide* for more information on **CRLF Formatted**.

- ❶ Select the **Source documents have been formatted with CRLFs** checkbox if a text editor has wrapped your EDI document by inserting CRLF's (carriage return line feed characters).
- ❷ Enter a character in the **Data Segment Terminator** field that will define the end of a record in the EDI file.
- ❸ Enter a character in the **Data Element Terminator** field that will define the end of a field in the EDI file.
- ❹ Enter a character in the **Composite Data Element Terminator** field that will define the end of data types that are "compound" or composed of other data elements. For example, a data element of "date" could be composed of month, day, and year elements.
- ❺ Enter a value in the **Release Indicator** field. This tells the system to read a character as a character, not as a command.
- ❻ Use the Default buttons only if you want to reset your EDI options:
 - a. If you want to reset all the previous values back to their default X-12 settings, click **Reset X-12 Default**.
 - b. If you want to reset all the previous values back to their last default

settings, click **Reset Last Default**.

- 7 Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

Figure 13-45. Use this screen if you need to change any of your source EDI document's default values.

 **Tip:** for more information about RosettaNet trading partners, PIPs, and PIAs, see Chapter 3, Chapter 4, and Chapter 5, respectively, in the *Public Processes Guide*.

Select Target Information (RosettaNet)

- 1 In the next screen of the Transformation Wizard, select the RosettaNet trading partner definition that you want to use for this transformation from the **Trading Partner** drop-down menu.
- 2 Select which trading partner’s PIP you want to use from the **PIP** drop-down menu.
- 3 Select which PIA in the previously selected PIP you want to use from the **PIA** drop-down menu.
- 4 Compare your work to the figure below, then click the **Next** button to continue.

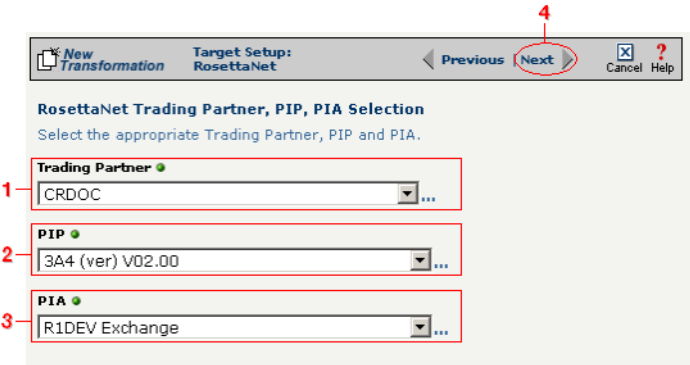



Figure 13-3 Use this screen to select the trading partner, PIP, and finally PIA that you want to use as the target for this transformation.

 **Tip:** for more information about RosettaNet trading partners, PIPs, and PIAs, see “How to Configure Roles and Services” on page 5-22 in the *Public Processes Guide*.

- ❶ In the next screen of the Transformation Wizard, select which activity is appropriate for this transformation from the **Activity** drop-down menu.
- ❷ Select the appropriate role this source will play from the **Role** drop-down menu.
- ❸ Compare your definition to that shown in the figure below, then click **Save** to save your work and exit out of the Transformation Wizard.

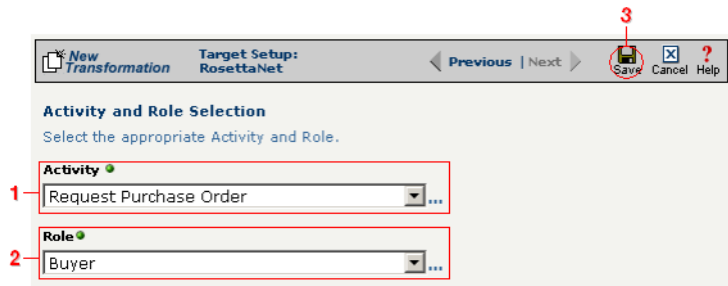


Figure 13-4 Specify the target RosettaNet’s activity and role.

What’s Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for instructions on mapping your new transformation.

How to Transform from RosettaNet to an SAP Environment



Tip: Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from an XML document to an SAP environment.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See Chapter 3, “RosettaNet Trading Partner Definitions,” in the *Public Processes Guide* if you haven’t already defined your RosettaNet trading partner.
 - b. See Chapter 4, “RosettaNet Partner Interface Processes,” in the *Public Processes Guide* if you haven’t already added the appropriate PIP to your RosettaNet trading partner.
 - c. See Chapter 5, “Partner Interface Agreements,” in the *Public Processes Guide* if you haven’t already defined the appropriate PIA within your trading partner’s PIP.
- ❸ Create Your Target Definition (see “How to Create an SAP Target Definition” on page 8-17 for details)
- ❹ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❺ Map the Source and Target Fields (see Chapter 17 for details)
- ❻ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

Use the Transformation Wizard to Build Your Transformation

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).



Note: Make sure you’ve completed steps 1-3 above before attempting to define your transformation.

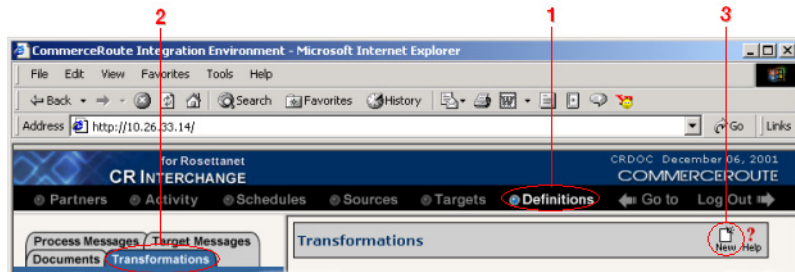


Figure 13-46. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- 4 Enter an appropriate name for your new transformation in the **Transformation Name** field.
- 5 Select “RosettaNet” from the **Source** drop-down menu and “SAP” from the **Target** drop-down menu.
- 6 Click the **Next** button in the toolbar to continue.

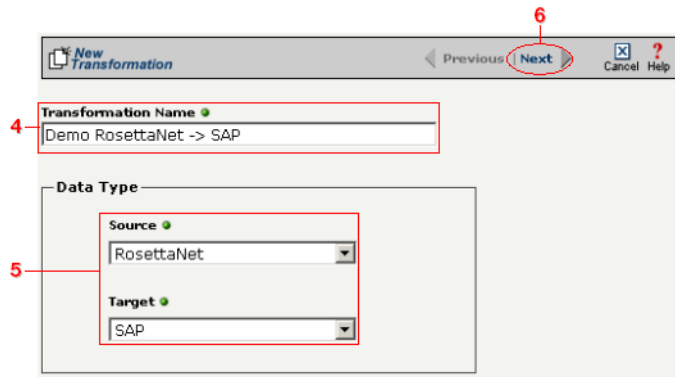

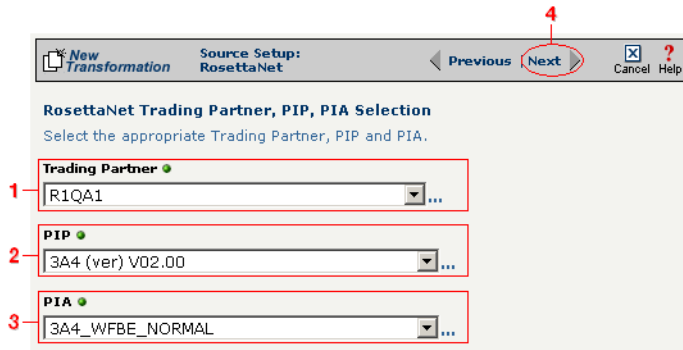


Figure 13-47. Give your new transformation definition an appropriate name, then choose “RosettaNet” for your Source and “SAP” for your Target.

 **Tip:** for more information about RosettaNet trading partners, PIPs, and PIAs, see Chapter 3, Chapter 4, and Chapter 5, respectively, in the *Public Processes Guide*.


Select Source Information (RosettaNet)

- 1 In the next screen of the Transformation Wizard, select the RosettaNet trading partner definition that you want to use for this transformation from the **Trading Partner** drop-down menu.
- 2 Select which trading partner's PIP you want to use from the **PIP** drop-down menu.
- 3 Select which PIA in the previously selected PIP you want to use from the **PIA** drop-down menu.
- 4 Compare your work to the figure below, then click the **Next** button to continue.



The screenshot shows a software window titled "New Transformation" with a subtitle "Source Setup: RosettaNet". The main heading is "RosettaNet Trading Partner, PIP, PIA Selection" with the instruction "Select the appropriate Trading Partner, PIP and PIA." Below this are three dropdown menus. The first is labeled "Trading Partner" and shows "R1QA1". The second is labeled "PIP" and shows "3A4 (ver) V02.00". The third is labeled "PIA" and shows "3A4_WFBE_NORMAL". Each dropdown has a red box around it with a number (1, 2, 3) to its left. In the top right corner, there are buttons for "Previous", "Next", "Cancel", and "Help". The "Next" button is highlighted with a red circle and a red arrow with the number 4 above it.

Figure 13-48. Use this screen to select the trading partner, PIP, and finally PIA that you want to use as the source for this transformation.

 **Tip:** for more information about RosettaNet trading partners, PIPs, and PIAs, see “How to Configure Roles and Services” on page 5-22 in the *Public Processes Guide*.

- 1 In the next screen of the Transformation Wizard, select which activity is appropriate for this transformation from the **Activity** drop-down menu.
- 2 Select the appropriate role this source will play from the **Role** drop-down menu.
- 3 Compare your work to the figure below, then click the **Next** button to continue.

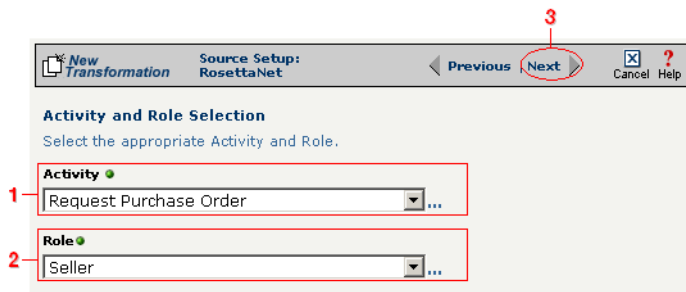


Figure 13-49. Specify the source RosettaNet’s activity and role.

Select Target Information (SAP)

Follow the steps below to configure your SAP target for transformation mapping:

- 1 Select the appropriate SAP target that you defined from the **SAP Target** drop-down list.
- 2 Click the **Next** button in the toolbar to continue.

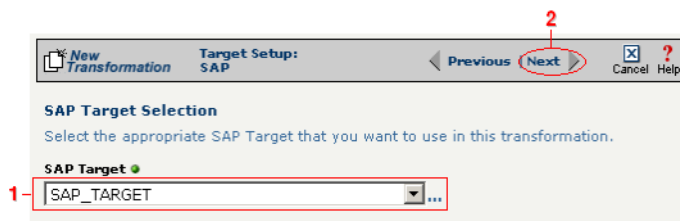




Figure 13-50. Choose the appropriate SAP target from the **SAP Target** drop-down list.

 **Tip:** SAP-provided BAPI function names always start with the letters “BAPI”. You can also use the asterick (*) character as a wild card when searching for the function name.

 **Tip:** If you are certain that the selected function performs a “commit” internally, performance can be improved by deselecting the checkbox.

Select RFC/BAPI Function

In this next screen, you need to select the appropriate RFC or BAPI function that should be used.

- ❶ Type in the complete name of the function, or enter any substring of the function name.
- ❷ Click the **Search** button to search the SAP environment for all formulas that match the name (or partial name) you entered. Note that this search may take several seconds.
- ❸ When the function search has completed, the **Select RFC/BAPI Function** drop-down menu appears, displaying all the functions that contain the string you entered in step 1 above. Select the appropriate function from the drop-down menu.
- ❹ (Optional) Select the **Commit Work** checkbox to ensure that a “commit” is performed on the SAP environment after the function has run. (We recommend leaving this selected, as it guarantees that a commit is performed, regardless of whether the function does this or not.)
- ❺ Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

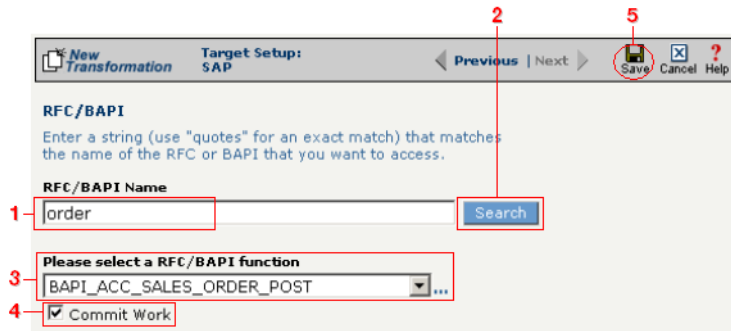



Figure 13-51. Use this screen to select the appropriate SAP RFC or BAPI function to run against your SAP environment.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for

instructions on mapping your new transformation.


How to Transform from RosettaNet to a Text File

 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from RosettaNet to a text file.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See Chapter 3, “RosettaNet Trading Partner Definitions,” in the *Public Processes Guide* if you haven’t already defined your RosettaNet trading partner.
 - b. See Chapter 4, “RosettaNet Partner Interface Processes,” in the *Public Processes Guide* if you haven’t already added the appropriate PIP to your RosettaNet trading partner.
 - c. See Chapter 5, “Partner Interface Agreements,” in the *Public Processes Guide* if you haven’t already defined the appropriate PIA within your trading partner’s PIP.
- ❸ Create Your Target Definition
 - a. See “How to Create an FTP Target Definition” on page 8-10 if your target text file will be stored on an FTP server.
 - b. See “How to Create a File Share Target Definition” on page 8-7 if your target text file will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Target Definition” on page 8-14 if your target text file will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Target Definition” on page 8-20 if your target text file will be stored on an SCP server.
- ❹ Create Your Target Document Definition (see Chapter 9 for details)
- ❺ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❻ Map the Source and Target Fields (see Chapter 17 for details)
- ❼ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

 **Note:** Make sure you've completed steps 1-4 above before attempting to define your transformation.

Use the Transformation Wizard to Build Your Transformation

Follow these steps to transform information from an XML document to a text file.

- 1 Click the **Definitions** button in the navigation bar.
- 2 Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- 3 Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

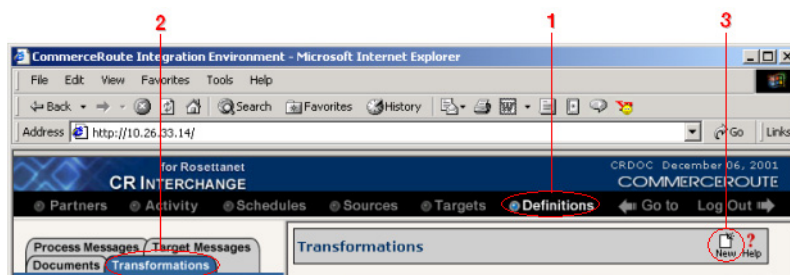


Figure 13-52. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- 4 Enter an appropriate name for your new transformation in the **Transformation Name** field.
- 5 Select “RosettaNet” from the **Source** drop-down menu and “Text” from the **Target** drop-down menu.
- 6 Click the **Next** button in the toolbar to continue.

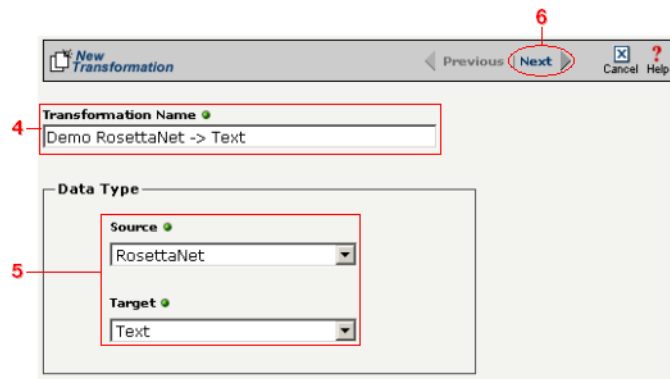



Figure 13-53. Give your new transformation definition an appropriate name, then choose “RosettaNet” for your Source and “Text” for your Target.

 **Tip:** for more information about RosettaNet trading partners, PIPs, and PIAs, see Chapter 3, Chapter 4, and Chapter 5, respectively, in the *Public Processes Guide*.

Select Source Information (RosettaNet)

- 1 In the next screen of the Transformation Wizard, select the RosettaNet trading partner definition that you want to use for this transformation from the **Trading Partner** drop-down menu.
- 2 Select which trading partner's PIP you want to use from the **PIP** drop-down menu.
- 3 Select which PIA in the previously selected PIP you want to use from the **PIA** drop-down menu.
- 4 Compare your work to the figure below, then click the **Next** button to continue.

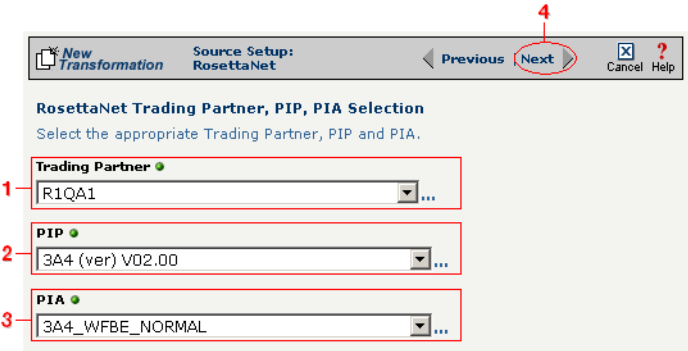

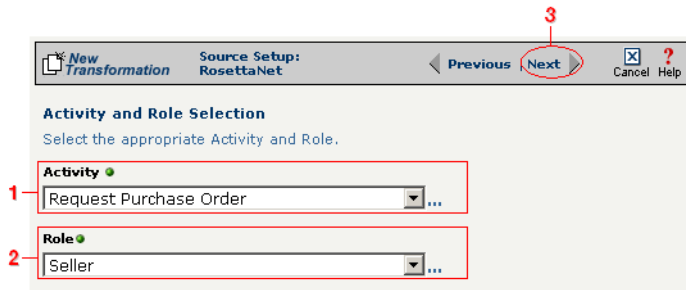


Figure 13-54. Use this screen to select the trading partner, PIP, and finally PIA that you want to use as the source for this transformation.


 **Tip:** for more information about RosettaNet trading partners, PIPs, and PIAs, see “How to Configure Roles and Services” on page 5-22 in the *Public Processes Guide*.

- 1 In the next screen of the Transformation Wizard, select which activity is appropriate for this transformation from the **Activity** drop-down menu.
- 2 Select the appropriate role this source will play from the **Role** drop-down menu.
- 3 Compare your work to the figure below, then click the **Next** button to continue.



The screenshot shows the 'Source Setup: RosettaNet' dialog box. The title bar includes 'New Transformation' and 'Source Setup: RosettaNet'. The main area is titled 'Activity and Role Selection' with the instruction 'Select the appropriate Activity and Role.' There are two dropdown menus: 'Activity' with 'Request Purchase Order' selected (labeled 1) and 'Role' with 'Seller' selected (labeled 2). The 'Next' button is circled in red and labeled 3. Other buttons include 'Previous', 'Cancel', and 'Help'.

Figure 13-55. Specify the source RosettaNet’s activity and role.

 **Tip:** for more information about document definitions, see Chapter 9, “Creating Document Definitions.”

Select Target Information (Text)

- 1 In the next screen of the Transformation Wizard, select the document definition that you want to hold the transformed text from the **Select a Document** drop-down menu.
- 2 Compare your definition to that shown in the figure below, then click **Save** to save your work and exit out of the Transformation Wizard.

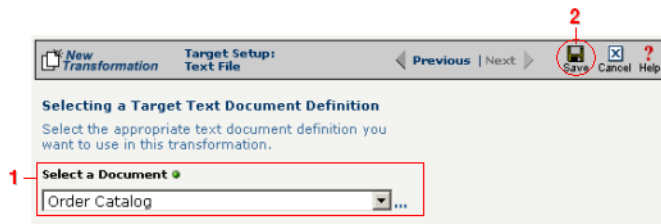



Figure 13-56. Select the document definition you want to use as your target.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for instructions on mapping your new transformation.


How to Transform from a Text File to RosettaNet

 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from a text file to RosettaNet.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See “How to Create an FTP Source Definition” on page 7-8 if your source text file will be stored on an FTP server.
 - b. See “How to Create a File Share Source Definition” on page 7-5 if your source text file will be stored on a network shared drive (UNC).
 - c. See “How to Create a File Share Source Definition” on page 7-5 if your source text file will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Source Definition” on page 7-13 if your source text file will be stored on an SCP server.
- ❸ Create Your Target Definition
 - a. See Chapter 3, “RosettaNet Trading Partner Definitions,” in the *Public Processes Guide* if you haven’t already defined your RosettaNet trading partner.
 - b. See Chapter 4, “RosettaNet Partner Interface Processes,” in the *Public Processes Guide* if you haven’t already added the appropriate PIP to your RosettaNet trading partner.
 - c. See Chapter 5, “Partner Interface Agreements,” in the *Public Processes Guide* if you haven’t already defined the appropriate PIA within your trading partner’s PIP.
- ❹ Create Your Source Document Definition (see Chapter 9 for details)
- ❺ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❻ Map the Source and Target Fields (see Chapter 17 for details)
- ❼ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

 **Note:** Make sure you've completed steps 1-4 above before attempting to define your transformation.

Use the Transformation Wizard to Build Your Transformation

Follow these steps to transform information from a text file to an XML document.

- 1 Click the **Definitions** button in the navigation bar.
- 2 Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- 3 Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

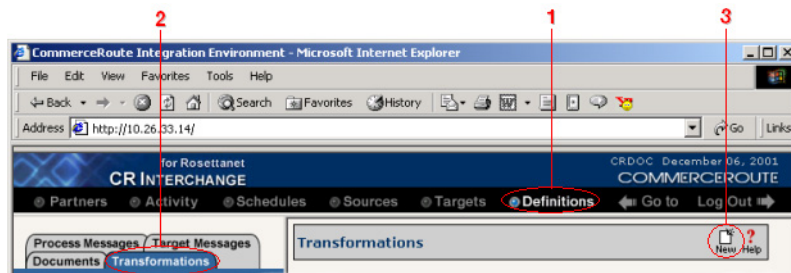


Figure 13-57. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- 4 Enter an appropriate name for your new transformation in the **Transformation Name** field.
- 5 Select “Text” from the **Source** drop-down menu and “RosettaNet” from the **Target** drop-down menu.
- 6 Click the **Next** button in the toolbar to continue.

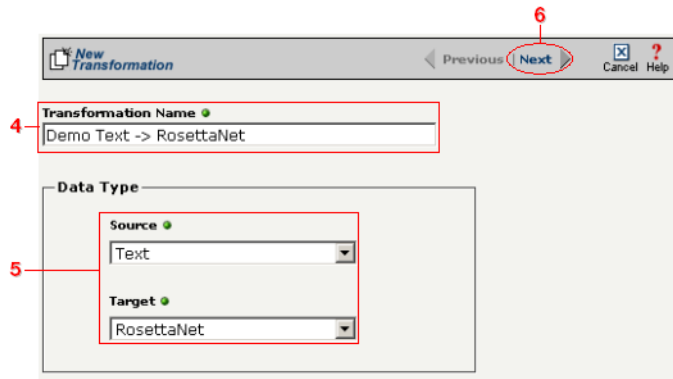




Figure 13-58. Give your new transformation definition an appropriate name, then choose “Text” for your Source and “RosettaNet” for your Target.

 **Tip:** for more information about document definitions, see Chapter 9, “Creating Document Definitions.”

 **Tip:** DIFF is only available for complex text files. For more information about DIFF and optimization, see “Optimization Options (DIFF)” on page 10-5.

Select Source Information (Text)

- 1 In the next screen of the Transformation Wizard, select the document you want to use as a source from the **Text Document Definition** drop-down menu.
- 2 Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

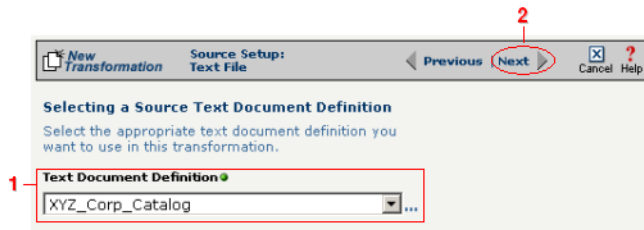


Figure 13-59. Choose which document definition you want to use as your source document.

If the text file you chose for your source is a complex text type, an additional screen appears that lets you set your source to take advantage of an operation’s DIFF function. If you want this transformation to be optimized by filtering out redundant data, select the field(s) that you want to use for filtering in this screen.

- 1 Click the checkbox that corresponds to the appropriate key field name.
- 2 Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

New Transformation Source Setup: Text File Previous **Next** Cancel Help

DIFF Optimization
(optional) Select the fields that will be used for optimization purposes.

Key Field Name	DIFF (optional)
VendorName	<input type="checkbox"/>
VendorID	<input type="checkbox"/>
OrderID	<input checked="" type="checkbox"/>
Date	<input type="checkbox"/>
BookID	<input type="checkbox"/>

Figure 13-60. If your text file is a complex file and you need to set a field to act as an optimization filter using DIFF functionality, select the appropriate field in this screen.

Tip: for more information about RosettaNet trading partners, PIPs, and PIAs, see Chapter 3, Chapter 4, and Chapter 5, respectively, in the *Public Processes Guide*.

Select Target Information (RosettaNet)

- 1 In the next screen of the Transformation Wizard, select the RosettaNet trading partner definition that you want to use for this transformation from the **Trading Partner** drop-down menu.
- 2 Select which trading partner's PIP you want to use from the **PIP** drop-down menu.
- 3 Select which PIA in the previously selected PIP you want to use from the **PIA** drop-down menu.
- 4 Compare your work to the figure below, then click the **Next** button to continue.

The screenshot shows a software window titled "New Transformation" with a sub-header "Target Setup: RosettaNet". At the top right are buttons for "Previous", "Next", "Cancel", and "Help". The "Next" button is circled in red with a red number 4 above it. The main area is titled "RosettaNet Trading Partner, PIP, PIA Selection" with the instruction "Select the appropriate Trading Partner, PIP and PIA." Below this are three dropdown menus, each with a red number to its left: 1. "Trading Partner" with "CRDOC" selected. 2. "PIP" with "3A4 (ver) V02.00" selected. 3. "PIA" with "R1DEV Exchange" selected.

Figure 13-5 Use this screen to select the trading partner, PIP, and finally PIA that you want to use as the target for this transformation.

Tip: for more information about RosettaNet trading partners, PIPs, and PIAs, see “How to Configure Roles and Services” on page 5-22 in the *Public Processes Guide*.

- ❶ In the next screen of the Transformation Wizard, select which activity is appropriate for this transformation from the **Activity** drop-down menu.
- ❷ Select the appropriate role this source will play from the **Role** drop-down menu.
- ❸ Compare your definition to that shown in the figure below, then click **Save** to save your work and exit out of the Transformation Wizard.

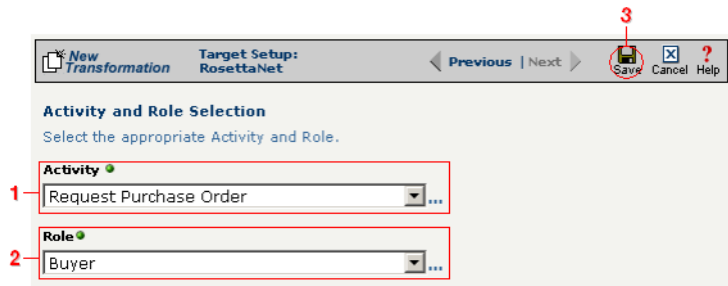



Figure 13-6 Specify the target RosettaNet’s activity and role.

What’s Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for instructions on mapping your new transformation.


How to Transform from RosettaNet to an XML Document

 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from a text file to an XML document.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See Chapter 3, “RosettaNet Trading Partner Definitions,” in the *Public Processes Guide* if you haven’t already defined your RosettaNet trading partner.
 - b. See Chapter 4, “RosettaNet Partner Interface Processes,” in the *Public Processes Guide* if you haven’t already added the appropriate PIP to your RosettaNet trading partner.
 - c. See Chapter 5, “Partner Interface Agreements,” in the *Public Processes Guide* if you haven’t already defined the appropriate PIA within your trading partner’s PIP.
- ❸ Create Your Target Definition
 - a. See “How to Create an FTP Target Definition” on page 8-10 if your target XML document will be stored on an FTP server.
 - b. See “How to Create a File Share Target Definition” on page 8-7 if your target XML document will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Target Definition” on page 8-14 if your target XML document will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Target Definition” on page 8-20 if your target XML document will be stored on an SCP server.
- ❹ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❺ Map the Source and Target Fields (see Chapter 17 for details)
- ❻ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

 **Note:** Make sure you've completed steps 1-3 above before attempting to define your transformation.

Use the Transformation Wizard to Build Your Transformation

Follow these steps to transform information from a text file to an XML document.

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

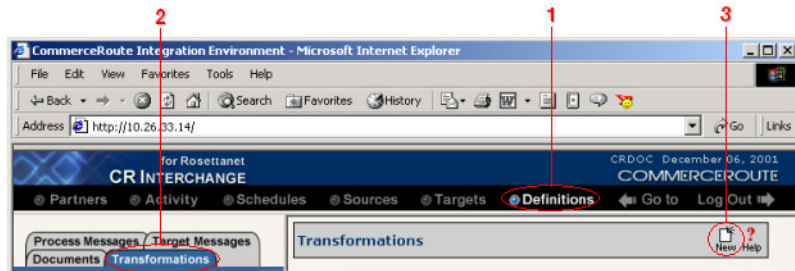


Figure 13-61. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- ❹ Enter an appropriate name for your new transformation in the **Transformation Name** field.
- ❺ Select “RosettaNet” from the **Source** drop-down menu and “XML” from the **Target** drop-down menu.
- ❻ Click the **Next** button in the toolbar to continue.

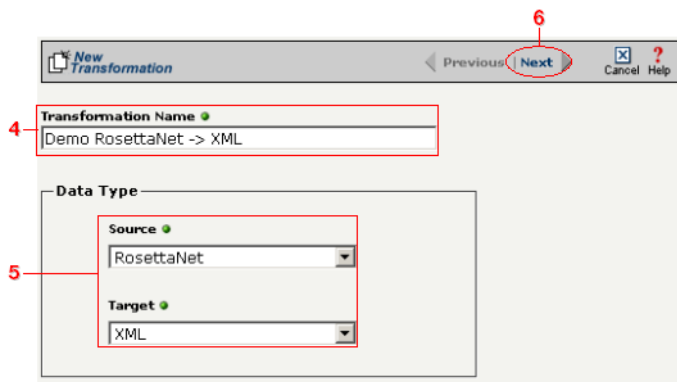


Figure 13-62. Give your new transformation definition an appropriate name, then choose “RosettaNet” for your Source and “XML” for your Target.


Tip: for more information about RosettaNet trading partners, PIPs, and PIAs, see Chapter 3, Chapter 4, and Chapter 5, respectively, in the *Public Processes Guide*.

Select Source Information (RosettaNet)

- ❶ In the next screen of the Transformation Wizard, select the RosettaNet trading partner definition that you want to use for this transformation from the **Trading Partner** drop-down menu.
- ❷ Select which trading partner's PIP you want to use from the **PIP** drop-down menu.
- ❸ Select which PIA in the previously selected PIP you want to use from the **PIA** drop-down menu.
- ❹ Compare your work to the figure below, then click the **Next** button to continue.

The screenshot shows a dialog box titled "RosettaNet Trading Partner, PIP, PIA Selection". The subtitle is "Select the appropriate Trading Partner, PIP and PIA." There are three dropdown menus: "Trading Partner" with "R1QA1" selected, "PIP" with "3A4 (ver) V02.00" selected, and "PIA" with "3A4_WFBE_NORMAL" selected. Red numbers 1, 2, and 3 are placed to the left of each dropdown menu. In the top right corner, there are buttons for "Previous", "Next", "Cancel", and "Help". A red number 4 is placed above the "Next" button, which is circled in red.

Figure 13-63. Use this screen to select the trading partner, PIP, and finally PIA that you want to use as the source for this transformation.

 **Tip:** for more information about RosettaNet trading partners, PIPs, and PIAs, see “How to Configure Roles and Services” on page 5-22 in the *Public Processes Guide*.

- ❶ In the next screen of the Transformation Wizard, select which activity is appropriate for this transformation from the **Activity** drop-down menu.
- ❷ Select the appropriate role this source will play from the **Role** drop-down menu.
- ❸ Compare your work to the figure below, then click the **Next** button to continue.

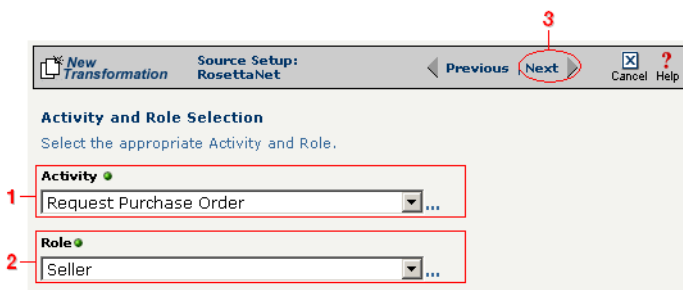


Figure 13-64. Specify the source RosettaNet’s activity and role.

Tip: for more information about DTD files, see “What’s a DTD File?” on page 11-42 in the *Syncx Integration Appliance Reference Guide*.

Select Target Information (XML)


You have two scenarios for loading your XML document. Follow the option that describes where your XML document's DTD file is located:

Option 1: You are using an XML document whose definition is already loaded into the appliance

- ❶ Click the **Select an XML DTD** radio button.
- ❷ Select the appropriate XML folder from the drop-down list.
- ❸ Choose the appropriate DTD file from the scrollable list below the drop-down list.
- ❹ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.
- ❺ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

The screenshot shows the 'New Transformation' dialog box with the 'Source Setup: XML' tab. The 'Select an XML DTD' radio button is selected. Below it, a dropdown menu shows 'Custom' selected, and a list below it shows 'PurchaseOrder.dtd' selected. The 'Next' button in the toolbar is highlighted with a red circle and a red number 5. A red number 1 points to the 'Select an XML DTD' radio button. A red number 2 points to the 'Custom' dropdown. A red number 3 points to the 'PurchaseOrder.dtd' list item. A red number 4 points to the 'Specify the root name: (Optional)' text field.

Figure 13-65. Click the **Select an XML DTD** radio button if your XML document definition has already been loaded into the system.

 **Note:** Skip these steps if you chose to follow Option 1 above.

Option 2: You need to use an XML document whose definition has not yet been loaded into the appliance

- ❶ Choose the **Upload an XML DTD** radio button.
- ❷ Click **Browse** and navigate to the location of your DTD file that you want to add to the appliance.
- ❸ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.
- ❹ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

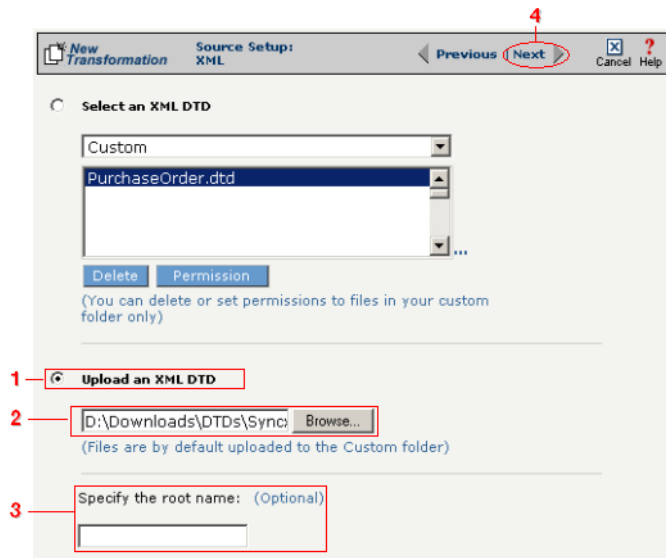


Figure 13-66. Click the **Upload an XML DTD** radio button if you need to copy a new DTD to the Syncx appliance.

Select Target XML DTD Options

You have three choices for where you will copy your DTD file. Click on the option that describes where your XML document's DTD file should be stored:

Option 1: Copy the DTD file to the same folder as your XML file

- ❶ Select the **Copy DTD file to folder where...** radio button.
- ❷ Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

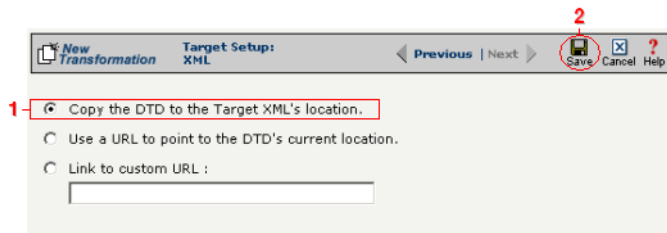


Figure 13-67. Click the **Copy DTD file to folder where...** radio button if you want to copy your DTD to the same folder as your XML document.

Option 2: Make the DTD file's location appear as the current URL in the XML document's header

- ❶ Select the **Use a URL to point to the DTD's Current Location** radio button.
- ❷ Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

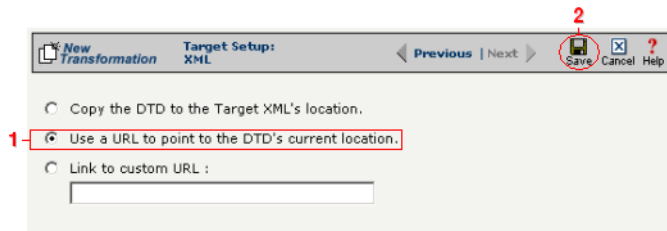




Figure 13-68. If you want to make your DTD file's location appear as the current URL in the XML document's header, click the **Link to Current URL** radio button.

 **Note:** Skip these steps if you chose to follow Option 1 above or Option 3 below.

 **Note:** Skip these steps if you chose to follow Option 1 or 2 above.

Option 3: Make the DTD file's location appear as a custom URL in the XML document's header

- ❶ Select the **Link to Custom URL** radio button and enter the custom URL in the corresponding field.
- ❷ Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

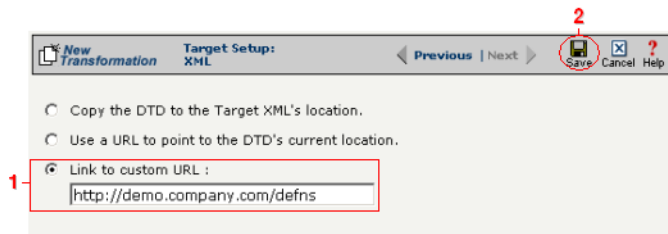



Figure 13-69. Click the **Link to Custom URL** radio button and enter the new URL in the corresponding field if you want to make your DTD file's location appear as a custom URL in the XML document's header.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for instructions on mapping your new transformation.


How to Transform from an XML Document to RosettaNet

 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from an XML document to a text file.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See “How to Create an FTP Source Definition” on page 7-8 if your source XML document will be stored on an FTP server.
 - b. See “How to Create a File Share Source Definition” on page 7-5 if your source XML document will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Source Definition” on page 7-11 if your source XML document will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Source Definition” on page 7-13 if your source XML document will be stored on an SCP server.
- ❸ Create Your Target Definition
 - a. See Chapter 3, “RosettaNet Trading Partner Definitions,” in the *Public Processes Guide* if you haven’t already defined your RosettaNet trading partner.
 - b. See Chapter 4, “RosettaNet Partner Interface Processes,” in the *Public Processes Guide* if you haven’t already added the appropriate PIP to your RosettaNet trading partner.
 - c. See Chapter 5, “Partner Interface Agreements,” in the *Public Processes Guide* if you haven’t already defined the appropriate PIA within your trading partner’s PIP.
- ❹ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❺ Map the Source and Target Fields (see Chapter 17 for details)
- ❻ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

 **Note:** Make sure you've completed steps 1-3 above before attempting to define your transformation.

Use the Transformation Wizard to Build Your Transformation

Follow these steps to transform information from an XML document to a text file.

- 1 Click the **Definitions** button in the navigation bar.
- 2 Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- 3 Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

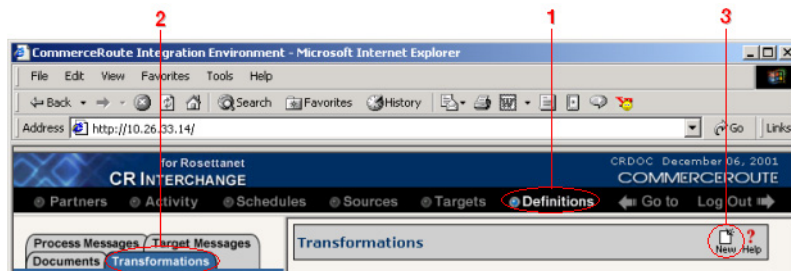


Figure 13-70. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- 4 Enter an appropriate name for your new transformation in the **Transformation Name** field.
- 5 Select “XML” from the **Source** drop-down menu and “RosettaNet” from the **Target** drop-down menu.
- 6 Click the **Next** button in the toolbar to continue.

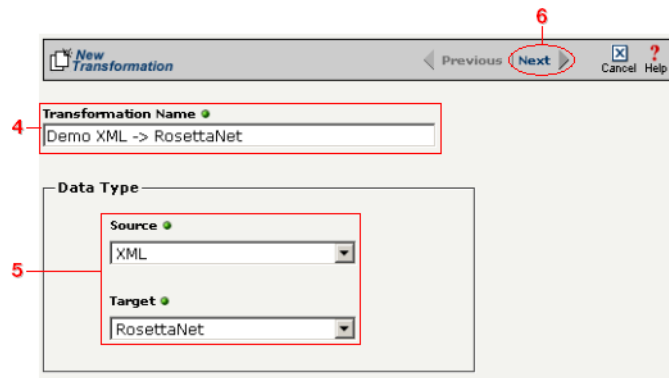



Figure 13-71. Give your new transformation definition an appropriate name, then choose “XML” for your Source and “RosettaNet” for your Target.

 **Tip:** for more information about DTD files, see “What’s a DTD File?” on page 11-42 in the *Syncx Integration Appliance Reference Guide*.


Select Source Information (XML)

You have two choices for loading your XML document. Follow the option that describes where your XML document's DTD file is located:

Option 1: You are using an XML document whose definition is already loaded into the appliance

- ❶ Click the **Select an XML DTD** radio button.
- ❷ Select the appropriate XML folder from the drop-down list.
- ❸ Choose the appropriate DTD file from the scrollable list below the drop-down list.
- ❹ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.
- ❺ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

Figure 13-72. Click the **Select an XML DTD** radio button if your XML document definition has already been loaded into the system.

 **Note:** Skip these steps if you chose to follow Option 1 above.

Option 2: You need to use an XML document whose definition has not yet been loaded into the appliance

- ❶ Choose the **Upload an XML DTD** radio button.
- ❷ Click **Browse** and navigate to the location of your DTD file that you want to add to the appliance.
- ❸ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.
- ❹ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.

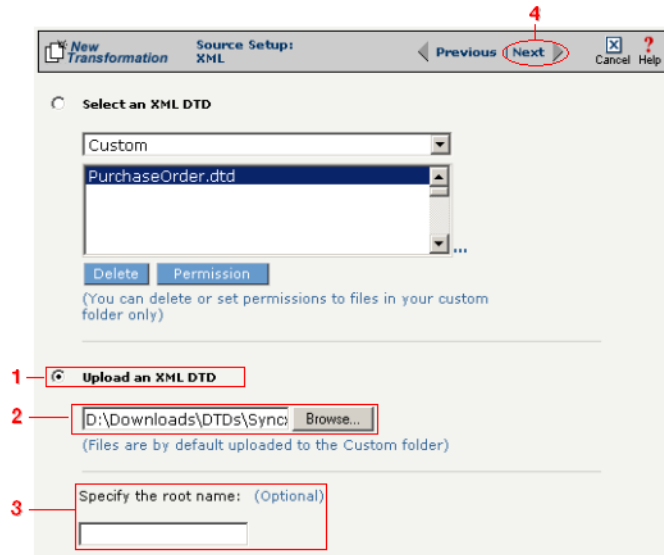



Figure 13-73. Click the **Upload an XML DTD** radio button if you need to copy a new DTD to the Syncx appliance.

 **Tip:** for more information about RosettaNet trading partners, PIPs, and PIAs, see Chapter 3, Chapter 4, and Chapter 5, respectively, in the *Public Processes Guide*.

Select Target Information (RosettaNet)

- 1 In the next screen of the Transformation Wizard, select the RosettaNet trading partner definition that you want to use for this transformation from the **Trading Partner** drop-down menu.
- 2 Select which trading partner’s PIP you want to use from the **PIP** drop-down menu.
- 3 Select which PIA in the previously selected PIP you want to use from the **PIA** drop-down menu.
- 4 Compare your work to the figure below, then click the **Next** button to continue.

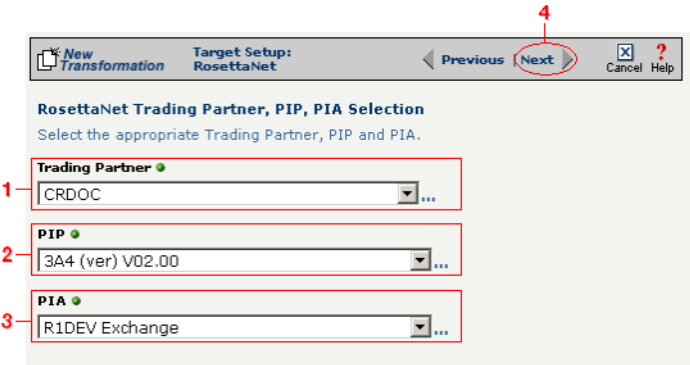


Figure 13-7 Use this screen to select the trading partner, PIP, and finally PIA that you want to use as the target for this transformation.

Tip: for more information about RosettaNet trading partners, PIPs, and PIAs, see “How to Configure Roles and Services” on page 5-22 in the *Public Processes Guide*.

- ❶ In the next screen of the Transformation Wizard, select which activity is appropriate for this transformation from the **Activity** drop-down menu.
- ❷ Select the appropriate role this source will play from the **Role** drop-down menu.
- ❸ Compare your definition to that shown in the figure below, then click **Save** to save your work and exit out of the Transformation Wizard.

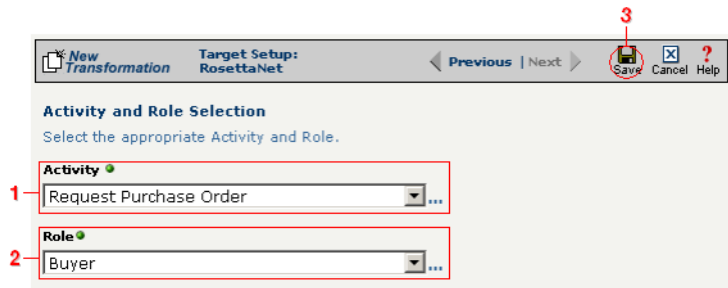


Figure 13-8 Specify the target RosettaNet’s activity and role.

What’s Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for instructions on mapping your new transformation.



Chapter 14

Transforming SAP

Overview



Note: SAP is an option available only in some Syncx 6200 Series Appliance Appliances. Your Appliance may or may not display this functionality.



Tip: For more information about how Syncx 6200 Series Appliance works with SAP, see “About SAP” on page 11-34 in the *Reference Guide*.

This chapter describes how to transform information from all supported data types to an SAP environment. The complete list of SAP transformations is shown below, followed by step-by-step instructions for each transformation combination.

Appliance SAP Transformations

- Database to SAP
- EDI to SAP
- RosettaNet to SAP
- Text to SAP
- XML to SAP

How to Transform from a Database to an SAP Environment

Tip: Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from a database to an SAP environment.

- 1 Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- 2 Create Your Source Definition (see “How to Create a Database Source Definition” on page 7-2 for details)
- 3 Create Your Target Definition (see “How to Create an SAP Target Definition” on page 8-17 for details)
- 4 Use the Transformation Wizard to Build Your Transformation (see below for details)
- 5 Map the Source and Target Fields (see Chapter 17 for details)
- 6 Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

Use the Transformation Wizard to Build Your Transformation

Note: Make sure you've completed steps 1-3 above before attempting to define your transformation.

- 1 Click the **Definitions** button in the navigation bar.
- 2 Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- 3 Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

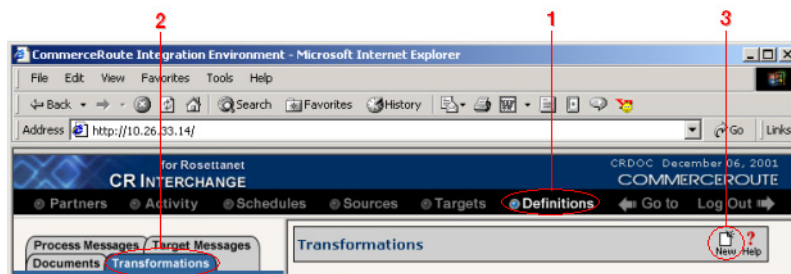


Figure 14-1. To launch the Transformation Wizard, click on the **Transformations** tab in the

Definitions screen and click the **New** button in the toolbar.

- ④ Enter an appropriate name for your new transformation in the **Transformation Name** field.
- ⑤ Select “Database” from the **Source** drop-down menu and “SAP” from the **Target** drop-down menu.
- ⑥ Click the **Next** button in the toolbar to continue.

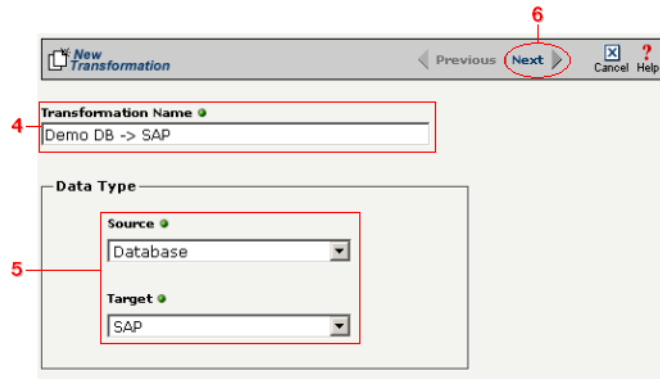


Figure 14-2. Give your new transformation definition an appropriate name, then choose **Database** for your Source and **SAP** for your Target.

Select Source Information (Database)

- ❶ In the next screen of the Transformation Wizard, select the name of the Source that holds the database information you want to transform from the **Data Source** drop-down menu.
- ❷ Choose how you will get information from your database. You have two options:

Option 1: Use the Transformation Wizard to help you access your database without typing SQL

- a. Select the appropriate database definition from the **Database Source** drop-down menu.
- b. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

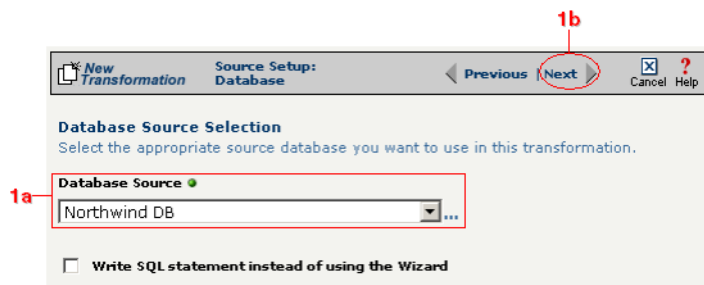


Figure 14-3. Choose the appropriate database from the **Database Source** drop-down menu if you want the Transformation Wizard to help you access your database without having to type any SQL.

Within Option 1, you need to specify how you will access information from your source database. Choose one of two options:

Option 1a: Only a single table in the source database will be accessed.

1. Enter part or all of the table's name. If you want to view all the database's items, leave the field blank.
2. Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
3. Click the **Search** button to view the list of items that match your name search.

4. Select the appropriate item in the **Available Item(s)** field, then click the right arrow button.
5. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

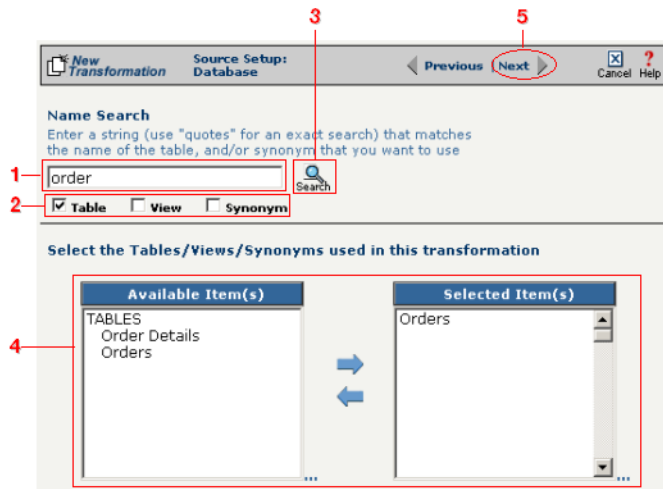


Figure 14-4. Select the single table you want to access from the **Available Tables** field.

The next screen is where you specify how many times you will use the single table (or view/synonym) you selected for your source.

1. (Optional) If you will use this table more than once, change the **Times Used** field to the appropriate number.
2. Compare your work to below, then click **Next** to continue.

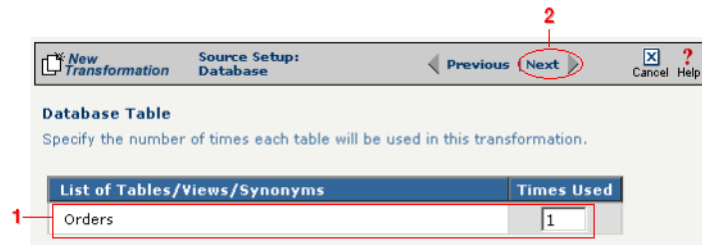


Figure 14-5. Use this screen to specify how many times the source table will be used.

The next screen lets you add a WHERE clause to filter your query:

1. Enter an appropriate WHERE SQL statement in the Where Clause.
2. (Optional) If you want to review your database table's fields, select the **View Field List** checkbox. The list will appear in a table at the bottom of the screen.
3. Click the **Next** button in the toolbar to continue.

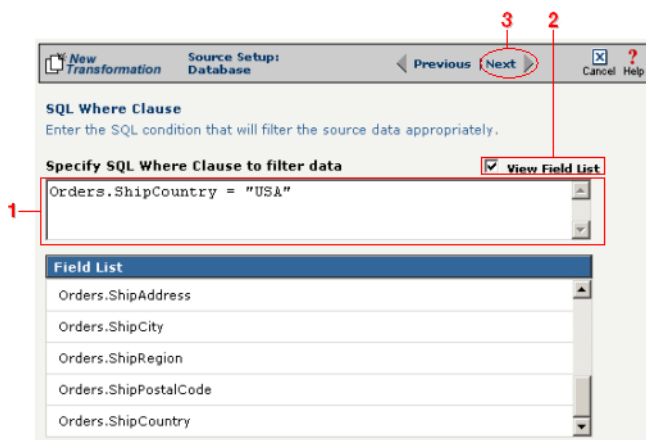

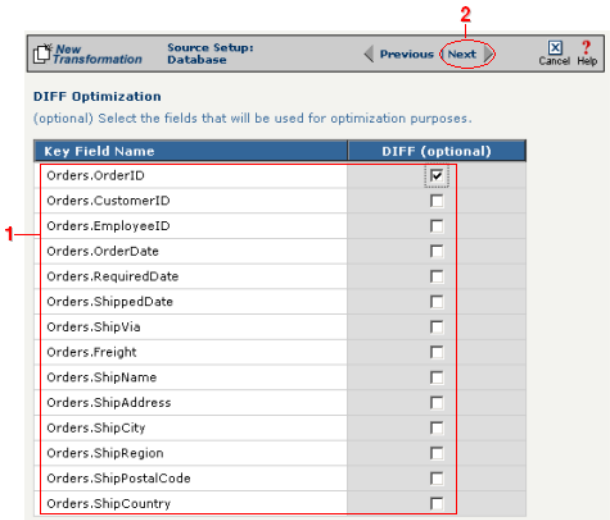


Figure 14-6. This optional screen lets you add a WHERE SQL clause to filter your information.

 **Tip:** For more information about DIFF and optimization, see “Optimization Options (DIFF)” on page 10-5.

This next screen lets you set your source to take advantage of an operation’s DIFF function. If you want this source information to be optimized by filtering out redundant data, select the field(s) that you want to use for filtering in this screen.

1. Click the checkbox that corresponds to the appropriate key field name.
2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.



Key Field Name	DIFF (optional)
Orders.OrderID	<input checked="" type="checkbox"/>
Orders.CustomerID	<input type="checkbox"/>
Orders.EmployeeID	<input type="checkbox"/>
Orders.OrderDate	<input type="checkbox"/>
Orders.RequiredDate	<input type="checkbox"/>
Orders.ShippedDate	<input type="checkbox"/>
Orders.ShipVia	<input type="checkbox"/>
Orders.Freight	<input type="checkbox"/>
Orders.ShipName	<input type="checkbox"/>
Orders.ShipAddress	<input type="checkbox"/>
Orders.ShipCity	<input type="checkbox"/>
Orders.ShipRegion	<input type="checkbox"/>
Orders.ShipPostalCode	<input type="checkbox"/>
Orders.ShipCountry	<input type="checkbox"/>

Figure 14-7. If you need to set a database field to act as an optimization filter using DIFF functionality, select the appropriate field in this screen.

Note: You won't see this screen if your source database table has no primary key.

Tip: for more information about the Update Field Value, see "Update Field Value" on page 11-6 in the *Syncx Integration Appliance Reference Guide*.

When your source database table has at least one primary key, this next screen gives you the option to select a database field as an update key.


1. (Optional) Use the **Update Field Value** field to update the value of the fields that match your filter criteria.
- ! **Caution!** This value will replace the source element's current value with whatever you enter in this field.
2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

Update Field Name	Update Field Value
Orders.OrderID	Primary Key
Orders.CustomerID	
Orders.EmployeeID	
Orders.OrderDate	
Orders.RequiredDate	
Orders.ShippedDate	
Orders.ShipVia	
Orders.Freight	
Orders.ShipName	
Orders.ShipAddress	
Orders.ShipCity	
Orders.ShipRegion	
Orders.ShipPostalCode	
Orders.ShipCountry	

Figure 14-8. If you need to set a database field to act as an update key, select the appropriate field in this screen.

You have finished defining your Option 1a source (using the Transformation Wizard to specify a single source table).

Option 1b: More than one table in the source database will be accessed.

 **Note:** Skip these steps if you chose to follow Option 1a above.

1. Enter part or all of the tables names. If you want to view all the database's items, leave the field blank.
2. Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
3. Click the **Search** button to view the list of items that match your name search.
4. Select the appropriate items in the **Available Item(s)** field, then click the right arrow button.
5. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

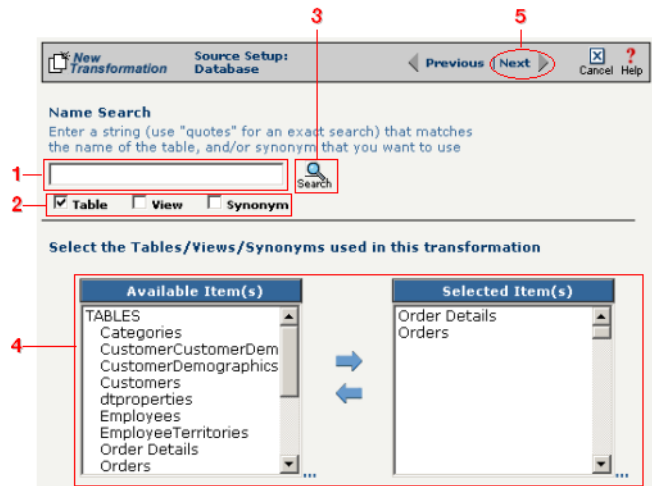



Figure 14-9. Select the appropriate tables you want to access from the **Available Item(s)** field.

 **Note:** Skip these steps if you chose to follow Option 1a.

The next screen is where you specify how many times you will use each table (or view/synonym) you selected for your source.

1. (Optional) If you will use each table more than once, change the **Times Used** field to the appropriate number.
2. Compare your work to below, then click **Next** to continue.

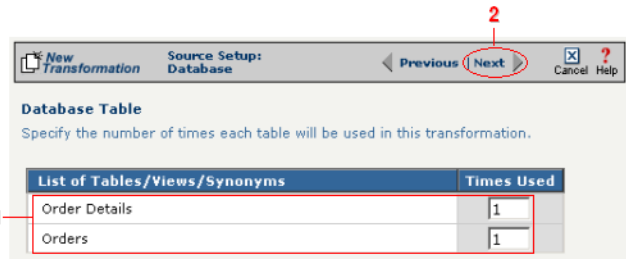



Figure 14-10. Use this screen in the Transformation Wizard to specify how many times each item will be used in the transformation.

 **Note:** Skip these steps if you chose to follow Option 1a.

Because you chose Option 1b (accessing more than one database table), you need to declare the tables' respective relationships:

1. Select the item in the **Parent** drop-down menu that you want to be the parent structure (i.e., at the top level of your data hierarchy).
2. Select the item in the **Child** drop-down menu that you want to be the child structure.
3. Select the appropriate database column in the **Parent Fields** window that will be used to reference the child table.
4. Select the appropriate database column in the **Child Fields** window that will be used to reference the parent table.
5. Click the **Add** button. This saves this parent-child relationship. You should see the new relationship appear in the **Parent – Child Field Relationships** table.
6. (Optional) If you have more child structures, click the **New** button and repeat the previous steps for each additional child.
7. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

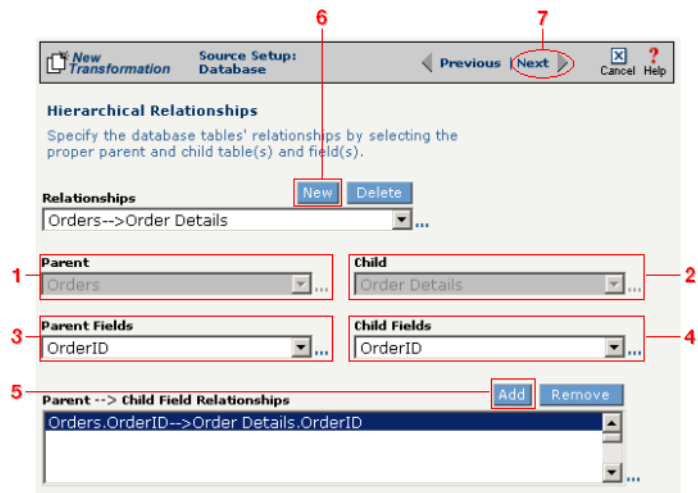



Figure 14-11. Use this screen in the Transformation Wizard to define the relationship between the different database tables.

 **Note:** Skip these steps if you chose to follow Option 1a.

In the **Nature of Data** screen, you need to indicate whether or not each child table's data must be present.

1. Select the appropriate radio button for each parent-child relationship:
 - a. Select **1 to N** if there will be at least 1 child to each parent entry.
 - b. Select **1** if there will always be a one-to-one parent-child relationship.
 - c. Select **0 to N** if there could be none, one, or more children for each parent.
 - d. Select **0 or 1** if there could be either no children or 1 child for each parent.
2. Compare your work to the figure below, then click **Next** to continue.

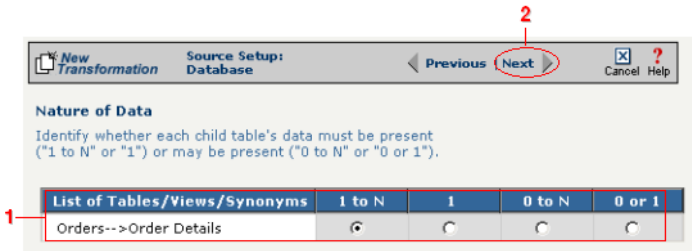



Figure 14-12. Use the Nature of Data screen to identify the number of child entries that are supported for each parent-child relationship.

 **Note:** Skip these steps if you chose to follow Option 1a.

The next screen lets you add a WHERE clause to filter your query:

1. Enter an appropriate WHERE SQL statement in the desired field's corresponding **Filter Condition** field.
2. (Optional) You can have the filtered output be sorted either ascending or descending by selecting the appropriate value from the **Sort** drop-down menu.
3. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

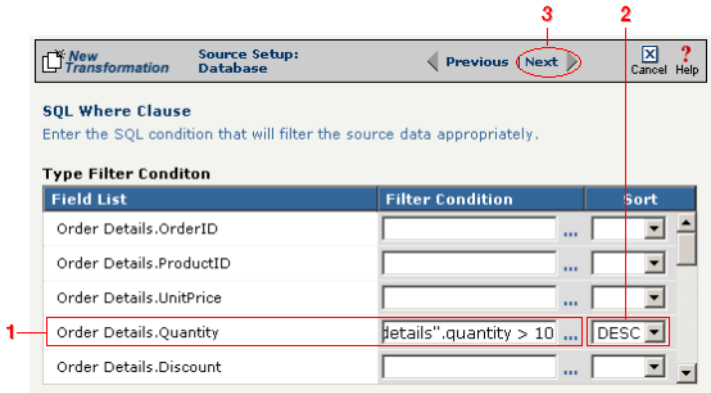



Figure 14-13. This optional screen lets you add a WHERE SQL clause to filter your information.

You have finished defining your Option 1b source (using the Transformation Wizard to specify a source with multiple tables).

 **Note:** Skip these steps if you chose to follow Option 1a or 1b above.

Option 2: You are familiar with SQL and want to enter your SQL query directly

1. Select the **Write SQL Statement** checkbox.
2. Enter your SQL query in the **SQL Statement** field.
3. (Optional) You can test the validity of your SQL statement by clicking the **Test SQL** button.
4. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

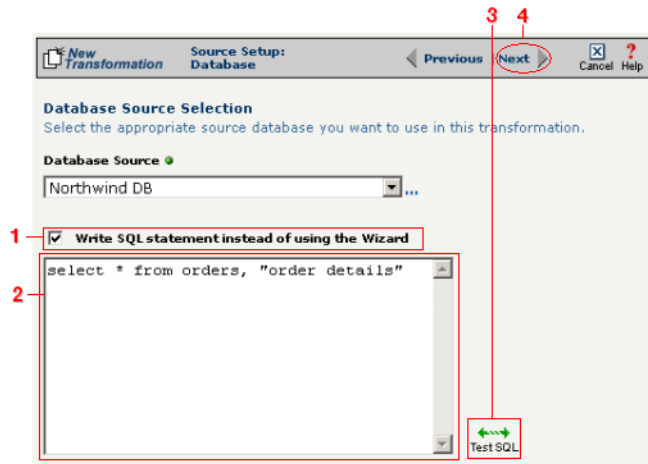




Figure 14-14. Click the **Write SQL Statement** checkbox if you are familiar with SQL and you want to type your statement directly into the **SQL Statement** field.

 **Note:** Skip these steps if you chose to follow Option 1a or 1b above.

 **Tip:** For more information about DIFF and optimization, see “Optimization Options (DIFF)” on page 10-5.

This next screen lets you set your source to take advantage of an operation’s DIFF function. If you want this source information to be optimized by filtering out redundant data, select the field(s) that you want to use for filtering in this screen.

1. Click the checkbox that corresponds to the appropriate key field name.
2. Compare your work to the figure shown below, then click the **Next** button to continue.

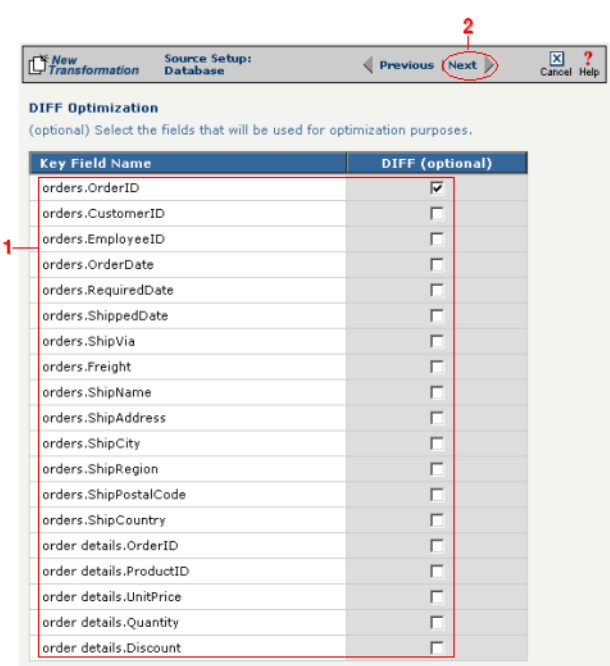


Figure 14-15. If you need to set a database field to act as an optimization filter using DIFF functionality, select the appropriate field in this screen.

You have finished defining your Option 2 source (directly entering the appropriate SQL statement).

Select Target Information (SAP)

Follow the steps below to configure your SAP target for transformation mapping:

- 1 Select the appropriate SAP target that you defined from the **SAP Target** drop-down list.
- 2 Click the **Next** button in the toolbar to continue.

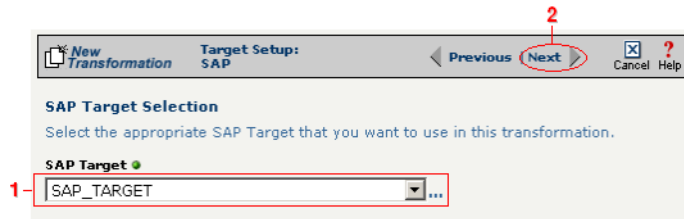


Figure 14-16. Choose the appropriate SAP target from the **SAP Target** drop-down list.

Tip: SAP-provided BAPI function names always start with the letters “BAPI”. You can also use the asterick (*) character as a wild card when searching for the function name.

Tip: If you are certain that the selected function performs a “commit” internally, performance can be improved by deselecting the checkbox.

Select RFC/BAPI Function

In this next screen, you need to select the appropriate RFC or BAPI function that should be used.

- ❶ Type in the complete name of the function, or enter any substring of the function name.
- ❷ Click the **Search** button to search the SAP environment for all formulas that match the name (or partial name) you entered. Note that this search may take several seconds.
- ❸ When the function search has completed, the **Select RFC/BAPI Function** drop-down menu appears, displaying all the functions that contain the string you entered in step 1 above. Select the appropriate function from the drop-down menu.
- ❹ (Optional) Select the **Commit Work** checkbox to ensure that a “commit” is performed on the SAP environment after the function has run. (We recommend leaving this selected, as it guarantees that a commit is performed, regardless of whether the function does this or not.)
- ❺ Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.


Figure 14-17. Use this screen to select the appropriate SAP RFC or BAPI function to run against your SAP environment.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for

instructions on mapping your new transformation.

How to Transform from an EDI Document to an SAP Environment


 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from an EDI document to an SAP environment.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See “How to Create an FTP Source Definition” on page 7-8 if your source EDI document will be stored on an FTP server.
 - b. See “How to Create a File Share Source Definition” on page 7-5 if your source EDI document will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Source Definition” on page 7-11 if your source EDI document will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Source Definition” on page 7-13 if your source EDI document will be stored on an SCP server.
- ❸ Create Your Target Definition (see “How to Create an SAP Target Definition” on page 8-17 for details)
- ❹ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❺ Map the Source and Target Fields (see Chapter 17 for details)
- ❻ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

Use the Transformation Wizard to Build Your Transformation

 **Note:** Make sure you’ve completed steps 1-3 above before attempting to define your transformation.

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

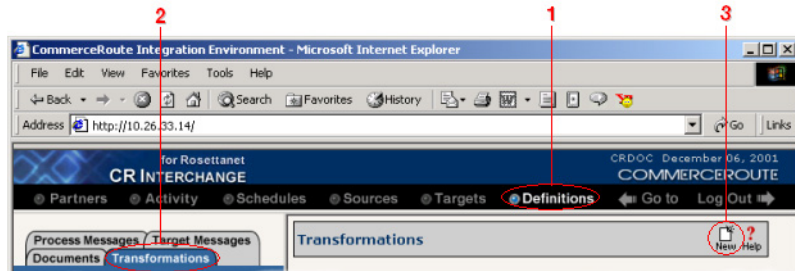


Figure 14-18. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- 4 Enter an appropriate name for your new transformation in the **Transformation Name** field.
- 5 Select “EDI” from the **Source** drop-down menu and “SAP” from the **Target** drop-down menu.
- 6 Click the **Next** button in the toolbar to continue.

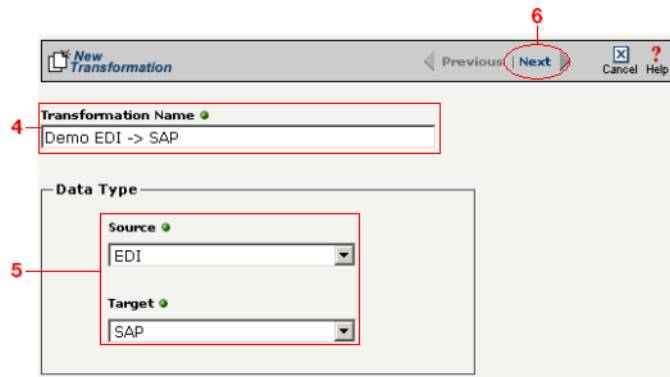


Figure 14-19. Give your new transformation definition an appropriate name, then choose **EDI Document** for your Source and **SAP** for your Target.

Tip: for more information about SEF files, see “What’s an SEF File?” on page 11-14 in the *Syncx Integration Appliance Reference Guide*.

Note: Skip these steps if you chose to follow Option 1 above.

Select Source Information (EDI)

You have two options for selecting the appropriate source EDI file. Follow the scenario that describes where your source EDI document's SEF file is located:

Option 1: You are using an EDI file whose definition is already loaded into the appliance

- 1 Click the **Select an existing SEF** radio button.
- 2 Select the appropriate EDI folder (that matches the EDI standard and version you want to use) from the drop-down list.
- 3 Choose the appropriate EDI document from the scrollable list below (e.g., 850 if you want to use the Purchase Order form).
- 4 Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

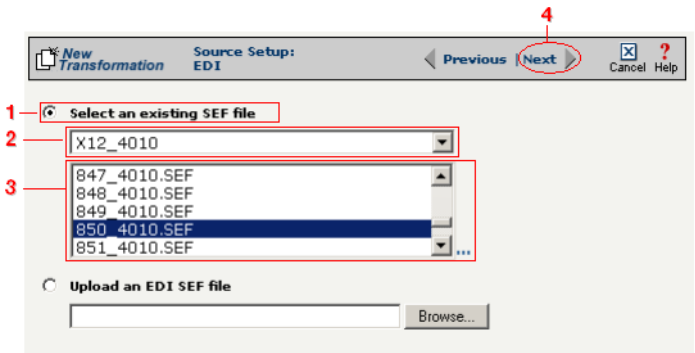


Figure 14-20. Click the **Select an existing SEF** radio button if your EDI document definition has already been loaded into the system.

Option 2: You need to use an EDI file whose definition has not yet been loaded into the appliance

- 1 Choose the **Upload an EDI SEF file** radio button.
- 2 Click **Browse** and navigate to and select the location of your EDI file whose definition (SEF file) you want to add to the appliance to load it into the associated field.
- 3 Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

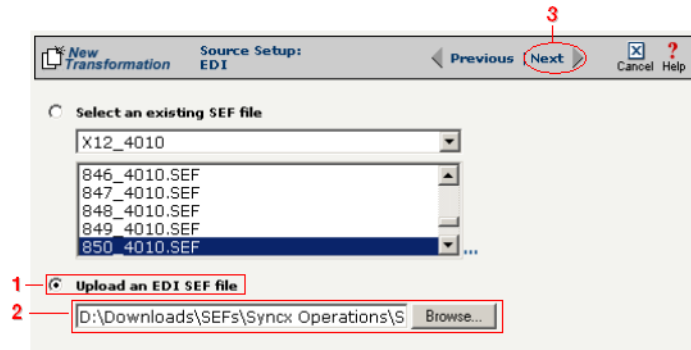



Figure 14-21. Click the **Upload an EDI SEF file** radio button if you need to copy a new EDI definition to the Syncx appliance.

(Optional) Select Source EDI Options

This screen is where you can set all the appropriate default values for your source EDI document. In most cases, you will leave the default settings as they are. You may optionally change them, however, if you want to change how the system will format the EDI information.

 **Tip:** See “CRLF Formatting” on page 11-16 in the *Syncx Integration Appliance Reference Guide* for more information on **CRLF Formatted**.

- ❶ Select the **Source documents have been formatted with CRLFs** checkbox if a text editor has wrapped your EDI document by inserting CRLF's (carriage return line feed characters).
- ❷ Enter a character in the **Data Segment Terminator** field that will define the end of a record in the EDI file.
- ❸ Enter a character in the **Data Element Terminator** field that will define the end of a field in the EDI file.
- ❹ Enter a character in the **Composite Data Element Terminator** field that will define the end of data types that are "compound" or composed of other data elements. For example, a data element of "date" could be composed of month, day, and year elements.
- ❺ Enter a value in the **Release Indicator** field. This tells the system to read a character as a character, not as a command.
- ❻ Use the Default buttons only if you want to reset your EDI options:
 - a. If you want to reset all the previous values back to their default X-12 settings, click **Reset X-12 Default**.
 - b. If you want to reset all the previous values back to their last default

settings, click **Reset Last Default**.

- 7 Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

The screenshot shows the 'New Transformation' dialog box with the 'Source Setup: EDI' tab selected. The 'EDI Options' section contains a checkbox labeled '1' for 'Source document has been formatted with CRLFs'. Below this is the 'Default Values' section, which includes a note: 'Specify which character(s) should be used for each control character. (For 'carriage return line feed', please enter 'CRLF')'. There are four text input fields: 'Data Segment Terminator' (labeled 2), 'Data Element Terminator' (labeled 3), 'Composite Data Element Terminator' (labeled 4), and 'Release Indicator' (labeled 5). At the bottom of the dialog are two buttons: 'Reset X12 Default' (labeled 6a) and 'Reset Last Saved' (labeled 6b). The top toolbar shows 'Previous', 'Next' (circled and labeled 7), 'Cancel', and 'Help'.

Figure 14-22. Use this screen if you need to change any of your source EDI document's default values.

Select Target Information (SAP)

Follow the steps below to configure your SAP target for transformation mapping:

- 1 Select the appropriate SAP target that you defined from the **SAP Target** drop-down list.
- 2 Click the **Next** button in the toolbar to continue.

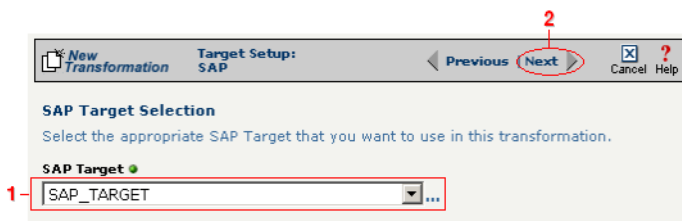




Figure 14-23. Choose the appropriate SAP target from the **SAP Target** drop-down list.

 **Tip:** SAP-provided BAPI function names always start with the letters “BAPI”. You can also use the asterick (*) character as a wild card when searching for the function name.

 **Tip:** If you are certain that the selected function performs a “commit” internally, performance can be improved by deselecting the checkbox.

Select RFC/BAPI Function

In this next screen, you need to select the appropriate RFC or BAPI function that should be used.

- 1 Type in the complete name of the function, or enter any substring of the function name.
- 2 Click the **Search** button to search the SAP environment for all formulas that match the name (or partial name) you entered. Note that this search may take several seconds.
- 3 When the function search has completed, the **Select RFC/BAPI Function** drop-down menu appears, displaying all the functions that contain the string you entered in step 1 above. Select the appropriate function from the drop-down menu.
- 4 (Optional) Select the **Commit Work** checkbox to ensure that a “commit” is performed on the SAP environment after the function has run. (We recommend leaving this selected, as it guarantees that a commit is performed, regardless of whether the function does this or not.)
- 5 Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

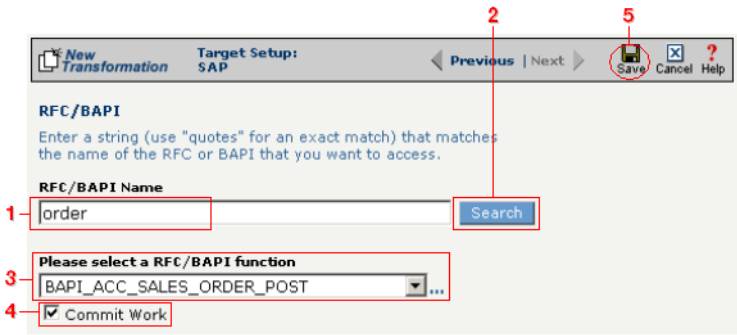


Figure 14-24. Use this screen to select the appropriate SAP RFC or BAPI function to run against your SAP environment.

What’s Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for

instructions on mapping your new transformation.

How to Transform from RosettaNet to an SAP Environment



Tip: Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from an XML document to an SAP environment.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See Chapter 3, “RosettaNet Trading Partner Definitions,” in the *Public Processes Guide* if you haven’t already defined your RosettaNet trading partner.
 - b. See Chapter 4, “RosettaNet Partner Interface Processes,” in the *Public Processes Guide* if you haven’t already added the appropriate PIP to your RosettaNet trading partner.
 - c. See Chapter 5, “Partner Interface Agreements,” in the *Public Processes Guide* if you haven’t already defined the appropriate PIA within your trading partner’s PIP.
- ❸ Create Your Target Definition (see “How to Create an SAP Target Definition” on page 8-17 for details)
- ❹ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❺ Map the Source and Target Fields (see Chapter 17 for details)
- ❻ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

Use the Transformation Wizard to Build Your Transformation

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).



Note: Make sure you’ve completed steps 1-3 above before attempting to define your transformation.

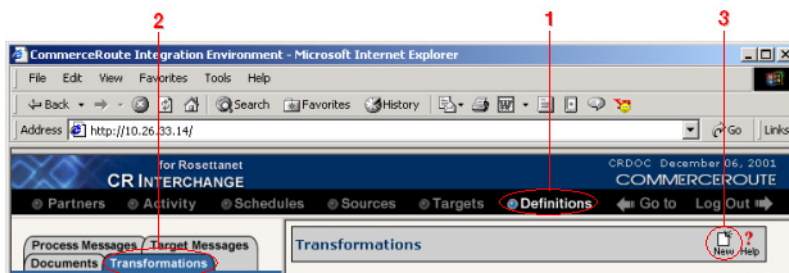


Figure 14-25. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- 4 Enter an appropriate name for your new transformation in the **Transformation Name** field.
- 5 Select “RosettaNet” from the **Source** drop-down menu and “SAP” from the **Target** drop-down menu.
- 6 Click the **Next** button in the toolbar to continue.

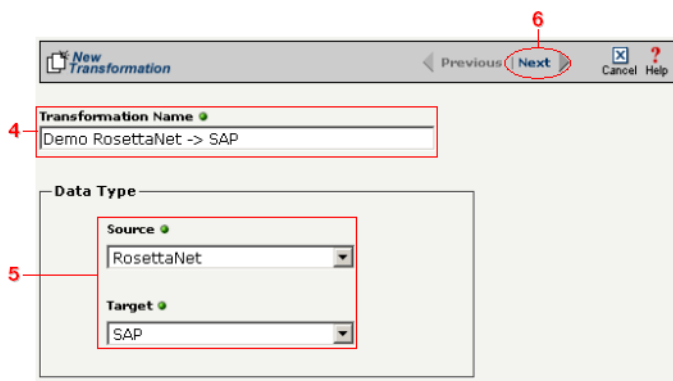

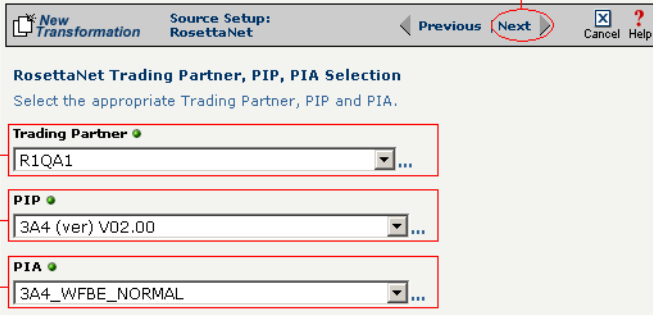


Figure 14-26. Give your new transformation definition an appropriate name, then choose “RosettaNet” for your Source and “SAP” for your Target.

 **Tip:** for more information about RosettaNet trading partners, PIPs, and PIAs, see Chapter 3, Chapter 4, and Chapter 5, respectively, in the *Public Processes Guide*.


Select Source Information (RosettaNet)

- 1 In the next screen of the Transformation Wizard, select the RosettaNet trading partner definition that you want to use for this transformation from the **Trading Partner** drop-down menu.
- 2 Select which trading partner's PIP you want to use from the **PIP** drop-down menu.
- 3 Select which PIA in the previously selected PIP you want to use from the **PIA** drop-down menu.
- 4 Compare your work to the figure below, then click the **Next** button to continue.



The screenshot shows a software window titled "New Transformation" with a subtitle "Source Setup: RosettaNet". It features a navigation bar with "Previous", "Next", "Cancel", and "Help" buttons. The main area is titled "RosettaNet Trading Partner, PIP, PIA Selection" and contains three dropdown menus. The first dropdown, labeled "Trading Partner", shows "R1QA1" and is marked with a red box and the number 1. The second dropdown, labeled "PIP", shows "3A4 (ver) V02.00" and is marked with a red box and the number 2. The third dropdown, labeled "PIA", shows "3A4_WFBE_NORMAL" and is marked with a red box and the number 3. The "Next" button in the top right corner is circled in red and marked with the number 4.

Figure 14-27. Use this screen to select the trading partner, PIP, and finally PIA that you want to use as the source for this transformation.

 **Tip:** for more information about RosettaNet trading partners, PIPs, and PIAs, see “How to Configure Roles and Services” on page 5-22 in the *Public Processes Guide*.

- 1 In the next screen of the Transformation Wizard, select which activity is appropriate for this transformation from the **Activity** drop-down menu.
- 2 Select the appropriate role this source will play from the **Role** drop-down menu.
- 3 Compare your work to the figure below, then click the **Next** button to continue.

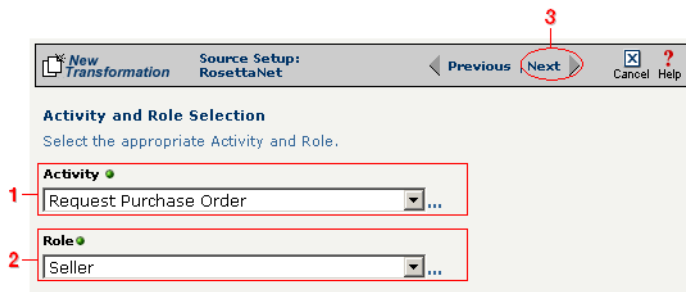


Figure 14-28. Specify the source RosettaNet’s activity and role.

Select Target Information (SAP)

Follow the steps below to configure your SAP target for transformation mapping:

- 1 Select the appropriate SAP target that you defined from the **SAP Target** drop-down list.
- 2 Click the **Next** button in the toolbar to continue.

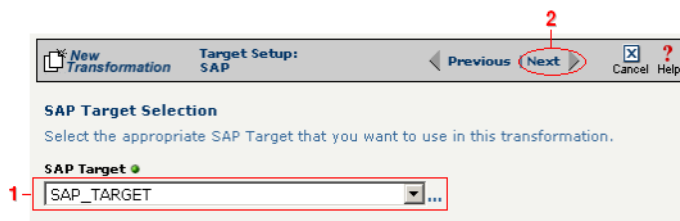




Figure 14-29. Choose the appropriate SAP target from the **SAP Target** drop-down list.

 **Tip:** SAP-provided BAPI function names always start with the letters “BAPI”. You can also use the asterick (*) character as a wild card when searching for the function name.

 **Tip:** If you are certain that the selected function performs a “commit” internally, performance can be improved by deselecting the checkbox.

Select RFC/BAPI Function

In this next screen, you need to select the appropriate RFC or BAPI function that should be used.

- ❶ Type in the complete name of the function, or enter any substring of the function name.
- ❷ Click the **Search** button to search the SAP environment for all formulas that match the name (or partial name) you entered. Note that this search may take several seconds.
- ❸ When the function search has completed, the **Select RFC/BAPI Function** drop-down menu appears, displaying all the functions that contain the string you entered in step 1 above. Select the appropriate function from the drop-down menu.
- ❹ (Optional) Select the **Commit Work** checkbox to ensure that a “commit” is performed on the SAP environment after the function has run. (We recommend leaving this selected, as it guarantees that a commit is performed, regardless of whether the function does this or not.)
- ❺ Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

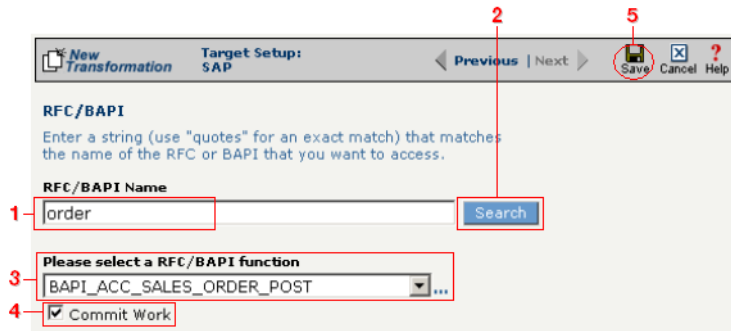



Figure 14-30. Use this screen to select the appropriate SAP RFC or BAPI function to run against your SAP environment.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for

instructions on mapping your new transformation.

How to Transform from a Text File to an SAP Environment

 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.


Summary of Steps

Follow these steps to transform information from a text file to an SAP environment.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See “How to Create an FTP Source Definition” on page 7-8 if your source text file will be stored on an FTP server.
 - b. See “How to Create a File Share Source Definition” on page 7-5 if your source text file will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Source Definition” on page 7-11 if your source text file will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Source Definition” on page 7-13 if your source text file will be stored on an SCP server.
- ❸ Create Your Target Definition (see “How to Create an SAP Target Definition” on page 8-17 for details)
- ❹ Create Your Source Document Definition (see Chapter 9 for details)
- ❺ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❻ Map the Source and Target Fields (see Chapter 17 for details)
- ❼ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

Use the Transformation Wizard to Build Your Transformation

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

 **Note:** Make sure you've completed steps 1-4 above before attempting to define your transformation.

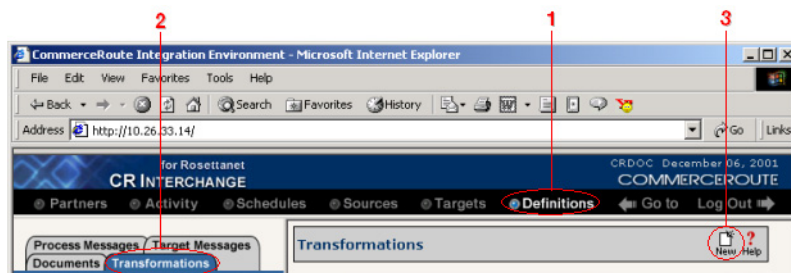


Figure 14-31. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- ④ Enter an appropriate name for your new transformation in the **Transformation Name** field.
- ⑤ Select “Text” from the **Source** drop-down menu and “SAP” from the **Target** drop-down menu.
- ⑥ Click the **Next** button in the toolbar to continue.

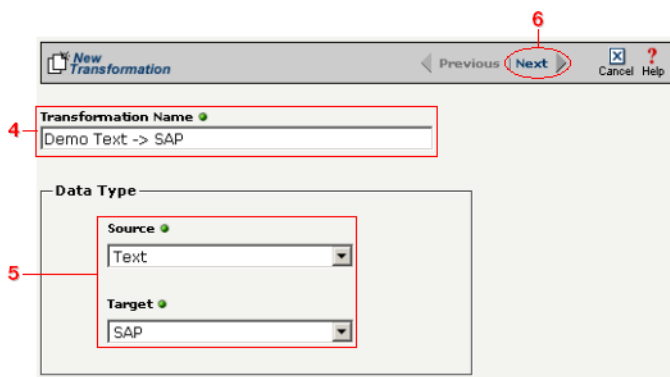



Figure 14-32. Give your new transformation definition an appropriate name, then choose **Text File** for your Source and **SAP** for your Target.

 **Tip:** for more information about document definitions, see Chapter 9, “Creating Document Definitions.”

Select Source Information (Text)

- ❶ In the next screen of the Transformation Wizard, select the document you want to use as a source from the **Text Document Definition** drop-down menu.
- ❷ Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

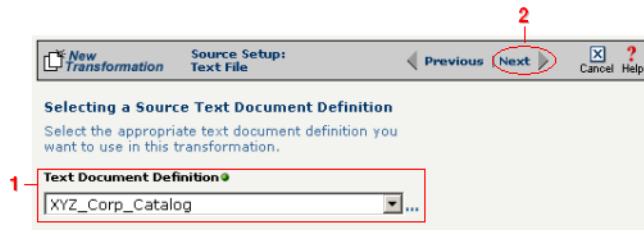



Figure 14-33. Choose which document definition you want to use as your source document.

 **Tip:** DIFF is only available for complex text files. For more information about DIFF and optimization, see “Optimization Options (DIFF)” on page 10-5.

If the text file you chose for your source is a complex text type, an additional screen appears that lets you set your source to take advantage of an operation’s DIFF function. If you want this transformation to be optimized by filtering out redundant data, select the field(s) that you want to use for filtering in this screen.

- ❶ Click the checkbox that corresponds to the appropriate key field name.
- ❷ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

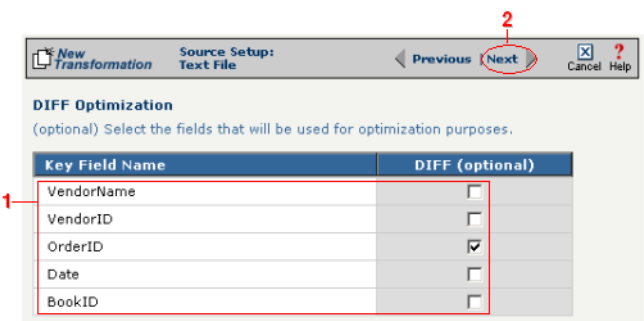


Figure 14-34. If your text file is a complex file and you need to set a field to act as an optimization filter using DIFF functionality, select the appropriate field in this screen.

Select Target Information (SAP)

Follow the steps below to configure your SAP target for transformation mapping:

- 1 Select the appropriate SAP target that you defined from the **SAP Target** drop-down list.
- 2 Click the **Next** button in the toolbar to continue.

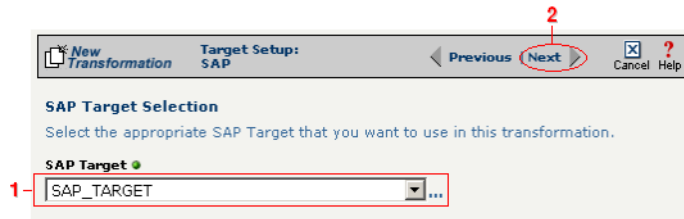




Figure 14-35. Choose the appropriate SAP target from the **SAP Target** drop-down list.

 **Tip:** SAP-provided BAPI function names always start with the letters “BAPI”. You can also use the asterick (*) character as a wild card when searching for the function name.

 **Tip:** If you are certain that the selected function performs a “commit” internally, performance can be improved by deselecting the checkbox.

Select RFC/BAPI Function

In this next screen, you need to select the appropriate RFC or BAPI function that should be used.

- ❶ Type in the complete name of the function, or enter any substring of the function name.
- ❷ Click the **Search** button to search the SAP environment for all formulas that match the name (or partial name) you entered. Note that this search may take several seconds.
- ❸ When the function search has completed, the **Select RFC/BAPI Function** drop-down menu appears, displaying all the functions that contain the string you entered in step 1 above. Select the appropriate function from the drop-down menu.
- ❹ (Optional) Select the **Commit Work** checkbox to ensure that a “commit” is performed on the SAP environment after the function has run. (We recommend leaving this selected, as it guarantees that a commit is performed, regardless of whether the function does this or not.)
- ❺ Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

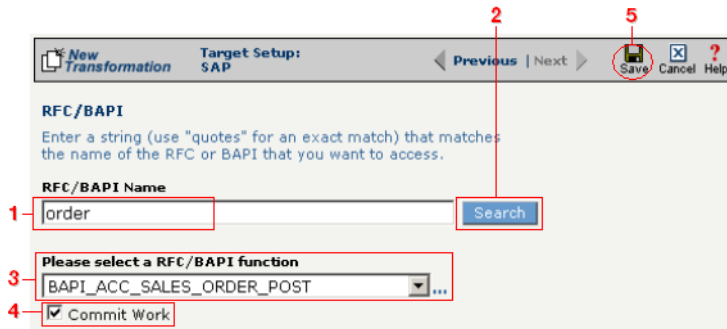


Figure 14-36. Use this screen to select the appropriate SAP RFC or BAPI function to run against your SAP environment.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for

instructions on mapping your new transformation.

How to Transform from an XML Document to an SAP Environment



Tip: Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from an XML document to an SAP environment.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See “How to Create an FTP Source Definition” on page 7-8 if your source XML document will be stored on an FTP server.
 - b. See “How to Create a File Share Source Definition” on page 7-5 if your source XML document will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Source Definition” on page 7-11 if your source XML document will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Source Definition” on page 7-13 if your source XML document will be stored on an SCP server.
- ❸ Create Your Target Definition (see “How to Create an SAP Target Definition” on page 8-17 for details)
- ❹ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❺ Map the Source and Target Fields (see Chapter 17 for details)
- ❻ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

Use the Transformation Wizard to Build Your Transformation



Note: Make sure you’ve completed steps 1-3 above before attempting to define your transformation.

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

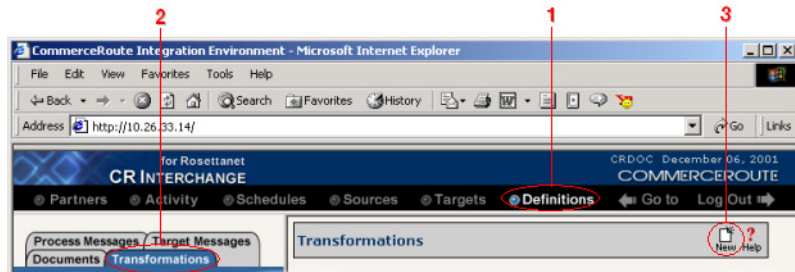


Figure 14-37. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- 4 Enter an appropriate name for your new transformation in the **Transformation Name** field.
- 5 Select “XML” from the **Source** drop-down menu and “SAP” from the **Target** drop-down menu.
- 6 Click the **Next** button in the toolbar to continue.

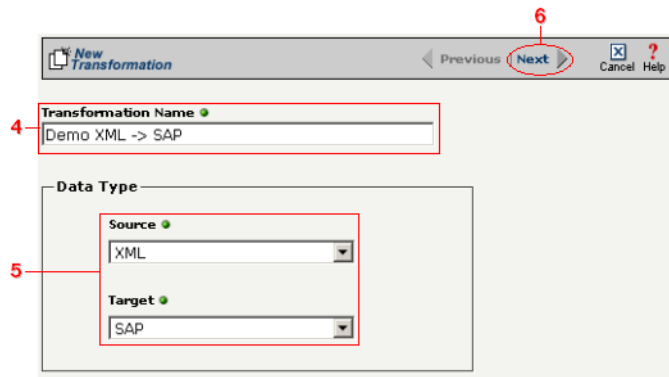


Figure 14-38. Give your new transformation definition an appropriate name, then choose **XML Document** for your Source and **SAP** for your Target.

Tip: for more information about DTD files, see “What’s a DTD File?” on page 11-42 in the *Syncx Integration Appliance Reference Guide*.


Select Source Information (XML)

You have two choices for loading your XML document. Follow the option that describes where your XML document's DTD file is located:

Option 1: You are using an XML document whose definition is already loaded into the appliance

- ❶ Click the **Select an XML DTD** radio button.
- ❷ Select the appropriate XML folder from the drop-down list.
- ❸ Choose the appropriate DTD file from the scrollable list below the drop-down list.
- ❹ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.
- ❺ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

Figure 14-39. Click the **Select an XML DTD** radio button if your XML document definition has already been loaded into the system.

 **Note:** Skip these steps if you chose to follow Option 1 above.

Option 2: You need to use an XML document whose definition has not yet been loaded into the appliance

- ❶ Choose the **Upload an XML DTD** radio button.
- ❷ Click **Browse** and navigate to the location of your DTD file that you want to add to the appliance.
- ❸ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.
- ❹ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.

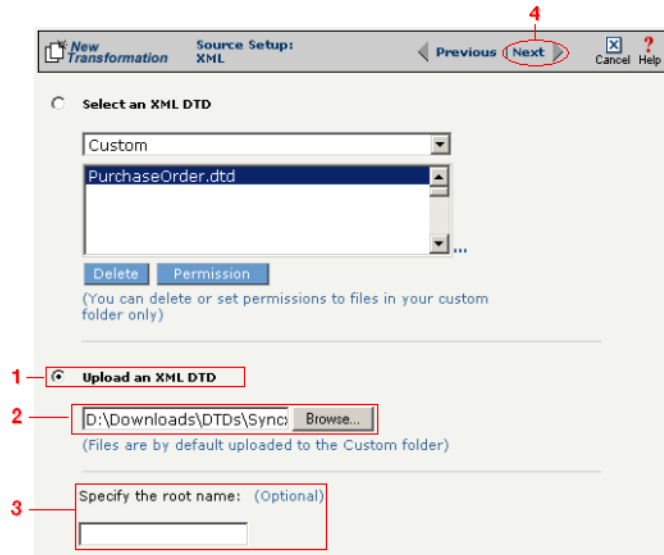


Figure 14-40. Click the **Upload an XML DTD** radio button if you need to copy a new DTD to the Syncx appliance.

Select Target Information (SAP)

Follow the steps below to configure your SAP target for transformation mapping:

- 1 Select the appropriate SAP target that you defined from the **SAP Target** drop-down list.
- 2 Click the **Next** button in the toolbar to continue.

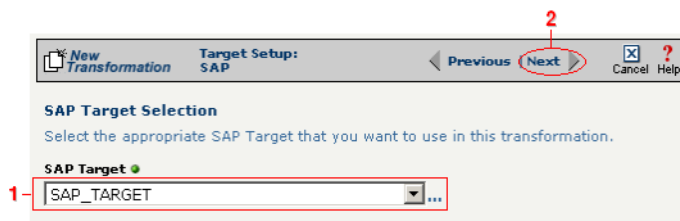




Figure 14-41. Choose the appropriate SAP target from the **SAP Target** drop-down list.

 **Tip:** SAP-provided BAPI function names always start with the letters “BAPI”. You can also use the asterick (*) character as a wild card when searching for the function name.

 **Tip:** If you are certain that the selected function performs a “commit” internally, performance can be improved by deselecting the checkbox.

Select RFC/BAPI Function

In this next screen, you need to select the appropriate RFC or BAPI function that should be used.

- ❶ Type in the complete name of the function, or enter any substring of the function name.
- ❷ Click the **Search** button to search the SAP environment for all formulas that match the name (or partial name) you entered. Note that this search may take several seconds.
- ❸ When the function search has completed, the **Select RFC/BAPI Function** drop-down menu appears, displaying all the functions that contain the string you entered in step 1 above. Select the appropriate function from the drop-down menu.
- ❹ (Optional) Select the **Commit Work** checkbox to ensure that a “commit” is performed on the SAP environment after the function has run. (We recommend leaving this selected, as it guarantees that a commit is performed, regardless of whether the function does this or not.)
- ❺ Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

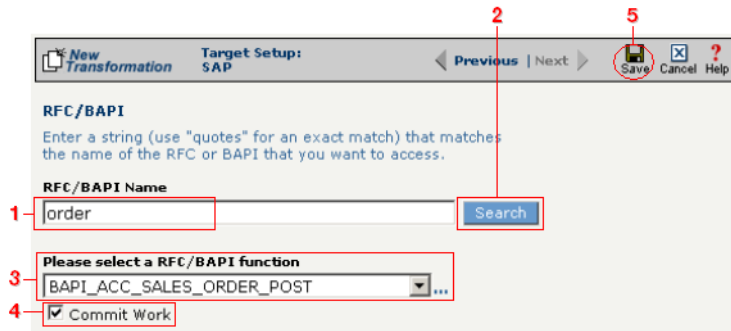


Figure 14-42. Use this screen to select the appropriate SAP RFC or BAPI function to run against your SAP environment.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for

instructions on mapping your new transformation.

Chapter 15

Transforming Text


Overview

This chapter describes how to transform information in text files to or from all supported data types. The complete list of text transformations is shown below, followed by step-by-step instructions for each transformation combination.

Appliance Text Transformations

- Text to Text
- Text to Database
- Database to Text
- Text to EDI
- EDI to Text
- Text to XML
- XML to Text
- Text to SAP
- Text to CRbuilder Process

How to Transform from a Text File to a CRbuilder Process

 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps


Follow these steps to transform information from a text file to a CRbuilder process.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See “How to Create an FTP Source Definition” on page 7-8 if your source text file will be stored on an FTP server.
 - b. See “How to Create a File Share Source Definition” on page 7-5 if your source text file will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Source Definition” on page 7-11 if your source text file will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Source Definition” on page 7-13 if your source text file will be stored on an SCP server.
- ❸ Create Your Target Definition (see “How to Create a CRbuilder Process Target Definition” on page 8-2 for details)
- ❹ Create Your Source Document Definition (see Chapter 9 for details)
- ❺ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❻ Map the Source and Target Fields (see Chapter 17 for details)
- ❼ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

Use the Transformation Wizard to Build Your Transformation

Follow these steps to transform information from a text file to a CRbuilder process.

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

 **Note:** Make sure you've completed steps 1-4 above before attempting to define your transformation.

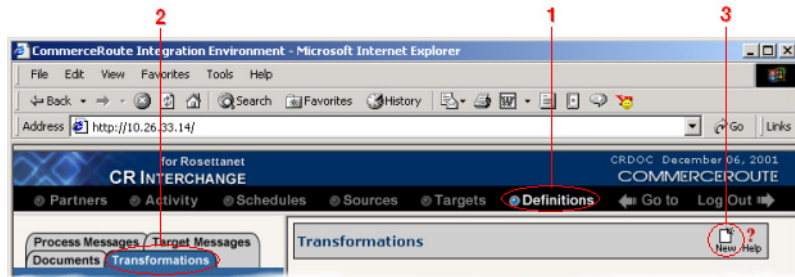


Figure 15-1. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- 4 Enter an appropriate name for your new transformation in the **Transformation Name** field.
- 5 Select “Text” from the **Source** drop-down menu and “CRbuilder Process” from the **Target** drop-down menu.
- 6 Click the **Next** button in the toolbar to continue.

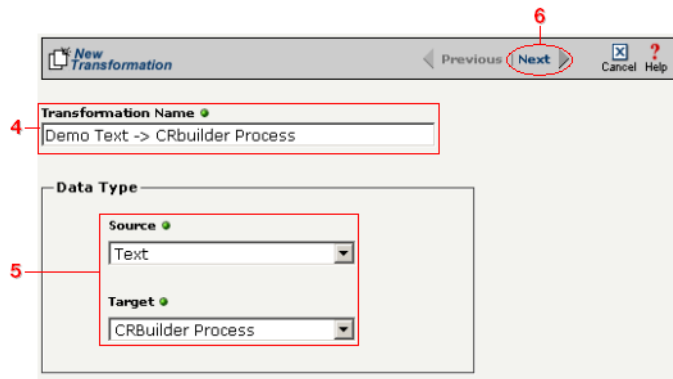


Figure 15-2. Give your new transformation definition an appropriate name, then choose **Text File** for your Source and **CRbuilder Process** for your Target.

Tip: for more information about document definitions, see Chapter 9, “Creating Document Definitions.”

Tip: DIFF is only available for complex text files. For more information about DIFF and optimization, see “Optimization Options (DIFF)” on page 10-5.

Select Source Information (Text)

- 1 In the next screen of the Transformation Wizard, select the document you want to use as a source from the **Text Document Definition** drop-down menu.
- 2 Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

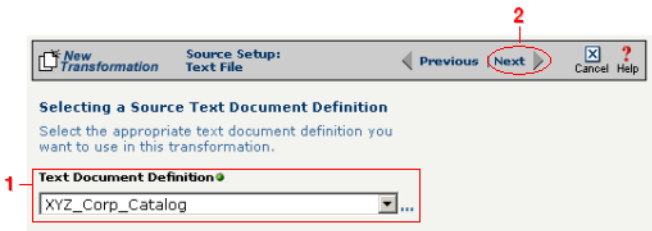


Figure 15-3. Choose which document definition you want to use as your source document.

If the text file you chose for your source is a complex text type, an additional screen appears that lets you set your source to take advantage of an operation’s DIFF function. If you want this transformation to be optimized by filtering out redundant data, select the field(s) that you want to use for filtering in this screen.

- 1 Click the checkbox that corresponds to the appropriate key field name.
- 2 Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

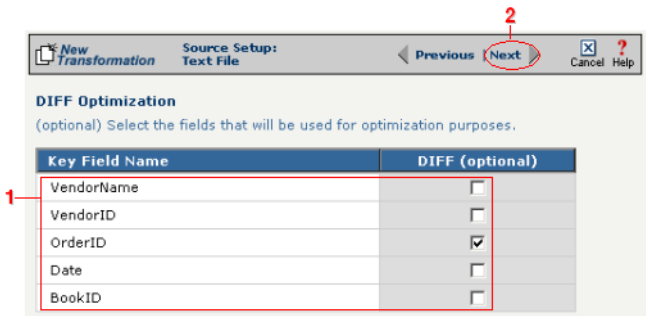


Figure 15-4. If your text file is a complex file and you need to set a field to act as an optimization filter using DIFF functionality, select the appropriate field in this screen.

Select Target Information (CRbuilder Process)

- ❶ Select the appropriate CRbuilder process from the drop-down menu.
- ❷ Select the process' initial task that you want to use to initiate from the drop-down menu.
- ❸ Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

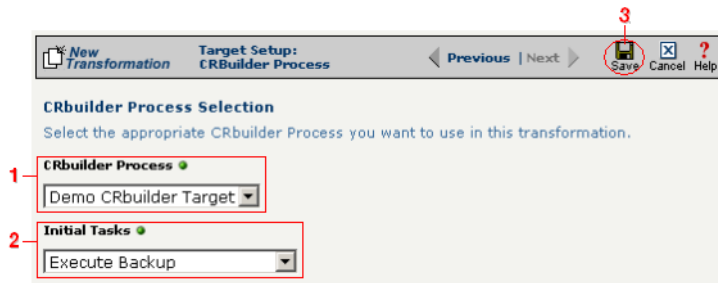


Figure 15-5. Select the name of the appropriate CRbuilder process and the desired initial task from their respective drop-down menu.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for instructions on mapping your new transformation.

How to Transform from a Text File to a Database



Tip: Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from a text file to a database.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See “How to Create an FTP Source Definition” on page 7-8 if your source text file will be stored on an FTP server
 - b. See “How to Create a File Share Source Definition” on page 7-5 if your source text file will be stored on a network shared drive (UNC)
 - c. See “How to Create an HTTP Source Definition” on page 7-11 if your source text file will be stored on a Web server (HTTP)
 - d. See “How to Create an SCP Source Definition” on page 7-13 if your source text file will be stored on an SCP server
- ❸ Create Your Target Definition (see “How to Create a Database Target Definition” on page 8-4 for details)
- ❹ Create Your Source Document Definition (see Chapter 9 for details)
- ❺ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❻ Map the Source and Target Fields (see Chapter 17 for details)
- ❼ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

Use the Transformation Wizard to Build Your Transformation

Follow these steps to transform information from a text file to a database.

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).



Note: Make sure you've completed steps 1-4 above before attempting to define your transformation.

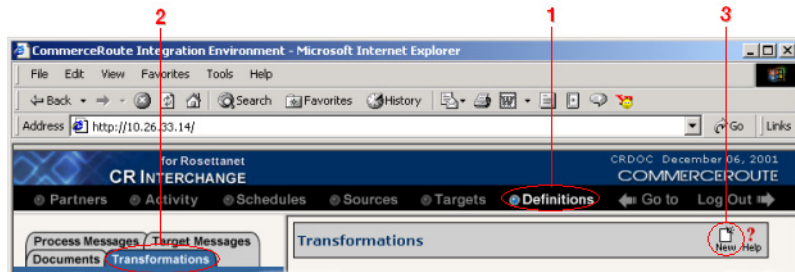


Figure 15-6. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- 4 Enter an appropriate name for your new transformation in the **Transformation Name** field.
- 5 Select “Text” from the **Source** drop-down menu and “Database” from the **Target** drop-down menu.
- 6 Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

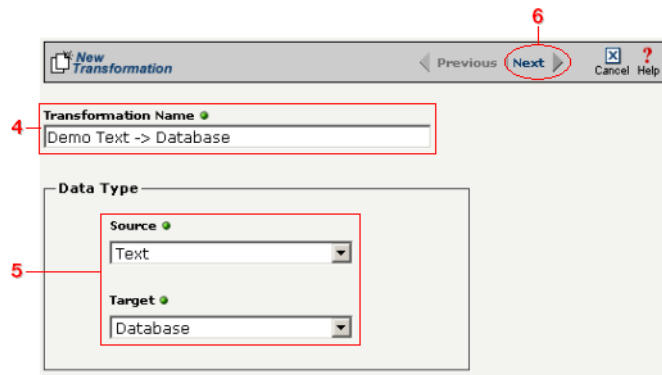


Figure 15-7. Give your new transformation definition an appropriate name, then choose “Text” for your Source and “Database” for your Target.

Tip: for more information about document definitions, see Chapter 9, “Creating Document Definitions.”

Tip: DIFF is only available for complex text files. For more information about DIFF and optimization, see “Optimization Options (DIFF)” on page 10-5.

Select Source Information (Text)

- 1 In the next screen of the Transformation Wizard, select the document you want to use as a source from the **Text Document Definition** drop-down menu.
- 2 Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

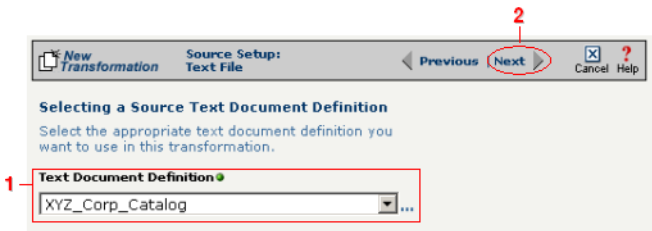


Figure 15-8. Choose which document definition you want to use as your source document.

If the text file you chose for your source is a complex text type, an additional screen appears that lets you set your source to take advantage of an operation’s DIFF function. If you want this transformation to be optimized by filtering out redundant data, select the field(s) that you want to use for filtering in this screen.

- 1 Click the checkbox that corresponds to the appropriate key field name.
- 2 Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

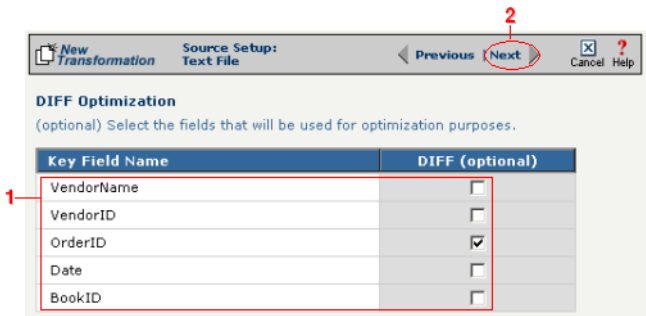


Figure 15-9. If your text file is a complex file and you need to set a field to act as an optimization filter using DIFF functionality, select the appropriate field in this screen.

Select Target Information (Database)

- ❶ Select the name of the data target that you defined as your Target Definition from the **Database Target** drop-down menu.
- ❷ Click the **Next** button in the toolbar to continue (see the figure below).

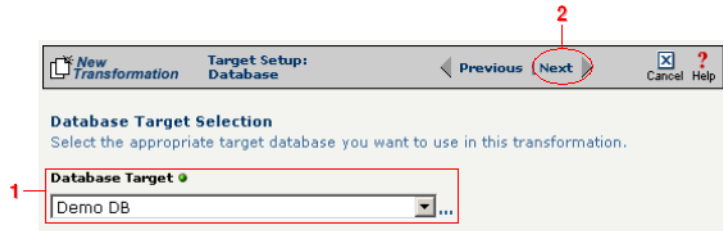


Figure 15-10. Choose which data source you will use as your target database from the **Database Target** drop-down menu.

Next, you need to specify how you will write information to your target database. Follow the option that is appropriate for your transformation:

Option 1: Only a single table in the target database will be accessed

- ❶ Enter part or all of the table's name. If you want to view all the database's items, leave the field blank.
- ❷ Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
- ❸ Click the **Search** button to view the list of items that match your name search.
- ❹ Select the appropriate item in the **Available Item(s)** field, then click the right arrow button.
- ❺ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

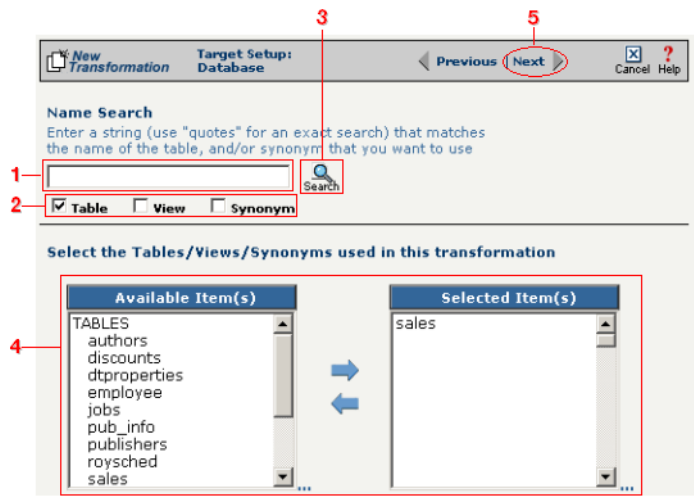


Figure 15-11. Choose the single table you want to access from the **Available Tables** field.


The next screen is where you specify how many times you will use the single table (or view/synonym) you selected for your target.

1. (Optional) If you will use this table more than once, change the **Times Used** field to the appropriate number.
2. Compare your work to below, then click **Next** to continue.

The screenshot shows a software window titled 'New Transformation' with a tab labeled 'Target Setup: Database'. At the top right are buttons for 'Previous', 'Next' (circled in red with a red '2' above it), 'Cancel', and 'Help'. Below the title bar, the text 'Database Table' is followed by the instruction 'Specify the number of times each table will be used in this transformation.' A table with two columns, 'List of Tables/Views/Synonyms' and 'Times Used', is displayed. The first row contains the text 'sales' in the first column and the number '1' in the second column. A red '1' is placed to the left of the 'sales' text.

List of Tables/Views/Synonyms	Times Used
sales	1

Figure 15-12. Use this screen to specify how many times the target table will be used.

 **Note:** You won't see this screen if your database table has no primary key.

When your database table has at least one primary key, this next screen gives you the option to select a database field as an update key.

1. (Optional) Use the **Update Key** field to select the field(s) that will be treated as update keys.
2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

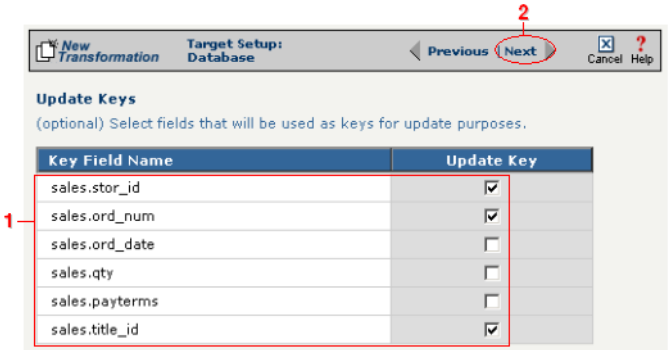




Figure 15-13. If you need to set a database field to act as an update key, select the appropriate field in this screen.

 **Note:** Skip to “Select Insert/Update Mode” on page 15-16 if you chose to follow Option 1 above.

 **Tip:** Hold down the Ctrl key to select multiple tables.

Option 2: More than one table in the target database will be accessed

1. Enter part or all of the tables' names. If you want to view all the database's items, leave the field blank.
2. Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
3. Click the **Search** button to view the list of items that match your name search.
4. Select the appropriate items in the **Available Item(s)** field, then click the right arrow button.
5. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

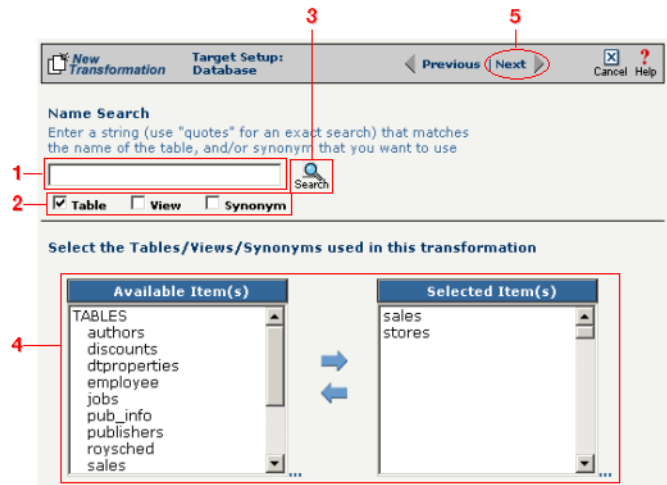


Figure 15-14. Select the appropriate tables you want to access from the **Available Tables** field.

Because you chose Option 2 (accessing more than one database table), you need to declare the tables' respective relationships:

1. Select the item in the **Parent** drop-down menu that you want to be the parent structure (i.e., at the top level of your data hierarchy).
2. Select the item in the **Child** drop-down menu that you want to be the child structure.
3. Select the appropriate database column in the **Parent Fields** window that will be used to reference the child table.
4. Select the appropriate database column in the **Child Fields** window that will be used to reference the parent table.
5. Click the **Add** button. This saves this parent-child relationship. You should see the new relationship appear in the **Parent – Child Field Relationships** table.
6. (Optional) If you have more child structures, click the **New** button and repeat the previous steps for each additional child.
7. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

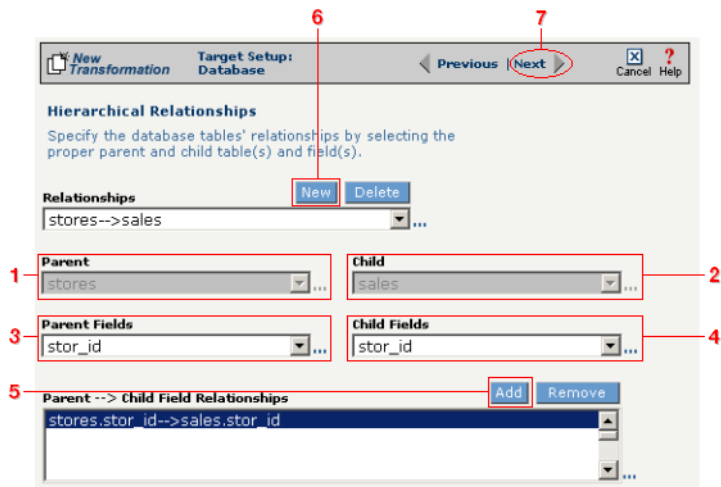


Figure 15-15. Use this screen in the Transformation Wizard to define the relationship between the different database tables.

In the **Nature of Data** screen, you need to indicate whether or not each child table's data must be present.

1. Select the appropriate radio button for each parent-child relationship:
 - a. Select **1 to N** if there will be at least 1 child to each parent entry.
 - b. Select **1** if there will always be a one-to-one parent-child relationship.
 - c. Select **0 to N** if there could be none, one, or more children for each parent.
 - d. Select **0 or 1** if there could be either no children or 1 child for each parent.
2. Compare your work to the figure below, then click **Next** to continue.

The screenshot shows the 'Nature of Data' screen in a database transformation tool. The title bar indicates 'New Transformation' and 'Target Setup: Database'. The main heading is 'Nature of Data' with a subtitle: 'Identify whether each child table's data must be present ("1 to N" or "1") or may be present ("0 to N" or "0 or 1").' Below this is a table with five columns: 'List of Tables/Views/Synonyms', '1 to N', '1', '0 to N', and '0 or 1'. The first row of the table is 'stores-->sales'. Under the '1' column for this row, the radio button is selected. A red box highlights the entire row. A red arrow labeled '1' points to the row. Another red arrow labeled '2' points to the 'Next' button in the top right corner of the window.

List of Tables/Views/Synonyms	1 to N	1	0 to N	0 or 1
stores-->sales	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure 15-16. Use the Nature of Data screen to identify the number of child entries that are supported for each parent-child relationship.

Note: You won't see this screen if your database table has no primary key.

When your database table has at least one primary key, this next screen gives you the option to select a database field as an update key.

- 1. (Optional) Select the checkbox(es) in the **Update Key** column that correspond to the field(s) that will be treated as update keys.
- 2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

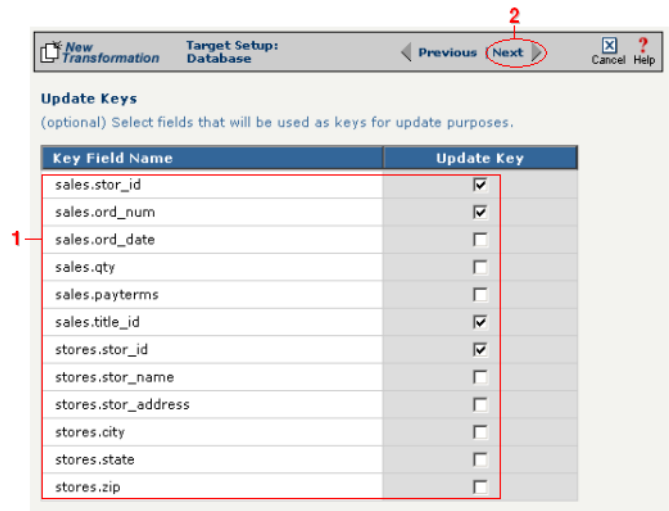



Figure 15-17. If you need to set a database field to act as an update key, select the appropriate field in this screen.

You have now completed Option 2.

Select Insert/Update Mode

In this last screen of the Transformation Wizard, you define how the Syncx Integration Appliance will handle new or existing records when it loads data from your source to your target database.

- 1. Select one of the four options described below:
 - a. **Insert/Update:** the appliance will first attempt to insert any new record it encounters. If a record already exists, it will then update that record.
 - b. **Insert Only:** the appliance will attempt to insert a new record only. No

 **Note:** The options that include Update are only available if you chose at least one field in the **Update Key** screen.

updates will be permitted.

- c. **Update Only:** the appliance will attempt to update an existing record. No new records will be created.
- d. **Update/Insert:** the appliance will first attempt to update a record. It will create a new record if none exists.

- ② Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

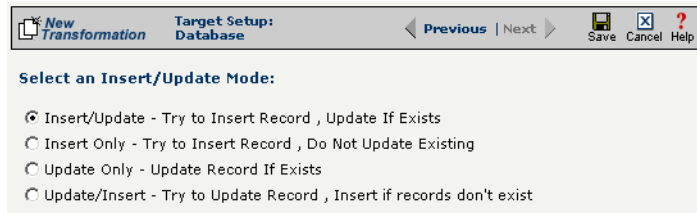



Figure 15-18. Choose which of the four insert/update options is appropriate for your transformation.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for instructions on mapping your new transformation.

How to Transform from a Database to a Text File

 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps


Follow these steps to transform information from a database to a text file.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition (see “How to Create a Database Source Definition” on page 7-2 for details)
- ❸ Create Your Target Definition
 - a. See “How to Create an FTP Target Definition” on page 8-10 if your target text file will be stored on an FTP server
 - b. See “How to Create a File Share Target Definition” on page 8-7 if your target text file will be stored on a network shared drive (UNC)
 - c. See “How to Create an HTTP Target Definition” on page 8-14 if your target text file will be stored on a Web server (HTTP)
 - d. See “How to Create an SCP Target Definition” on page 8-20 if your target text file will be stored on an SCP server
- ❹ Create Your Target Document Definition (see Chapter 9 for details)
- ❺ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❻ Map the Source and Target Fields (see Chapter 17 for details)
- ❼ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

Use the Transformation Wizard to Build Your Transformation

Follow these steps to transform information from a database to a text file.

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

 **Note:** Make sure you've completed steps 1-4 above before attempting to define your transformation.

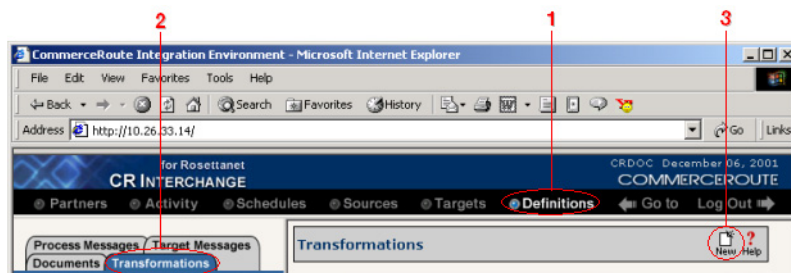


Figure 15-19. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- ④ Enter an appropriate name for your new transformation in the **Transformation Name** field.
- ⑤ Select “Database” from the **Source** drop-down menu and “Text” from the **Target** drop-down menu.
- ⑥ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

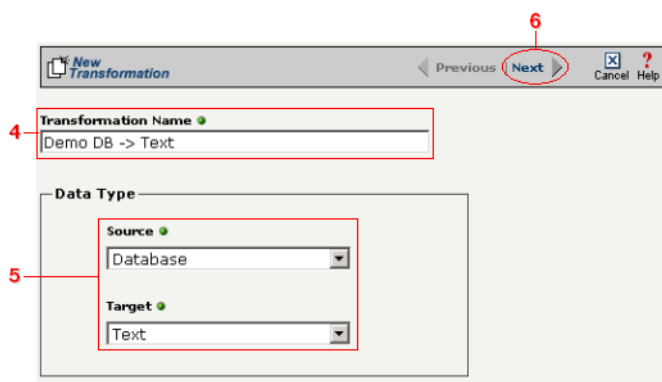


Figure 15-20. Give your new transformation definition an appropriate name, then choose “Database” for your Source and “Text” for your Target.

Select Source Information (Database)

- ❶ In the next screen of the Transformation Wizard, select the name of the Source that holds the database information you want to transform from the **Data Source** drop-down menu.
- ❷ Choose how you will get information from your database. You have two options:

Option 1: Use the Transformation Wizard to help you access your database without typing SQL

- a. Select the appropriate database definition from the **Database Source** drop-down menu.
- b. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

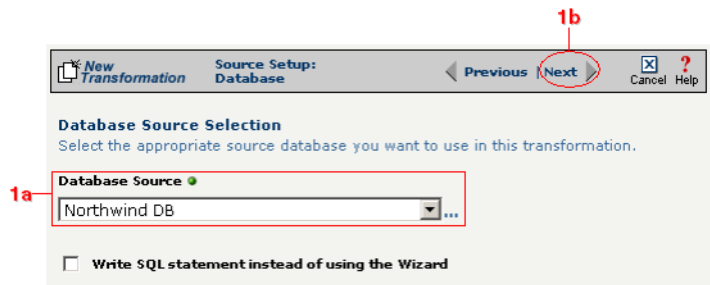


Figure 15-21. Choose the appropriate database from the **Database Source** drop-down menu if you want the Transformation Wizard to help you access your database without having to type any SQL.

Within Option 1, you need to specify how you will access information from your source database. Choose one of two options:

Option 1a: Only a single table in the source database will be accessed.

1. Enter part or all of the table's name. If you want to view all the database's items, leave the field blank.
2. Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
3. Click the **Search** button to view the list of items that match your name search.

4. Select the appropriate item in the **Available Item(s)** field, then click the right arrow button.
5. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

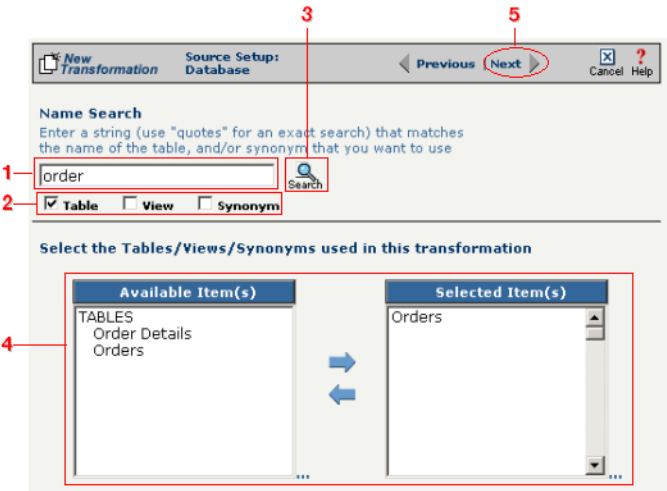


Figure 15-22. Select the single table you want to access from the **Available Tables** field.

The next screen is where you specify how many times you will use the single table (or view/synonym) you selected for your source.

1. (Optional) If you will use this table more than once, change the **Times Used** field to the appropriate number.
2. Compare your work to below, then click **Next** to continue.

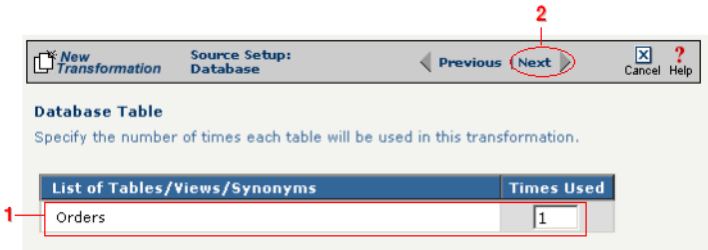


Figure 15-23. Use this screen to specify how many times the source table will be used.

The next screen lets you add a WHERE clause to filter your query:

1. Enter an appropriate WHERE SQL statement in the Where Clause.
2. (Optional) If you want to review your database table's fields, select the **View Field List** checkbox. The list will appear in a table at the bottom of the screen.
3. Click the **Next** button in the toolbar to continue.

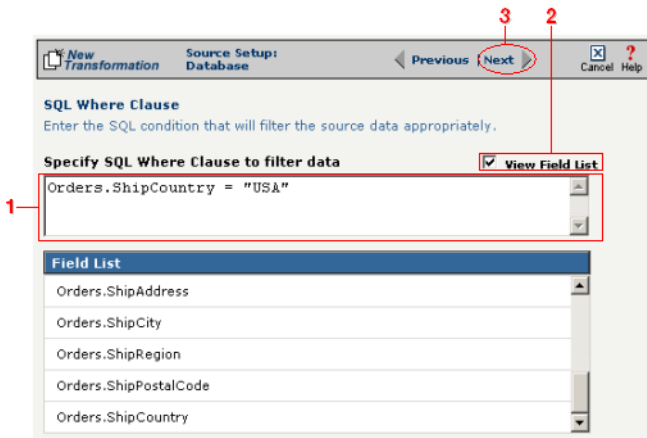

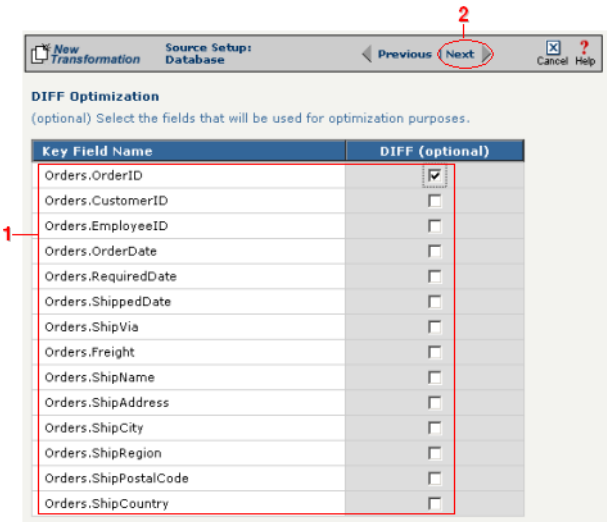


Figure 15-24. This optional screen lets you add a WHERE SQL clause to filter your information.

 **Tip:** For more information about DIFF and optimization, see “Optimization Options (DIFF)” on page 10-5.


This next screen lets you set your source to take advantage of an operation’s DIFF function. If you want this source information to be optimized by filtering out redundant data, select the field(s) that you want to use for filtering in this screen.


1. Click the checkbox that corresponds to the appropriate key field name.
2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.



Key Field Name	DIFF (optional)
Orders.OrderID	<input checked="" type="checkbox"/>
Orders.CustomerID	<input type="checkbox"/>
Orders.EmployeeID	<input type="checkbox"/>
Orders.OrderDate	<input type="checkbox"/>
Orders.RequiredDate	<input type="checkbox"/>
Orders.ShippedDate	<input type="checkbox"/>
Orders.ShipVia	<input type="checkbox"/>
Orders.Freight	<input type="checkbox"/>
Orders.ShipName	<input type="checkbox"/>
Orders.ShipAddress	<input type="checkbox"/>
Orders.ShipCity	<input type="checkbox"/>
Orders.ShipRegion	<input type="checkbox"/>
Orders.ShipPostalCode	<input type="checkbox"/>
Orders.ShipCountry	<input type="checkbox"/>


Figure 15-25. If you need to set a database field to act as an optimization filter using DIFF functionality, select the appropriate field in this screen.

 **Note:** You won't see this screen if your source database table has no primary key.

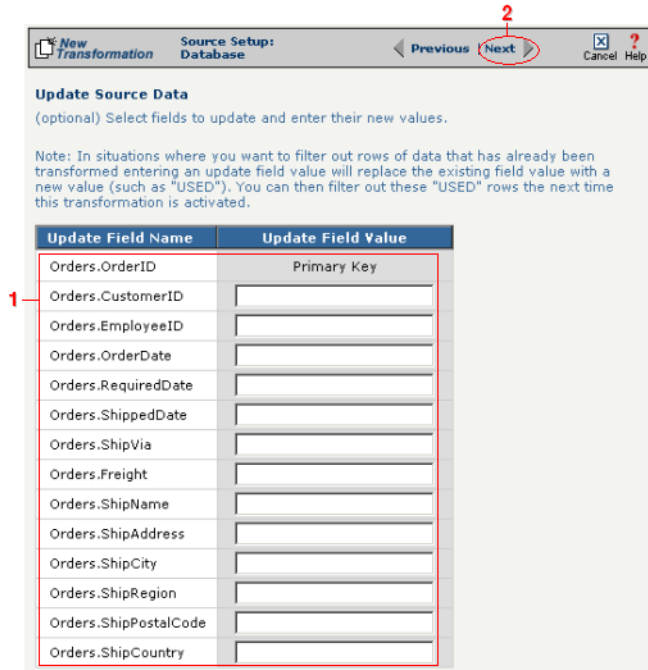
 **Tip:** for more information about the Update Field Value, see "Update Field Value" on page 11-6 in the *Syncx Integration Appliance Reference Guide*.

When your source database table has at least one primary key, this next screen gives you the option to select a database field as an update key.

1. (Optional) Use the **Update Field Value** field to update the value of the fields that match your filter criteria.

 **Caution!** This value will replace the source element's current value with whatever you enter in this field.

2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.



Update Source Data
(optional) Select fields to update and enter their new values.


Note: In situations where you want to filter out rows of data that has already been transformed entering an update field value will replace the existing field value with a new value (such as "USED"). You can then filter out these "USED" rows the next time this transformation is activated.

Update Field Name	Update Field Value
Orders.OrderID	Primary Key
Orders.CustomerID	
Orders.EmployeeID	
Orders.OrderDate	
Orders.RequiredDate	
Orders.ShippedDate	
Orders.ShipVia	
Orders.Freight	
Orders.ShipName	
Orders.ShipAddress	
Orders.ShipCity	
Orders.ShipRegion	
Orders.ShipPostalCode	
Orders.ShipCountry	

Figure 15-26. If you need to set a database field to act as an update key, select the appropriate field in this screen.

You have finished defining your Option 1a source (using the Transformation Wizard to specify a single source table).

Option 1b: More than one table in the source database will be accessed.

 **Note:** Skip these steps if you chose to follow Option 1a above.

1. Enter part or all of the tables names. If you want to view all the database's items, leave the field blank.
2. Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
3. Click the **Search** button to view the list of items that match your name search.
4. Select the appropriate items in the **Available Item(s)** field, then click the right arrow button.
5. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

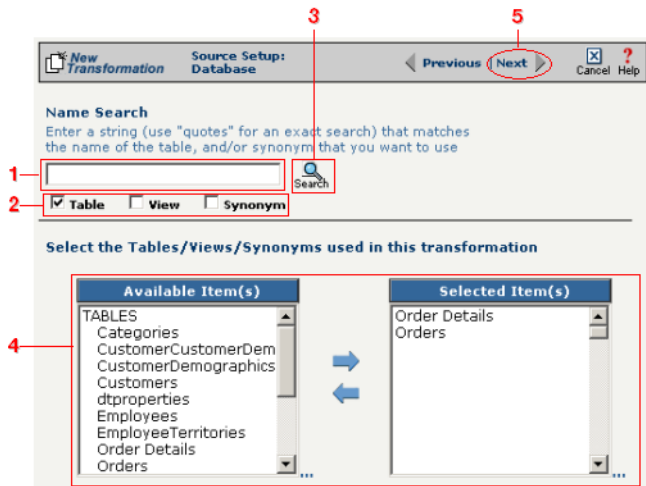



Figure 15-27. Select the appropriate tables you want to access from the **Available Item(s)** field.

 **Note:** Skip these steps if you chose to follow Option 1a.

The next screen is where you specify how many times you will use each table (or view/synonym) you selected for your source.

1. (Optional) If you will use each table more than once, change the **Times Used** field to the appropriate number.
2. Compare your work to below, then click **Next** to continue.

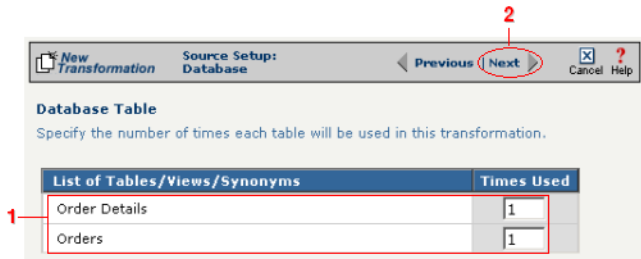



Figure 15-28. Use this screen in the Transformation Wizard to specify how many times each item will be used in the transformation.

 **Note:** Skip these steps if you chose to follow Option 1a.

Because you chose Option 1b (accessing more than one database table), you need to declare the tables' respective relationships:

1. Select the item in the **Parent** drop-down menu that you want to be the parent structure (i.e., at the top level of your data hierarchy).
2. Select the item in the **Child** drop-down menu that you want to be the child structure.
3. Select the appropriate database column in the **Parent Fields** window that will be used to reference the child table.
4. Select the appropriate database column in the **Child Fields** window that will be used to reference the parent table.
5. Click the **Add** button. This saves this parent-child relationship. You should see the new relationship appear in the **Parent – Child Field Relationships** table.
6. (Optional) If you have more child structures, click the **New** button and repeat the previous steps for each additional child.
7. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

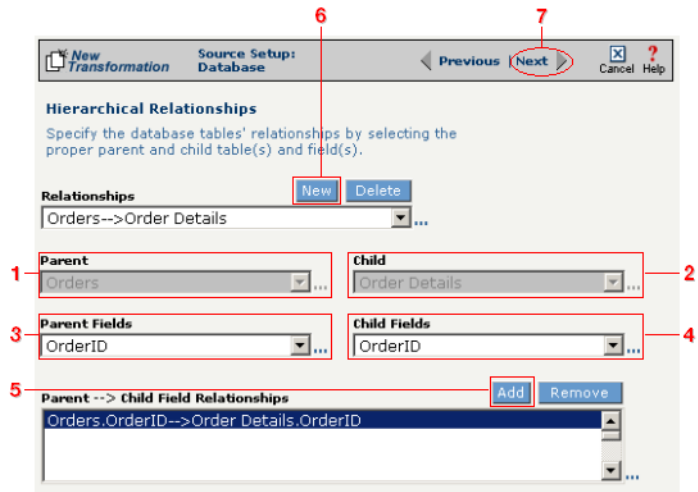


Figure 15-29. Use this screen in the Transformation Wizard to define the relationship between the different database tables.

Note: Skip these steps if you chose to follow Option 1a.

In the **Nature of Data** screen, you need to indicate whether or not each child table's data must be present.

1. Select the appropriate radio button for each parent-child relationship:
 - a. Select **1 to N** if there will be at least 1 child to each parent entry.
 - b. Select **1** if there will always be a one-to-one parent-child relationship.
 - c. Select **0 to N** if there could be none, one, or more children for each parent.
 - d. Select **0 or 1** if there could be either no children or 1 child for each parent.
2. Compare your work to the figure below, then click **Next** to continue.

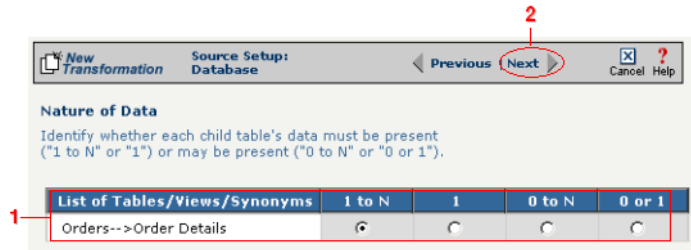



Figure 15-30. Use the Nature of Data screen to identify the number of child entries that are supported for each parent-child relationship.

 **Note:** Skip these steps if you chose to follow Option 1a.

The next screen lets you add a WHERE clause to filter your query:

1. Enter an appropriate WHERE SQL statement in the desired field's corresponding **Filter Condition** field.
2. (Optional) You can have the filtered output be sorted either ascending or descending by selecting the appropriate value from the **Sort** drop-down menu.
3. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

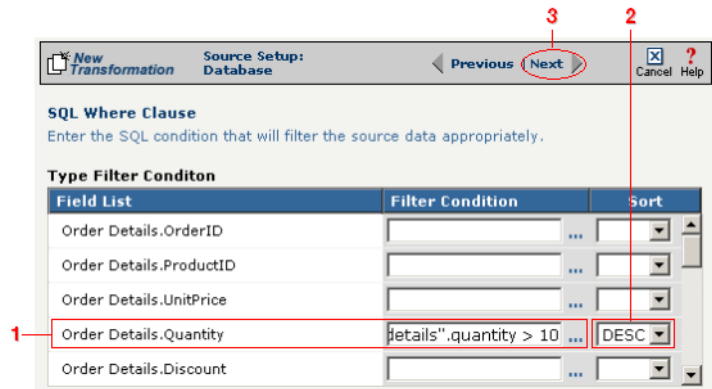



Figure 15-31. This optional screen lets you add a WHERE SQL clause to filter your information.

You have finished defining your Option 1b source (using the Transformation Wizard to specify a source with multiple tables).

 **Note:** Skip these steps if you chose to follow Option 1a or 1b above.

Option 2: You are familiar with SQL and want to enter your SQL query directly

1. Select the **Write SQL Statement** checkbox.
2. Enter your SQL query in the **SQL Statement** field.
3. (Optional) You can test the validity of your SQL statement by clicking the **Test SQL** button.
4. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

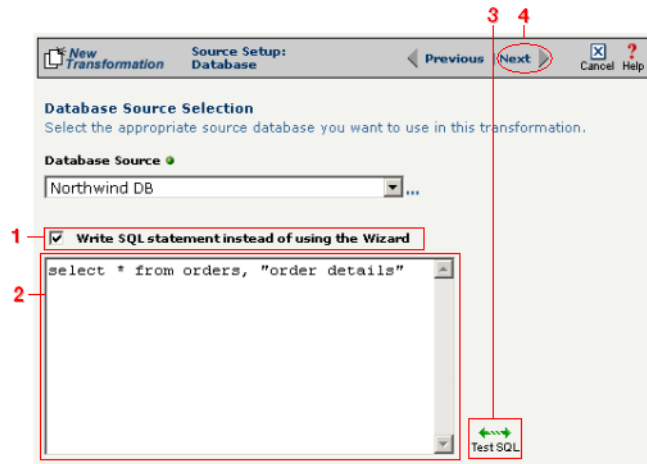




Figure 15-32. Click the **Write SQL Statement** checkbox if you are familiar with SQL and you want to type your statement directly into the **SQL Statement** field.

 **Note:** Skip these steps if you chose to follow Option 1a or 1b above.

 **Tip:** For more information about DIFF and optimization, see “Optimization Options (DIFF)” on page 10-5.

This next screen lets you set your source to take advantage of an operation’s DIFF function. If you want this source information to be optimized by filtering out redundant data, select the field(s) that you want to use for filtering in this screen.

1. Click the checkbox that corresponds to the appropriate key field name.
2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

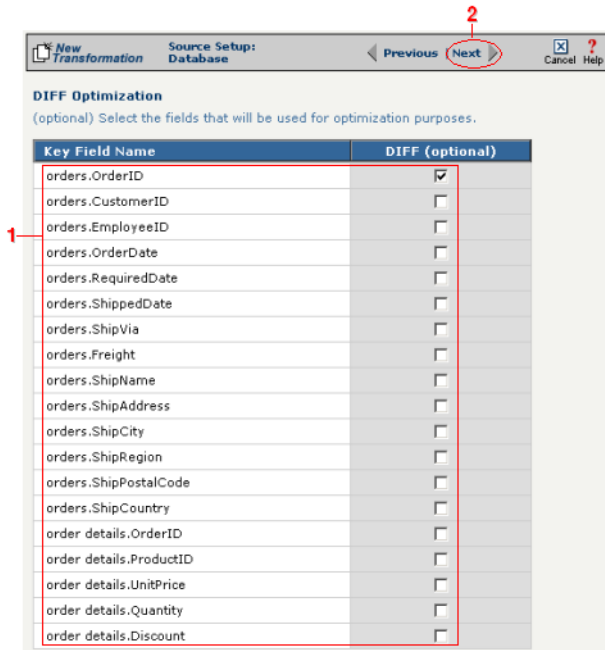



Figure 15-33. If you need to set a database field to act as an optimization filter using DIFF functionality, select the appropriate field in this screen.

You have finished defining your Option 2 source (directly entering the appropriate SQL statement).

 **Tip:** for more information about document definitions, see Chapter 9, “Creating Document Definitions.”

Select Target Information (Text)

- 1 In the next screen of the Transformation Wizard, select the document definition that you want to hold the transformed text from the **Select a Document** drop-down menu.
- 2 Compare your definition to that shown in the figure below, then click **Save** to save your work and exit out of the Transformation Wizard.

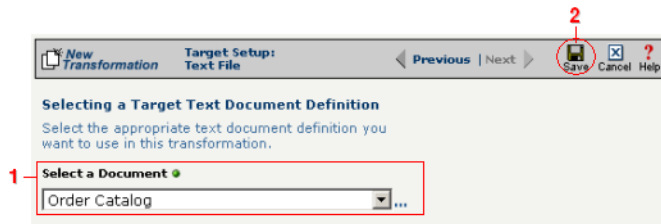



Figure 15-34. Select the document definition you want to use as your target.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for instructions on mapping your new transformation.


How to Transform from a Text File to an EDI Document

 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from a text file to an EDI document.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See “How to Create an FTP Source Definition” on page 7-8 if your source text file will be stored on an FTP server
 - b. See “How to Create a File Share Source Definition” on page 7-5 if your source text file will be stored on a network shared drive (UNC)
 - c. See “How to Create an HTTP Source Definition” on page 7-11 if your source text file will be stored on a Web server (HTTP)
 - d. See “How to Create an SCP Source Definition” on page 7-13 if your source text file will be stored on an SCP server
- ❸ Create Your Target Definition
 - a. See “How to Create an FTP Target Definition” on page 8-10 if your target EDI document will be stored on an FTP server
 - b. See “How to Create a File Share Target Definition” on page 8-7 if your target EDI document will be stored on a network shared drive (UNC)
 - c. See “How to Create an HTTP Target Definition” on page 8-14 if your target EDI document will be stored on a Web server (HTTP)
 - d. See “How to Create an SCP Target Definition” on page 8-20 if your target EDI document will be stored on an SCP server
- ❹ Create Your Source Document Definition (see Chapter 9 for details)
- ❺ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❻ Map the Source and Target Fields (see Chapter 17 for details)
- ❼ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

 **Note:** Make sure you've completed steps 1-4 above before attempting to define your transformation.

Use the Transformation Wizard to Build Your Transformation

Follow these steps to transform information from a text file to an EDI document.

- 1 Click the **Definitions** button in the navigation bar.
- 2 Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- 3 Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

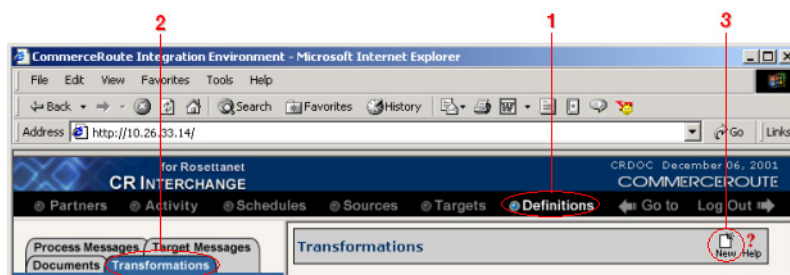


Figure 15-35. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- 4 Enter an appropriate name for your new transformation in the **Transformation Name** field.
- 5 Select “Text” from the **Source** drop-down menu and “EDI” from the **Target** drop-down menu.
- 6 Click the **Next** button in the toolbar to continue (see the figure below).

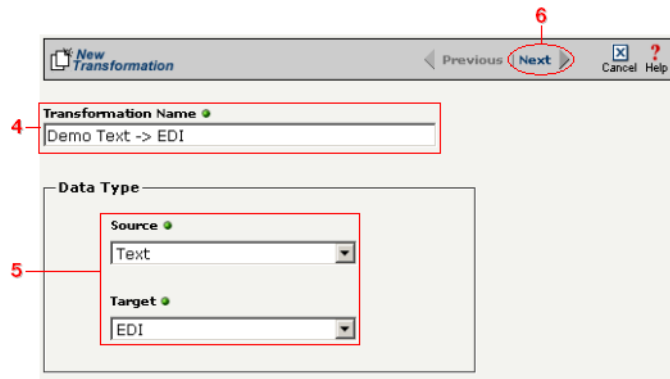


Figure 15-36. Give your new transformation definition an appropriate name, then choose **Text File** for your Source and **EDI Document** for your Target.

Tip: for more information about document definitions, see Chapter 9, “Creating Document Definitions.”

Tip: DIFF is only available for complex text files. For more information about DIFF and optimization, see “Optimization Options (DIFF)” on page 10-5.

Select Source Information (Text)

- 1 In the next screen of the Transformation Wizard, select the document you want to use as a source from the **Text Document Definition** drop-down menu.
- 2 Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

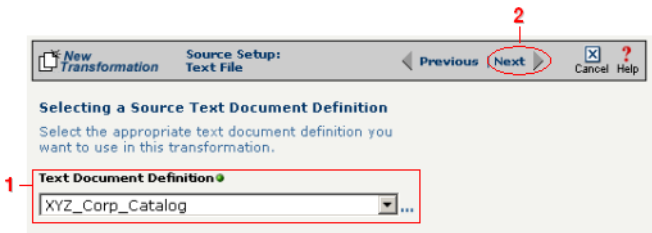


Figure 15-37. Choose which document definition you want to use as your source document.

If the text file you chose for your source is a complex text type, an additional screen appears that lets you set your source to take advantage of an operation’s DIFF function. If you want this transformation to be optimized by filtering out redundant data, select the field(s) that you want to use for filtering in this screen.

- 1 Click the checkbox that corresponds to the appropriate key field name.
- 2 Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

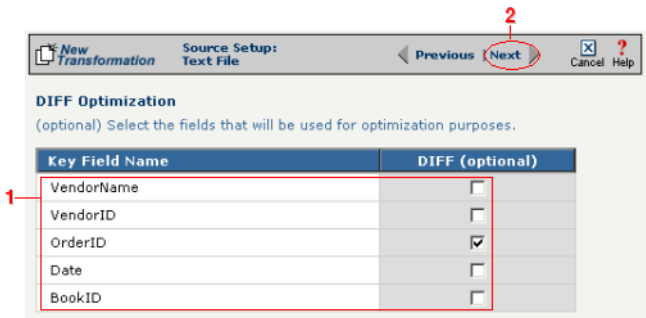


Figure 15-38. If your text file is a complex file and you need to set a field to act as an optimization filter using DIFF functionality, select the appropriate field in this screen.

Tip: for more information about SEF files, see “What’s an SEF File?” on page 11-14 in the *Syncx Integration Appliance Reference Guide*.

Select Target Information (EDI)

You have two options for selecting the appropriate target EDI file. Follow the scenario that describes where your target EDI document's SEF file is located:

Option1: You are using an EDI file whose definition is already loaded into the appliance

- ❶ Click the **Select an existing SEF** radio button.
- ❷ Select the appropriate EDI folder (that matches the EDI standard and version you want to use) from the drop-down list.
- ❸ Choose the appropriate EDI document from the scrollable list below (e.g., 850 if you want to use the Purchase Order form).
- ❹ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

The screenshot shows the 'Target Setup: EDI' window. At the top, there's a toolbar with 'Previous', 'Next' (circled in red with a red '4' above it), 'Cancel', and 'Help'. Below the toolbar, there are two radio buttons: 'Select an existing SEF file' (which is selected and labeled with a red '1') and 'Upload an EDI SEF file'. Under the selected radio button, there's a dropdown menu labeled 'X12_4010' (labeled with a red '2') and a scrollable list of EDI documents: '847_4010.SEF', '848_4010.SEF', '849_4010.SEF', '850_4010.SEF', and '851_4010.SEF' (which is selected and labeled with a red '3'). At the bottom, there's a text input field and a 'Browse...' button under the 'Upload an EDI SEF file' radio button.

Figure 15-39. Click the **Select an existing SEF** radio button if your EDI document definition has already been loaded into the system.

Note: Skip to “(Optional) Select Target EDI Options” below if you chose to follow Option 1 above.

Option 2: You need to use an EDI file whose definition has not yet been loaded into the appliance

- ❶ Choose the **Upload an EDI SEF file** radio button.
- ❷ Click **Browse** and navigate to the location of your EDI file whose definition (SEF file) you want to add to the appliance.
- ❸ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

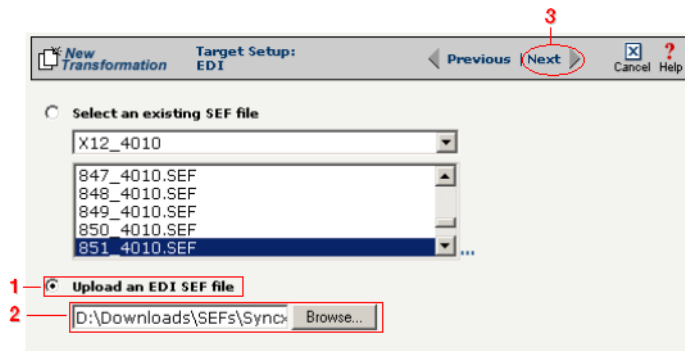


Figure 15-40. Click the **Upload an EDI SEF file** radio button if you need to copy a new EDI definition to the Syncx appliance.

(Optional) Select Target EDI Options

This screen is where you can set all the appropriate default values for your target EDI document. In most cases, you will leave the default settings as they are. You may optionally change them, however, if you want to change how the system will format the EDI information.

- ❶ Select the **CRLF Formatted** checkbox if a text editor has wrapped your EDI document by inserting CRLF’s (carriage return line feed characters).
- ❷ Enter a new character in the **Data Segment Terminator** field that will define the end of a record in the EDI file.
- ❸ Enter a new character in the **Data Element Terminator** field that will define the end of a field in the EDI file.
- ❹ Enter a new character in the **Composite Data Element Terminator** field that will define the end of data types that are “compound” or composed of other data elements. For example, a data element of “date” could be composed of month, day, and year elements.

Tip: See “CRLF Formatting” on page 11-16 in the *Syncx Integration Appliance Reference Guide* for more information on **CRLF Formatted**.

- 5 Enter a new value in the **Release Indicator** field. This tells the system to read a character as a character, not as a command.
- 6 Use the Default buttons only if you want to reset your EDI options:
 - a. If you want to reset all the previous values back to their default X-12 settings, click **Reset X-12 Default**.
 - b. If you want to reset all the previous values back to their last default settings, click **Reset Last Default**.
- 7 Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

New Transformation Target Setup: EDI

Default Values:
Specify which character(s) should be used for each control character.
(For 'carriage return line feed', please enter 'CRLF')

2 Data Segment Terminator: ~

3 Data Element Terminator: *

4 Composite Data Element Terminator: |

5 Release Indicator: \

6a Reset X12 Default

6b Reset Last Saved


7 Save Cancel Help

Figure 15-41. Use this screen if you need to change any of your Target EDI document's default values.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, "Transformation Mapping" for instructions on mapping your new transformation.


How to Transform from an EDI Document to a Text File

 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from an EDI document to a text file.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See “How to Create an FTP Source Definition” on page 7-8 if your source EDI document will be stored on an FTP server.
 - b. See “How to Create a File Share Source Definition” on page 7-5 if your source EDI document will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Source Definition” on page 7-11 if your source EDI document will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Source Definition” on page 7-13 if your source EDI document will be stored on an SCP server.
- ❸ Create Your Target Definition
 - a. See “How to Create an FTP Target Definition” on page 8-10 if your target text file will be stored on an FTP server.
 - b. See “How to Create a File Share Target Definition” on page 8-7 if your target text file will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Target Definition” on page 8-14 if your target text file will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Target Definition” on page 8-20 if your target text file will be stored on an SCP server.
- ❹ Create Your Target Document Definition (see Chapter 9 for details)
- ❺ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❻ Map the Source and Target Fields (see Chapter 17 for details)
- ❼ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

 **Note:** Make sure you've completed steps 1-4 above before attempting to define your transformation.

Use the Transformation Wizard to Build Your Transformation

Follow these steps to transform information from an EDI document to a text file.

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

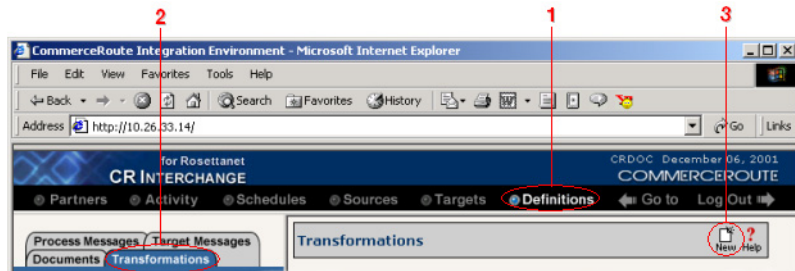


Figure 15-42. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- ❹ Enter an appropriate name for your new transformation in the **Transformation Name** field.
- ❺ Select “EDI” from the **Source** drop-down menu and “Text” from the **Target** drop-down menu.
- ❻ Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

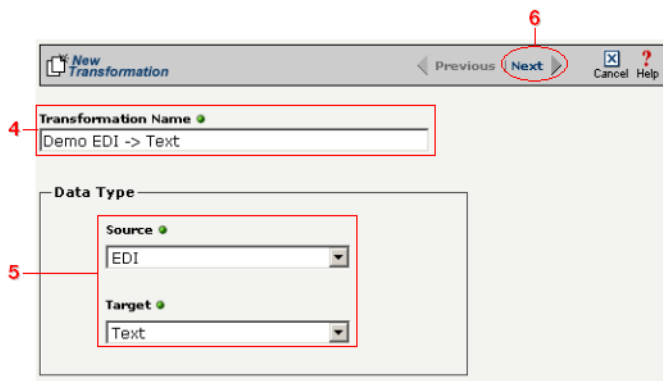


Figure 15-43. Give your new transformation definition an appropriate name, then choose **EDI Document** for your Source and **Text File** for your Target.

Tip: for more information about SEF files, see “What’s an SEF File?” on page 11-14 in the *Syncx Integration Appliance Reference Guide*.

Select Source Information (EDI)

You have two options for selecting the appropriate source EDI file. Follow the scenario that describes where your source EDI document's SEF file is located:

Option 1: You are using an EDI file whose definition is already loaded into the appliance

- ❶ Click the **Select an existing SEF** radio button.
- ❷ Select the appropriate EDI folder (that matches the EDI standard and version you want to use) from the drop-down list.
- ❸ Choose the appropriate EDI document from the scrollable list below (e.g., 850 if you want to use the Purchase Order form).
- ❹ Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

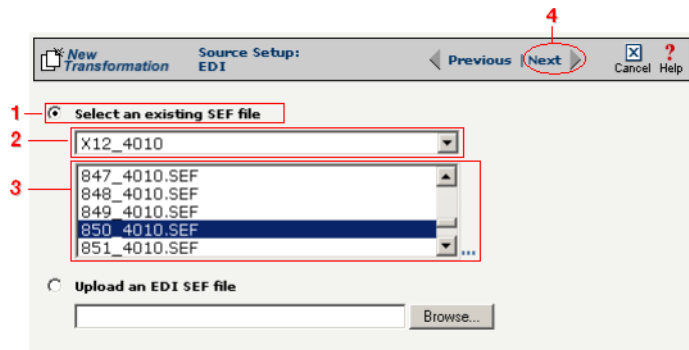


Figure 15-44. Click the **Select an existing SEF** radio button if your EDI document definition has already been loaded into the system.

Note: Skip these steps if you chose to follow Option 1 above.

Option 2: You need to use an EDI file whose definition has not yet been loaded into the appliance

- ❶ Choose the **Upload an EDI SEF file** radio button.
- ❷ Click **Browse** and navigate to and select the location of your EDI file whose definition (SEF file) you want to add to the appliance to load it into the associated field.
- ❸ Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

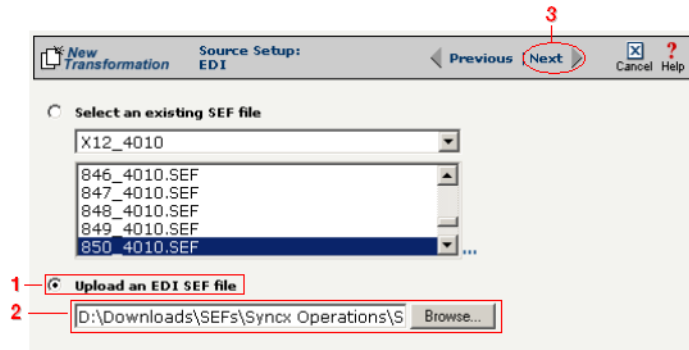


Figure 15-45. Click the **Upload an EDI SEF file** radio button if you need to copy a new EDI definition to the Syncx appliance.

(Optional) Select Source EDI Options

This screen is where you can set all the appropriate default values for your source EDI document. In most cases, you will leave the default settings as they are. You may optionally change them, however, if you want to change how the system will format the EDI information.


Tip: See “CRLF Formatting” on page 11-16 in the *Syncx Integration Appliance Reference Guide* for more information on **CRLF Formatted**.

- ❶ Select the **Source documents have been formatted with CRLFs** checkbox if a text editor has wrapped your EDI document by inserting CRLF's (carriage return line feed characters).
- ❷ Enter a character in the **Data Segment Terminator** field that will define the end of a record in the EDI file.
- ❸ Enter a character in the **Data Element Terminator** field that will define the end of a field in the EDI file.
- ❹ Enter a character in the **Composite Data Element Terminator** field that will define the end of data types that are "compound" or composed of other data elements. For example, a data element of "date" could be composed of month, day, and year elements.
- ❺ Enter a value in the **Release Indicator** field. This tells the system to read a character as a character, not as a command.
- ❻ Use the Default buttons only if you want to reset your EDI options:
 - a. If you want to reset all the previous values back to their default X-12 settings, click **Reset X-12 Default**.
 - b. If you want to reset all the previous values back to their last default

settings, click **Reset Last Default**.

- 7 Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

Figure 15-46. Use this screen if you need to change any of your source EDI document's default values.

 **Tip:** for more information about document definitions, see Chapter 9, “Creating Document Definitions.”

Select Target Information (Text)

- 1 In the next screen of the Transformation Wizard, select the document definition that you want to hold the transformed text from the **Select a Document** drop-down menu.
- 2 Compare your definition to that shown in the figure below, then click **Save** to save your work and exit out of the Transformation Wizard.

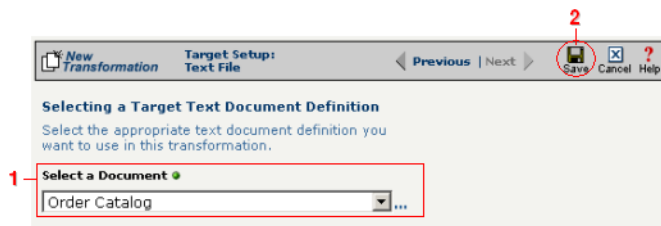



Figure 15-47. Select the document definition you want to use as your target.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for instructions on mapping your new transformation.


How to Transform from a Text File to RosettaNet

 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from a text file to RosettaNet.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See “How to Create an FTP Source Definition” on page 7-8 if your source text file will be stored on an FTP server.
 - b. See “How to Create a File Share Source Definition” on page 7-5 if your source text file will be stored on a network shared drive (UNC).
 - c. See “How to Create a File Share Source Definition” on page 7-5 if your source text file will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Source Definition” on page 7-13 if your source text file will be stored on an SCP server.
- ❸ Create Your Target Definition
 - a. See Chapter 3, “RosettaNet Trading Partner Definitions,” in the *Public Processes Guide* if you haven’t already defined your RosettaNet trading partner.
 - b. See Chapter 4, “RosettaNet Partner Interface Processes,” in the *Public Processes Guide* if you haven’t already added the appropriate PIP to your RosettaNet trading partner.
 - c. See Chapter 5, “Partner Interface Agreements,” in the *Public Processes Guide* if you haven’t already defined the appropriate PIA within your trading partner’s PIP.
- ❹ Create Your Source Document Definition (see Chapter 9 for details)
- ❺ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❻ Map the Source and Target Fields (see Chapter 17 for details)
- ❼ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

 **Note:** Make sure you've completed steps 1-4 above before attempting to define your transformation.

Use the Transformation Wizard to Build Your Transformation

Follow these steps to transform information from a text file to an XML document.

- 1 Click the **Definitions** button in the navigation bar.
- 2 Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- 3 Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

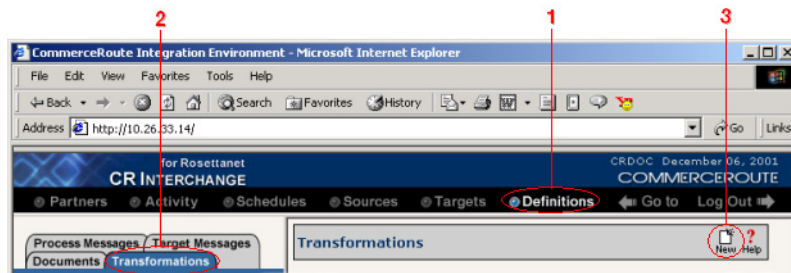


Figure 15-48. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- 4 Enter an appropriate name for your new transformation in the **Transformation Name** field.
- 5 Select “Text” from the **Source** drop-down menu and “RosettaNet” from the **Target** drop-down menu.
- 6 Click the **Next** button in the toolbar to continue.

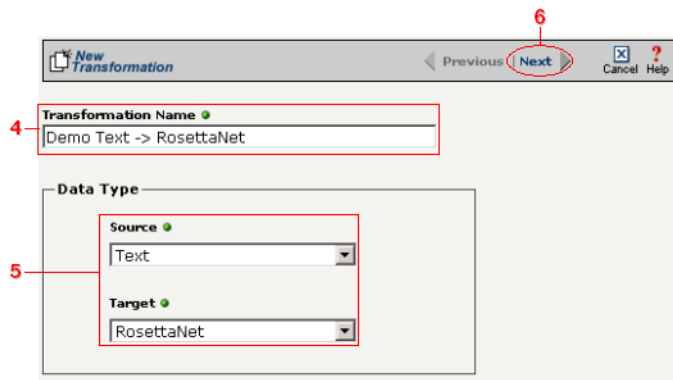




Figure 15-49. Give your new transformation definition an appropriate name, then choose “Text” for your Source and “RosettaNet” for your Target.

 **Tip:** for more information about document definitions, see Chapter 9, “Creating Document Definitions.”

 **Tip:** DIFF is only available for complex text files. For more information about DIFF and optimization, see “Optimization Options (DIFF)” on page 10-5.

Select Source Information (Text)

- 1 In the next screen of the Transformation Wizard, select the document you want to use as a source from the **Text Document Definition** drop-down menu.
- 2 Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

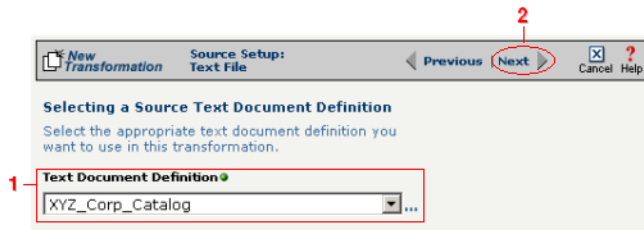


Figure 15-50. Choose which document definition you want to use as your source document.

If the text file you chose for your source is a complex text type, an additional screen appears that lets you set your source to take advantage of an operation’s DIFF function. If you want this transformation to be optimized by filtering out redundant data, select the field(s) that you want to use for filtering in this screen.

- 1 Click the checkbox that corresponds to the appropriate key field name.
- 2 Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.


New Transformation Source Setup: Text File

Previous **Next** Cancel Help

DIFF Optimization
(optional) Select the fields that will be used for optimization purposes.

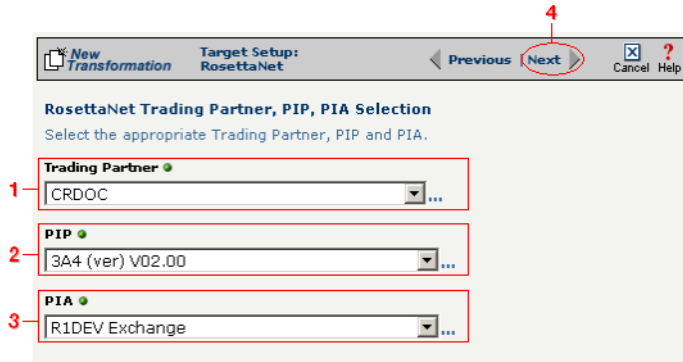
Key Field Name	DIFF (optional)
VendorName	<input type="checkbox"/>
VendorID	<input type="checkbox"/>
OrderID	<input checked="" type="checkbox"/>
Date	<input type="checkbox"/>
BookID	<input type="checkbox"/>

Figure 15-51. If your text file is a complex file and you need to set a field to act as an optimization filter using DIFF functionality, select the appropriate field in this screen.

 **Tip:** for more information about RosettaNet trading partners, PIPs, and PIAs, see Chapter 3, Chapter 4, and Chapter 5, respectively, in the *Public Processes Guide*.


Select Target Information (RosettaNet)

- 1 In the next screen of the Transformation Wizard, select the RosettaNet trading partner definition that you want to use for this transformation from the **Trading Partner** drop-down menu.
- 2 Select which trading partner's PIP you want to use from the **PIP** drop-down menu.
- 3 Select which PIA in the previously selected PIP you want to use from the **PIA** drop-down menu.
- 4 Compare your work to the figure below, then click the **Next** button to continue.



The screenshot shows a dialog box titled "RosettaNet Trading Partner, PIP, PIA Selection". The dialog has a title bar with "New Transformation" and "Target Setup: RosettaNet". It contains three dropdown menus: "Trading Partner" with "CRDOC" selected, "PIP" with "3A4 (ver) V02.00" selected, and "PIA" with "R1DEV Exchange" selected. Red boxes and numbers 1, 2, and 3 highlight these dropdowns. A red circle and number 4 highlight the "Next" button in the top right corner.

Figure 15-1 Use this screen to select the trading partner, PIP, and finally PIA that you want to use as the target for this transformation.

 **Tip:** for more information about RosettaNet trading partners, PIPs, and PIAs, see “How to Configure Roles and Services” on page 5-22 in the *Public Processes Guide*.

- ❶ In the next screen of the Transformation Wizard, select which activity is appropriate for this transformation from the **Activity** drop-down menu.
- ❷ Select the appropriate role this source will play from the **Role** drop-down menu.
- ❸ Compare your definition to that shown in the figure below, then click **Save** to save your work and exit out of the Transformation Wizard.

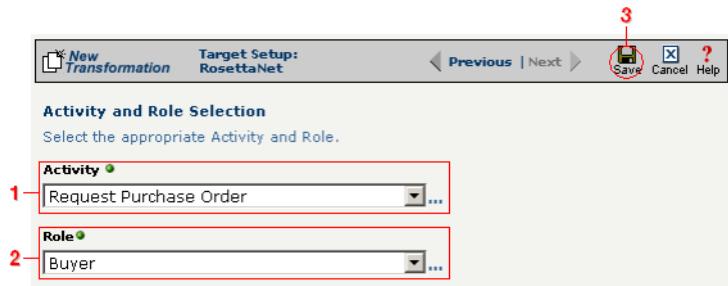



Figure 15-2 Specify the target RosettaNet’s activity and role.

What’s Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for instructions on mapping your new transformation.


How to Transform from RosettaNet to a Text File

 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from RosettaNet to a text file.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See Chapter 3, “RosettaNet Trading Partner Definitions,” in the *Public Processes Guide* if you haven’t already defined your RosettaNet trading partner.
 - b. See Chapter 4, “RosettaNet Partner Interface Processes,” in the *Public Processes Guide* if you haven’t already added the appropriate PIP to your RosettaNet trading partner.
 - c. See Chapter 5, “Partner Interface Agreements,” in the *Public Processes Guide* if you haven’t already defined the appropriate PIA within your trading partner’s PIP.
- ❸ Create Your Target Definition
 - a. See “How to Create an FTP Target Definition” on page 8-10 if your target text file will be stored on an FTP server.
 - b. See “How to Create a File Share Target Definition” on page 8-7 if your target text file will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Target Definition” on page 8-14 if your target text file will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Target Definition” on page 8-20 if your target text file will be stored on an SCP server.
- ❹ Create Your Target Document Definition (see Chapter 9 for details)
- ❺ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❻ Map the Source and Target Fields (see Chapter 17 for details)
- ❼ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

 **Note:** Make sure you've completed steps 1-4 above before attempting to define your transformation.

Use the Transformation Wizard to Build Your Transformation

Follow these steps to transform information from an XML document to a text file.

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

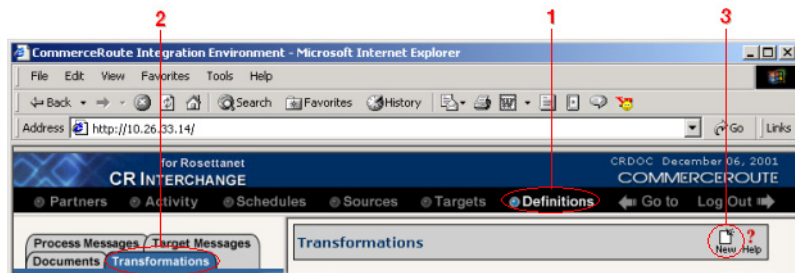


Figure 15-52. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- ❹ Enter an appropriate name for your new transformation in the **Transformation Name** field.
- ❺ Select “RosettaNet” from the **Source** drop-down menu and “Text” from the **Target** drop-down menu.
- ❻ Click the **Next** button in the toolbar to continue.

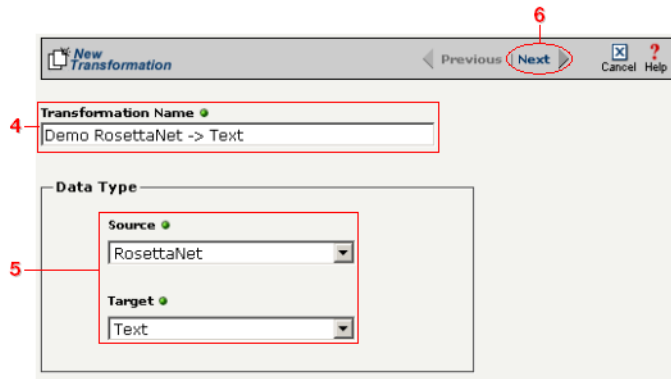

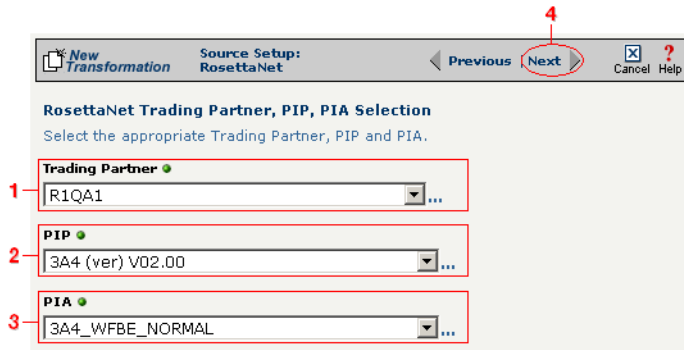


Figure 15-53. Give your new transformation definition an appropriate name, then choose “RosettaNet” for your Source and “Text” for your Target.

 **Tip:** for more information about RosettaNet trading partners, PIPs, and PIAs, see Chapter 3, Chapter 4, and Chapter 5, respectively, in the *Public Processes Guide*.


Select Source Information (RosettaNet)

- ❶ In the next screen of the Transformation Wizard, select the RosettaNet trading partner definition that you want to use for this transformation from the **Trading Partner** drop-down menu.
- ❷ Select which trading partner's PIP you want to use from the **PIP** drop-down menu.
- ❸ Select which PIA in the previously selected PIP you want to use from the **PIA** drop-down menu.
- ❹ Compare your work to the figure below, then click the **Next** button to continue.



The screenshot shows a dialog box titled "RosettaNet Trading Partner, PIP, PIA Selection". The subtitle is "Select the appropriate Trading Partner, PIP and PIA." There are three dropdown menus: "Trading Partner" with "R1QA1" selected, "PIP" with "3A4 (ver) V02.00" selected, and "PIA" with "3A4_WFBE_NORMAL" selected. Red numbers 1, 2, and 3 are placed to the left of each dropdown menu. In the top right corner, there is a "Next" button with a red number 4 above it, and "Cancel" and "Help" buttons.

Figure 15-54. Use this screen to select the trading partner, PIP, and finally PIA that you want to use as the source for this transformation.

 **Tip:** for more information about RosettaNet trading partners, PIPs, and PIAs, see “How to Configure Roles and Services” on page 5-22 in the *Public Processes Guide*.

- ❶ In the next screen of the Transformation Wizard, select which activity is appropriate for this transformation from the **Activity** drop-down menu.
- ❷ Select the appropriate role this source will play from the **Role** drop-down menu.
- ❸ Compare your work to the figure below, then click the **Next** button to continue.

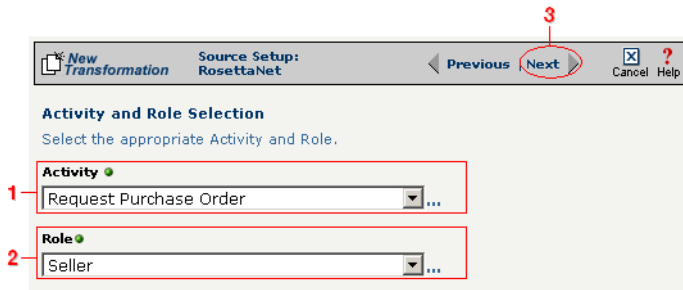



Figure 15-55. Specify the source RosettaNet’s activity and role.

 **Tip:** for more information about document definitions, see Chapter 9, “Creating Document Definitions.”

Select Target Information (Text)

- ❶ In the next screen of the Transformation Wizard, select the document definition that you want to hold the transformed text from the **Select a Document** drop-down menu.
- ❷ Compare your definition to that shown in the figure below, then click **Save** to save your work and exit out of the Transformation Wizard.

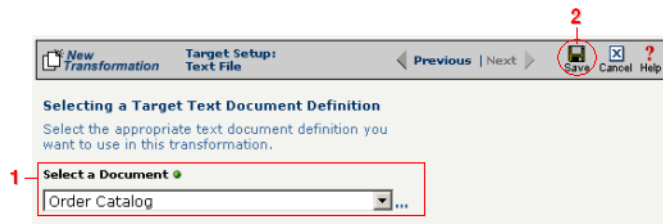


Figure 15-56. Select the document definition you want to use as your target.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for instructions on mapping your new transformation.

How to Transform from a Text File to an SAP Environment



Tip: Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from a text file to an SAP environment.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See “How to Create an FTP Source Definition” on page 7-8 if your source text file will be stored on an FTP server.
 - b. See “How to Create a File Share Source Definition” on page 7-5 if your source text file will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Source Definition” on page 7-11 if your source text file will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Source Definition” on page 7-13 if your source text file will be stored on an SCP server.
- ❸ Create Your Target Definition (see “How to Create an SAP Target Definition” on page 8-17 for details)
- ❹ Create Your Source Document Definition (see Chapter 9 for details)
- ❺ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❻ Map the Source and Target Fields (see Chapter 17 for details)
- ❼ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

Use the Transformation Wizard to Build Your Transformation

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).



Note: Make sure you've completed steps 1-4 above before attempting to define your transformation.

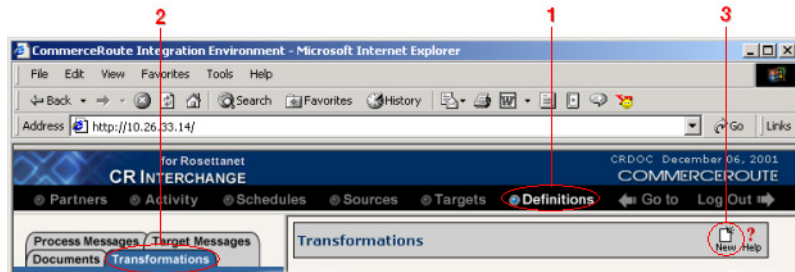


Figure 15-57. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- 4 Enter an appropriate name for your new transformation in the **Transformation Name** field.
- 5 Select “Text” from the **Source** drop-down menu and “SAP” from the **Target** drop-down menu.
- 6 Click the **Next** button in the toolbar to continue.

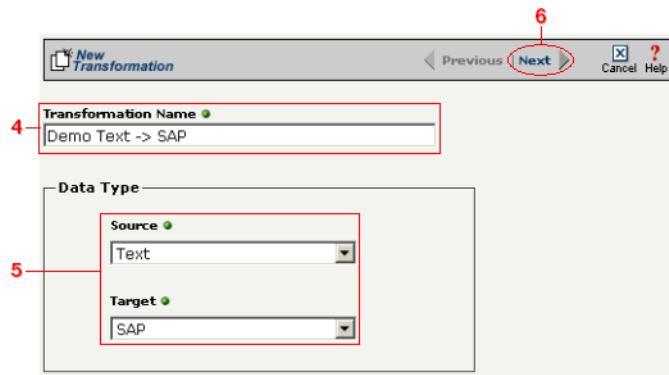


Figure 15-58. Give your new transformation definition an appropriate name, then choose **Text File** for your Source and **SAP** for your Target.

Tip: for more information about document definitions, see Chapter 9, “Creating Document Definitions.”

Tip: DIFF is only available for complex text files. For more information about DIFF and optimization, see “Optimization Options (DIFF)” on page 10-5.

Select Source Information (Text)

- ❶ In the next screen of the Transformation Wizard, select the document you want to use as a source from the **Text Document Definition** drop-down menu.
- ❷ Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

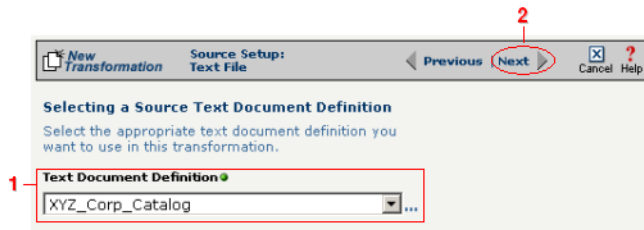


Figure 15-59. Choose which document definition you want to use as your source document.

If the text file you chose for your source is a complex text type, an additional screen appears that lets you set your source to take advantage of an operation’s DIFF function. If you want this transformation to be optimized by filtering out redundant data, select the field(s) that you want to use for filtering in this screen.

- ❶ Click the checkbox that corresponds to the appropriate key field name.
- ❷ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

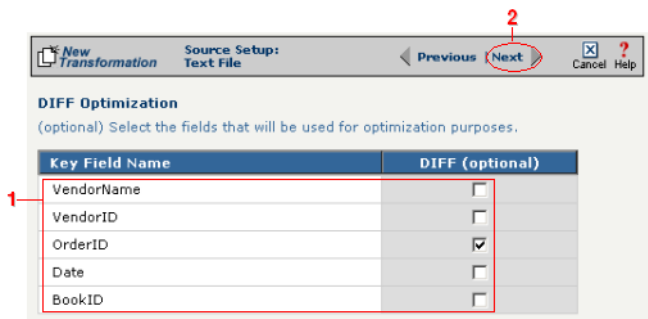


Figure 15-60. If your text file is a complex file and you need to set a field to act as an optimization filter using DIFF functionality, select the appropriate field in this screen.

Select Target Information (SAP)

Follow the steps below to configure your SAP target for transformation mapping:

- 1 Select the appropriate SAP target that you defined from the **SAP Target** drop-down list.
- 2 Click the **Next** button in the toolbar to continue.

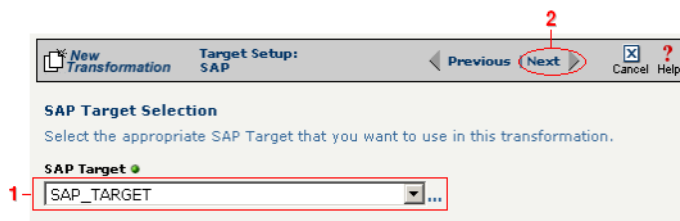




Figure 15-61. Choose the appropriate SAP target from the **SAP Target** drop-down list.

 **Tip:** SAP-provided BAPI function names always start with the letters “BAPI”. You can also use the asterick (*) character as a wild card when searching for the function name.

 **Tip:** If you are certain that the selected function performs a “commit” internally, performance can be improved by deselecting the checkbox.

Select RFC/BAPI Function

In this next screen, you need to select the appropriate RFC or BAPI function that should be used.

- ❶ Type in the complete name of the function, or enter any substring of the function name.
- ❷ Click the **Search** button to search the SAP environment for all formulas that match the name (or partial name) you entered. Note that this search may take several seconds.
- ❸ When the function search has completed, the **Select RFC/BAPI Function** drop-down menu appears, displaying all the functions that contain the string you entered in step 1 above. Select the appropriate function from the drop-down menu.
- ❹ (Optional) Select the **Commit Work** checkbox to ensure that a “commit” is performed on the SAP environment after the function has run. (We recommend leaving this selected, as it guarantees that a commit is performed, regardless of whether the function does this or not.)
- ❺ Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

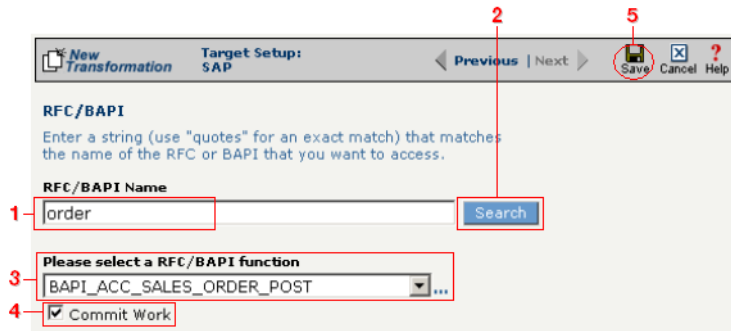



Figure 15-62. Use this screen to select the appropriate SAP RFC or BAPI function to run against your SAP environment.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for

instructions on mapping your new transformation.


How to Transform from a Text File to a Text File

 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

The following is a summary of the procedures to transform a text file to another text file.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See “How to Create an FTP Source Definition” on page 7-8 if your source text file will be stored on an FTP server.
 - b. See “How to Create a File Share Source Definition” on page 7-5 if your source text file will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Source Definition” on page 7-11 if your source text file will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Source Definition” on page 7-13 if your source text file will be stored on an SCP server.
- ❸ Create Your Target Definition
 - a. See “How to Create an FTP Target Definition” on page 8-10 if your target text file will be stored on an FTP server.
 - b. See “How to Create a File Share Target Definition” on page 8-7 if your target text file will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Target Definition” on page 8-14 if your target text file will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Target Definition” on page 8-20 if your target text file will be stored on an SCP server.
- ❹ Create Your Document Definitions for both Source and Target (see Chapter 9 for details)
- ❺ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❻ Map the Source and Target Fields (see Chapter 17, “Transformation Mapping,” for details)
- ❼ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

 **Note:** Make sure you've completed steps 1-4 above before attempting to define your transformation.

Use the Transformation Wizard to Build Your Transformation

Follow these steps to transform information from one text file to a different text file.

Launch the Transformation Wizard

- 1 Click the **Definitions** button in the navigation bar.
- 2 Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- 3 Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

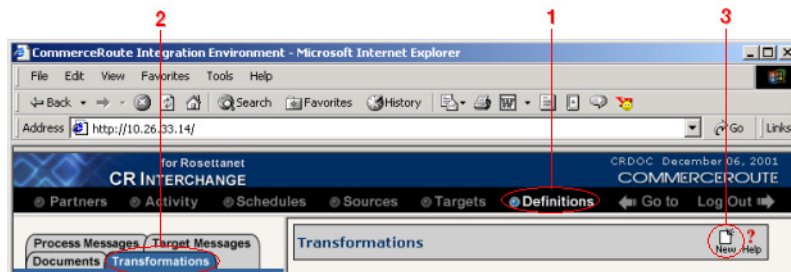


Figure 15-63. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- 4 Enter an appropriate name for your new transformation in the **Transformation Name** field.
- 5 Select “Text” from the **Source** drop-down menu and “Text” from the **Target** drop-down menu.
- 6 Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

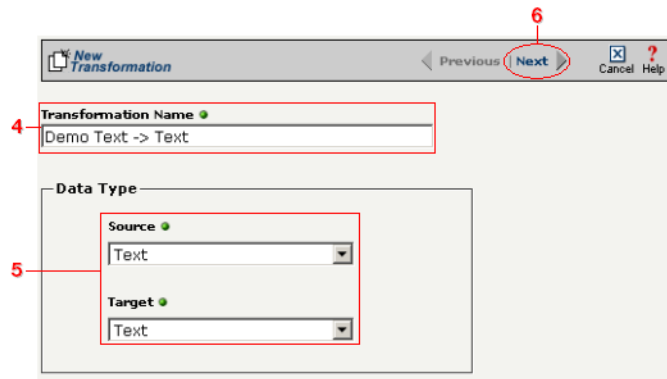


Figure 15-64. Give your new transformation definition an appropriate name, then choose “Text” for both your Source and Target.

Tip: for more information about document definitions, see Chapter 9, “Creating Document Definitions.”

Tip: DIFF is only available for complex text files. For more information about DIFF and optimization, see “Optimization Options (DIFF)” on page 10-5.

Select Source Information (Text)

- 1 In the next screen of the Transformation Wizard, select the document you want to use as a source from the **Text Document Definition** drop-down menu.
- 2 Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

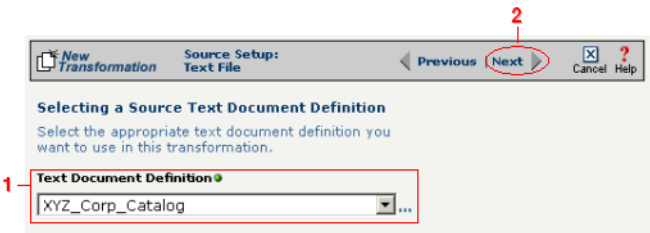


Figure 15-65. Choose which document definition you want to use as your source document.

If the text file you chose for your source is a complex text type, an additional screen appears that lets you set your source to take advantage of an operation’s DIFF function. If you want this transformation to be optimized by filtering out redundant data, select the field(s) that you want to use for filtering in this screen.

- 1 Click the checkbox that corresponds to the appropriate key field name.
- 2 Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

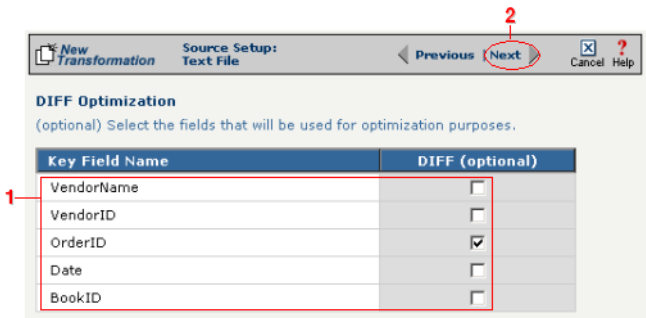



Figure 15-66. If your text file is a complex file and you need to set a field to act as an optimization filter using DIFF functionality, select the appropriate field in this screen.

 **Tip:** for more information about document definitions, see Chapter 9, “Creating Document Definitions.”

Select Target Information (Text)

- ❶ In the next screen of the Transformation Wizard, select the document definition that you want to hold the transformed text from the **Select a Document** drop-down menu.
- ❷ Compare your definition to that shown in the figure below, then click **Save** to save your work and exit out of the Transformation Wizard.

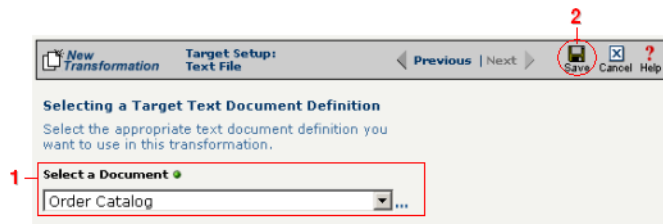


Figure 15-67. Select the document definition you want to use as your target.

What’s Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for instructions on mapping your new transformation.

How to Transform from a Text File to an XML Document




Tip: Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from a text file to an XML document.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See “How to Create an FTP Source Definition” on page 7-8 if your source text file will be stored on an FTP server.
 - b. See “How to Create a File Share Source Definition” on page 7-5 if your source text file will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Source Definition” on page 7-11 if your source text file will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Source Definition” on page 7-13 if your source text file will be stored on an SCP server.
- ❸ Create Your Target Definition
 - a. See “How to Create an FTP Target Definition” on page 8-10 if your target XML document will be stored on an FTP server.
 - b. See “How to Create a File Share Target Definition” on page 8-7 if your target XML document will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Target Definition” on page 8-14 if your target XML document will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Target Definition” on page 8-20 if your target XML document will be stored on an SCP server.
- ❹ Create Your Source Document Definition (see Chapter 9 for details)
- ❺ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❻ Map the Source and Target Fields (see Chapter 17 for details)
- ❼ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

 **Note:** Make sure you've completed steps 1-4 above before attempting to define your transformation.

Use the Transformation Wizard to Build Your Transformation

Follow these steps to transform information from a text file to an XML document.

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

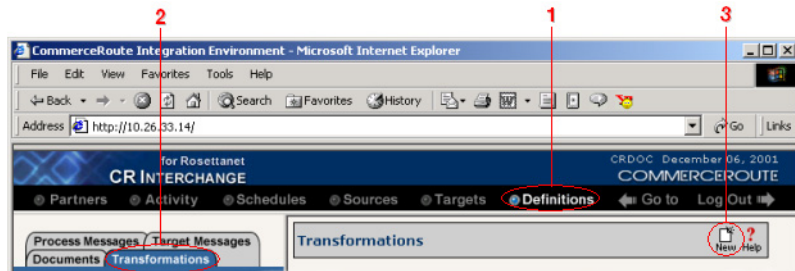


Figure 15-68. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- ❹ Enter an appropriate name for your new transformation in the **Transformation Name** field.
- ❺ Select “Text” from the **Source** drop-down menu and “XML” from the **Target** drop-down menu.
- ❻ Click the **Next** button in the toolbar to continue.

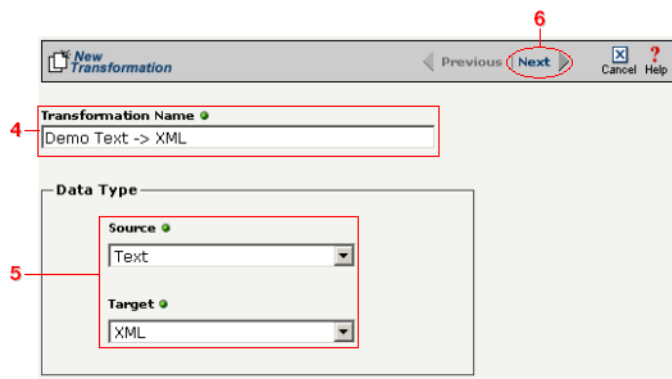




Figure 15-69. Give your new transformation definition an appropriate name, then choose **Text File** for your Source and **XML Document** for your Target.

 **Tip:** for more information about document definitions, see Chapter 9, “Creating Document Definitions.”

 **Tip:** DIFF is only available for complex text files. For more information about DIFF and optimization, see “Optimization Options (DIFF)” on page 10-5.

Select Source Information (Text)

- 1 In the next screen of the Transformation Wizard, select the document you want to use as a source from the **Text Document Definition** drop-down menu.
- 2 Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

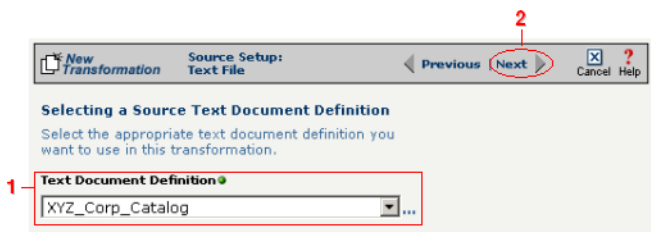


Figure 15-70. Choose which document definition you want to use as your source document.

If the text file you chose for your source is a complex text type, an additional screen appears that lets you set your source to take advantage of an operation’s DIFF function. If you want this transformation to be optimized by filtering out redundant data, select the field(s) that you want to use for filtering in this screen.

- 1 Click the checkbox that corresponds to the appropriate key field name.
- 2 Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

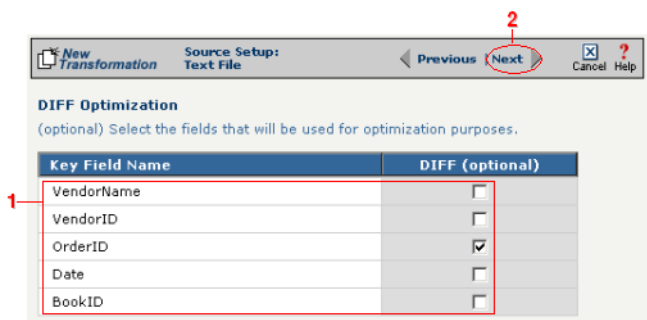


Figure 15-71. If your text file is a complex file and you need to set a field to act as an optimization filter using DIFF functionality, select the appropriate field in this screen.

Tip: for more information about DTD files, see “What’s a DTD File?” on page 11-42 in the *Syncx Integration Appliance Reference Guide*.

Select Target Information (XML)

You have two scenarios for loading your XML document. Follow the option that describes where your XML document's DTD file is located:

Option 1: You are using an XML document whose definition is already loaded into the appliance

- ❶ Click the **Select an XML DTD** radio button.
- ❷ Select the appropriate XML folder from the drop-down list.
- ❸ Choose the appropriate DTD file from the scrollable list below the drop-down list.
- ❹ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.
- ❺ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

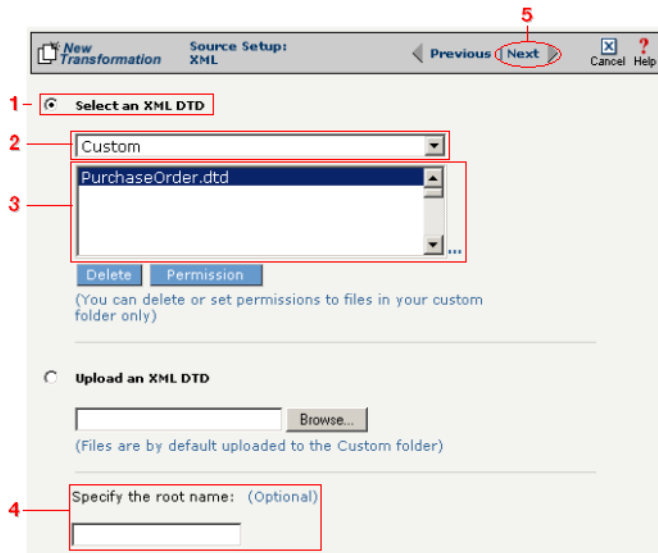



Figure 15-72. Click the **Select an XML DTD** radio button if your XML document definition has already been loaded into the system.

 **Note:** Skip these steps if you chose to follow Option 1 above.

Option 2: You need to use an XML document whose definition has not yet been loaded into the appliance

- ❶ Choose the **Upload an XML DTD** radio button.
- ❷ Click **Browse** and navigate to the location of your DTD file that you want to add to the appliance.
- ❸ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.
- ❹ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

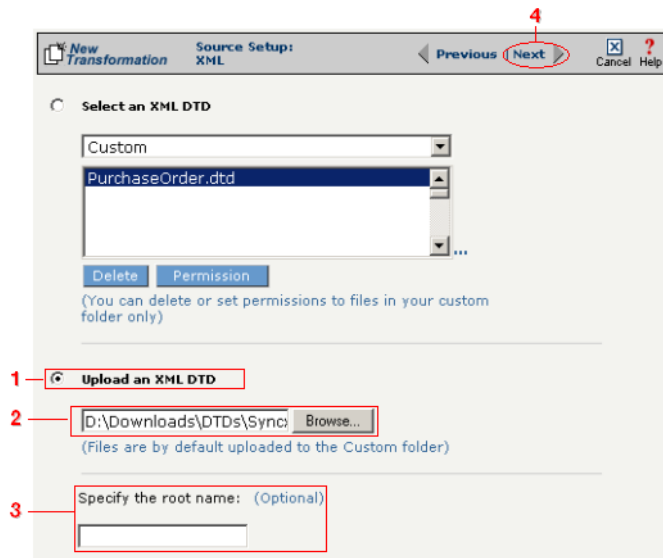


Figure 15-73. Click the **Upload an XML DTD** radio button if you need to copy a new DTD to the Syncx appliance.

Select Target XML DTD Options

You have three choices for where you will copy your DTD file. Click on the option that describes where your XML document's DTD file should be stored:

Option 1: Copy the DTD file to the same folder as your XML file

- ❶ Select the **Copy DTD file to folder where...** radio button.
- ❷ Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

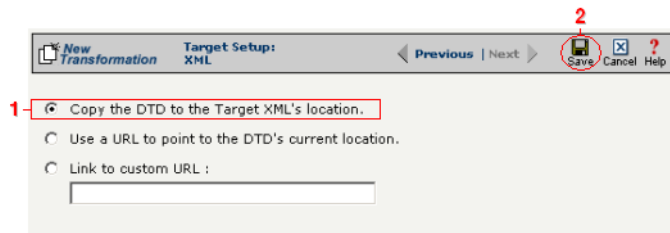



Figure 15-74. Click the **Copy DTD file to folder where...** radio button if you want to copy your DTD to the same folder as your XML document.

 **Note:** Skip these steps if you chose to follow Option 1 above or Option 3 below.

Option 2: Make the DTD file's location appear as the current URL in the XML document's header

- ❶ Select the **Use a URL to point to the DTD's Current Location** radio button.
- ❷ Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

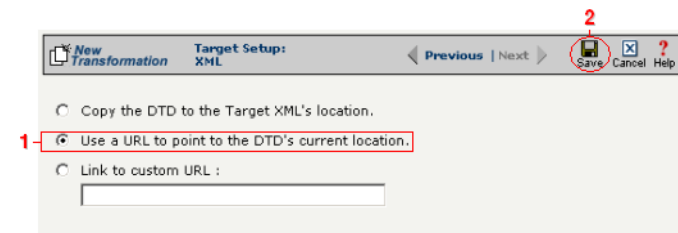



Figure 15-75. If you want to make your DTD file's location appear as the current URL in the XML document's header, click the **Link to Current URL** radio button.

 **Note:** Skip these steps if you chose to follow Option 1 or 2 above.

Option 3: Make the DTD file's location appear as a custom URL in the XML document's header

- ❶ Select the **Link to Custom URL** radio button and enter the custom URL in the corresponding field.
- ❷ Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

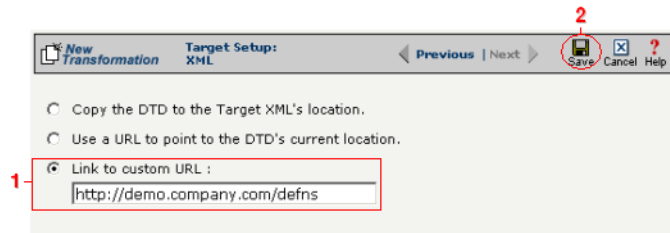



Figure 15-76. Click the **Link to Custom URL** radio button and enter the new URL in the corresponding field if you want to make your DTD file's location appear as a custom URL in the XML document's header.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for instructions on mapping your new transformation.


How to Transform from an XML Document to a Text File

 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from an XML document to a text file.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See “How to Create an FTP Source Definition” on page 7-8 if your source XML document will be stored on an FTP server.
 - b. See “How to Create a File Share Source Definition” on page 7-5 if your source XML document will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Source Definition” on page 7-11 if your source XML document will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Source Definition” on page 7-13 if your source XML document will be stored on an SCP server.
- ❸ Create Your Target Definition
 - a. See “How to Create an FTP Target Definition” on page 8-10 if your target text file will be stored on an FTP server.
 - b. See “How to Create a File Share Target Definition” on page 8-7 if your target text file will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Target Definition” on page 8-14 if your target text file will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Target Definition” on page 8-20 if your target text file will be stored on an SCP server.
- ❹ Create Your Target Document Definition (see Chapter 9 for details)
- ❺ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❻ Map the Source and Target Fields (see Chapter 17 for details)
- ❼ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

 **Note:** Make sure you've completed steps 1-4 above before attempting to define your transformation.

Use the Transformation Wizard to Build Your Transformation

Follow these steps to transform information from an XML document to a text file.

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

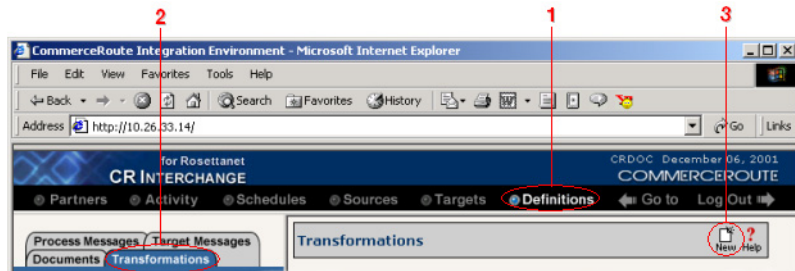


Figure 15-77. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- ❹ Enter an appropriate name for your new transformation in the **Transformation Name** field.
- ❺ Select “XML” from the **Source** drop-down menu and “Text” from the **Target** drop-down menu.
- ❻ Click the **Next** button in the toolbar to continue.

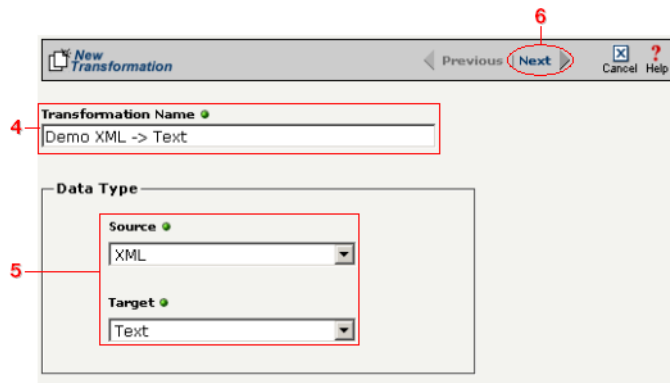


Figure 15-78. Give your new transformation definition an appropriate name, then choose **XML Document** for your Source and **Text File** for your Target.

Tip: for more information about DTD files, see “What’s a DTD File?” on page 11-42 in the *Syncx Integration Appliance Reference Guide*.


Select Source Information (XML)

You have two choices for loading your XML document. Follow the option that describes where your XML document's DTD file is located:

Option 1: You are using an XML document whose definition is already loaded into the appliance

- ❶ Click the **Select an XML DTD** radio button.
- ❷ Select the appropriate XML folder from the drop-down list.
- ❸ Choose the appropriate DTD file from the scrollable list below the drop-down list.
- ❹ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.
- ❺ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

Figure 15-79. Click the **Select an XML DTD** radio button if your XML document definition has already been loaded into the system.

 **Note:** Skip these steps if you chose to follow Option 1 above.

Option 2: You need to use an XML document whose definition has not yet been loaded into the appliance

- ❶ Choose the **Upload an XML DTD** radio button.
- ❷ Click **Browse** and navigate to the location of your DTD file that you want to add to the appliance.
- ❸ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.
- ❹ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.

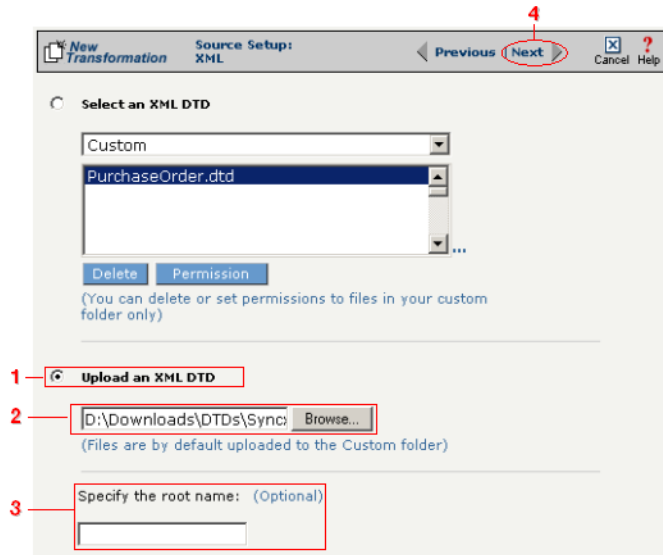



Figure 15-80. Click the **Upload an XML DTD** radio button if you need to copy a new DTD to the Syncx appliance.

 **Tip:** for more information about document definitions, see Chapter 9, “Creating Document Definitions.”

Select Target Information (Text)

- ❶ In the next screen of the Transformation Wizard, select the document definition that you want to hold the transformed text from the **Select a Document** drop-down menu.
- ❷ Compare your definition to that shown in the figure below, then click **Save** to save your work and exit out of the Transformation Wizard.

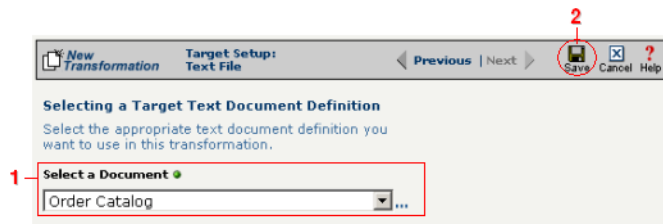


Figure 15-81. Select the document definition you want to use as your target.

What's Next?


Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for instructions on mapping your new transformation.



Chapter 16

Transforming XML

Overview


 **Tip:** For more information about how Syncx 6200 Series Appliance works with XML, see “About XML” on page 11-42 in the *Reference Guide*.


This chapter describes how to transform information in XML documents to or from all supported data types. The complete list of XML transformations is shown below, followed by step-by-step instructions for each transformation combination.

Appliance XML Transformations

- XML to CRbuilder Process
- XML to Database
- Database to XML
- XML to EDI
- EDI to XML
- XML to RosettaNet
- RosettaNet to XML
- XML to SAP
- XML to Text
- Text to XML
- XML to XML

How to Transform from an XML Document to a CRbuilder Process

 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

 **Note:** Make sure you've completed steps 1-3 above before attempting to define your transformation.

Summary of Steps

Follow these steps to transform information from an XML document to a text file.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See “How to Create an FTP Source Definition” on page 7-8 if your source XML document will be stored on an FTP server.
 - b. See “How to Create a File Share Source Definition” on page 7-5 if your source XML document will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Source Definition” on page 7-11 if your source XML document will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Source Definition” on page 7-13 if your source XML document will be stored on an SCP server.
- ❸ Create Your Target Definition (see “How to Create a CRbuilder Process Target Definition” on page 8-2 for details)
- ❹ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❺ Map the Source and Target Fields (see Chapter 17 for details)
- ❻ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

Use the Transformation Wizard to Build Your Transformation

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

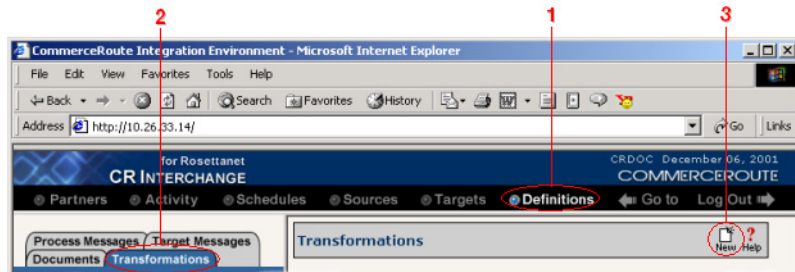


Figure 16-1. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- 4 Enter an appropriate name for your new transformation in the **Transformation Name** field.
- 5 Select “XML” from the **Source** drop-down menu and “CRbuilder Process” from the **Target** drop-down menu.
- 6 Click the **Next** button in the toolbar to continue.

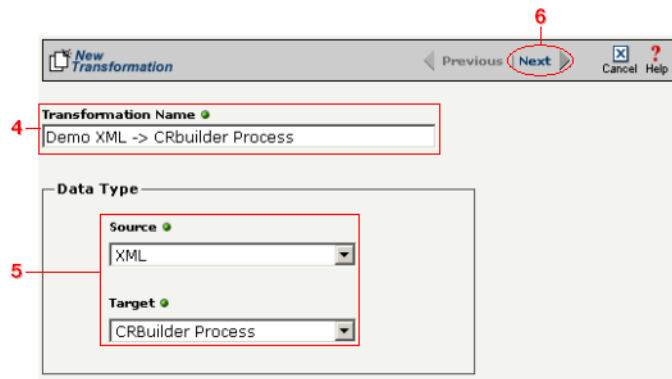


Figure 16-2. Give your new transformation definition an appropriate name, then choose **EDI Document** for your Source and **CRbuilder Process** for your Target.

Tip: for more information about DTD files, see “What’s a DTD File?” on page 11-42 in the *Syncx Integration Appliance Reference Guide*.

Select Source Information (XML)

You have two choices for loading your XML document. Follow the option that describes where your XML document's DTD file is located:

Option 1: You are using an XML document whose definition is already loaded into the appliance

- ❶ Click the **Select an XML DTD** radio button.
- ❷ Select the appropriate XML folder from the drop-down list.
- ❸ Choose the appropriate DTD file from the scrollable list below the drop-down list.
- ❹ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.
- ❺ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

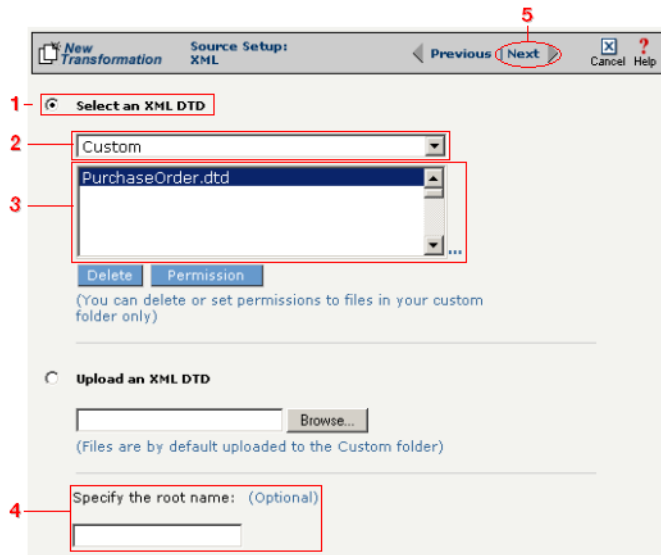



Figure 16-3. Click the **Select an XML DTD** radio button if your XML document definition has already been loaded into the system.

 **Note:** Skip these steps if you chose to follow Option 1 above.

Option 2: You need to use an XML document whose definition has not yet been loaded into the appliance

- ❶ Choose the **Upload an XML DTD** radio button.
- ❷ Click **Browse** and navigate to the location of your DTD file that you want to add to the appliance.
- ❸ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.
- ❹ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.

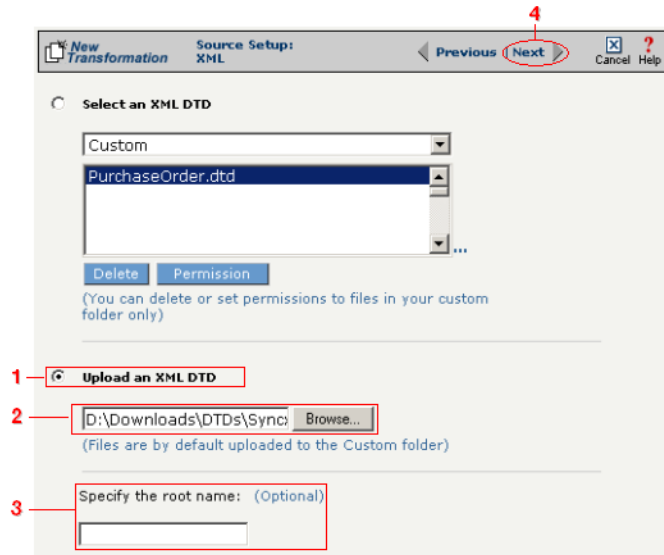


Figure 16-4. Click the **Upload an XML DTD** radio button if you need to copy a new DTD to the Syncx appliance.

Select Target Information (CRbuilder Process)

- 1 Select the appropriate CRbuilder process from the drop-down menu.
- 2 Select the process' initial task that you want to use to initiate from the drop-down menu.
- 3 Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

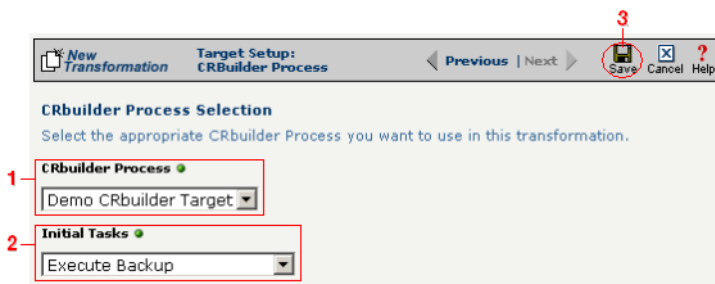



Figure 16-5. Select the name of the appropriate CRbuilder process and the desired initial task from their respective drop-down menu.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for instructions on mapping your new transformation.

How to Transform from an XML Document to a Database


 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from an XML document to a database.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See “How to Create an FTP Source Definition” on page 7-8 if your source XML document will be stored on an FTP server.
 - b. See “How to Create a File Share Source Definition” on page 7-5 if your source XML document will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Source Definition” on page 7-11 if your source text file will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Source Definition” on page 7-13 if your source text file will be stored on an SCP server.
- ❸ Create Your Target Definition (see “How to Create a Database Target Definition” on page 8-4 for details)
- ❹ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❺ Map the Source and Target Fields (see Chapter 17 for details)
- ❻ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

Use the Transformation Wizard to Build Your Transformation

 **Note:** Make sure you’ve completed steps 1-3 above before attempting to define your transformation.

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

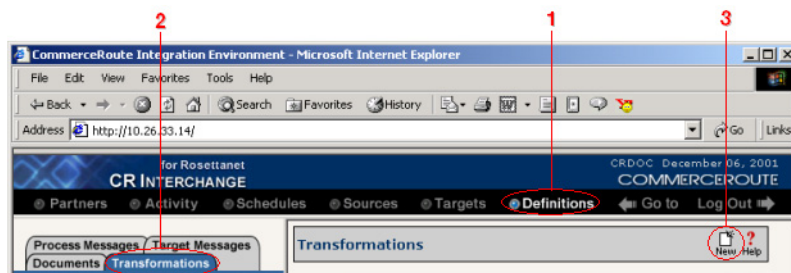


Figure 16-6. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- ④ Enter an appropriate name for your new transformation in the **Transformation Name** field.
- ⑤ Select “XML” from the **Source** drop-down menu and “Database” from the **Target** drop-down menu.
- ⑥ Click the **Next** button in the toolbar to continue.

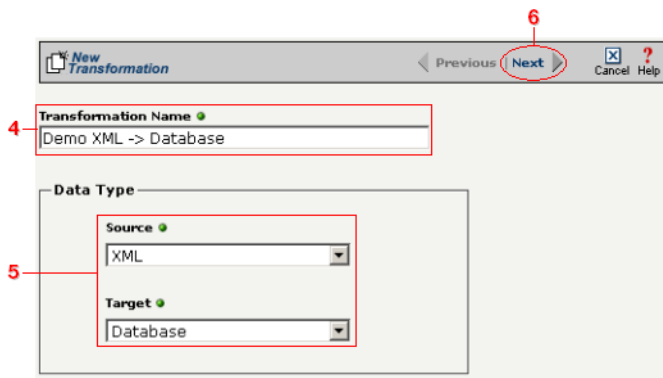


Figure 16-7. Give your new transformation definition an appropriate name, then choose “XML” for your Source and “Database” for your Target.

Tip: for more information about DTD files, see “What’s a DTD File?” on page 11-42 in the *Syncx Integration Appliance Reference Guide*.

Select Source Information (XML)

You have two choices for loading your XML document. Follow the option that describes where your XML document's DTD file is located:

Option 1: You are using an XML document whose definition is already loaded into the appliance

- ❶ Click the **Select an XML DTD** radio button.
- ❷ Select the appropriate XML folder from the drop-down list.
- ❸ Choose the appropriate DTD file from the scrollable list below the drop-down list.
- ❹ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.
- ❺ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

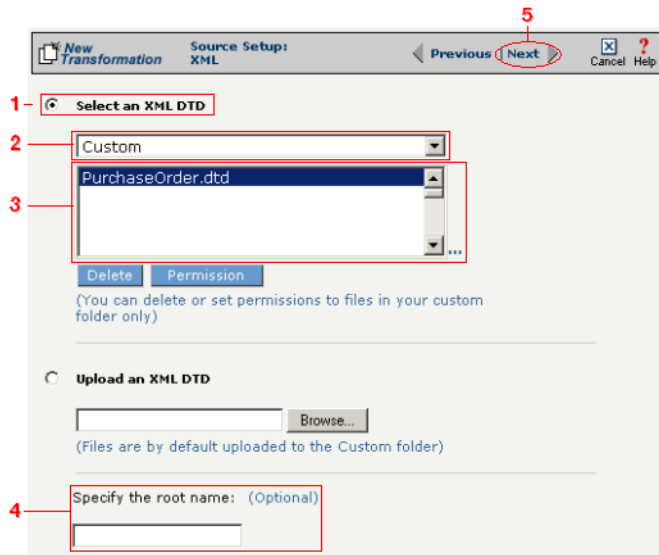



Figure 16-8. Click the **Select an XML DTD** radio button if your XML document definition has already been loaded into the system.

 **Note:** Skip these steps if you chose to follow Option 1 above.

Option 2: You need to use an XML document whose definition has not yet been loaded into the appliance

- ❶ Choose the **Upload an XML DTD** radio button.
- ❷ Click **Browse** and navigate to the location of your DTD file that you want to add to the appliance.
- ❸ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.
- ❹ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.

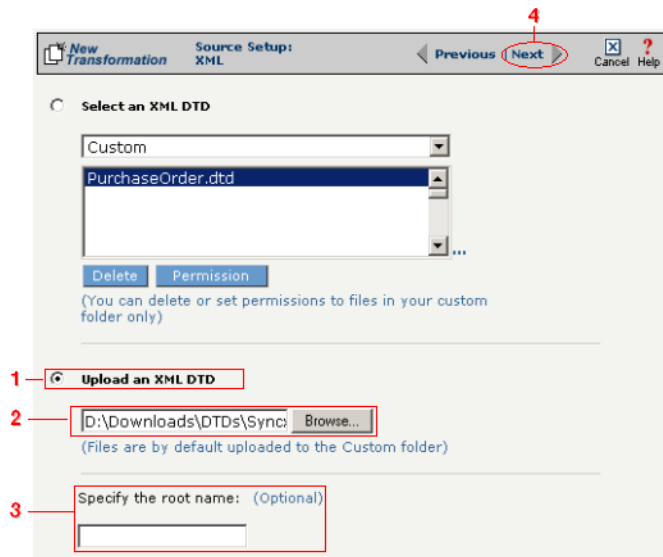


Figure 16-9. Click the **Upload an XML DTD** radio button if you need to copy a new DTD to the Syncx appliance.

Select Target Information (Database)

- ❶ Select the name of the data target that you defined as your Target Definition from the **Database Target** drop-down menu.
- ❷ Click the **Next** button in the toolbar to continue (see the figure below).

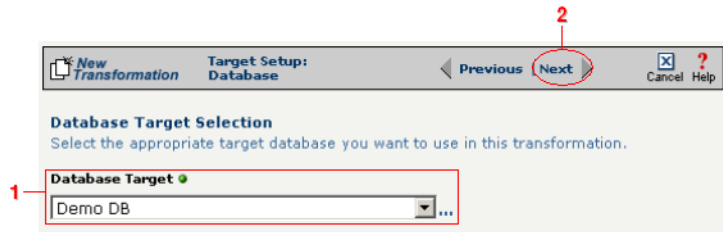


Figure 16-10. Choose which data source you will use as your target database from the **Database Target** drop-down menu.

Next, you need to specify how you will write information to your target database. Follow the option that is appropriate for your transformation:

Option 1: Only a single table in the target database will be accessed

- ❶ Enter part or all of the table's name. If you want to view all the database's items, leave the field blank.
- ❷ Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
- ❸ Click the **Search** button to view the list of items that match your name search.
- ❹ Select the appropriate item in the **Available Item(s)** field, then click the right arrow button.
- ❺ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

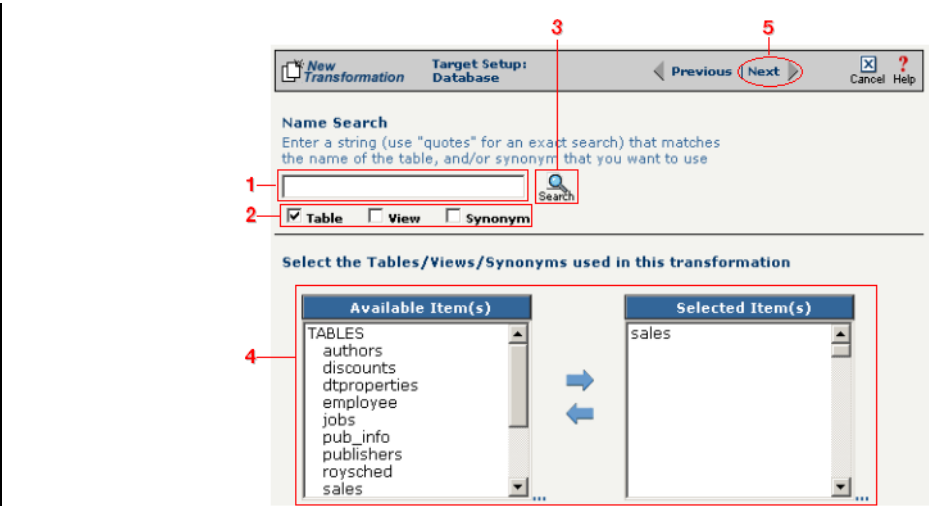


Figure 16-11. Choose the single table you want to access from the **Available Tables** field.


The next screen is where you specify how many times you will use the single table (or view/synonym) you selected for your target.

1. (Optional) If you will use this table more than once, change the **Times Used** field to the appropriate number.
2. Compare your work to below, then click **Next** to continue.

The screenshot shows a software window titled 'New Transformation' with a tab labeled 'Target Setup: Database'. At the top right are buttons for 'Previous', 'Next' (circled in red with a red '2' above it), 'Cancel', and 'Help'. Below this is a section titled 'Database Table' with the instruction 'Specify the number of times each table will be used in this transformation.' A table with two columns, 'List of Tables/Views/Synonyms' and 'Times Used', is displayed. The first row contains the text 'sales' in the first column and the number '1' in the second column. A red '1' is placed to the left of the 'sales' text.

List of Tables/Views/Synonyms	Times Used
sales	1

Figure 16-12. Use this screen to specify how many times the target table will be used.

 **Note:** You won't see this screen if your database table has no primary key.

When your database table has at least one primary key, this next screen gives you the option to select a database field as an update key.

1. (Optional) Use the **Update Key** field to select the field(s) that will be treated as update keys.
2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

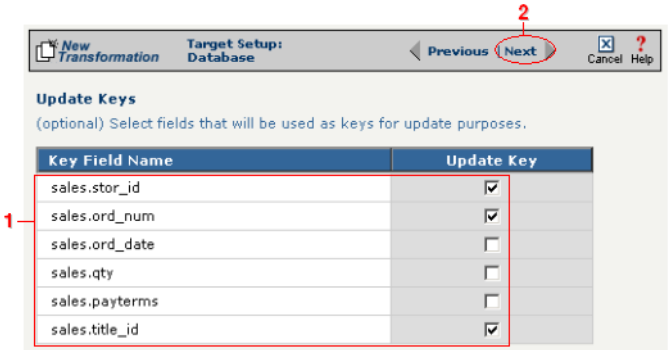




Figure 16-13. If you need to set a database field to act as an update key, select the appropriate field in this screen.

 **Note:** Skip to “Select Insert/Update Mode” on page 16-18 if you chose to follow Option 1 above.

 **Tip:** Hold down the Ctrl key to select multiple tables.

Option 2: More than one table in the target database will be accessed

1. Enter part or all of the tables' names. If you want to view all the database's items, leave the field blank.
2. Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
3. Click the **Search** button to view the list of items that match your name search.
4. Select the appropriate items in the **Available Item(s)** field, then click the right arrow button.
5. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

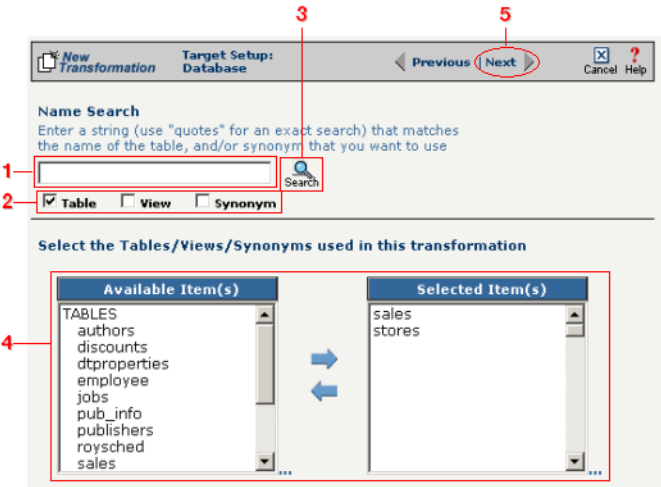


Figure 16-14. Select the appropriate tables you want to access from the **Available Tables** field.

Because you chose Option 2 (accessing more than one database table), you need to declare the tables' respective relationships:

1. Select the item in the **Parent** drop-down menu that you want to be the parent structure (i.e., at the top level of your data hierarchy).
2. Select the item in the **Child** drop-down menu that you want to be the child structure.
3. Select the appropriate database column in the **Parent Fields** window that will be used to reference the child table.
4. Select the appropriate database column in the **Child Fields** window that will be used to reference the parent table.
5. Click the **Add** button. This saves this parent-child relationship. You should see the new relationship appear in the **Parent – Child Field Relationships** table.
6. (Optional) If you have more child structures, click the **New** button and repeat the previous steps for each additional child.
7. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

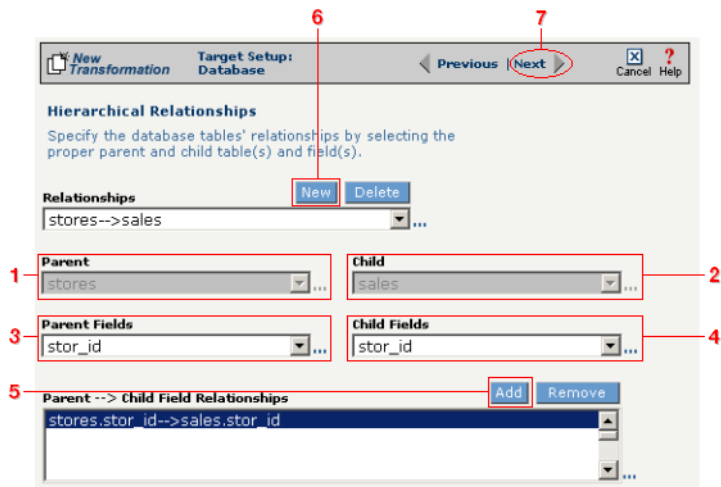


Figure 16-15. Use this screen in the Transformation Wizard to define the relationship between the different database tables.

In the **Nature of Data** screen, you need to indicate whether or not each child table's data must be present.

1. Select the appropriate radio button for each parent-child relationship:
 - a. Select **1 to N** if there will be at least 1 child to each parent entry.
 - b. Select **1** if there will always be a one-to-one parent-child relationship.
 - c. Select **0 to N** if there could be none, one, or more children for each parent.
 - d. Select **0 or 1** if there could be either no children or 1 child for each parent.
2. Compare your work to the figure below, then click **Next** to continue.

The screenshot shows the 'Nature of Data' screen in a database transformation tool. The title bar indicates 'New Transformation' and 'Target Setup: Database'. The main heading is 'Nature of Data' with the instruction: 'Identify whether each child table's data must be present ("1 to N" or "1") or may be present ("0 to N" or "0 or 1").' Below this is a table with the following structure:

List of Tables/Views/Synonyms	1 to N	1	0 to N	0 or 1
stores-->sales	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

At the top right, there are navigation buttons: 'Previous', 'Next' (highlighted with a red circle and a red arrow labeled '2'), 'Cancel', and 'Help'.

Figure 16-16. Use the Nature of Data screen to identify the number of child entries that are supported for each parent-child relationship.

Note: You won't see this screen if your database table has no primary key.

When your database table has at least one primary key, this next screen gives you the option to select a database field as an update key.

1. (Optional) Select the checkbox(es) in the **Update Key** column that correspond to the field(s) that will be treated as update keys.
2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

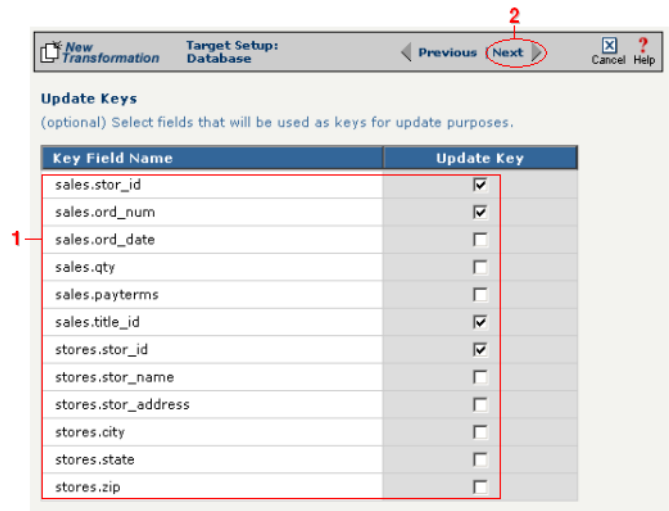



Figure 16-17. If you need to set a database field to act as an update key, select the appropriate field in this screen.

You have now completed Option 2.

Select Insert/Update Mode

In this last screen of the Transformation Wizard, you define how the Syncx Integration Appliance will handle new or existing records when it loads data from your source to your target database.

1. Select one of the four options described below:
 - a. **Insert/Update:** the appliance will first attempt to insert any new record it encounters. If a record already exists, it will then update that record.
 - b. **Insert Only:** the appliance will attempt to insert a new record only. No

 **Note:** The options that include Update are only available if you chose at least one field in the **Update Key** screen.

updates will be permitted.

- c. **Update Only:** the appliance will attempt to update an existing record. No new records will be created.
- d. **Update/Insert:** the appliance will first attempt to update a record. It will create a new record if none exists.

- ② Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

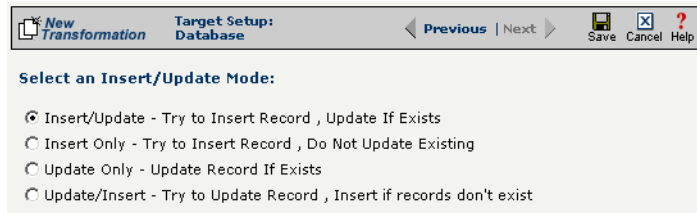



Figure 16-18. Choose which of the four insert/update options is appropriate for your transformation.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for instructions on mapping your new transformation.

How to Transform from a Database to an XML Document


 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from a database to an XML document.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition (see “How to Create a Database Source Definition” on page 7-2 for details)
- ❸ Create Your Target Definition
 - a. See “How to Create an FTP Target Definition” on page 8-10 if your target XML document will be stored on an FTP server.
 - b. See “How to Create a File Share Target Definition” on page 8-7 if your target XML document will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Target Definition” on page 8-14 if your target XML document will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Target Definition” on page 8-20 if your target XML document will be stored on an SCP server.
- ❹ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❺ Map the Source and Target Fields (see Chapter 17 for details)
- ❻ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

Use the Transformation Wizard to Build Your Transformation

 **Note:** Make sure you’ve completed steps 1-3 above before attempting to define your transformation.

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

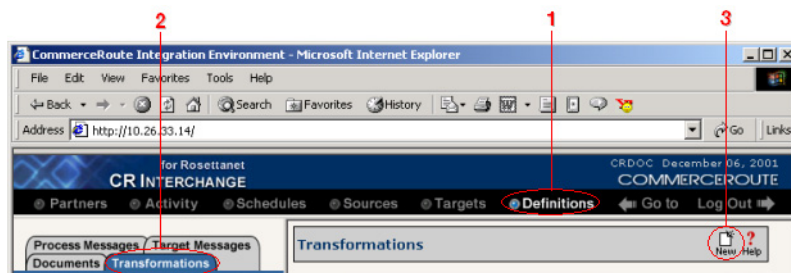


Figure 16-19. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- ④ Enter an appropriate name for your new transformation in the **Transformation Name** field.
- ⑤ Select “Database” from the **Source** drop-down menu and “XML” from the **Target** drop-down menu.
- ⑥ Click the **Next** button in the toolbar to continue.

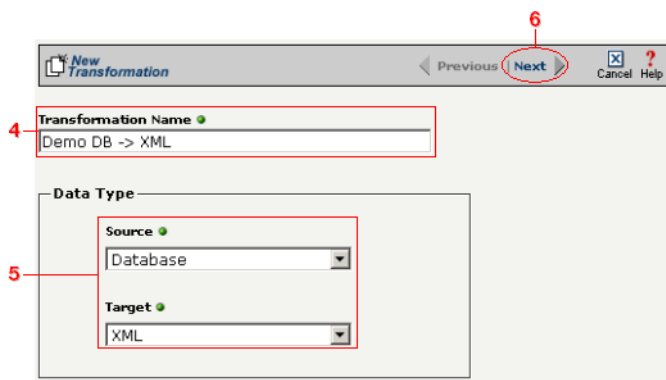


Figure 16-20. Give your new transformation definition an appropriate name, then choose “Database” for your Source and “XML” for your Target.

Select Source Information (Database)

- ❶ In the next screen of the Transformation Wizard, select the name of the Source that holds the database information you want to transform from the **Data Source** drop-down menu.
- ❷ Choose how you will get information from your database. You have two options:

Option 1: Use the Transformation Wizard to help you access your database without typing SQL

- a. Select the appropriate database definition from the **Database Source** drop-down menu.
- b. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

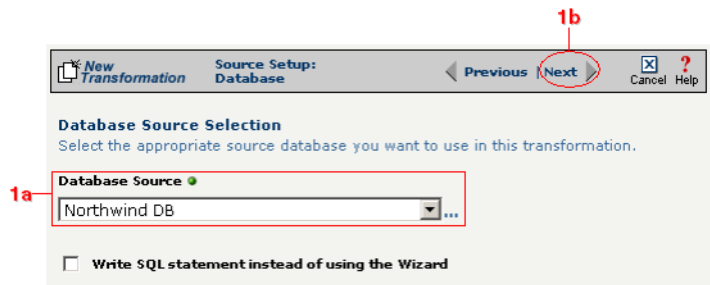


Figure 16-21. Choose the appropriate database from the **Database Source** drop-down menu if you want the Transformation Wizard to help you access your database without having to type any SQL.

Within Option 1, you need to specify how you will access information from your source database. Choose one of two options:

Option 1a: Only a single table in the source database will be accessed.

1. Enter part or all of the table's name. If you want to view all the database's items, leave the field blank.
2. Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
3. Click the **Search** button to view the list of items that match your name search.

4. Select the appropriate item in the **Available Item(s)** field, then click the right arrow button.
5. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

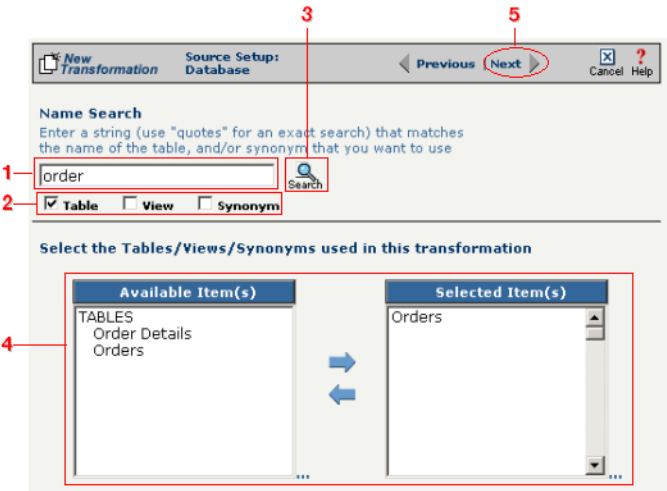


Figure 16-22. Select the single table you want to access from the **Available Tables** field.

The next screen is where you specify how many times you will use the single table (or view/synonym) you selected for your source.

1. (Optional) If you will use this table more than once, change the **Times Used** field to the appropriate number.
2. Compare your work to below, then click **Next** to continue.

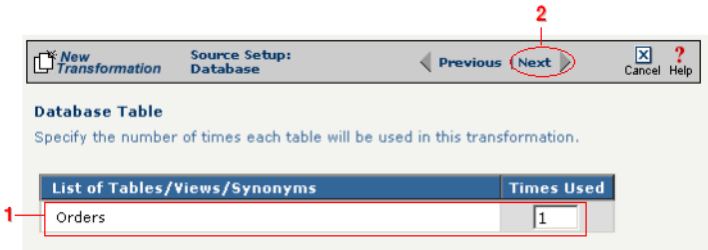


Figure 16-23. Use this screen to specify how many times the source table will be used.

The next screen lets you add a WHERE clause to filter your query:

1. Enter an appropriate WHERE SQL statement in the Where Clause.
2. (Optional) If you want to review your database table's fields, select the **View Field List** checkbox. The list will appear in a table at the bottom of the screen.
3. Click the **Next** button in the toolbar to continue.

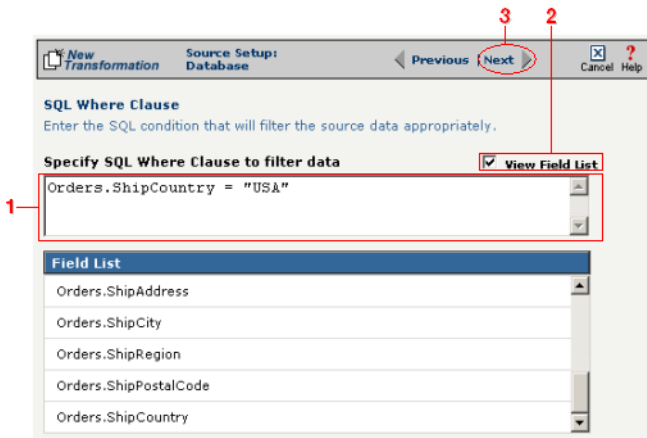

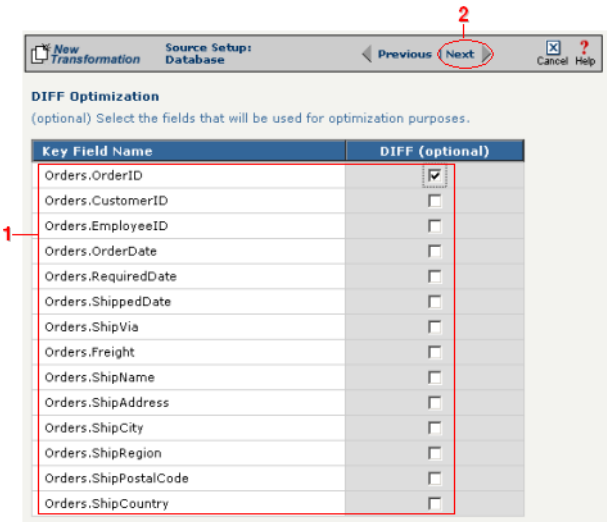


Figure 16-24. This optional screen lets you add a WHERE SQL clause to filter your information.

 **Tip:** For more information about DIFF and optimization, see “Optimization Options (DIFF)” on page 10-5.


This next screen lets you set your source to take advantage of an operation’s DIFF function. If you want this source information to be optimized by filtering out redundant data, select the field(s) that you want to use for filtering in this screen.


1. Click the checkbox that corresponds to the appropriate key field name.
2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.



Key Field Name	DIFF (optional)
Orders.OrderID	<input checked="" type="checkbox"/>
Orders.CustomerID	<input type="checkbox"/>
Orders.EmployeeID	<input type="checkbox"/>
Orders.OrderDate	<input type="checkbox"/>
Orders.RequiredDate	<input type="checkbox"/>
Orders.ShippedDate	<input type="checkbox"/>
Orders.ShipVia	<input type="checkbox"/>
Orders.Freight	<input type="checkbox"/>
Orders.ShipName	<input type="checkbox"/>
Orders.ShipAddress	<input type="checkbox"/>
Orders.ShipCity	<input type="checkbox"/>
Orders.ShipRegion	<input type="checkbox"/>
Orders.ShipPostalCode	<input type="checkbox"/>
Orders.ShipCountry	<input type="checkbox"/>


Figure 16-25. If you need to set a database field to act as an optimization filter using DIFF functionality, select the appropriate field in this screen.

 **Note:** You won't see this screen if your source database table has no primary key.

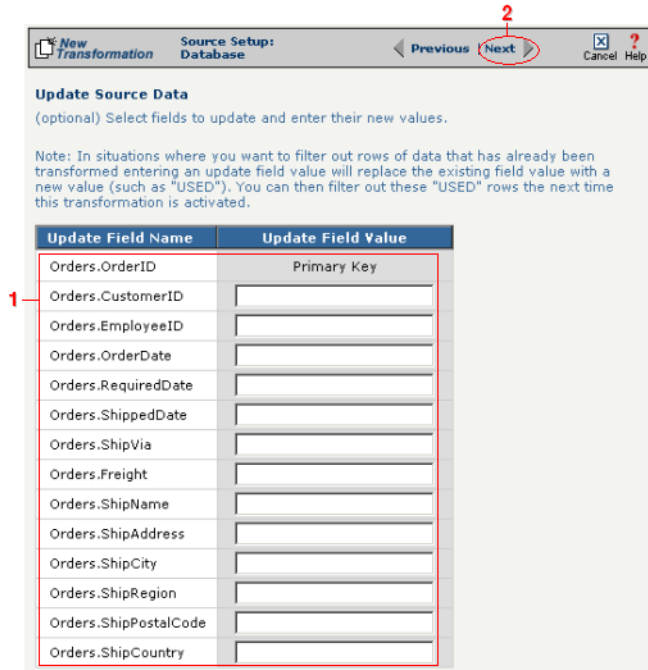
 **Tip:** for more information about the Update Field Value, see "Update Field Value" on page 11-6 in the *Syncx Integration Appliance Reference Guide*.

When your source database table has at least one primary key, this next screen gives you the option to select a database field as an update key.

1. (Optional) Use the **Update Field Value** field to update the value of the fields that match your filter criteria.

 **Caution!** This value will replace the source element's current value with whatever you enter in this field.

2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.



Update Source Data
(optional) Select fields to update and enter their new values.


Note: In situations where you want to filter out rows of data that has already been transformed entering an update field value will replace the existing field value with a new value (such as "USED"). You can then filter out these "USED" rows the next time this transformation is activated.

Update Field Name	Update Field Value
Orders.OrderID	Primary Key
Orders.CustomerID	
Orders.EmployeeID	
Orders.OrderDate	
Orders.RequiredDate	
Orders.ShippedDate	
Orders.ShipVia	
Orders.Freight	
Orders.ShipName	
Orders.ShipAddress	
Orders.ShipCity	
Orders.ShipRegion	
Orders.ShipPostalCode	
Orders.ShipCountry	

Figure 16-26. If you need to set a database field to act as an update key, select the appropriate field in this screen.

You have finished defining your Option 1a source (using the Transformation Wizard to specify a single source table).

Option 1b: More than one table in the source database will be accessed.

 **Note:** Skip these steps if you chose to follow Option 1a above.

1. Enter part or all of the tables names. If you want to view all the database's items, leave the field blank.
2. Indicate whether you want to search for database tables, views, synonyms, or any combination by selecting the appropriate combination of checkboxes.
3. Click the **Search** button to view the list of items that match your name search.
4. Select the appropriate items in the **Available Item(s)** field, then click the right arrow button.
5. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

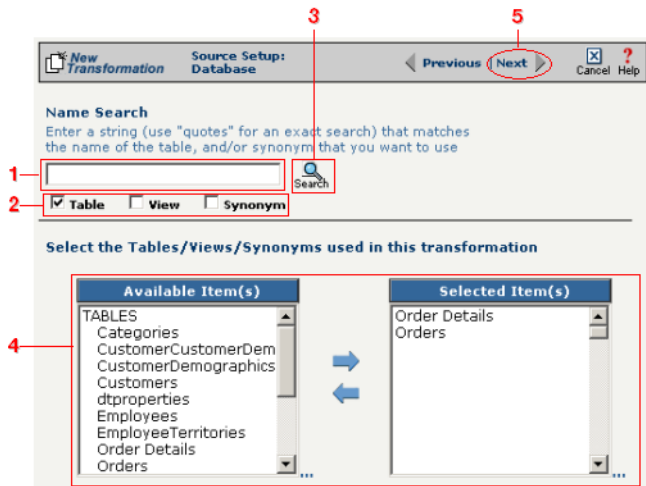



Figure 16-27. Select the appropriate tables you want to access from the **Available Item(s)** field.

 **Note:** Skip these steps if you chose to follow Option 1a.

The next screen is where you specify how many times you will use each table (or view/synonym) you selected for your source.

1. (Optional) If you will use each table more than once, change the **Times Used** field to the appropriate number.
2. Compare your work to below, then click **Next** to continue.

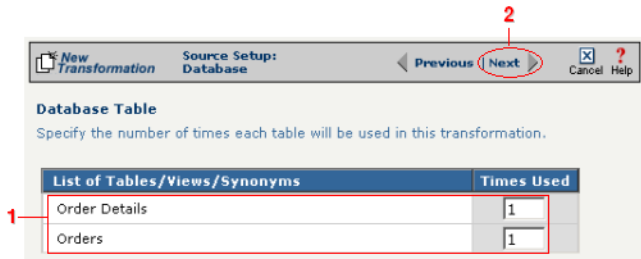



Figure 16-28. Use this screen in the Transformation Wizard to specify how many times each item will be used in the transformation.

 **Note:** Skip these steps if you chose to follow Option 1a.

Because you chose Option 1b (accessing more than one database table), you need to declare the tables' respective relationships:

1. Select the item in the **Parent** drop-down menu that you want to be the parent structure (i.e., at the top level of your data hierarchy).
2. Select the item in the **Child** drop-down menu that you want to be the child structure.
3. Select the appropriate database column in the **Parent Fields** window that will be used to reference the child table.
4. Select the appropriate database column in the **Child Fields** window that will be used to reference the parent table.
5. Click the **Add** button. This saves this parent-child relationship. You should see the new relationship appear in the **Parent – Child Field Relationships** table.
6. (Optional) If you have more child structures, click the **New** button and repeat the previous steps for each additional child.
7. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

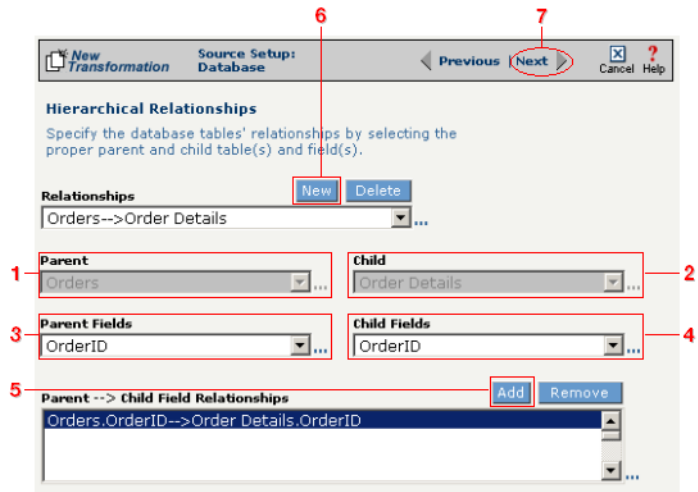


Figure 16-29. Use this screen in the Transformation Wizard to define the relationship between the different database tables.

Note: Skip these steps if you chose to follow Option 1a.

In the **Nature of Data** screen, you need to indicate whether or not each child table's data must be present.

1. Select the appropriate radio button for each parent-child relationship:
 - a. Select **1 to N** if there will be at least 1 child to each parent entry.
 - b. Select **1** if there will always be a one-to-one parent-child relationship.
 - c. Select **0 to N** if there could be none, one, or more children for each parent.
 - d. Select **0 or 1** if there could be either no children or 1 child for each parent.
2. Compare your work to the figure below, then click **Next** to continue.

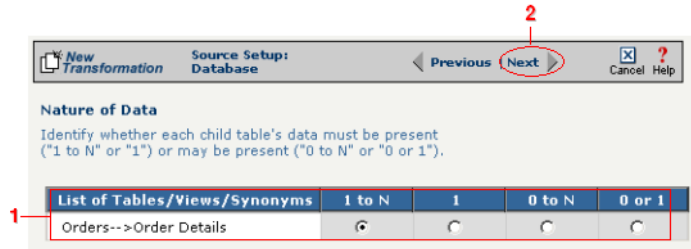



Figure 16-30. Use the Nature of Data screen to identify the number of child entries that are supported for each parent-child relationship.

 **Note:** Skip these steps if you chose to follow Option 1a.

The next screen lets you add a WHERE clause to filter your query:

1. Enter an appropriate WHERE SQL statement in the desired field's corresponding **Filter Condition** field.
2. (Optional) You can have the filtered output be sorted either ascending or descending by selecting the appropriate value from the **Sort** drop-down menu.
3. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

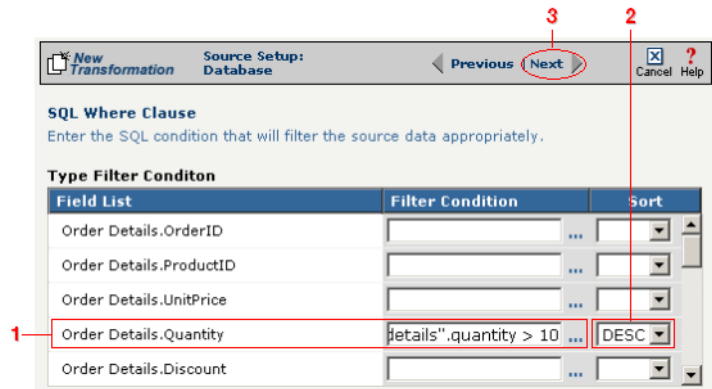



Figure 16-31. This optional screen lets you add a WHERE SQL clause to filter your information.

You have finished defining your Option 1b source (using the Transformation Wizard to specify a source with multiple tables).

 **Note:** Skip these steps if you chose to follow Option 1a or 1b above.

Option 2: You are familiar with SQL and want to enter your SQL query directly

1. Select the **Write SQL Statement** checkbox.
2. Enter your SQL query in the **SQL Statement** field.
3. (Optional) You can test the validity of your SQL statement by clicking the **Test SQL** button.
4. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

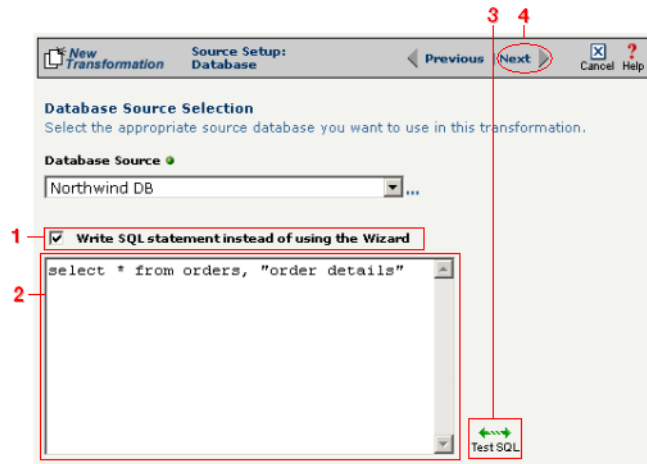




Figure 16-32. Click the **Write SQL Statement** checkbox if you are familiar with SQL and you want to type your statement directly into the **SQL Statement** field.

 **Note:** Skip these steps if you chose to follow Option 1a or 1b above.

 **Tip:** For more information about DIFF and optimization, see “Optimization Options (DIFF)” on page 10-5.

This next screen lets you set your source to take advantage of an operation’s DIFF function. If you want this source information to be optimized by filtering out redundant data, select the field(s) that you want to use for filtering in this screen.

1. Click the checkbox that corresponds to the appropriate key field name.
2. Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

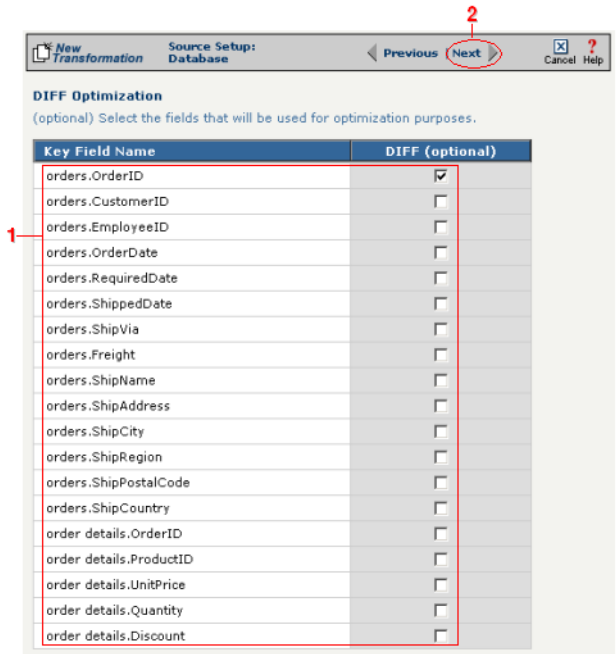


Figure 16-33. If you need to set a database field to act as an optimization filter using DIFF functionality, select the appropriate field in this screen.

You have finished defining your Option 2 source (directly entering the appropriate SQL statement).

Tip: for more information about DTD files, see "What's a DTD File?" on page 11-42 in the *Syncx Integration Appliance Reference Guide*.

Select Target Information (XML)

You have two scenarios for loading your XML document. Follow the option that describes where your XML document's DTD file is located:

Option 1: You are using an XML document whose definition is already loaded into the appliance

- ❶ Click the **Select an XML DTD** radio button.
- ❷ Select the appropriate XML folder from the drop-down list.
- ❸ Choose the appropriate DTD file from the scrollable list below the drop-down list.
- ❹ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.
- ❺ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

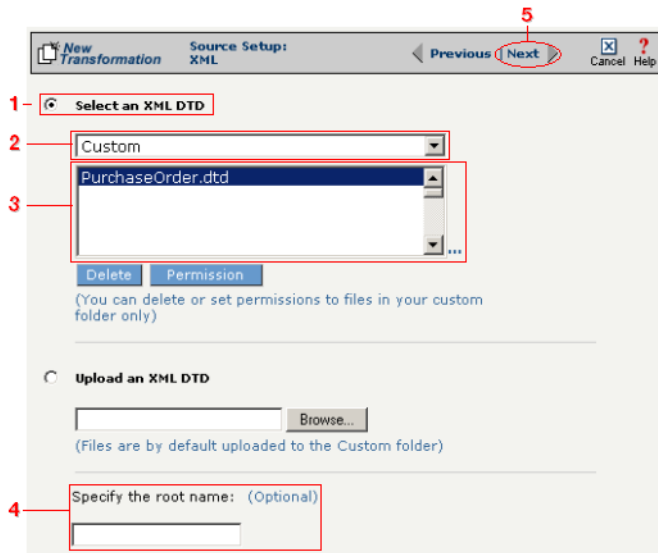



Figure 16-34. Click the **Select an XML DTD** radio button if your XML document definition has already been loaded into the system.

 **Note:** Skip these steps if you chose to follow Option 1 above.

Option 2: You need to use an XML document whose definition has not yet been loaded into the appliance

- ❶ Choose the **Upload an XML DTD** radio button.
- ❷ Click **Browse** and navigate to the location of your DTD file that you want to add to the appliance.
- ❸ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.
- ❹ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

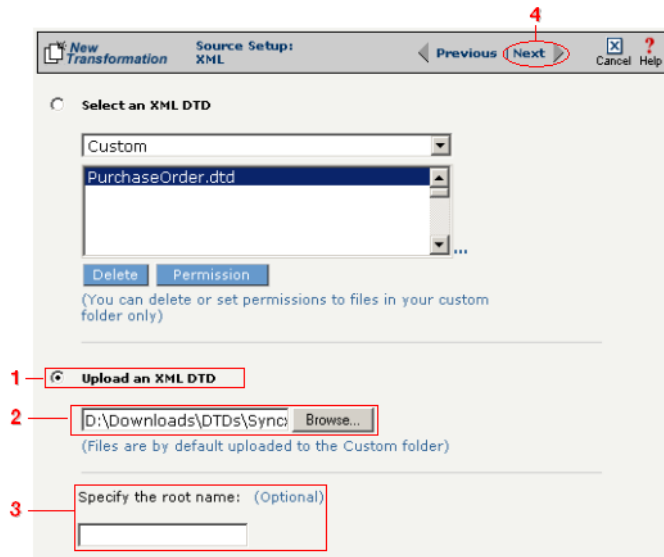


Figure 16-35. Click the **Upload an XML DTD** radio button if you need to copy a new DTD to the Syncx appliance.

Select Target XML DTD Options

You have three choices for where you will copy your DTD file. Click on the option that describes where your XML document's DTD file should be stored:

Option 1: Copy the DTD file to the same folder as your XML file

- ❶ Select the **Copy DTD file to folder where...** radio button.
- ❷ Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

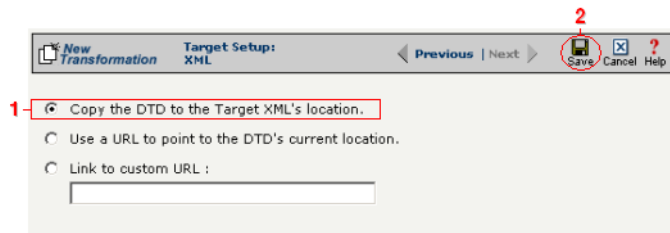



Figure 16-36. Click the **Copy DTD file to folder where...** radio button if you want to copy your DTD to the same folder as your XML document.

 **Note:** Skip these steps if you chose to follow Option 1 above or Option 3 below.

Option 2: Make the DTD file's location appear as the current URL in the XML document's header

- ❶ Select the **Use a URL to point to the DTD's Current Location** radio button.
- ❷ Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

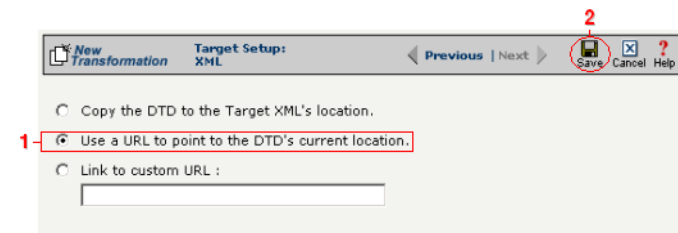



Figure 16-37. If you want to make your DTD file's location appear as the current URL in the XML document's header, click the **Link to Current URL** radio button.

 **Note:** Skip these steps if you chose to follow Option 1 or 2 above.

Option 3: Make the DTD file's location appear as a custom URL in the XML document's header

- ❶ Select the **Link to Custom URL** radio button and enter the custom URL in the corresponding field.
- ❷ Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

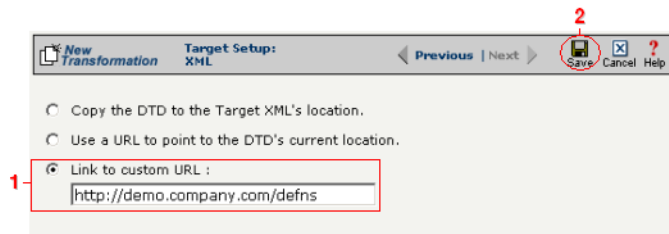



Figure 16-38. Click the **Link to Custom URL** radio button and enter the new URL in the corresponding field if you want to make your DTD file's location appear as a custom URL in the XML document's header.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for instructions on mapping your new transformation.


How to Transform from an XML Document to an EDI Document

 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from an XML document to an EDI document.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See “How to Create an FTP Source Definition” on page 7-8 if your source XML document will be stored on an FTP server.
 - b. See “How to Create a File Share Source Definition” on page 7-5 if your source XML document will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Source Definition” on page 7-11 if your source XML document will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Source Definition” on page 7-13 if your source XML document will be stored on an SCP server.
- ❸ Create Your Target Definition
 - a. See “How to Create an FTP Target Definition” on page 8-10 if your target EDI document will be stored on an FTP server.
 - b. See “How to Create a File Share Target Definition” on page 8-7 if your target EDI document will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Target Definition” on page 8-14 if your target EDI document will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Target Definition” on page 8-20 if your target EDI document will be stored on an SCP server.
- ❹ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❺ Map the Source and Target Fields (see Chapter 17 for details)
- ❻ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

 **Note:** Make sure you've completed steps 1-3 above before attempting to define your transformation.

Use the Transformation Wizard to Build Your Transformation

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

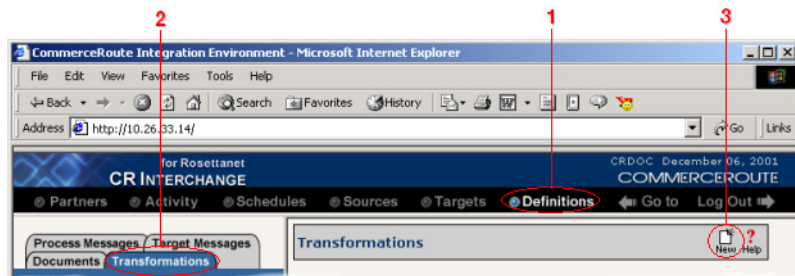


Figure 16-39. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- ❹ Enter an appropriate name for your new transformation in the **Transformation Name** field.
- ❺ Select “XML” from the **Source** drop-down menu and “EDI” from the **Target** drop-down menu.
- ❻ Click the **Next** button in the toolbar to continue.

The screenshot shows the 'New Transformation' dialog box. At the top, there is a title bar with a document icon and the text 'New Transformation'. Below the title bar, there are navigation buttons: 'Previous', 'Next', 'Cancel', and 'Help'. The 'Next' button is circled in red and has a red number '6' above it. Below the navigation buttons, there is a 'Transformation Name' field with a green checkmark icon to its right. The text 'Demo XML -> EDI' is entered in this field, and it is enclosed in a red box with a red number '4' to its left. Below the 'Transformation Name' field, there is a 'Data Type' section. Inside this section, there are two dropdown menus: 'Source' and 'Target'. The 'Source' dropdown menu has 'XML' selected and is enclosed in a red box with a red number '5' to its left. The 'Target' dropdown menu has 'EDI' selected.

Figure 16-40. Give your new transformation definition an appropriate name, then choose **XML Document** for your Source and **EDI Document** for your Target.

Tip: for more information about DTD files, see “What’s a DTD File?” on page 11-42 in the *Syncx Integration Appliance Reference Guide*.

Select Source Information (XML)

You have two choices for loading your XML document. Follow the option that describes where your XML document's DTD file is located:

Option 1: You are using an XML document whose definition is already loaded into the appliance

- ❶ Click the **Select an XML DTD** radio button.
- ❷ Select the appropriate XML folder from the drop-down list.
- ❸ Choose the appropriate DTD file from the scrollable list below the drop-down list.
- ❹ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.
- ❺ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

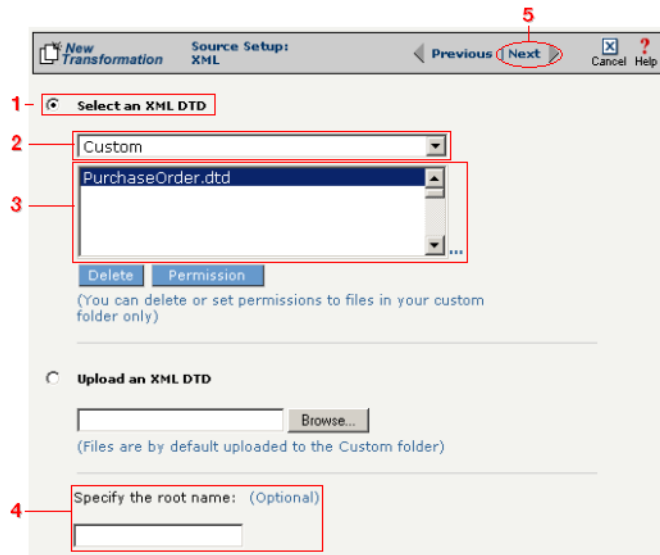



Figure 16-41. Click the **Select an XML DTD** radio button if your XML document definition has already been loaded into the system.

 **Note:** Skip these steps if you chose to follow Option 1 above.

Option 2: You need to use an XML document whose definition has not yet been loaded into the appliance

- ❶ Choose the **Upload an XML DTD** radio button.
- ❷ Click **Browse** and navigate to the location of your DTD file that you want to add to the appliance.
- ❸ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.
- ❹ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.

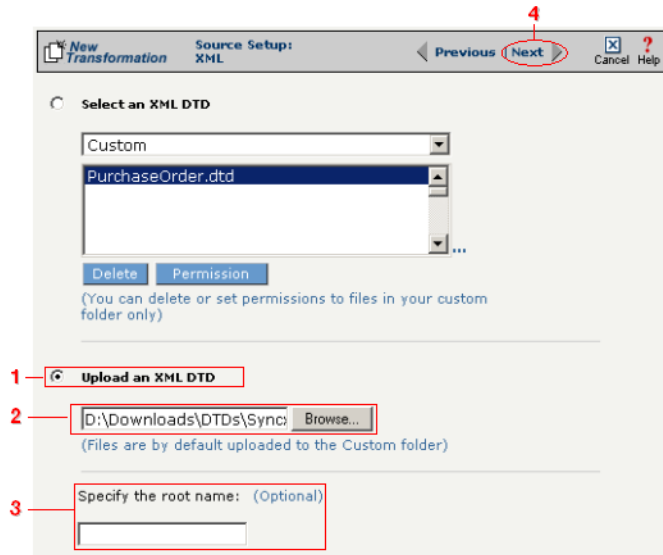


Figure 16-42. Click the **Upload an XML DTD** radio button if you need to copy a new DTD to the Syncx appliance.

Tip: for more information about SEF files, see “What’s an SEF File?” on page 11-14 in the *Syncx Integration Appliance Reference Guide*.

Select Target Information (EDI)

You have two options for selecting the appropriate target EDI file. Follow the scenario that describes where your target EDI document's SEF file is located:

Option1: You are using an EDI file whose definition is already loaded into the appliance

- ❶ Click the **Select an existing SEF** radio button.
- ❷ Select the appropriate EDI folder (that matches the EDI standard and version you want to use) from the drop-down list.
- ❸ Choose the appropriate EDI document from the scrollable list below (e.g., 850 if you want to use the Purchase Order form).
- ❹ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

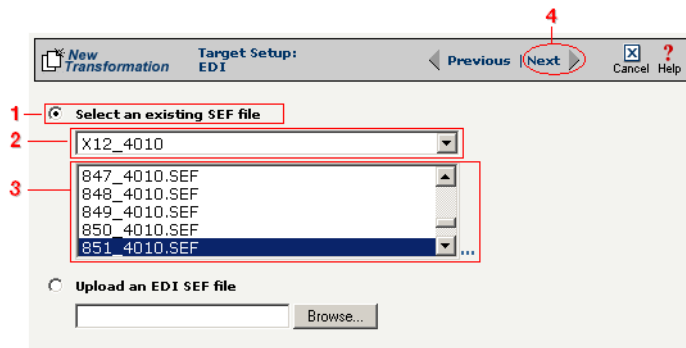


Figure 16-43. Click the **Select an existing SEF** radio button if your EDI document definition has already been loaded into the system.

Note: Skip to “(Optional) Select Target EDI Options” below if you chose to follow Option 1 above.

Option 2: You need to use an EDI file whose definition has not yet been loaded into the appliance

- ❶ Choose the **Upload an EDI SEF file** radio button.
- ❷ Click **Browse** and navigate to the location of your EDI file whose definition (SEF file) you want to add to the appliance.
- ❸ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

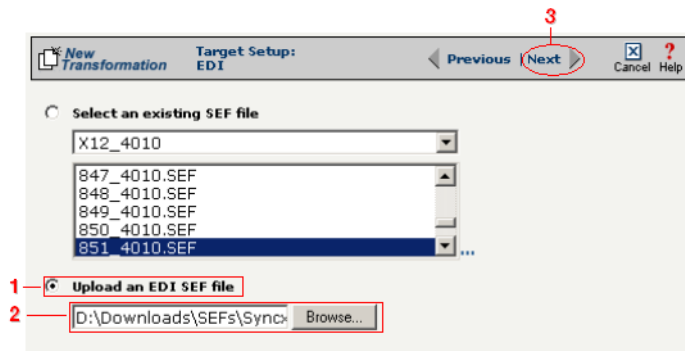


Figure 16-44. Click the **Upload an EDI SEF file** radio button if you need to copy a new EDI definition to the Syncx appliance.

(Optional) Select Target EDI Options

This screen is where you can set all the appropriate default values for your target EDI document. In most cases, you will leave the default settings as they are. You may optionally change them, however, if you want to change how the system will format the EDI information.

- ❶ Select the **CRLF Formatted** checkbox if a text editor has wrapped your EDI document by inserting CRLF’s (carriage return line feed characters).
- ❷ Enter a new character in the **Data Segment Terminator** field that will define the end of a record in the EDI file.
- ❸ Enter a new character in the **Data Element Terminator** field that will define the end of a field in the EDI file.
- ❹ Enter a new character in the **Composite Data Element Terminator** field that will define the end of data types that are “compound” or composed of other data elements. For example, a data element of “date” could be composed of month, day, and year elements.

Tip: See “CRLF Formatting” on page 11-16 in the *Syncx Integration Appliance Reference Guide* for more information on **CRLF Formatted**.

- 5 Enter a new value in the **Release Indicator** field. This tells the system to read a character as a character, not as a command.
- 6 Use the Default buttons only if you want to reset your EDI options:
 - a. If you want to reset all the previous values back to their default X-12 settings, click **Reset X-12 Default**.
 - b. If you want to reset all the previous values back to their last default settings, click **Reset Last Default**.
- 7 Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

New Transformation Target Setup: EDI Previous | Next Save Cancel Help

Default Values:
Specify which character(s) should be used for each control character.
(For 'carriage return line feed', please enter 'CRLF')

2 Data Segment Terminator: ~

3 Data Element Terminator: *

4 Composite Data Element Terminator: |

5 Release Indicator: \


6a Reset X12 Default 6b Reset Last Saved

Figure 16-45. Use this screen if you need to change any of your Target EDI document's default values.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, "Transformation Mapping" for instructions on mapping your new transformation.


How to Transform from an EDI Document to an XML Document

 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from an EDI document to an XML document.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See “How to Create an FTP Source Definition” on page 7-8 if your source EDI document will be stored on an FTP server.
 - b. See “How to Create a File Share Source Definition” on page 7-5 if your source EDI document will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Source Definition” on page 7-11 if your source EDI document will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Source Definition” on page 7-13 if your source EDI document will be stored on an SCP server.
- ❸ Create Your Target Definition
 - a. See “How to Create an FTP Target Definition” on page 8-10 if your target XML document will be stored on an FTP server.
 - b. See “How to Create a File Share Target Definition” on page 8-7 if your target XML document will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Target Definition” on page 8-14 if your target XML document will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Target Definition” on page 8-20 if your target XML document will be stored on an SCP server.
- ❹ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❺ Map the Source and Target Fields (see Chapter 17 for details)
- ❻ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

 **Note:** Make sure you've completed steps 1-3 above before attempting to define your transformation.

Use the Transformation Wizard to Build Your Transformation

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

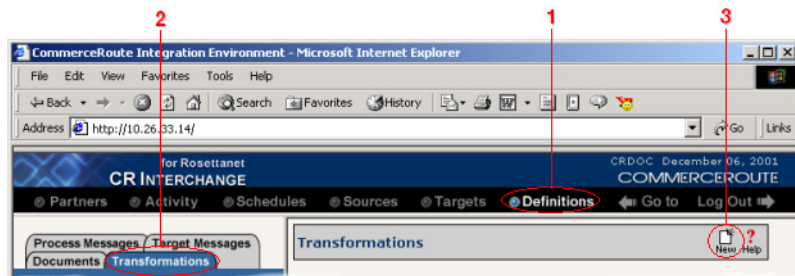


Figure 16-46. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- ❹ Enter an appropriate name for your new transformation in the **Transformation Name** field.
- ❺ Select “EDI” from the **Source** drop-down menu and “XML” from the **Target** drop-down menu.
- ❻ Click the **Next** button in the toolbar to continue.

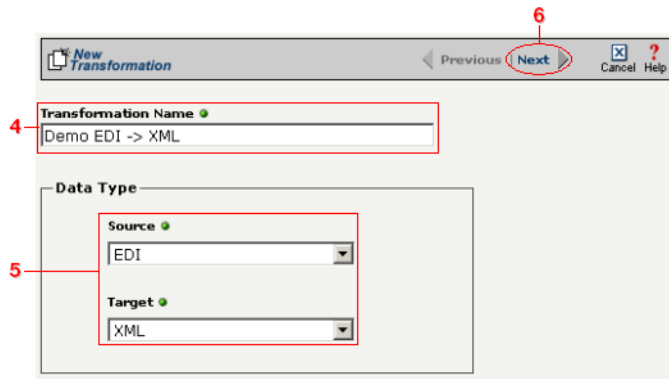


Figure 16-47. Give your new transformation definition an appropriate name, then choose **EDI Document** for your Source and **XML Document** for your Target.

Tip: for more information about SEF files, see “What’s an SEF File?” on page 11-14 in the *Syncx Integration Appliance Reference Guide*.

Select Source Information (EDI)

You have two options for selecting the appropriate source EDI file. Follow the scenario that describes where your source EDI document’s SEF file is located:

Option 1: You are using an EDI file whose definition is already loaded into the appliance

- ❶ Click the **Select an existing SEF** radio button.
- ❷ Select the appropriate EDI folder (that matches the EDI standard and version you want to use) from the drop-down list.
- ❸ Choose the appropriate EDI document from the scrollable list below (e.g., 850 if you want to use the Purchase Order form).
- ❹ Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

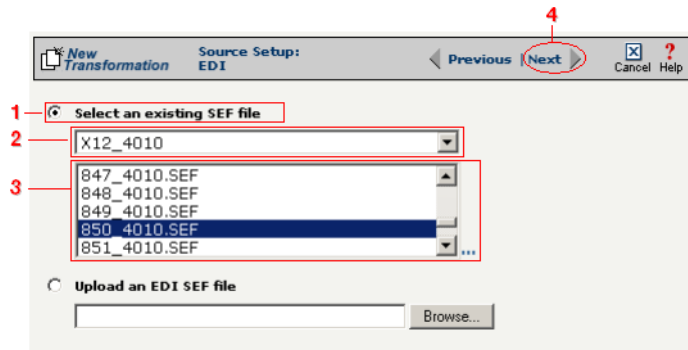


Figure 16-48. Click the **Select an existing SEF** radio button if your EDI document definition has already been loaded into the system.

Note: Skip these steps if you chose to follow Option 1 above.

Option 2: You need to use an EDI file whose definition has not yet been loaded into the appliance

- ❶ Choose the **Upload an EDI SEF file** radio button.
- ❷ Click **Browse** and navigate to and select the location of your EDI file whose definition (SEF file) you want to add to the appliance to load it into the associated field.
- ❸ Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

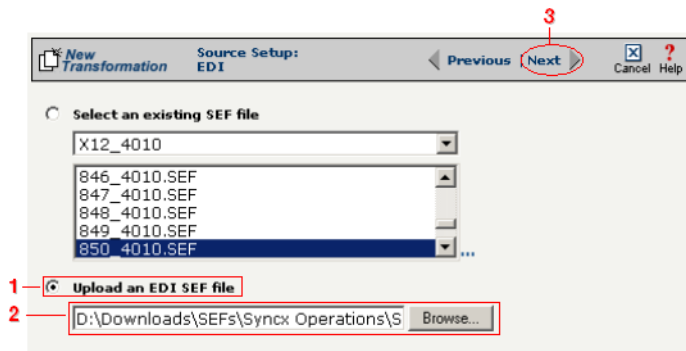


Figure 16-49. Click the **Upload an EDI SEF file** radio button if you need to copy a new EDI definition to the Syncx appliance.

(Optional) Select Source EDI Options

This screen is where you can set all the appropriate default values for your source EDI document. In most cases, you will leave the default settings as they are. You may optionally change them, however, if you want to change how the system will format the EDI information.

Tip: See “CRLF Formatting” on page 11-16 in the *Syncx Integration Appliance Reference Guide* for more information on **CRLF Formatted**.

- ❶ Select the **Source documents have been formatted with CRLFs** checkbox if a text editor has wrapped your EDI document by inserting CRLF's (carriage return line feed characters).
- ❷ Enter a character in the **Data Segment Terminator** field that will define the end of a record in the EDI file.
- ❸ Enter a character in the **Data Element Terminator** field that will define the end of a field in the EDI file.
- ❹ Enter a character in the **Composite Data Element Terminator** field that will define the end of data types that are "compound" or composed of other data elements. For example, a data element of "date" could be composed of month, day, and year elements.
- ❺ Enter a value in the **Release Indicator** field. This tells the system to read a character as a character, not as a command.
- ❻ Use the Default buttons only if you want to reset your EDI options:
 - a. If you want to reset all the previous values back to their default X-12 settings, click **Reset X-12 Default**.
 - b. If you want to reset all the previous values back to their last default

settings, click **Reset Last Default**.

- 7 Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

The screenshot shows the 'New Transformation' dialog box with the 'Source Setup: EDI' tab selected. The 'EDI Options' section contains a checkbox labeled 'Source document has been formatted with CRLFs' with a red '1' next to it. Below this is the 'Default Values' section, which includes a description: 'Specify which character(s) should be used for each control character. (For 'carriage return line feed', please enter 'CRLF')'. There are four text input fields: 'Data Segment Terminator' (labeled 2) with '~', 'Data Element Terminator' (labeled 3) with '*', 'Composite Data Element Terminator' (labeled 4) with '|', and 'Release Indicator' (labeled 5) with '\'. At the bottom of the dialog are two buttons: 'Reset X12 Default' (labeled 6a) and 'Reset Last Saved' (labeled 6b). The top toolbar shows 'Previous' (labeled 7), 'Next', 'Cancel', and 'Help'.

Figure 16-50. Use this screen if you need to change any of your source EDI document's default values.

Tip: for more information about DTD files, see “What’s a DTD File?” on page 11-42 in the *Syncx Integration Appliance Reference Guide*.

Select Target Information (XML)


You have two scenarios for loading your XML document. Follow the option that describes where your XML document's DTD file is located:

Option 1: You are using an XML document whose definition is already loaded into the appliance

- ❶ Click the **Select an XML DTD** radio button.
- ❷ Select the appropriate XML folder from the drop-down list.
- ❸ Choose the appropriate DTD file from the scrollable list below the drop-down list.
- ❹ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.
- ❺ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

The screenshot shows the 'New Transformation' dialog box with the 'Source Setup: XML' tab. The 'Select an XML DTD' radio button is selected. Below it, a dropdown menu shows 'Custom' selected, and a list below it shows 'PurchaseOrder.dtd' selected. The 'Next' button in the toolbar is circled in red. Red numbers 1 through 5 point to specific UI elements: 1 points to the 'Select an XML DTD' radio button, 2 points to the 'Custom' dropdown, 3 points to the 'PurchaseOrder.dtd' list item, 4 points to the 'Specify the root name: (Optional)' text box, and 5 points to the 'Next' button.

Figure 16-51. Click the **Select an XML DTD** radio button if your XML document definition has already been loaded into the system.

 **Note:** Skip these steps if you chose to follow Option 1 above.

Option 2: You need to use an XML document whose definition has not yet been loaded into the appliance

- ❶ Choose the **Upload an XML DTD** radio button.
- ❷ Click **Browse** and navigate to the location of your DTD file that you want to add to the appliance.
- ❸ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.
- ❹ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

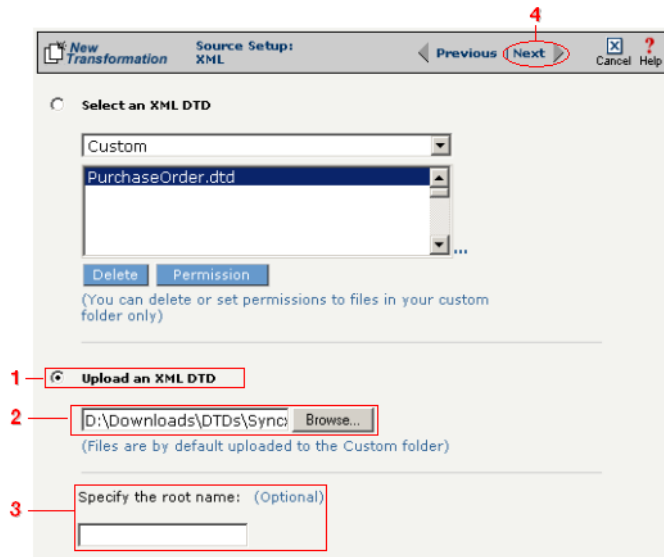


Figure 16-52. Click the **Upload an XML DTD** radio button if you need to copy a new DTD to the Syncx appliance.

Select Target XML DTD Options

You have three choices for where you will copy your DTD file. Click on the option that describes where your XML document's DTD file should be stored:

Option 1: Copy the DTD file to the same folder as your XML file

- ❶ Select the **Copy DTD file to folder where...** radio button.
- ❷ Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

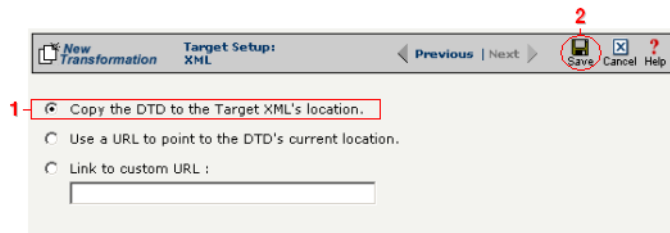


Figure 16-53. Click the **Copy DTD file to folder where...** radio button if you want to copy your DTD to the same folder as your XML document.

Option 2: Make the DTD file's location appear as the current URL in the XML document's header

- ❶ Select the **Use a URL to point to the DTD's Current Location** radio button.
- ❷ Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

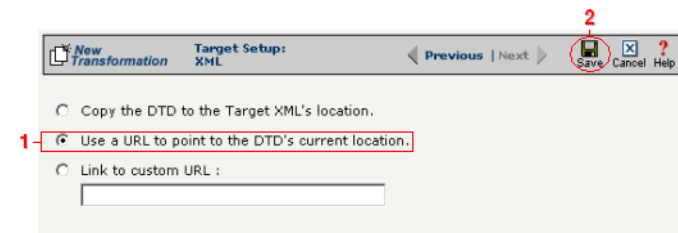



Figure 16-54. If you want to make your DTD file's location appear as the current URL in the XML document's header, click the **Link to Current URL** radio button.

Note: Skip these steps if you chose to follow Option 1 above or Option 3 below.

 **Note:** Skip these steps if you chose to follow Option 1 or 2 above.

Option 3: Make the DTD file's location appear as a custom URL in the XML document's header

- ❶ Select the **Link to Custom URL** radio button and enter the custom URL in the corresponding field.
- ❷ Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

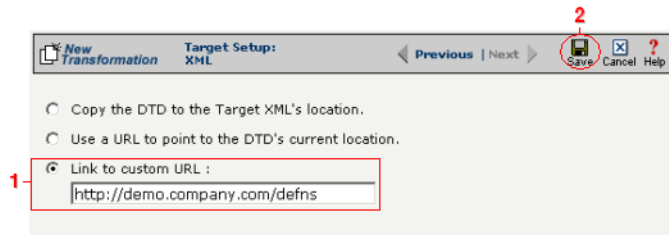



Figure 16-55. Click the **Link to Custom URL** radio button and enter the new URL in the corresponding field if you want to make your DTD file's location appear as a custom URL in the XML document's header.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for instructions on mapping your new transformation.


How to Transform from an XML Document to RosettaNet

 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from an XML document to a text file.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See “How to Create an FTP Source Definition” on page 7-8 if your source XML document will be stored on an FTP server.
 - b. See “How to Create a File Share Source Definition” on page 7-5 if your source XML document will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Source Definition” on page 7-11 if your source XML document will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Source Definition” on page 7-13 if your source XML document will be stored on an SCP server.
- ❸ Create Your Target Definition
 - a. See Chapter 3, “RosettaNet Trading Partner Definitions,” in the *Public Processes Guide* if you haven’t already defined your RosettaNet trading partner.
 - b. See Chapter 4, “RosettaNet Partner Interface Processes,” in the *Public Processes Guide* if you haven’t already added the appropriate PIP to your RosettaNet trading partner.
 - c. See Chapter 5, “Partner Interface Agreements,” in the *Public Processes Guide* if you haven’t already defined the appropriate PIA within your trading partner’s PIP.
- ❹ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❺ Map the Source and Target Fields (see Chapter 17 for details)
- ❻ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

 **Note:** Make sure you've completed steps 1-3 above before attempting to define your transformation.

Use the Transformation Wizard to Build Your Transformation

Follow these steps to transform information from an XML document to a text file.

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

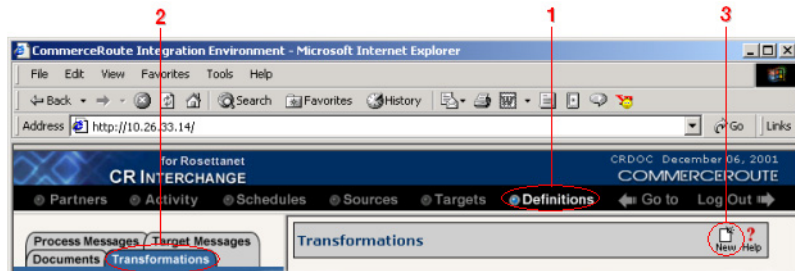


Figure 16-56. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- ❹ Enter an appropriate name for your new transformation in the **Transformation Name** field.
- ❺ Select “XML” from the **Source** drop-down menu and “RosettaNet” from the **Target** drop-down menu.
- ❻ Click the **Next** button in the toolbar to continue.

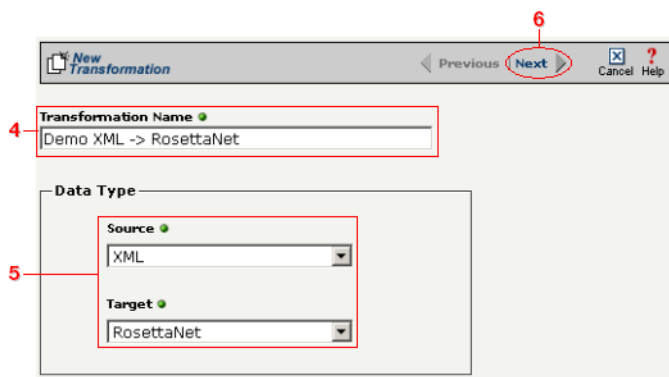


Figure 16-57. Give your new transformation definition an appropriate name, then choose “XML” for your Source and “RosettaNet” for your Target.

Tip: for more information about DTD files, see “What’s a DTD File?” on page 11-42 in the *Synx Integration Appliance Reference Guide*.


Select Source Information (XML)

You have two choices for loading your XML document. Follow the option that describes where your XML document's DTD file is located:

Option 1: You are using an XML document whose definition is already loaded into the appliance

- ❶ Click the **Select an XML DTD** radio button.
- ❷ Select the appropriate XML folder from the drop-down list.
- ❸ Choose the appropriate DTD file from the scrollable list below the drop-down list.
- ❹ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.
- ❺ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

Figure 16-58. Click the **Select an XML DTD** radio button if your XML document definition has already been loaded into the system.

 **Note:** Skip these steps if you chose to follow Option 1 above.

Option 2: You need to use an XML document whose definition has not yet been loaded into the appliance

- ❶ Choose the **Upload an XML DTD** radio button.
- ❷ Click **Browse** and navigate to the location of your DTD file that you want to add to the appliance.
- ❸ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.
- ❹ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.

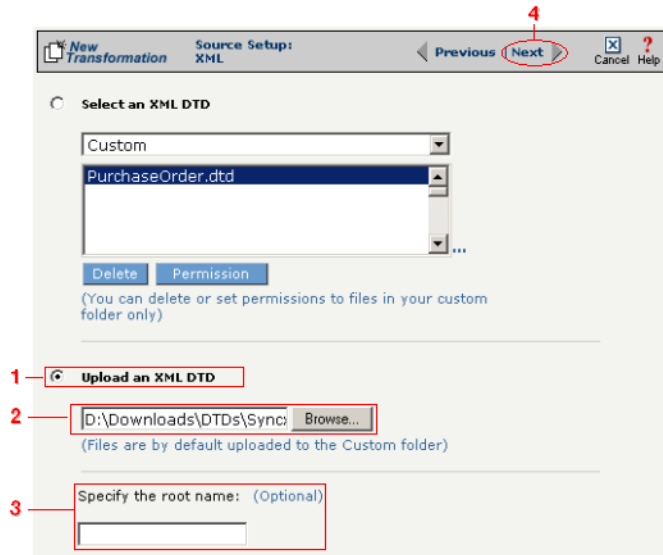


Figure 16-59. Click the **Upload an XML DTD** radio button if you need to copy a new DTD to the Syncx appliance.

Tip: for more information about RosettaNet trading partners, PIPs, and PIAs, see Chapter 3, Chapter 4, and Chapter 5, respectively, in the *Public Processes Guide*.

Select Target Information (RosettaNet)

- ❶ In the next screen of the Transformation Wizard, select the RosettaNet trading partner definition that you want to use for this transformation from the **Trading Partner** drop-down menu.
- ❷ Select which trading partner's PIP you want to use from the **PIP** drop-down menu.
- ❸ Select which PIA in the previously selected PIP you want to use from the **PIA** drop-down menu.
- ❹ Compare your work to the figure below, then click the **Next** button to continue.

The screenshot shows a dialog box titled "RosettaNet Trading Partner, PIP, PIA Selection". The subtitle is "Select the appropriate Trading Partner, PIP and PIA." There are three dropdown menus: "Trading Partner" with "CRDOC" selected, "PIP" with "3A4 (ver) V02.00" selected, and "PIA" with "R1DEV Exchange" selected. Red boxes and numbers 1, 2, and 3 highlight these dropdowns. A red circle and number 4 highlight the "Next" button in the top right corner.

Figure 16-1 Use this screen to select the trading partner, PIP, and finally PIA that you want to use as the target for this transformation.

Tip: for more information about RosettaNet trading partners, PIPs, and PIAs, see “How to Configure Roles and Services” on page 5-22 in the *Public Processes Guide*.

- ❶ In the next screen of the Transformation Wizard, select which activity is appropriate for this transformation from the **Activity** drop-down menu.
- ❷ Select the appropriate role this source will play from the **Role** drop-down menu.
- ❸ Compare your definition to that shown in the figure below, then click **Save** to save your work and exit out of the Transformation Wizard.

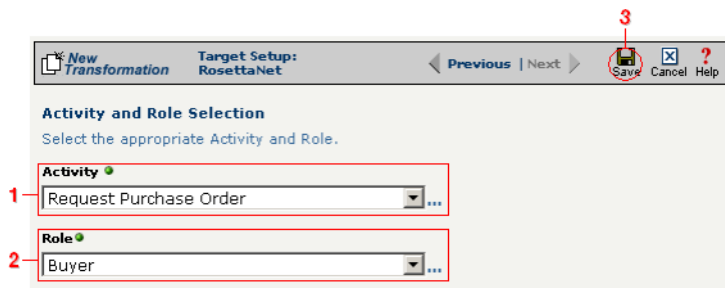



Figure 16-2 Specify the target RosettaNet’s activity and role.

What’s Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for instructions on mapping your new transformation.


How to Transform from RosettaNet to an XML Document

 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from a text file to an XML document.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See Chapter 3, “RosettaNet Trading Partner Definitions,” in the *Public Processes Guide* if you haven’t already defined your RosettaNet trading partner.
 - b. See Chapter 4, “RosettaNet Partner Interface Processes,” in the *Public Processes Guide* if you haven’t already added the appropriate PIP to your RosettaNet trading partner.
 - c. See Chapter 5, “Partner Interface Agreements,” in the *Public Processes Guide* if you haven’t already defined the appropriate PIA within your trading partner’s PIP.
- ❸ Create Your Target Definition
 - a. See “How to Create an FTP Target Definition” on page 8-10 if your target XML document will be stored on an FTP server.
 - b. See “How to Create a File Share Target Definition” on page 8-7 if your target XML document will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Target Definition” on page 8-14 if your target XML document will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Target Definition” on page 8-20 if your target XML document will be stored on an SCP server.
- ❹ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❺ Map the Source and Target Fields (see Chapter 17 for details)
- ❻ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

 **Note:** Make sure you've completed steps 1-3 above before attempting to define your transformation.

Use the Transformation Wizard to Build Your Transformation

Follow these steps to transform information from a text file to an XML document.

- 1 Click the **Definitions** button in the navigation bar.
- 2 Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- 3 Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

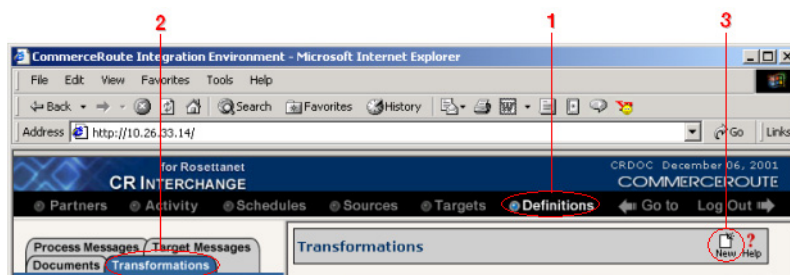


Figure 16-60. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- 4 Enter an appropriate name for your new transformation in the **Transformation Name** field.
- 5 Select “RosettaNet” from the **Source** drop-down menu and “XML” from the **Target** drop-down menu.
- 6 Click the **Next** button in the toolbar to continue.

The screenshot shows a 'New Transformation' dialog box. At the top, there's a title bar with a document icon and the text 'New Transformation'. Below the title bar, there are navigation buttons: 'Previous', 'Next' (circled in red with a red '6' above it), 'Cancel', and 'Help'. The main area of the dialog has a 'Transformation Name' field with the text 'Demo RosettaNet -> XML' (labeled with a red '4'). Below this is a 'Data Type' section. Inside this section, there are two dropdown menus: 'Source' (set to 'RosettaNet') and 'Target' (set to 'XML'). This section is labeled with a red '5'. The entire dialog box is highlighted with a light gray background.

Figure 16-61. Give your new transformation definition an appropriate name, then choose “RosettaNet” for your Source and “XML” for your Target.


Tip: for more information about RosettaNet trading partners, PIPs, and PIAs, see Chapter 3, Chapter 4, and Chapter 5, respectively, in the *Public Processes Guide*.

Select Source Information (RosettaNet)

- ❶ In the next screen of the Transformation Wizard, select the RosettaNet trading partner definition that you want to use for this transformation from the **Trading Partner** drop-down menu.
- ❷ Select which trading partner's PIP you want to use from the **PIP** drop-down menu.
- ❸ Select which PIA in the previously selected PIP you want to use from the **PIA** drop-down menu.
- ❹ Compare your work to the figure below, then click the **Next** button to continue.

The screenshot shows a software window titled "New Transformation" with a subtitle "Source Setup: RosettaNet". The main heading is "RosettaNet Trading Partner, PIP, PIA Selection" with the instruction "Select the appropriate Trading Partner, PIP and PIA." Below this are three dropdown menus. The first is labeled "Trading Partner" and shows "R1QA1". The second is labeled "PIP" and shows "3A4 (ver) V02.00". The third is labeled "PIA" and shows "3A4_WFBE_NORMAL". Each dropdown has a red box around it with a number: 1 for Trading Partner, 2 for PIP, and 3 for PIA. In the top right corner, there are buttons for "Previous", "Next", "Cancel", and "Help". The "Next" button is highlighted with a red circle and a red arrow pointing to it with the number 4.

Figure 16-62. Use this screen to select the trading partner, PIP, and finally PIA that you want to use as the source for this transformation.

 **Tip:** for more information about RosettaNet trading partners, PIPs, and PIAs, see “How to Configure Roles and Services” on page 5-22 in the *Public Processes Guide*.

- 1 In the next screen of the Transformation Wizard, select which activity is appropriate for this transformation from the **Activity** drop-down menu.
- 2 Select the appropriate role this source will play from the **Role** drop-down menu.
- 3 Compare your work to the figure below, then click the **Next** button to continue.

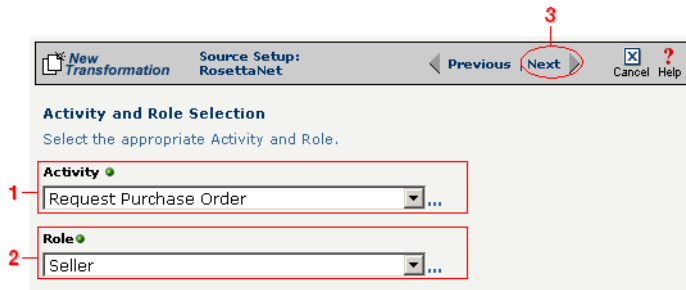


Figure 16-63. Specify the source RosettaNet’s activity and role.

Tip: for more information about DTD files, see “What’s a DTD File?” on page 11-42 in the *Syncx Integration Appliance Reference Guide*.

Select Target Information (XML)

You have two scenarios for loading your XML document. Follow the option that describes where your XML document's DTD file is located:

Option 1: You are using an XML document whose definition is already loaded into the appliance

- ❶ Click the **Select an XML DTD** radio button.
- ❷ Select the appropriate XML folder from the drop-down list.
- ❸ Choose the appropriate DTD file from the scrollable list below the drop-down list.
- ❹ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.
- ❺ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

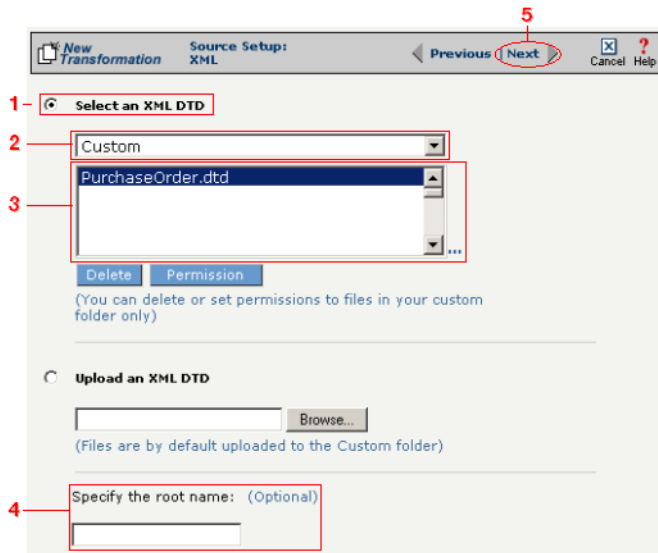



Figure 16-64. Click the **Select an XML DTD** radio button if your XML document definition has already been loaded into the system.

 **Note:** Skip these steps if you chose to follow Option 1 above.

Option 2: You need to use an XML document whose definition has not yet been loaded into the appliance

- ❶ Choose the **Upload an XML DTD** radio button.
- ❷ Click **Browse** and navigate to the location of your DTD file that you want to add to the appliance.
- ❸ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.
- ❹ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

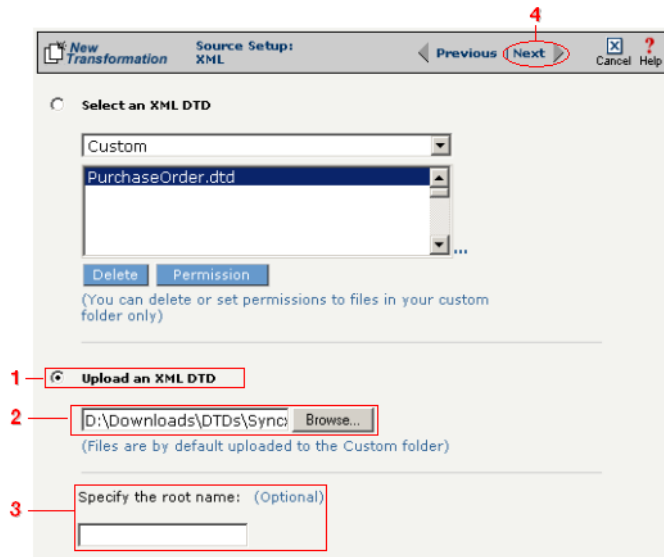


Figure 16-65. Click the **Upload an XML DTD** radio button if you need to copy a new DTD to the Syncx appliance.

Select Target XML DTD Options

You have three choices for where you will copy your DTD file. Click on the option that describes where your XML document's DTD file should be stored:

Option 1: Copy the DTD file to the same folder as your XML file

- ❶ Select the **Copy DTD file to folder where...** radio button.
- ❷ Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

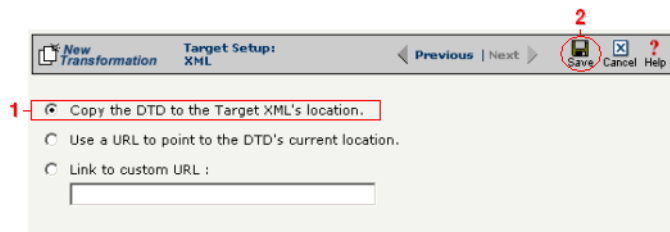



Figure 16-66. Click the **Copy DTD file to folder where...** radio button if you want to copy your DTD to the same folder as your XML document.

 **Note:** Skip these steps if you chose to follow Option 1 above or Option 3 below.

Option 2: Make the DTD file's location appear as the current URL in the XML document's header

- ❶ Select the **Use a URL to point to the DTD's Current Location** radio button.
- ❷ Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

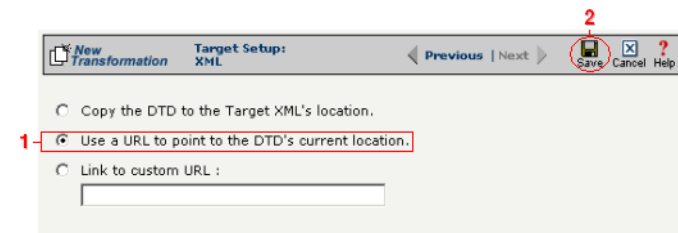



Figure 16-67. If you want to make your DTD file's location appear as the current URL in the XML document's header, click the **Link to Current URL** radio button.

 **Note:** Skip these steps if you chose to follow Option 1 or 2 above.

Option 3: Make the DTD file's location appear as a custom URL in the XML document's header

- ❶ Select the **Link to Custom URL** radio button and enter the custom URL in the corresponding field.
- ❷ Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

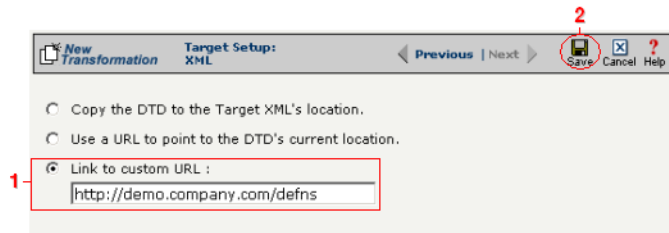


Figure 16-68. Click the **Link to Custom URL** radio button and enter the new URL in the corresponding field if you want to make your DTD file's location appear as a custom URL in the XML document's header.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for instructions on mapping your new transformation.

How to Transform from an XML Document to an SAP Environment



Tip: Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from an XML document to an SAP environment.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See “How to Create an FTP Source Definition” on page 7-8 if your source XML document will be stored on an FTP server.
 - b. See “How to Create a File Share Source Definition” on page 7-5 if your source XML document will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Source Definition” on page 7-11 if your source XML document will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Source Definition” on page 7-13 if your source XML document will be stored on an SCP server.
- ❸ Create Your Target Definition (see “How to Create an SAP Target Definition” on page 8-17 for details)
- ❹ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❺ Map the Source and Target Fields (see Chapter 17 for details)
- ❻ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

Use the Transformation Wizard to Build Your Transformation



Note: Make sure you’ve completed steps 1-3 above before attempting to define your transformation.

- ❶ Click the **Definitions** button in the navigation bar.
- ❷ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❸ Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

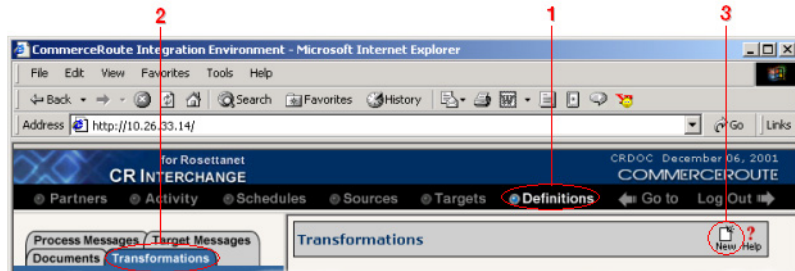


Figure 16-69. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- ④ Enter an appropriate name for your new transformation in the **Transformation Name** field.
- ⑤ Select “XML” from the **Source** drop-down menu and “SAP” from the **Target** drop-down menu.
- ⑥ Click the **Next** button in the toolbar to continue.

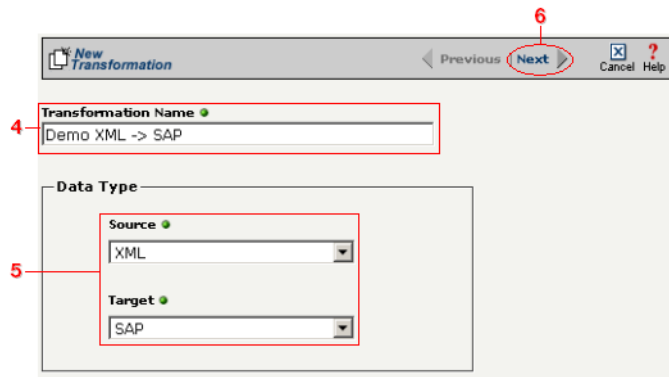


Figure 16-70. Give your new transformation definition an appropriate name, then choose **XML Document** for your Source and **SAP** for your Target.

Tip: for more information about DTD files, see “What’s a DTD File?” on page 11-42 in the *Syncx Integration Appliance Reference Guide*.


Select Source Information (XML)

You have two choices for loading your XML document. Follow the option that describes where your XML document's DTD file is located:

Option 1: You are using an XML document whose definition is already loaded into the appliance

- ❶ Click the **Select an XML DTD** radio button.
- ❷ Select the appropriate XML folder from the drop-down list.
- ❸ Choose the appropriate DTD file from the scrollable list below the drop-down list.
- ❹ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.
- ❺ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

Figure 16-71. Click the **Select an XML DTD** radio button if your XML document definition has already been loaded into the system.

 **Note:** Skip these steps if you chose to follow Option 1 above.

Option 2: You need to use an XML document whose definition has not yet been loaded into the appliance

- ❶ Choose the **Upload an XML DTD** radio button.
- ❷ Click **Browse** and navigate to the location of your DTD file that you want to add to the appliance.
- ❸ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.
- ❹ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.

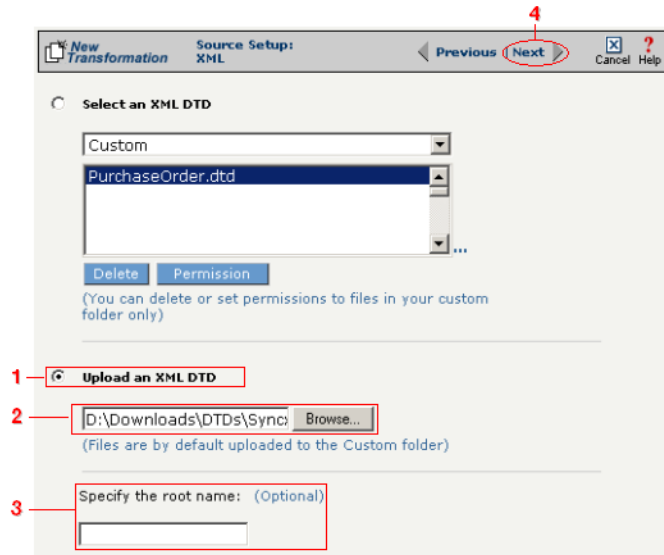


Figure 16-72. Click the **Upload an XML DTD** radio button if you need to copy a new DTD to the Syncx appliance.

Select Target Information (SAP)

Follow the steps below to configure your SAP target for transformation mapping:

- 1 Select the appropriate SAP target that you defined from the **SAP Target** drop-down list.
- 2 Click the **Next** button in the toolbar to continue.

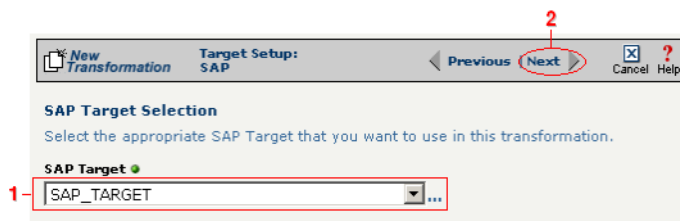




Figure 16-73. Choose the appropriate SAP target from the **SAP Target** drop-down list.

 **Tip:** SAP-provided BAPI function names always start with the letters “BAPI”. You can also use the asterick (*) character as a wild card when searching for the function name.

 **Tip:** If you are certain that the selected function performs a “commit” internally, performance can be improved by deselecting the checkbox.

Select RFC/BAPI Function

In this next screen, you need to select the appropriate RFC or BAPI function that should be used.

- ❶ Type in the complete name of the function, or enter any substring of the function name.
- ❷ Click the **Search** button to search the SAP environment for all formulas that match the name (or partial name) you entered. Note that this search may take several seconds.
- ❸ When the function search has completed, the **Select RFC/BAPI Function** drop-down menu appears, displaying all the functions that contain the string you entered in step 1 above. Select the appropriate function from the drop-down menu.
- ❹ (Optional) Select the **Commit Work** checkbox to ensure that a “commit” is performed on the SAP environment after the function has run. (We recommend leaving this selected, as it guarantees that a commit is performed, regardless of whether the function does this or not.)
- ❺ Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.


Figure 16-74. Use this screen to select the appropriate SAP RFC or BAPI function to run against your SAP environment.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for

instructions on mapping your new transformation.


How to Transform from an XML Document to a Text File

 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from an XML document to a text file.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See “How to Create an FTP Source Definition” on page 7-8 if your source XML document will be stored on an FTP server.
 - b. See “How to Create a File Share Source Definition” on page 7-5 if your source XML document will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Source Definition” on page 7-11 if your source XML document will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Source Definition” on page 7-13 if your source XML document will be stored on an SCP server.
- ❸ Create Your Target Definition
 - a. See “How to Create an FTP Target Definition” on page 8-10 if your target text file will be stored on an FTP server.
 - b. See “How to Create a File Share Target Definition” on page 8-7 if your target text file will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Target Definition” on page 8-14 if your target text file will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Target Definition” on page 8-20 if your target text file will be stored on an SCP server.
- ❹ Create Your Target Document Definition (see Chapter 9 for details)
- ❺ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❻ Map the Source and Target Fields (see Chapter 17 for details)
- ❼ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

 **Note:** Make sure you've completed steps 1-4 above before attempting to define your transformation.

Use the Transformation Wizard to Build Your Transformation

Follow these steps to transform information from an XML document to a text file.

- 1 Click the **Definitions** button in the navigation bar.
- 2 Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- 3 Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

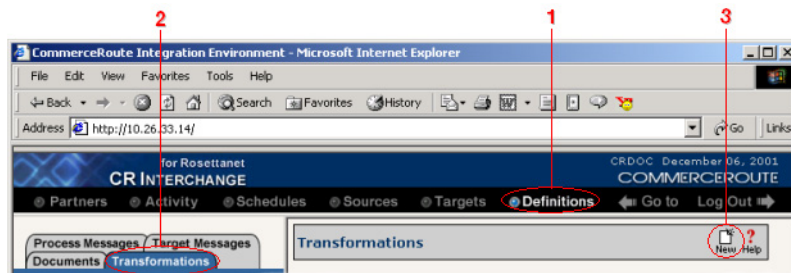


Figure 16-75. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- 4 Enter an appropriate name for your new transformation in the **Transformation Name** field.
- 5 Select “XML” from the **Source** drop-down menu and “Text” from the **Target** drop-down menu.
- 6 Click the **Next** button in the toolbar to continue.

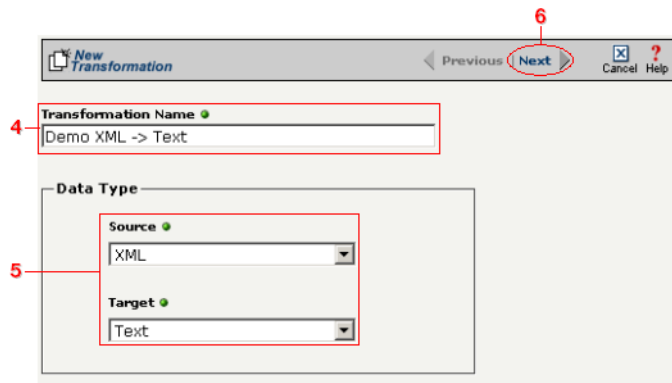



Figure 16-76. Give your new transformation definition an appropriate name, then choose **XML Document** for your Source and **Text File** for your Target.

 **Tip:** for more information about DTD files, see “What’s a DTD File?” on page 11-42 in the *Syncx Integration Appliance Reference Guide*.


Select Source Information (XML)

You have two choices for loading your XML document. Follow the option that describes where your XML document's DTD file is located:

Option 1: You are using an XML document whose definition is already loaded into the appliance

- ❶ Click the **Select an XML DTD** radio button.
- ❷ Select the appropriate XML folder from the drop-down list.
- ❸ Choose the appropriate DTD file from the scrollable list below the drop-down list.
- ❹ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.
- ❺ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

Figure 16-77. Click the **Select an XML DTD** radio button if your XML document definition has already been loaded into the system.

 **Note:** Skip these steps if you chose to follow Option 1 above.

Option 2: You need to use an XML document whose definition has not yet been loaded into the appliance

- ❶ Choose the **Upload an XML DTD** radio button.
- ❷ Click **Browse** and navigate to the location of your DTD file that you want to add to the appliance.
- ❸ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.
- ❹ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.

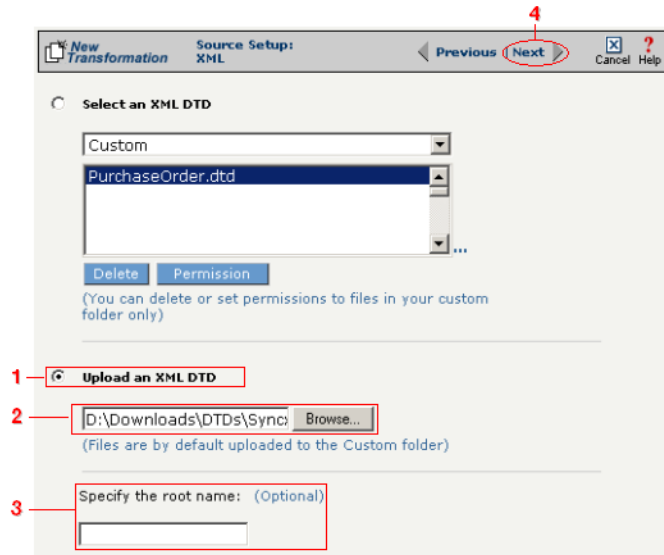



Figure 16-78. Click the **Upload an XML DTD** radio button if you need to copy a new DTD to the Syncx appliance.

 **Tip:** for more information about document definitions, see Chapter 9, “Creating Document Definitions.”

Select Target Information (Text)

- 1 In the next screen of the Transformation Wizard, select the document definition that you want to hold the transformed text from the **Select a Document** drop-down menu.
- 2 Compare your definition to that shown in the figure below, then click **Save** to save your work and exit out of the Transformation Wizard.

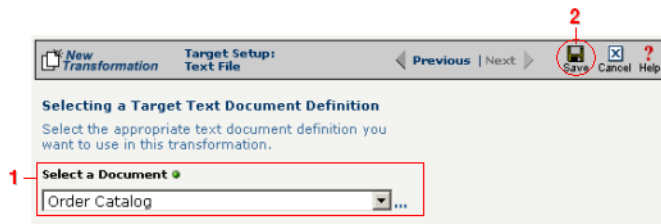



Figure 16-79. Select the document definition you want to use as your target.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for instructions on mapping your new transformation.


How to Transform from a Text File to an XML Document

 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from a text file to an XML document.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See “How to Create an FTP Source Definition” on page 7-8 if your source text file will be stored on an FTP server.
 - b. See “How to Create a File Share Source Definition” on page 7-5 if your source text file will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Source Definition” on page 7-11 if your source text file will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Source Definition” on page 7-13 if your source text file will be stored on an SCP server.
- ❸ Create Your Target Definition
 - a. See “How to Create an FTP Target Definition” on page 8-10 if your target XML document will be stored on an FTP server.
 - b. See “How to Create a File Share Target Definition” on page 8-7 if your target XML document will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Target Definition” on page 8-14 if your target XML document will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Target Definition” on page 8-20 if your target XML document will be stored on an SCP server.
- ❹ Create Your Source Document Definition (see Chapter 9 for details)
- ❺ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❻ Map the Source and Target Fields (see Chapter 17 for details)
- ❼ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

 **Note:** Make sure you've completed steps 1-4 above before attempting to define your transformation.

Use the Transformation Wizard to Build Your Transformation

Follow these steps to transform information from a text file to an XML document.

- 1 Click the **Definitions** button in the navigation bar.
- 2 Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- 3 Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

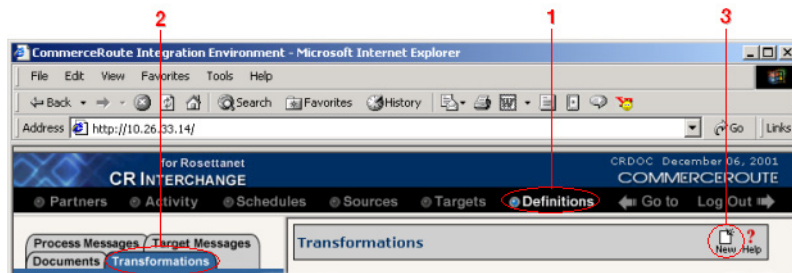


Figure 16-80. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- 4 Enter an appropriate name for your new transformation in the **Transformation Name** field.
- 5 Select “Text” from the **Source** drop-down menu and “XML” from the **Target** drop-down menu.
- 6 Click the **Next** button in the toolbar to continue.

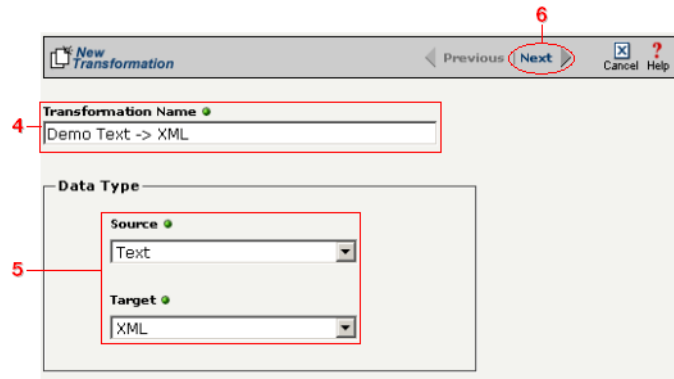


Figure 16-81. Give your new transformation definition an appropriate name, then choose **Text File** for your Source and **XML Document** for your Target.

Tip: for more information about document definitions, see Chapter 9, “Creating Document Definitions.”

Tip: DIFF is only available for complex text files. For more information about DIFF and optimization, see “Optimization Options (DIFF)” on page 10-5.

Select Source Information (Text)

- 1 In the next screen of the Transformation Wizard, select the document you want to use as a source from the **Text Document Definition** drop-down menu.
- 2 Compare your work to the figure below, then click the **Next** button in the toolbar to continue.

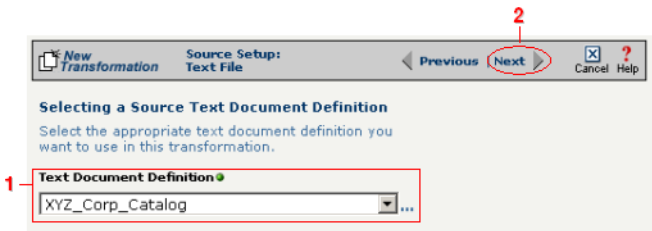


Figure 16-82. Choose which document definition you want to use as your source document.

If the text file you chose for your source is a complex text type, an additional screen appears that lets you set your source to take advantage of an operation’s DIFF function. If you want this transformation to be optimized by filtering out redundant data, select the field(s) that you want to use for filtering in this screen.

- 1 Click the checkbox that corresponds to the appropriate key field name.
- 2 Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

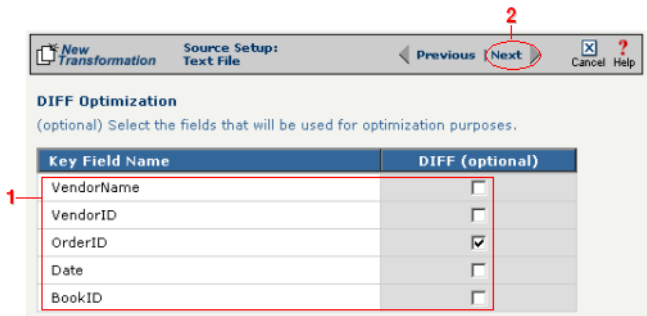


Figure 16-83. If your text file is a complex file and you need to set a field to act as an optimization filter using DIFF functionality, select the appropriate field in this screen.

Tip: for more information about DTD files, see “What’s a DTD File?” on page 11-42 in the *Syncx Integration Appliance Reference Guide*.

Select Target Information (XML)


You have two scenarios for loading your XML document. Follow the option that describes where your XML document's DTD file is located:

Option 1: You are using an XML document whose definition is already loaded into the appliance

- ❶ Click the **Select an XML DTD** radio button.
- ❷ Select the appropriate XML folder from the drop-down list.
- ❸ Choose the appropriate DTD file from the scrollable list below the drop-down list.
- ❹ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.
- ❺ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

The screenshot shows the 'New Transformation' dialog box with the 'Source Setup: XML' tab selected. The 'Select an XML DTD' radio button is selected. Below it, a dropdown menu shows 'Custom' selected, and a list below it shows 'PurchaseOrder.dtd' selected. The 'Next' button in the toolbar is highlighted with a red circle and a red number 5. A red number 1 points to the 'Select an XML DTD' radio button. A red number 2 points to the 'Custom' dropdown. A red number 3 points to the 'PurchaseOrder.dtd' list item. A red number 4 points to the 'Specify the root name: (Optional)' text field.

Figure 16-84. Click the **Select an XML DTD** radio button if your XML document definition has already been loaded into the system.

 **Note:** Skip these steps if you chose to follow Option 1 above.

Option 2: You need to use an XML document whose definition has not yet been loaded into the appliance

- ❶ Choose the **Upload an XML DTD** radio button.
- ❷ Click **Browse** and navigate to the location of your DTD file that you want to add to the appliance.
- ❸ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.
- ❹ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

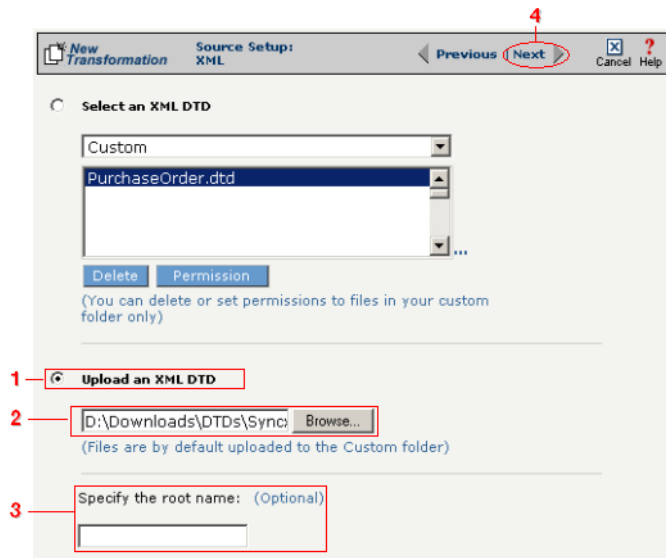


Figure 16-85. Click the **Upload an XML DTD** radio button if you need to copy a new DTD to the Syncx appliance.

Select Target XML DTD Options

You have three choices for where you will copy your DTD file. Click on the option that describes where your XML document's DTD file should be stored:

Option 1: Copy the DTD file to the same folder as your XML file

- ❶ Select the **Copy DTD file to folder where...** radio button.
- ❷ Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

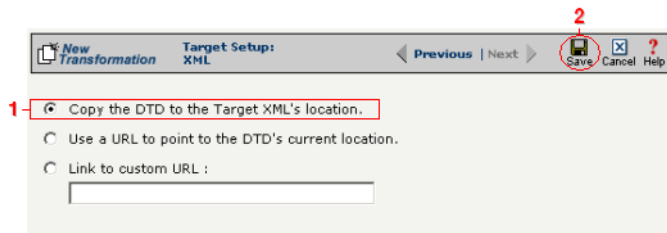


Figure 16-86. Click the **Copy DTD file to folder where...** radio button if you want to copy your DTD to the same folder as your XML document.

Option 2: Make the DTD file's location appear as the current URL in the XML document's header

- ❶ Select the **Use a URL to point to the DTD's Current Location** radio button.
- ❷ Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

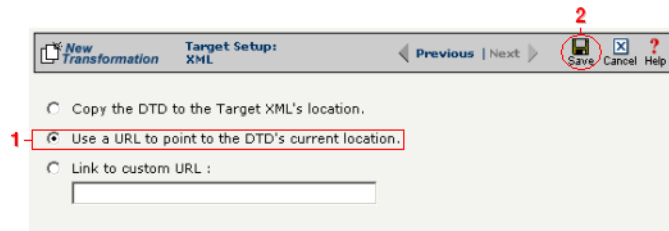




Figure 16-87. If you want to make your DTD file's location appear as the current URL in the XML document's header, click the **Link to Current URL** radio button.

 **Note:** Skip these steps if you chose to follow Option 1 above or Option 3 below.

 **Note:** Skip these steps if you chose to follow Option 1 or 2 above.

Option 3: Make the DTD file's location appear as a custom URL in the XML document's header

- ❶ Select the **Link to Custom URL** radio button and enter the custom URL in the corresponding field.
- ❷ Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

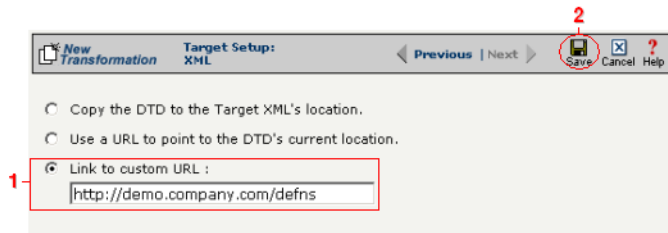



Figure 16-88. Click the **Link to Custom URL** radio button and enter the new URL in the corresponding field if you want to make your DTD file's location appear as a custom URL in the XML document's header.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for instructions on mapping your new transformation.


How to Transform from an XML Document to an XML Document

 **Tip:** Create your source, target, and other definitions before transforming the information. This summary shows you where to get information on completing each prerequisite step.

Summary of Steps

Follow these steps to transform information from an XML document to another XML document.

- ❶ Log in to the CR Interchange environment (see “Log In to the Tour” on page 2-2 for details).
- ❷ Create Your Source Definition
 - a. See “How to Create an FTP Source Definition” on page 7-8 if your source XML document will be stored on an FTP server.
 - b. See “How to Create a File Share Source Definition” on page 7-5 if your source XML document will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Source Definition” on page 7-11 if your source XML document will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Source Definition” on page 7-13 if your source XML document will be stored on an SCP server.
- ❸ Create Your Target Definition
 - a. See “How to Create an FTP Target Definition” on page 8-10 if your target XML document will be stored on an FTP server.
 - b. See “How to Create a File Share Target Definition” on page 8-7 if your target XML document will be stored on a network shared drive (UNC).
 - c. See “How to Create an HTTP Target Definition” on page 8-14 if your target XML document will be stored on a Web server (HTTP).
 - d. See “How to Create an SCP Target Definition” on page 8-20 if your target XML document will be stored on an SCP server.
- ❹ Use the Transformation Wizard to Build Your Transformation (see below for details)
- ❺ Map the Source and Target Fields (see Chapter 17 for details)
- ❻ Run Your Transformation By Placing it in an Operation (see Chapter 10 for details)

 **Note:** Make sure you've completed steps 1-3 above before attempting to define your transformation.

Use the Transformation Wizard to Build Your Transformation

- 1 Click the **Definitions** button in the navigation bar.
- 2 Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- 3 Click the **New** button in the toolbar to launch the Transformation Wizard (see the figure below).

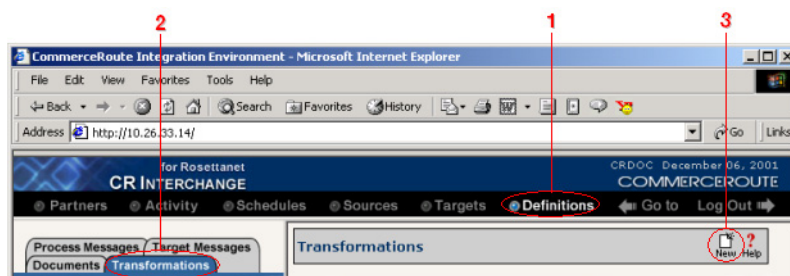


Figure 16-89. To launch the Transformation Wizard, click on the **Transformations** tab in the **Definitions** screen and click the **New** button in the toolbar.

- 4 Enter an appropriate name for your new transformation in the **Transformation Name** field.
- 5 Select “XML” from both the **Source** and “Database” **Target** drop-down menus.
- 6 Click the **Next** button in the toolbar to continue.

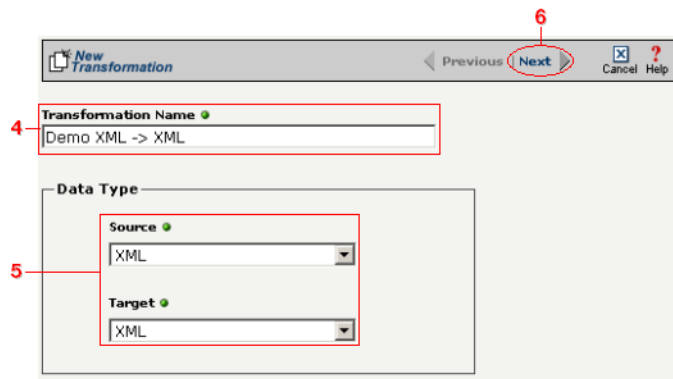


Figure 16-90. Give your new transformation definition an appropriate name, then choose **XML Document** for your Source and **XML Document** for your Target.

Tip: for more information about DTD files, see “What’s a DTD File?” on page 11-42 in the *Syncx Integration Appliance Reference Guide*.

Select Source Information (XML)

You have two choices for loading your XML document. Follow the option that describes where your XML document's DTD file is located:

Option 1: You are using an XML document whose definition is already loaded into the appliance

- ❶ Click the **Select an XML DTD** radio button.
- ❷ Select the appropriate XML folder from the drop-down list.
- ❸ Choose the appropriate DTD file from the scrollable list below the drop-down list.
- ❹ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.
- ❺ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

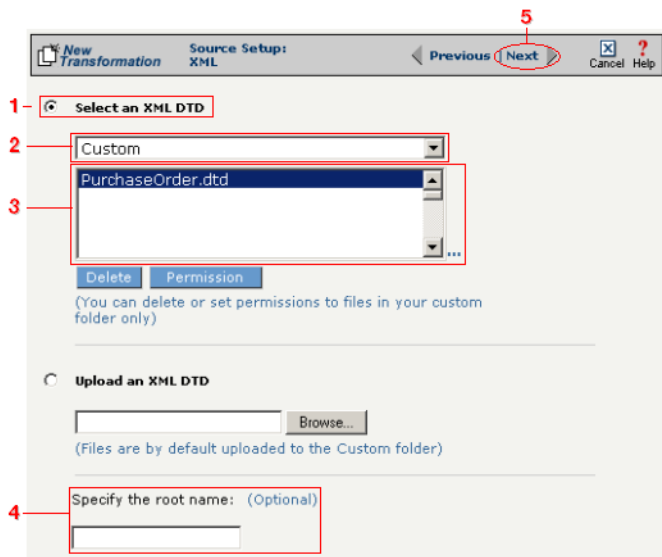



Figure 16-91. Click the **Select an XML DTD** radio button if your XML document definition has already been loaded into the system.

 **Note:** Skip these steps if you chose to follow Option 1 above.

Option 2: You need to use an XML document whose definition has not yet been loaded into the appliance

- ❶ Choose the **Upload an XML DTD** radio button.
- ❷ Click **Browse** and navigate to the location of your DTD file that you want to add to the appliance.
- ❸ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.
- ❹ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.

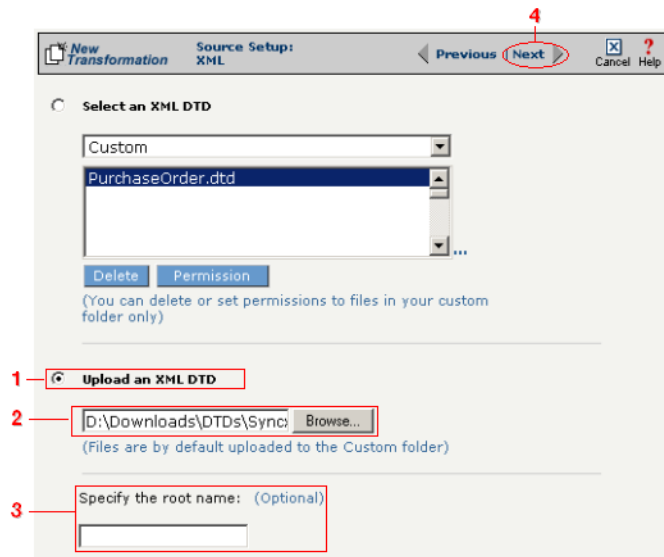


Figure 16-92. Click the **Upload an XML DTD** radio button if you need to copy a new DTD to the Syncx appliance.

Tip: for more information about DTD files, see “What’s a DTD File?” on page 11-42 in the *Syncx Integration Appliance Reference Guide*.

Select Target Information (XML)

You have two scenarios for loading your XML document. Follow the option that describes where your XML document's DTD file is located:

Option 1: You are using an XML document whose definition is already loaded into the appliance

- ❶ Click the **Select an XML DTD** radio button.
- ❷ Select the appropriate XML folder from the drop-down list.
- ❸ Choose the appropriate DTD file from the scrollable list below the drop-down list.
- ❹ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.
- ❺ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

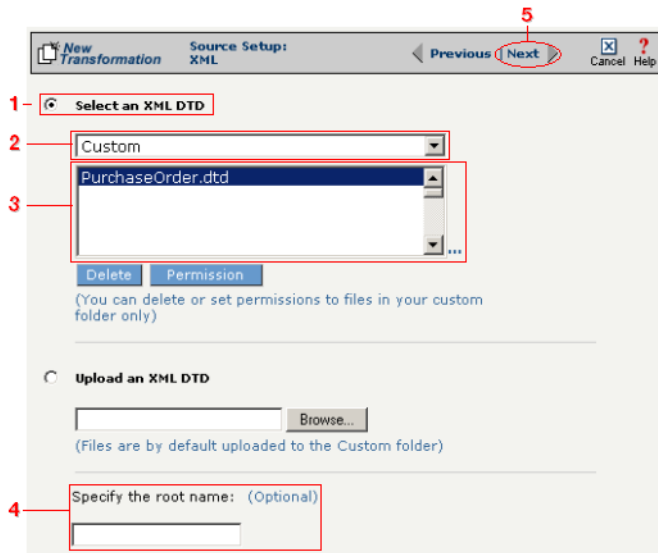



Figure 16-93. Click the **Select an XML DTD** radio button if your XML document definition has already been loaded into the system.

 **Note:** Skip these steps if you chose to follow Option 1 above.

Option 2: You need to use an XML document whose definition has not yet been loaded into the appliance

- ❶ Choose the **Upload an XML DTD** radio button.
- ❷ Click **Browse** and navigate to the location of your DTD file that you want to add to the appliance.
- ❸ (Optional) If your DTD file contains multiple XML definitions, identify the particular root XML element/node you want to use in this transformation by entering its exact name in this field.
- ❹ Compare your work to the figure shown below, then click the **Next** button in the toolbar to continue.

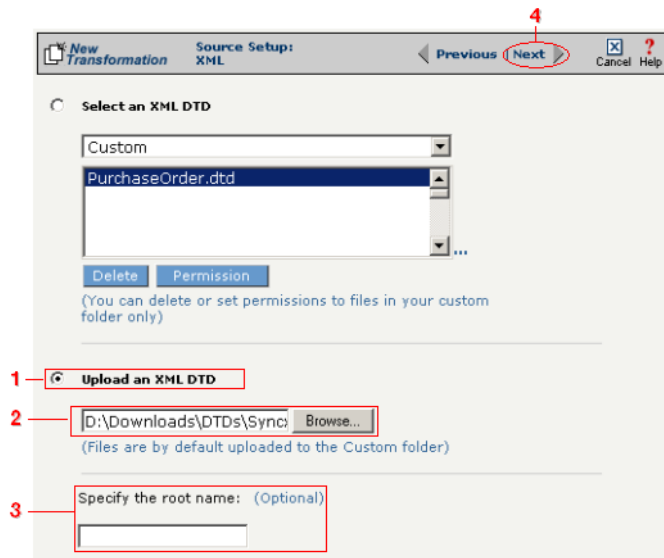


Figure 16-94. Click the **Upload an XML DTD** radio button if you need to copy a new DTD to the Syncx appliance.

Select Target XML DTD Options

You have three choices for where you will copy your DTD file. Click on the option that describes where your XML document's DTD file should be stored:

Option 1: Copy the DTD file to the same folder as your XML file

- ❶ Select the **Copy DTD file to folder where...** radio button.
- ❷ Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

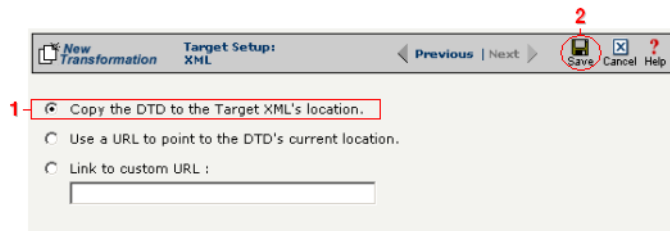


Figure 16-95. Click the **Copy DTD file to folder where...** radio button if you want to copy your DTD to the same folder as your XML document.

Option 2: Make the DTD file's location appear as the current URL in the XML document's header

- ❶ Select the **Use a URL to point to the DTD's Current Location** radio button.
- ❷ Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

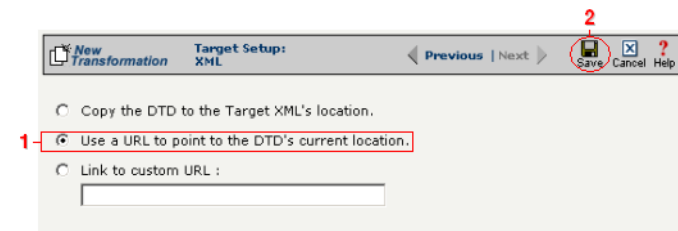



Figure 16-96. If you want to make your DTD file's location appear as the current URL in the XML document's header, click the **Link to Current URL** radio button.

Note: Skip these steps if you chose to follow Option 1 above or Option 3 below.

 **Note:** Skip these steps if you chose to follow Option 1 or 2 above.

Option 3: Make the DTD file's location appear as a custom URL in the XML document's header

- ❶ Select the **Link to Custom URL** radio button and enter the custom URL in the corresponding field.
- ❷ Compare your work to the figure shown below, then click **Save** to save your work and exit out of the Transformation Wizard.

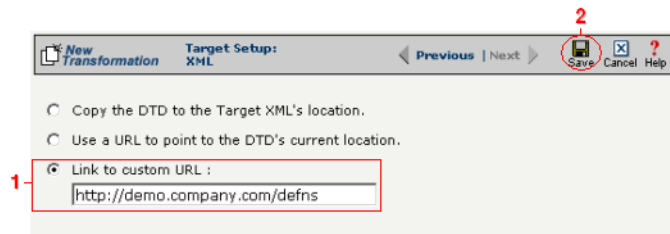


Figure 16-97. Click the **Link to Custom URL** radio button and enter the new URL in the corresponding field if you want to make your DTD file's location appear as a custom URL in the XML document's header.

What's Next?

Now that you have defined the nature of the source and your desired target, you are ready to map the relationship between your source and target at the field, or element, level. See Chapter 17, “Transformation Mapping” for instructions on mapping your new transformation.



Chapter 17

Transformation Mapping

Overview


After you have used the Transformation Wizard to define and configure a transformation's source and target, the Transformation screen appears. It is in this screen where you establish a relationship between the appropriate fields and/or records (also known as *data elements* or *elements*) of your source and target. *Mapping* is the process of selecting which source data element relates to which target data element.

The Syncx 6200 Series Appliance provides very robust mapping capabilities, including the ability to resolve hierarchical-to-flat (“instance”) mapping, flat-to-hierarchical (“multiple”) mapping, pre-conditions, and more.

How To Map Source and Target Fields

Follow these steps to map your source information to your target.

- ❶ Select the desired element in the **Source** pane.
- ❷ Select the corresponding target data element in the **Target** pane.
- ❸ Click the **Map** button to save their mapped relationship. (Alternatively, you can select the source data element, then double-click the target data element. This shortcut will automatically map the relationship.)
- ❹ The mapped relationship appears in the frame beneath the Transformation toolbar.
- ❺ (Optional) If you need to manipulate the value of the source data element relative to the target data element (e.g., convert US dollars to Euros), click the **Formula** button to launch the Formula Builder.

 **Tip:** For more details on how to work with the Formula Builder, see Chapter 19, “Formula Builder.”

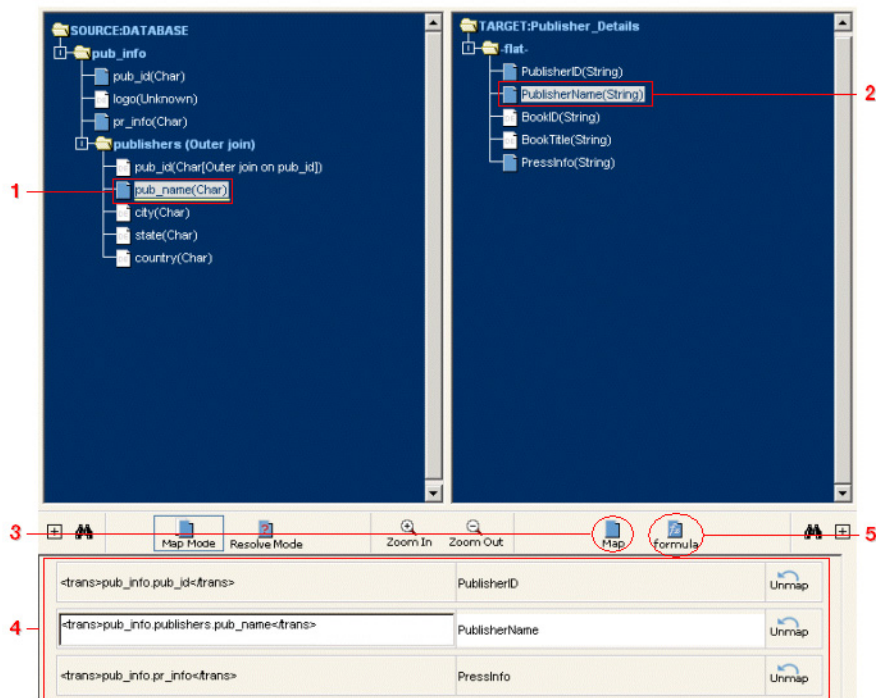


Figure 17-1. Select the desired source and target elements, then click the **Map** button to record their relationship.

- ❻ Click the **Save** button to save your changes. You now have a new

transformation definition that maps your data. You will see your transformation's name in the transformation list at the left side of the screen.

- 7 (Optional) If you want to give other users and/or groups access to your new transformation definition, click the **Access** button in the toolbar.

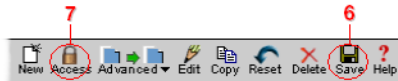


Figure 17-2. Make sure to save your mapped relationships by clicking the **Save** button. If you want other people to access this transformation, set the permissions accordingly by clicking the **Access** button.

What's Next?

After mapping the relationship between your source and target elements, you are ready to run this transformation by including it in an operation. See Chapter 10, “Creating Operations” for instructions on creating an operation.

Case No.	Case Name	Case Type	Case Status	Case Date	Case Location	Case Description	Case Details	Case Notes	Case Comments	Case Actions
1	John Doe	Case 1	Open	2023-01-01	New York	Case 1 Description	Case 1 Details	Case 1 Notes	Case 1 Comments	Case 1 Actions
2	Jane Smith	Case 2	Closed	2023-01-02	California	Case 2 Description	Case 2 Details	Case 2 Notes	Case 2 Comments	Case 2 Actions
3	Bob Johnson	Case 3	Pending	2023-01-03	Texas	Case 3 Description	Case 3 Details	Case 3 Notes	Case 3 Comments	Case 3 Actions
4	Alice Brown	Case 4	Open	2023-01-04	Florida	Case 4 Description	Case 4 Details	Case 4 Notes	Case 4 Comments	Case 4 Actions
5	Charlie Davis	Case 5	Closed	2023-01-05	Illinois	Case 5 Description	Case 5 Details	Case 5 Notes	Case 5 Comments	Case 5 Actions
6	Diana Prince	Case 6	Pending	2023-01-06	Washington	Case 6 Description	Case 6 Details	Case 6 Notes	Case 6 Comments	Case 6 Actions
7	Edward Norton	Case 7	Open	2023-01-07	Massachusetts	Case 7 Description	Case 7 Details	Case 7 Notes	Case 7 Comments	Case 7 Actions
8	Fiona Glenanne	Case 8	Closed	2023-01-08	Ontario	Case 8 Description	Case 8 Details	Case 8 Notes	Case 8 Comments	Case 8 Actions
9	George Clooney	Case 9	Pending	2023-01-09	Georgia	Case 9 Description	Case 9 Details	Case 9 Notes	Case 9 Comments	Case 9 Actions
10	Helen Mirren	Case 10	Open	2023-01-10	London	Case 10 Description	Case 10 Details	Case 10 Notes	Case 10 Comments	Case 10 Actions
11	Ian McKellen	Case 11	Closed	2023-01-11	Edinburgh	Case 11 Description	Case 11 Details	Case 11 Notes	Case 11 Comments	Case 11 Actions
12	Jennifer Lawrence	Case 12	Pending	2023-01-12	Indiana	Case 12 Description	Case 12 Details	Case 12 Notes	Case 12 Comments	Case 12 Actions
13	Keanu Reeves	Case 13	Open	2023-01-13	Manitoba	Case 13 Description	Case 13 Details	Case 13 Notes	Case 13 Comments	Case 13 Actions
14	Liam Neeson	Case 14	Closed	2023-01-14	Massachusetts	Case 14 Description	Case 14 Details	Case 14 Notes	Case 14 Comments	Case 14 Actions
15	Mel Gibson	Case 15	Pending	2023-01-15	Queensland	Case 15 Description	Case 15 Details	Case 15 Notes	Case 15 Comments	Case 15 Actions
16	Nicole Kidman	Case 16	Open	2023-01-16	Victoria	Case 16 Description	Case 16 Details	Case 16 Notes	Case 16 Comments	Case 16 Actions
17	Orlando Bloom	Case 17	Closed	2023-01-17	Quebec	Case 17 Description	Case 17 Details	Case 17 Notes	Case 17 Comments	Case 17 Actions
18	Peter Dinklage	Case 18	Pending	2023-01-18	Alberta	Case 18 Description	Case 18 Details	Case 18 Notes	Case 18 Comments	Case 18 Actions
19	Quentin Tarantino	Case 19	Open	2023-01-19	California	Case 19 Description	Case 19 Details	Case 19 Notes	Case 19 Comments	Case 19 Actions
20	Rachel Watson	Case 20	Closed	2023-01-20	Ontario	Case 20 Description	Case 20 Details	Case 20 Notes	Case 20 Comments	Case 20 Actions
21	Samuel L. Jackson	Case 21	Pending	2023-01-21	Georgia	Case 21 Description	Case 21 Details	Case 21 Notes	Case 21 Comments	Case 21 Actions
22	Tina Turner	Case 22	Open	2023-01-22	Ohio	Case 22 Description	Case 22 Details	Case 22 Notes	Case 22 Comments	Case 22 Actions
23	Uma Thurman	Case 23	Closed	2023-01-23	Quebec	Case 23 Description	Case 23 Details	Case 23 Notes	Case 23 Comments	Case 23 Actions
24	Will Smith	Case 24	Pending	2023-01-24	California	Case 24 Description	Case 24 Details	Case 24 Notes	Case 24 Comments	Case 24 Actions
25	Yasmine Paterlini	Case 25	Open	2023-01-25	Quebec	Case 25 Description	Case 25 Details	Case 25 Notes	Case 25 Comments	Case 25 Actions

**Advanced
Mapping
Concepts**

SECTION
FOUR

Chapter 18

Advanced Transformation Map Tools

Overview

The Transformation map screen's toolbar has an Advanced menu item. There are several transformation mapping tools that you can access within this menu, including:

- Loading actual Source data and displaying it in the transformation screen's Source pane.
- Testing the transformation by displaying the resulting Target data that corresponds to the Source content.
- Filtering the data elements to only show those that contain data.
- Testing Operations that use this Transformation map and seeing the resulting Source-Target content.
- Generating transformation map reports.

Test Source Data

Tip: If you don't have a local copy of the Source data, you can alternatively review both the Source and Target content by testing an operation that uses this Transformation. See "Test Operations" on page 18-8 for details.

The primary function of the **Advanced** menu items in the Transformation map window is to load actual data into the map. You can then visually review the values to confirm your transformation has been built correctly.

To start testing, you first need to test your Source data by loading it into the Transformation map screen's **Source** pane.

- 1 Select "Test Source Data" from the **Advanced** toolbar item (see Figure 18-1 below).

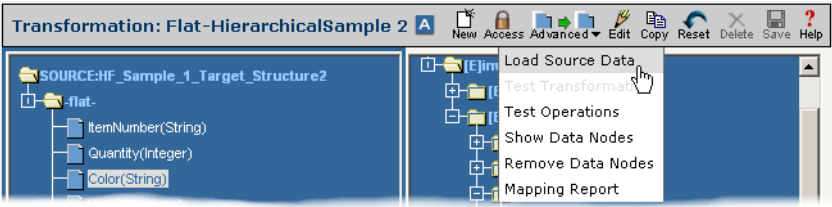


Figure 18-1. To load actual source data into your transformation map, select "Test Source Data" from the **Advanced** menu icon.

- 2 Depending on the Source's data type, you will either need to specify the location of the file (for file-based sources), or provide the appropriate query filter (for database sources).

File-Based Sources

If your Source is file-based (e.g., Text, EDI, or XML), then a dialog will appear, asking for the location of the source data file (see Figure 18-2 below).

- 1 Click the **Browse** button and navigate to the source data file's location.
- 2 Click the Upload button to load the source data into your transformation map.

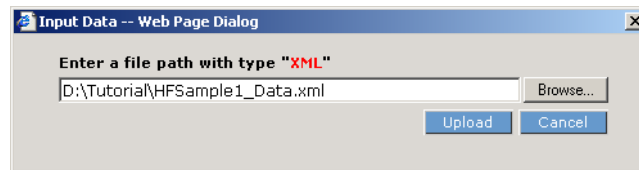


Figure 18-2. If your source has file-based data, you will need to use this dialog to specify the location of the source data.

Database Sources

If your Source is a database, then a filter dialog will appear, letting you specify the appropriate data filter (see Figure 18-3 below).

- ❶ (Optional) Click the **Add Filter**'s “Select Table” drop-down menu and select the appropriate database table you want to use in your query filter.
- ❷ (Optional) Click the **Add Filter**'s “Select Field” drop-down menu and select the appropriate database field you want to use in your query filter.
- ❸ Make sure to enter a valid filter into the **Additional Filter** field.
- ❹ Click OK to load your database information into the Transformation map's Source pane.

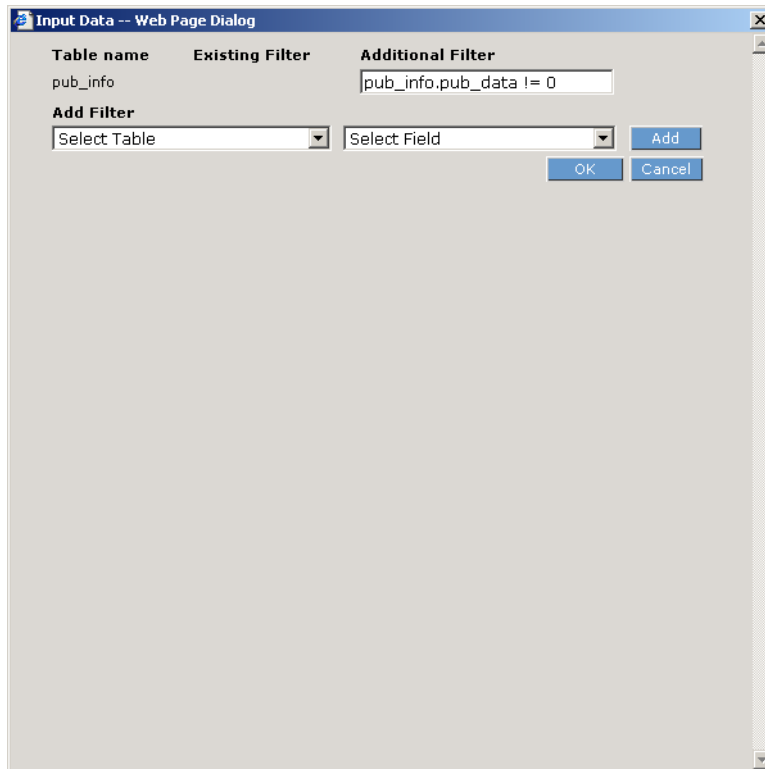


Figure 18-3. Use this dialog to filter your Source database's query.

Reviewing Data

Once you have provided details about your Source data, the content is loaded into the Transformation map's **Source** pane. The uploaded values are highlighted in yellow, and are placed to the right of their corresponding data elements.

As shown in Figure 18-4 below, you can toggle through a multi-entry element's values by clicking the appropriate folder's *1 of N* control.

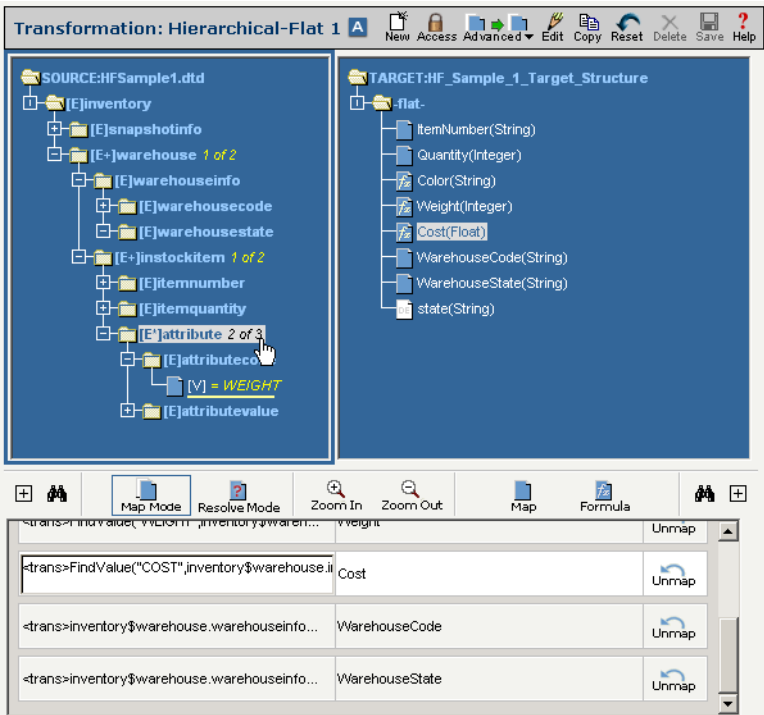



Figure 18-4. Source data is loaded into the **Source** pane and is displayed in yellow. You can toggle through an element's multiple values by clicking on the parent folder's 1 of N control.

Test Transformation

 **Note:** Test Transformation cannot be performed unless you first tested the Source data. See the previous section for details.

After reviewing your Source data elements' contents you can test the transformation map by reviewing how the Target's corresponding data elements' values appear after being transformed.

- 1 Select "Test Transformation" from the **Advanced** toolbar item (see Figure 18-5 below).

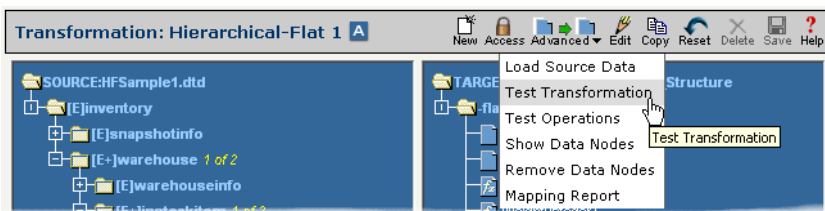


Figure 18-5. Select "Test Transformation" from the **Advanced** menu icon to see how your Target's values are generated from the original Source data.

- 2 The Source content is transformed according to your Transformation map, and the subsequent Target values are loaded into the **Target** pane. The Target data elements' values are highlighted in yellow, and are placed to the right of their corresponding data elements (see Figure 18-6 below).

- ③ Similar to the **Source** pane, you can toggle through a multi-entry **Target** element's values by clicking the appropriate folder's *1 of N* control. In the example shown below, the folder was clicked once to display the second of four sets of values.

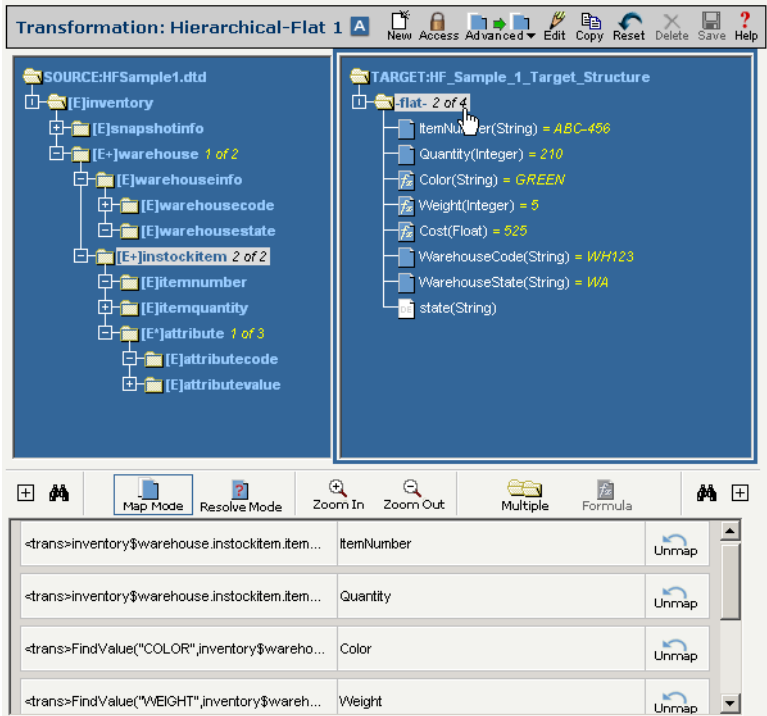



Figure 18-6. Testing the Transformation is done by loading corresponding Target data element values from the Source data and reviewing their results.

Test Operations

 **Tip:** Running the Test Operation is similar to pressing the operation's **Do Now** button, except that both the Source and Target's data are loaded into the Transformation map window.

The Test Operations tool essentially performs both the Source Data test and the Transformation test at once. There are a few circumstances when you must perform this test as an alternative to the Source Data-Transformation test sequence:

- Your Source is file-based and you don't have a local copy of the data file.
 - You have multiple operations with different sources, but with the same transformation. For example, you may have an East coast and a West coast FTP server, both of which hold a catalog data file. You can use the Test Operation tool to compare the transformation results from the different locations.
- ❶ Select “Test Operations” from the **Advanced** toolbar item (see Figure 18-7 below).

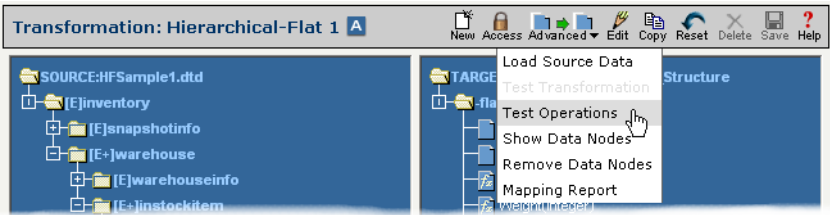


Figure 18-7. Select “Test Transformation” from the **Advanced** menu icon to run an operation that uses this transformation and review its Source data and the corresponding transformed Target data.

- ② An **Input Data** dialog appears, listing all the operations that currently use this transformation. Select the appropriate operation in the list, then click the **Select** button to continue (see Figure 18-8 below).

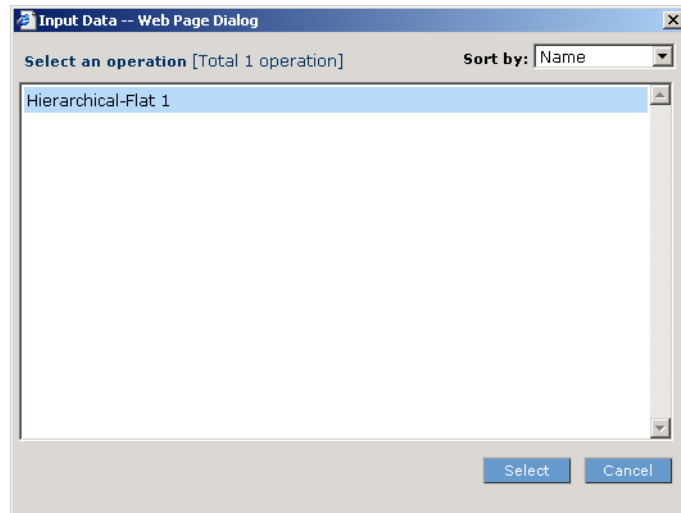


Figure 18-8. Select the appropriate operation whose source data you want to test in this Transformation map.

- 3 The Appliance immediately performs the transformation, using data from the specified Source. Both the Source and Target data are loaded into the Transformation map window (see Figure 18-9 below).

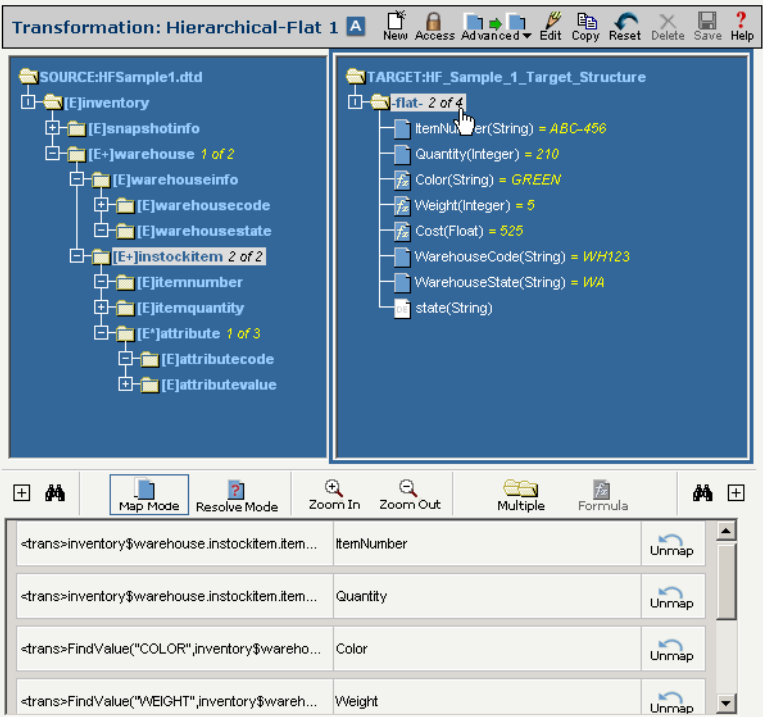


Figure 18-9. The **Test Operation** tool displays the source Data from the specified Source, performs the transformation, and displays the resulting Target values in the Transformation map screen.

Control Data Element Display

To help simplify the display, you can use the **Show Data Nodes** tool to hide all the data elements that do not have any value associated with them. The **Show All Nodes** tool reverses the view, displaying all the transformation map's data elements.

- 1 If you want to set the Transformation Map screen to display only those data elements which hold content, select “Show Data Nodes” from the **Advanced** toolbar item (see Figure 18-10 below).

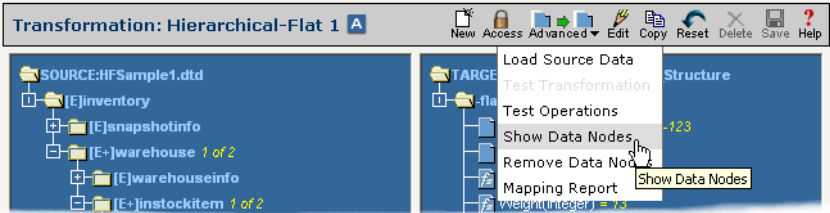


Figure 18-10. Select “Show Data Nodes” from the **Advanced** menu icon if you want to display only those data elements that hold data.

- 2 Depending on your filter setting, the hierarchical tree that displays the Source and Target data elements will show/hide elements that do not contain any content.
- 3 To return back to the default state that displays all data elements, select “Show All Nodes” from the **Advanced** toolbar item (see Figure 18-11 below).

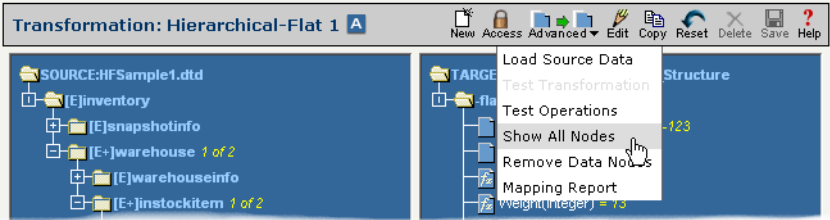


Figure 18-11. Select “Show All Nodes” from the **Advanced** menu icon if you want to display all the transformation map's data elements.

Resetting Data

The **Remove Data Nodes** tool is used to clear all the Source and Target elements' displayed content from the Transformation map window. Selecting this tool will reset your Transformation map back to its default state (without any data loaded).

- 1 Select “Remove Data Nodes” from the **Advanced** toolbar item (see Figure 18-12 below).
- 2 Data that was loaded and the *1 to N* controls are removed from the window.



Figure 18-12. Use “Remove Data Nodes” from the **Advanced** menu icon to remove all data from the window and reset the Transformation map back to its default state.

Transformation Reports

As shown in Figure 18-13 below, the **Mapping Report** tool will generate a printable report that displays the complete list of mapped data elements.

- 1 Select “Mapping Report” from the **Advanced** toolbar item.

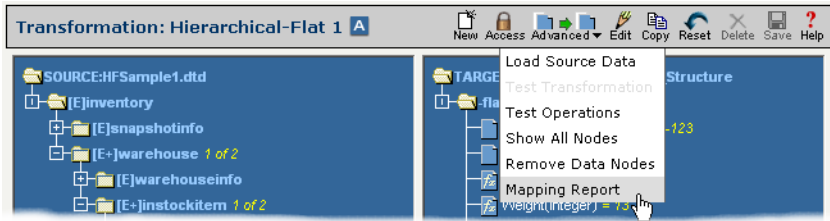


Figure 18-13. Select “Remove Data Nodes” from the **Advanced** menu icon to generate a printable report of all a Transformation’s mapped data elements.

- 2 A new window will appear that displays a table with each mapped Source data element, the transformation that is applied to that element, and its corresponding Target field (see Figure 18-14 below).
- 3 If you want to print a hard copy of this report, press the **Print** button.

The screenshot shows a window titled 'Print Records -- Web Page Dialog'. Inside, there's a header 'Report For Transformation: Hierarchical-Flat 1 (1)' with 'Print' and 'Close' buttons. Below is a table with two columns: 'Source Transformation' and 'Target Field'.

Source Transformation	Target Field
<trans>inventory\$warehouse.instockitem.itemnumber\$</trans>	ItemNumber
<trans>inventory\$warehouse.instockitem.itemquantity\$</trans>	Quantity
<trans>FindValue("COLOR",inventory\$warehouse.instockitem.attribute#.attributecode\$,inventory\$warehouse.instockitem.attribute#.attributevalue\$)</trans>	Color
<trans>FindValue("WEIGHT",inventory\$warehouse.instockitem.attribute#.attributecode\$,inventory\$warehouse.instockitem.attribute#.attributevalue\$)</trans>	Weight
<trans>FindValue("COST",inventory\$warehouse.instockitem.attribute#.attributecode\$,inventory\$warehouse.instockitem.attribute#.attributevalue\$)</trans>	Cost
<trans>inventory\$warehouseinfo\$warehousecode\$</trans>	WarehouseCode
<trans>inventory\$warehouseinfo\$warehousestate\$</trans>	WarehouseState

Figure 18-14. Reports describe each mapped Source data element, its transformation, and its Target field.

Related Topics

- To learn how to map Source to Target data elements, see Chapter 17, “Transformation Mapping.”
- To see how to work with the Formula Builder, see Chapter 19, “Formula Builder.”
- To see examples of advanced transformation mappings, see the remaining chapters in this section.

Chapter 19

Formula Builder

Overview

You can manipulate any field's value during the transformation by using the Formula Builder. With the Formula Builder, you can use mathematical operators, concatenate text strings, or even use formulas to perform more sophisticated functions.

How to Use the Formula Builder

Tip: As a shortcut to launching the Formula Builder, you can double-click on a mapped data element in the Transformation screen's Target Tree.

Note: If you have not yet defined your transformation, see the **Transformations** section of the *Backend Guide* for details.

Follow these steps to create use the Formula Builder in your transformation:

- ❶ Log in to the Data Interchange environment. (See “Log In to the Tour” on page 2-2 if you need details.)
- ❷ Click the **Definitions** button in the navigation bar.
- ❸ Select the **Transformations** tab in the upper-left corner of the **Definitions** screen.
- ❹ Select the transformation definition you want to use in the list at the left side of the pane.

Launch and Configure the Formula Builder

- ❶ Launch the Formula Builder by selecting the mapping that you want to apply a formula to, then click the **Formula** button (see Figure 19-1 below).

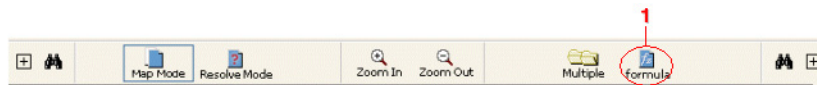


Figure 19-1. Click the **Formula** button in the Transformation screen to launch the Formula Builder applet.

- ❷ The value of the mapped source data element that you selected is loaded into the Formula Builder's upper pane.
- ⚠ **Caution:** In order to be transformed correctly, the Appliance must wrap the final expression with a `<trans> ... </trans>` tag. Make sure that this tag is preserved as you manipulate your expression.
- ❸ (Optional) If you need to use a logical operator in your expression, select the location in the expression where the operator should be placed, then click the appropriate operator button.
 - ❹ Select the function you want to use from the **Functions** tree in the left pane.
 - ❺ Add the selected function to your expression by clicking the **Insert** button.
 - ❻ (Optional) Click the **Test** button to open the Formula Tester dialog. The Formula Tester is where you can test the results of your formulas by entering the values you would like to supply as input to the formula. The resulting output will be displayed at the bottom of the dialog.
 - ❼ Compare your work to Figure 19-2 below. When you have finished your expression, click **OK**.

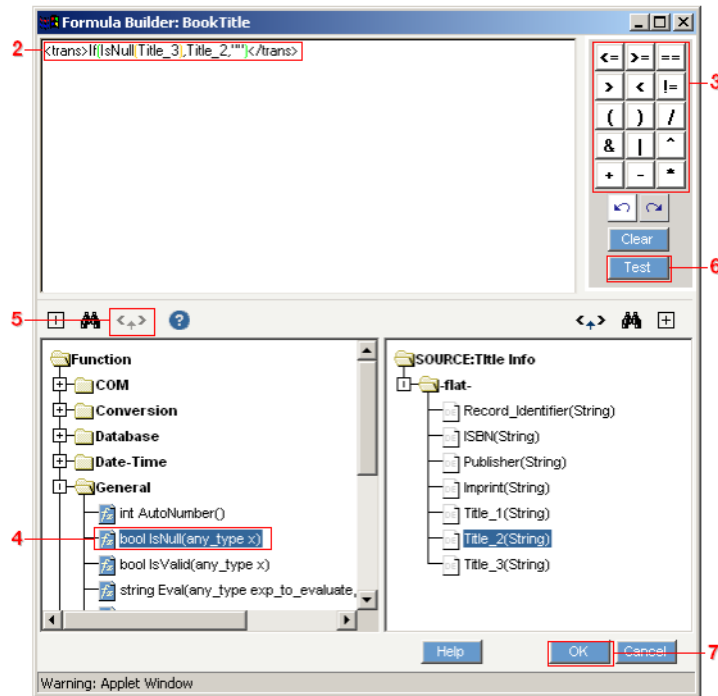


Figure 19-2. Use the Formula Builder applet to manipulate the value of any source data element to properly match its target element.

Modifying Expressions with Source Elements

You can use a source element's value to modify the expression you are creating in the Formula Builder. For example, you may need to convert one currency to another format. In this example, you may have a source element called “CurrentConversionRate” that contains the most recent exchange rate between US dollars and Euros.

To use another source data element in your expression, select where the expression should be placed, select the desired source element (e.g., “CurrentConversionRate”) in the Formula Builder’s **Source** pane, then click the **Insert** button. (Alternatively, you can double-click the desired source element as a shortcut to load it into your expression.)

Related Topics

- To see an example of using the Formula Builder in a transformation using an outer join, see Chapter 22, “Mapping with Outer Joins.”
- To see an example of using the Formula Builder in a hierarchical-to-flat transformation, see Chapter 23, “Mapping Hierarchical-to-Flat Structures.”
- To see an example of using the Formula Builder in a flat-to-hierarchical transformation, see Chapter 24, “Mapping Flat-to-Hierarchical Structures.”

Chapter 20

Conditional Output

Overview

This chapter provides descriptions of how to work with conditional output. *Conditional output* is a special data element added to your transformation definition that specifies the specific circumstances (conditions) when a particular transformation will occur. An example could be to transform an `approval` field only when a `requestedItem` field's value is greater than \$1,000.

How to Create Conditional Output

Note: This option only applies to target folders that can have a looping structure (also known as Target Loop Nodes, or TLN's).

During the mapping process, you may need to limit the creation of output data elements based on some criteria. For example, you might want to include an `authorizedby` data element in the output document only when the `ordertotal` element is greater than \$1,000.00. Creating a *conditional output* on the target folder is how you can achieve this.

Follow these steps to define a condition:

- ❶ Click on the folder to which the condition will apply.
- ❷ Click on the **Multiple** button in the toolbar to bring up the **Mapping Options** dialog (see Figure 20-1 below).

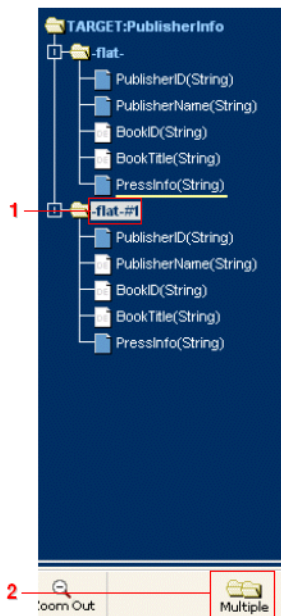


Figure 20-1. To create a condition, select the folder where you want to create the condition, then click the **Multiple** button.

- ③ Select the **Enable Conditions on current Folder** radio button (see Figure 20-2 below).
- ④ Click **OK** to dismiss the dialog.

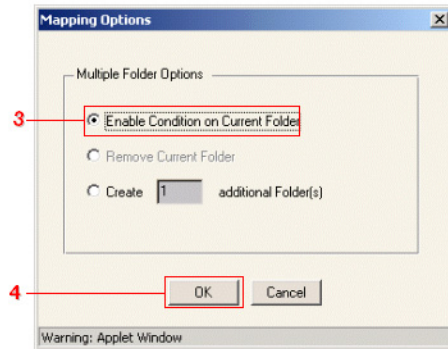


Figure 20-2. Choose the **Enable Condition on Current Folder** radio button in the Mapping Options dialog.

- 5 The folder you selected will now display a new Condition data element (see Figure 20-3 below).

Apply a Formula to the Condition

You now have a condition applied to your target. But for it to be operational, you must apply a formula to it.

- 1 Select the condition.
- 2 Click the **Formula** button to launch the Formula Builder.

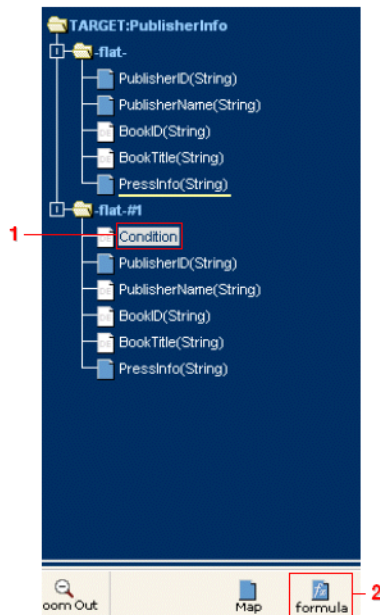


Figure 20-3. The Formula Builder is launched by clicking the **Formula** button.

Tip: See Chapter 19, “Formula Builder” for more information about working with the Formula Builder.

- 3 Create the expression that is appropriate for your condition with a combination of formulas, values of source data elements, and mathematical operators (see Figure 20-4 below).

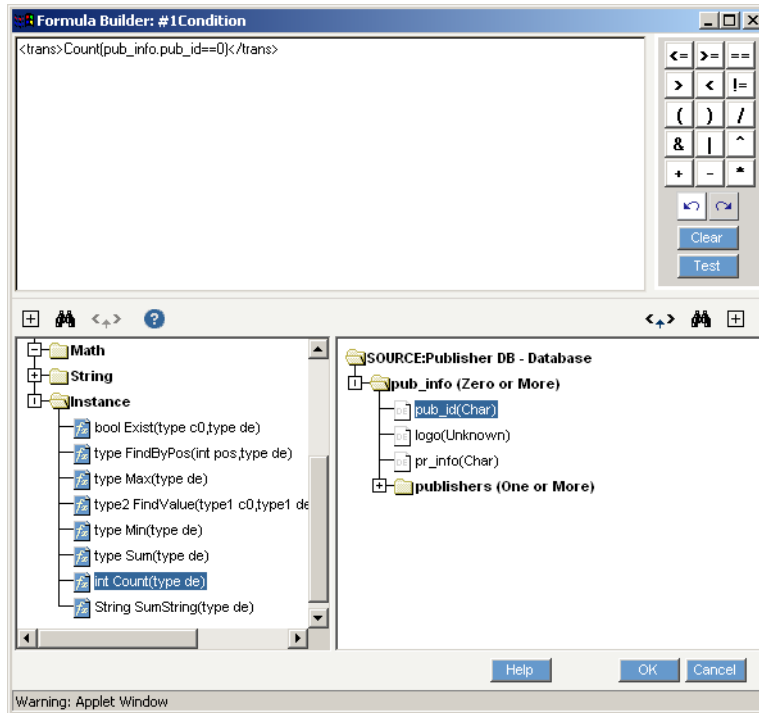


Figure 20-4. The Formula Builder can be used to configure your condition.

Related Topics

- To see an example condition applied in a transformation using an outer join, see “Add a Condition” on page 22-6.
- To see how to check for error conditions within your mappings, see Chapter 21, “Checking for Mapping Validation Errors.”

Chapter 21

Checking for Mapping Validation Errors

It is possible that during mapping, a condition is created that is not resolvable by the transformation engine. In this situation, you will need to supply additional folder information in order to resolve the issue. There are three situations where the mapping can become invalid:

- Many-to-One mapping
- Branching out in the same loop folder in the Target Tree
- Branching out between parent and child of target loop folder

How to Check for Mapping Validation Errors

To test and correct mapping errors, do the following after you have completed mapping:

- ❶ Click the **Resolve Mode** button in the Transformation toolbar. Your list of mapped source-target data elements now displays their resolve state. If no logical mapping errors are found, there will be no items listed in the lower section of the screen.
- ❷ If there are errors in the mapping logic, there will be one or more entries in the mapping list with an error icon to the left of them.
- ❸ Click on the first item in the list, and follow the instructions on the subsequent **Mapping Resolution** dialogs to correct the problem(s).
- ❹ Repeat the above step to resolve each subsequent mapping error.
- ❺ When you are resolved all mapping errors, select the **Map Mode** icon to return to the normal view in the source and target trees.

Chapter 22

Mapping with Outer Joins

If you are working with a hierarchical database source and you want to retrieve information from the source database even when the child table has no corresponding data, you need to use an *outer join*. This chapter provides an example of how to work with a transformation whose source is a database that uses an outer join.

How to Map an Outer Join

With Syncx 6200 Series Appliance, the Transformation Wizard lets you set an outer join by selecting the **Outer Join** checkbox in the wizard's **Create Relationships** screen. This chapter assumes you have already defined such a relationship through the Transformation Wizard.

Once you've created your transformation definition, follow these steps to map an outer join:

- 1 Select the desired source element.
- 2 Select the desired target element.
- 3 Map their relationship by clicking the **Map** button.

Repeat these steps for as many other fields that you want mapped (see Figure 22-1 below).

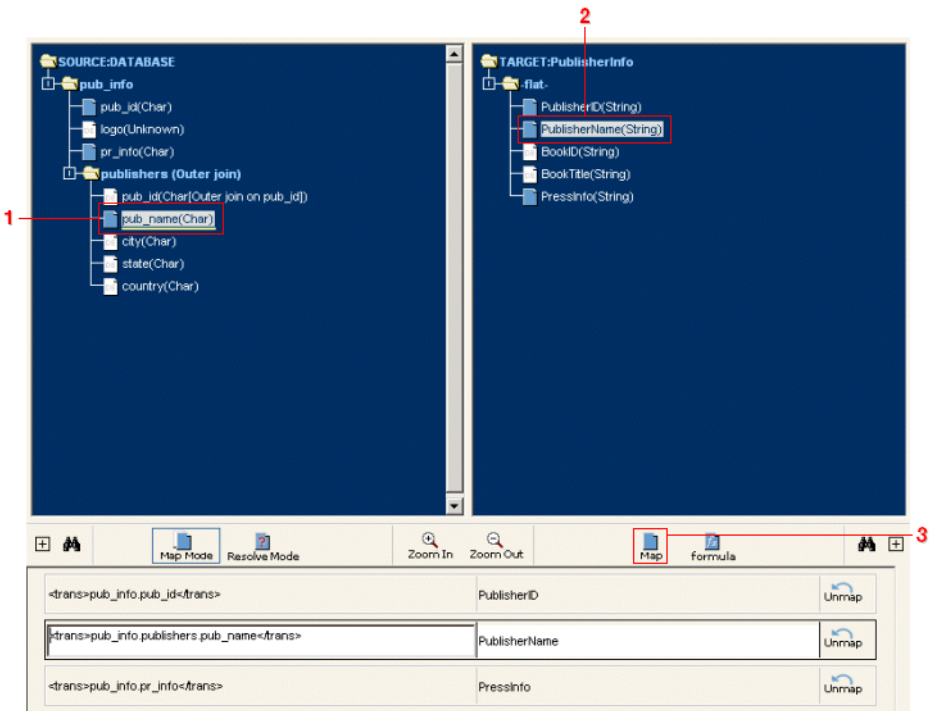


Figure 22-1. Start your outer join mapping by selecting the desired source elements and mapping to their respective target elements.

Create an Additional Target Folder

Next, you need to create a copy of the target folder for the outer join.

- 1 Select the name of the main folder within your target structure.
- 2 Click the **Multiple** button (see Figure 22-2 below).

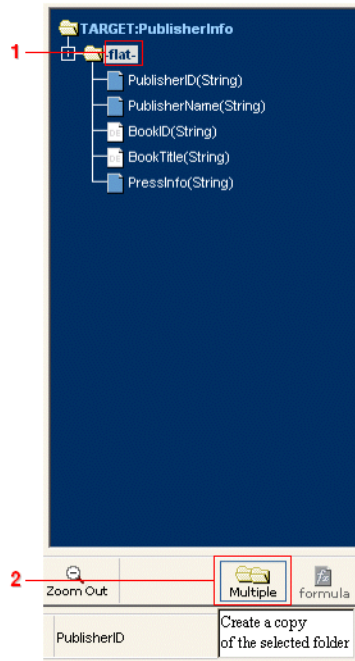


Figure 22-2. Select the main target folder and click the **Multiple** button to create an additional folder.

- ③ The Mapping Options dialog appears. **Select the Create...additional Folder(s)** radio button, and type a “1” into its field (see Figure 22-3 below).
- ④ Click **OK** to dismiss the dialog box and continue.

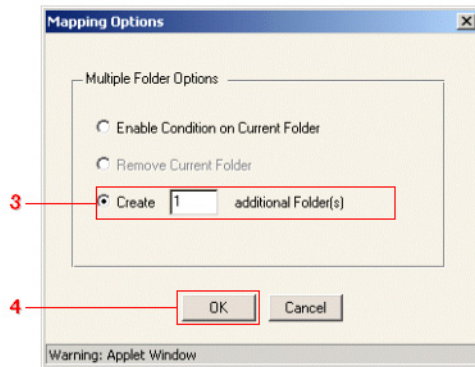



Figure 22-3. Select the **Create...additional Folder(s)** radio button to create a copy of your target folder.

 **Note:** Generally in an outer join, you will want to replicate the same mapping of all parent source data elements to the new target folder.

Map Additional Folder's Elements

- ❶ Back in the main transformation screen, you should see the new folder added to your target's structure.
- ❷ Select the source data element that you want to map to the new target folder.
- ❸ Select the appropriate target data element in the new folder.
- ❹ Click the **Map** button.

Repeat these steps for all other data elements you want to map. You can compare your work to that shown in Figure 22-4 below.

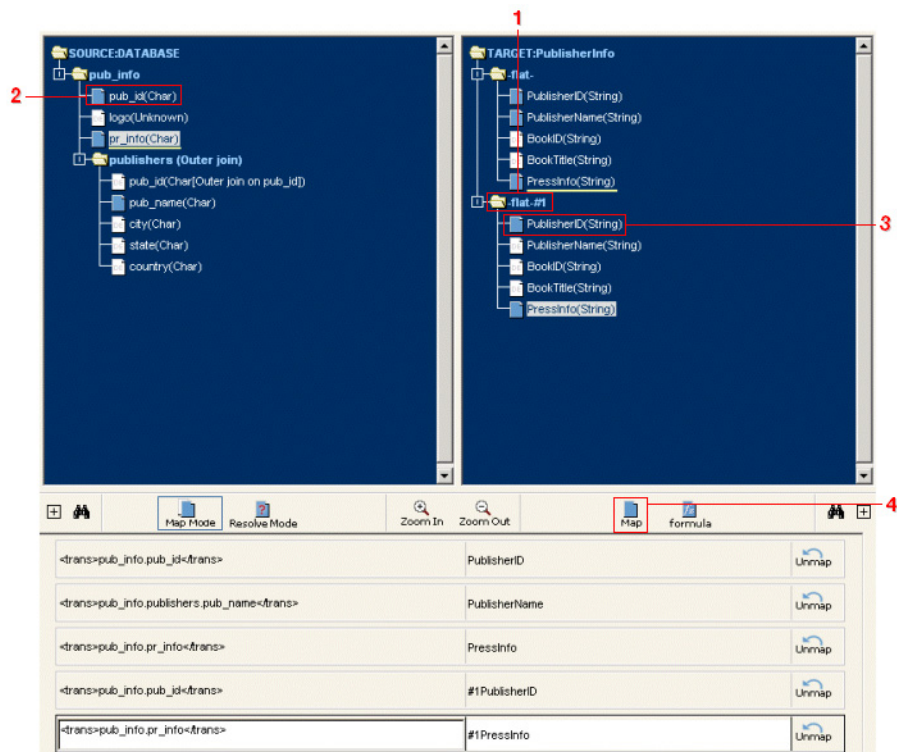


Figure 22-4. Now that you have the additional target folder, map the parent source data elements to the new folder's elements.

Add a Condition

You now need to add a condition that ensures that the new target folder's data elements will be referenced only when the source's data element is null (the outer join).

- 1 Select the name of the new target folder.
- 2 Click the **Multiple** button (see Figure 22-5 below).

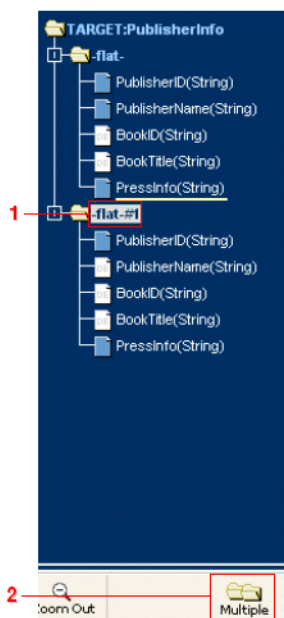


Figure 22-5. Use the **Multiple** button to add a condition to the target's new folder.

- ③ The Mapping Options dialog appears. Since you want to add a condition, select the first radio button (see Figure 22-6 below).
- ④ Click **OK** to dismiss the dialog and continue.

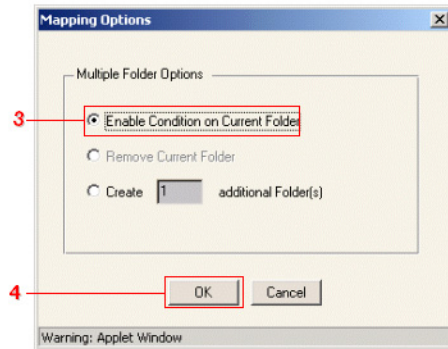


Figure 22-6. Use the Mapping Options dialog to add a condition to your target's folder.

Configure the Condition with the Formula Builder

Once the mapping dialog has disappeared, you should be back in the main transformation screen.

- 1 Select the new **Condition** element in the target tree.
- 2 Click the **Formula** button to launch the Formula Builder, where you will configure the condition (see Figure 22-7 below).

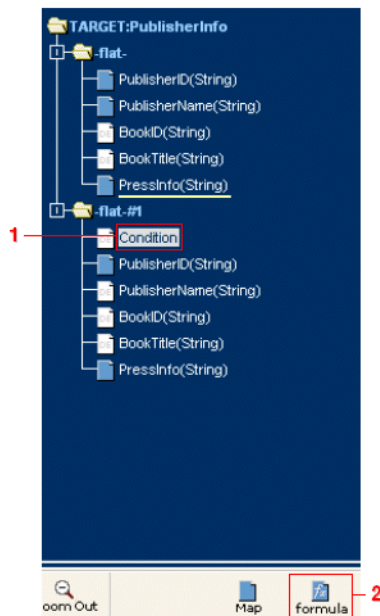


Figure 22-7. The **Formula** button launches the Formula Builder, which is where you can configure your condition.

- ③ The Formula Builder should appear. Open the **Instance** folder in the left pane, and select the **Count()** function.
- ④ Click the **Insert** button to add this function to your expression.
- ⑤ The new expression appears in the pane at the top of the dialog (see Figure 22-8 below).

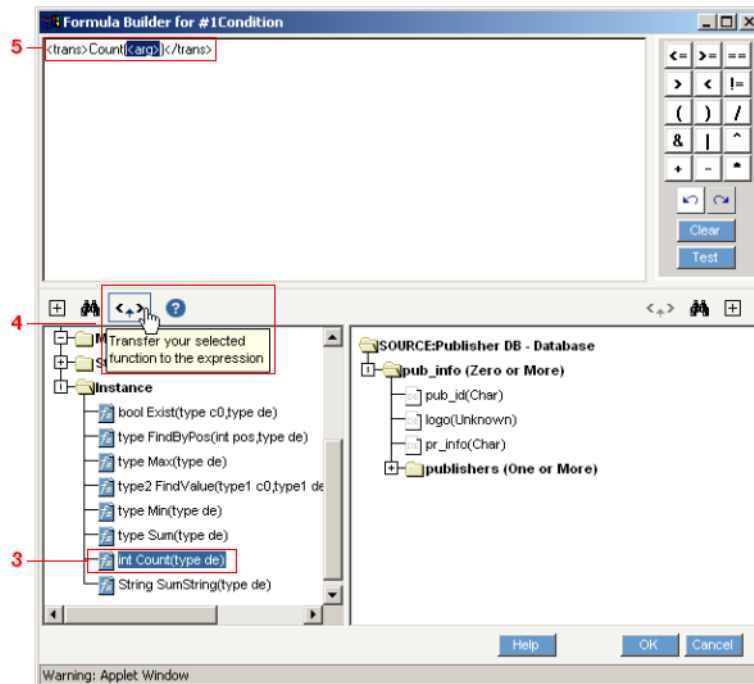


Figure 22-8. Select the appropriate formula from the pane at the left, then click the **Insert** button to start building your expression.

- 6 Next, choose the proper data element in your additional target folder as the Count() function's parameter. (In this case, it's the first data element.)
- 7 Making sure the <arg> value in your expression is selected, click the **Insert** button to replace <arg> with your target data element.
- 8 The modified expression appears in the pane at the top of the dialog as shown in Figure 22-9 below.

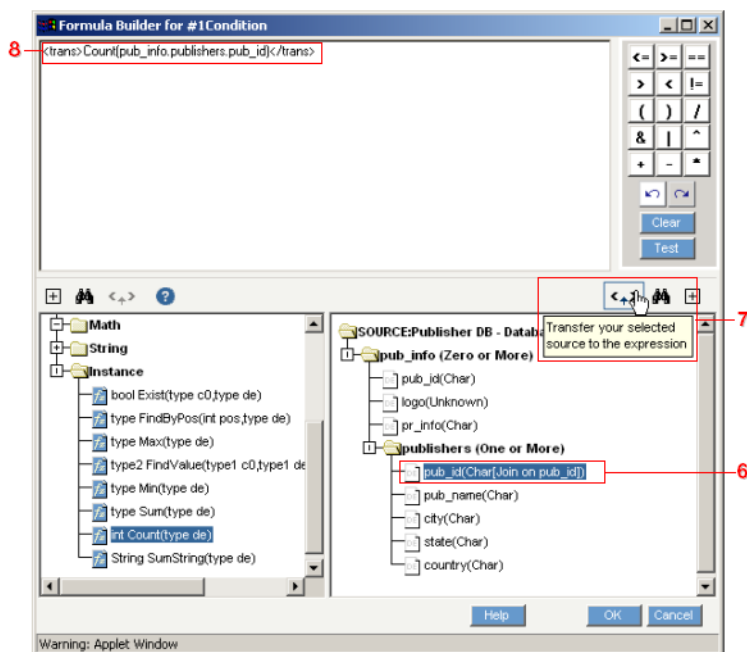


Figure 22-9. Select which source data element you want to use, then click the **Insert** button to place it into your expression.

Finally, you need to evaluate your Count() function.

- 9 Set your cursor's insertion point just before the </trans> tag in your expression, then click the == button.
- 10 Type the number 0, making sure it follows the ==, correctly completing your expression.
- 11 Compare your expression to that in Figure 22-10 below, carefully noting the <trans></trans> tags, the **Count()** function, and the evaluation of ==0. Click **OK** when you're finished.

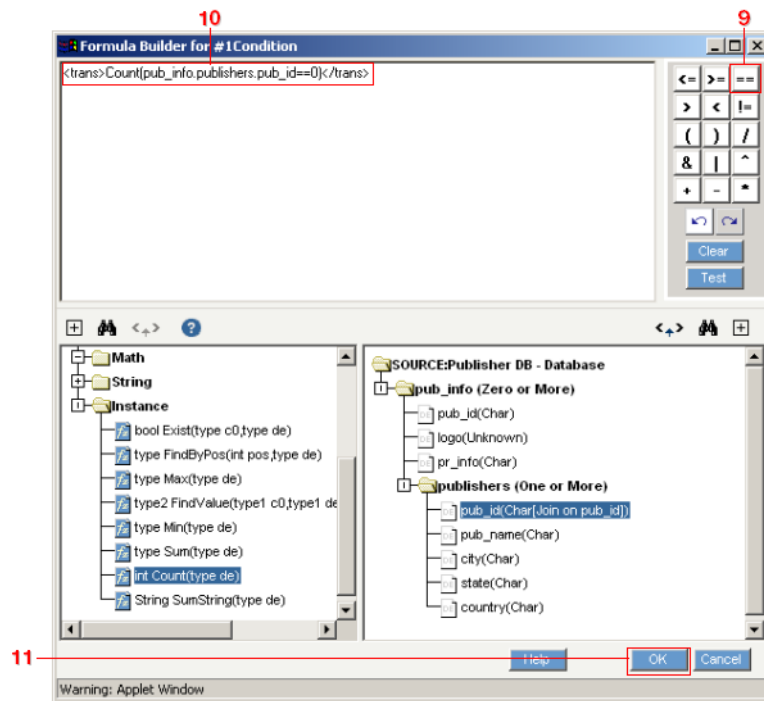


Figure 22-10. Complete your expression by adding an evaluator that compares the count of your target data element to 0.

Your outer join is complete. Figure 22-11 below displays the outer join, along with the properly configured expression that ensures the will add the source data elements' values to the additional folder only when the child data element doesn't contain any data (i.e., the child's count will be 0).

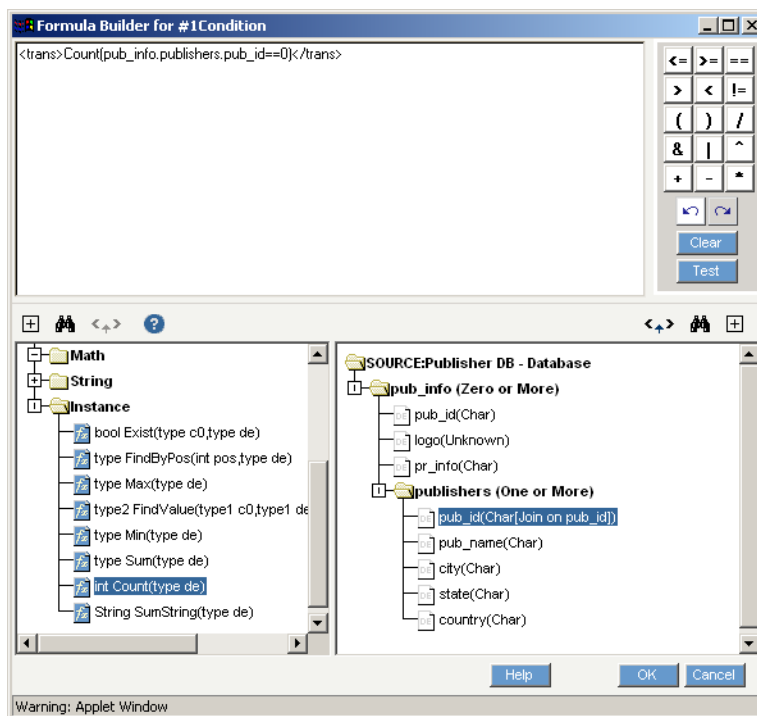


Figure 22-11. The correctly configured outer join mapping, with the newly created condition.

Related Topics

- To see a hierarchical-to-flat transformation mapping example, see Chapter 23, “Mapping Hierarchical-to-Flat Structures.”
- To see a flat-to-hierarchical mapping example, see Chapter 24, “Mapping Flat-to-Hierarchical Structures.”

Chapter 23

Mapping Hierarchical-to-Flat Structures

Overview

The concept of hierarchical-to-flat, or “Instance” mapping is the idea that you need to map a hierarchical structure to a flat structure, and you will need to resolve some information from one or more previous or “higher level” records. It essentially allows the user to move row-oriented data into column-oriented data, with the number of records generated dictated by the level of the data being mapped.

Two sample situations are provided in this chapter to illustrate how to achieve hierarchical-to-flat transformations.

Sample Situation 1

Consider the following situation, where a source XML document contains a looping structure with many levels, with a de-normalized (flat) target document. This could occur in other types of transformations, such as EDI-to-database, etc.

Document Structures and Data

There are three documents associated with Sample Situation 1:

- **Source Document Structure:** The source document is an XML document with many levels, some of which loop.
- **Source Document Data:** Data for this sample hierarchical-to-flat transformation conforms to the appropriate DTD criteria described above.
- **Target Document Structure:** The target document structure for this hierarchical-to-flat transformation is a tab-delimited text file.

Complete details about each of these documents are provided in the Appendix.

Scenario

The challenge in mapping these source and target documents is to correctly map the levels of the source with the levels of the target, making sure the correct data is placed into the target.

In this mapping scenario, a record for each of the item numbers needs to be created.

- ❶ Map the `itemnumber` in the source XML document to the target's `itemnumber` column. When we do this, we are creating one (target) record for each (source) `instockitem` entry.

Note

Items that are listed more than once will create additional records. In this example, this mapping will result in 4 records (ABC-123, ABC-456, ABC-123, DEF-456).

- ❷ Next, each source `itemquantity` must be mapped to the `quantity` field of the target.
- ❸ Similarly, map the source `warehousecode` and `warehousestate` data elements to their respective targets.

Map the Cost Attribute

To get the **Cost** attribute, map the `attributevalue` element of the `attribute` tag to the `Cost` field of the target. Since there can be more than one attribute code/value entry under the `attribute` tag, you must specify which attribute will map to the target's `Cost` field. Thus, you must define which exact attribute to use for the **Cost** field. In this example, it is the `cost` attribute code.

! **Caution:** The data elements from the source that are candidates must be data elements that are at the same level as the mapped data element, which means that it can only be `attributecode`. Using any other level above or below this would not make sense.

Now that we know what the options are, we need a way to define it. In this example, it would be to identify that we wanted the `attributevalue` where the `attributecode` is equal to `Cost`. It may also be that attributes are delivered in a certain order, and that their position determines the correct attribute instance.

Follow these steps to map `Cost` correctly:

- ❶ Select the `[V]` under the `attributevalue` element in the source pane.
- ❷ Click on `Cost` in the target pane.
- ❸ Click the **Map** button.
- ❹ Click on the **Formula** button to launch the Formula Builder (see Figure 23-1 below).

💡 **Tip:** See “Hierarchical Tree Notation” on page 3-3 of the *Reference Guide* for more information about the various symbols you may see in the Transformation screen.

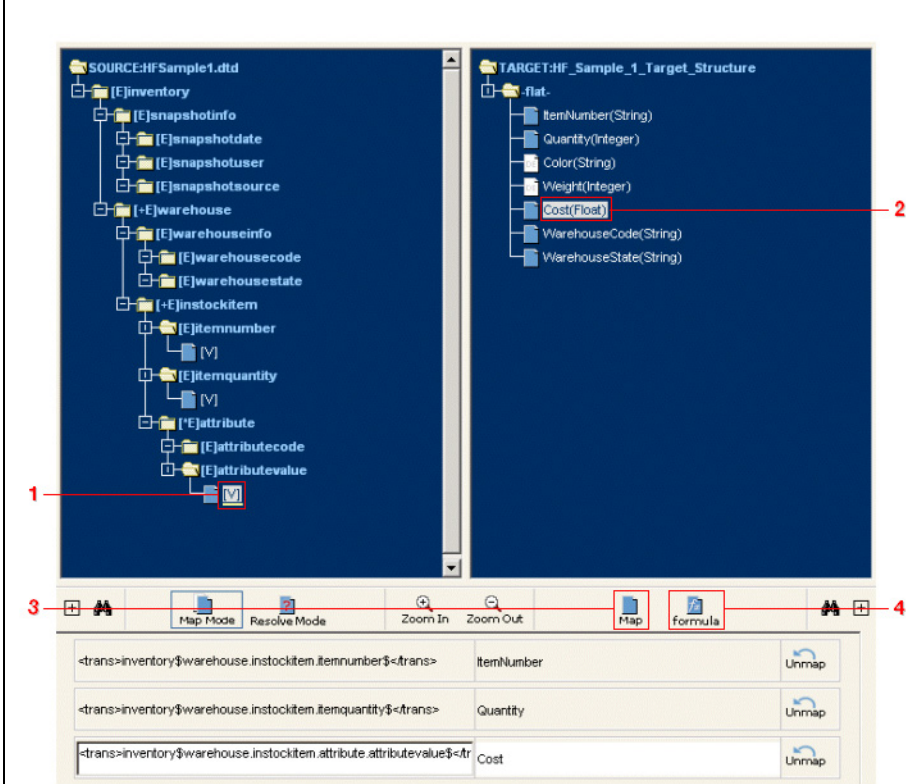


Figure 23-1. Map the appropriate source-target data elements, then click the **Formula** button to launch the Formula Builder.

- 5 The Formula Builder should appear. Open the **Instance** folder in the left pane, and select the **FindValue()** function.
- 6 Click the **Insert** button to add this function to your expression.
- 7 The new expression appears in the pane at the top of the dialog (see Figure 23-2 below).

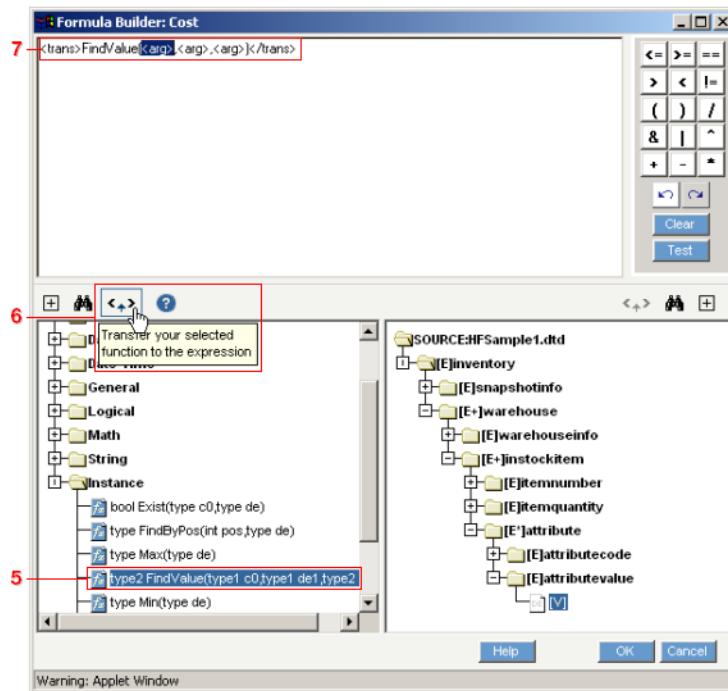


Figure 23-2. Start your expression by inserting the **FindValue()** function.

- 8 You now need to correctly configure the function's parameters:
 - a. Carefully highlight the first **<arg>** in your expression at the top of the window. This parameter should be the name of the attribute, so type "COST", replacing the **<arg>** in the expression.
 - b. This parameter provides the code used in the source data element. Making sure the expression's second **<arg>** is highlighted, replace it by double-clicking the **attributecode**'s [V] data element.
 - c. The last parameter returns the source data element's value. Making sure the expression's last **<arg>** is highlighted, replace it by double-

clicking the attributevalue's [V] data element.

- 9 Compare your expression with Figure 23-3 below, then click **OK** to close the window when you are finished.

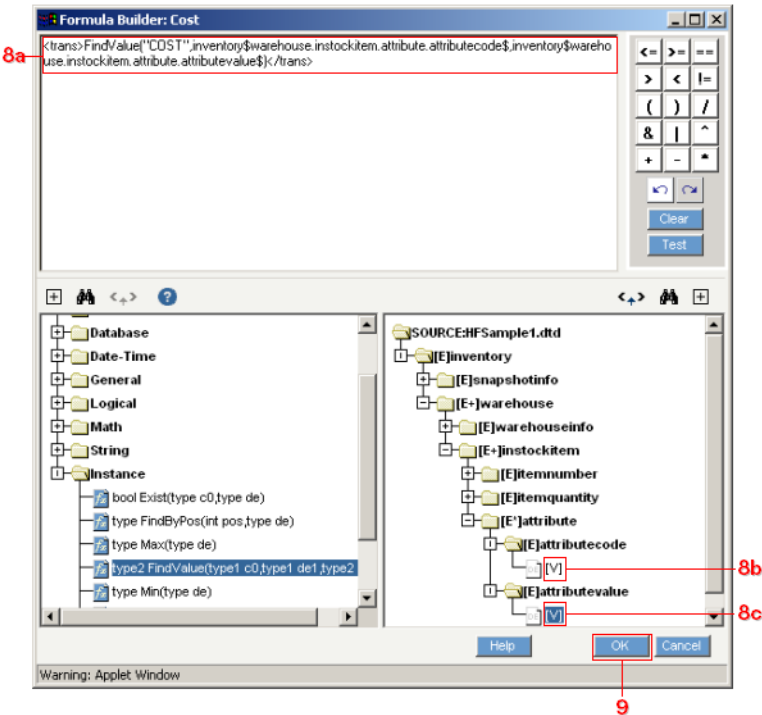


Figure 23-3. Carefully configure the **FindValue()** function's three parameters.

Complete the Sample

- 1 Repeat the steps listed above to map the WEIGHT and COLOR attributes in the source to their target counterparts.
- 2 The final data output would look as follows:

Item Number	Quantit y	Color	Weigh t	Cost (\$)	Warehous e Code	Warehous e State
ABC-123	450	BLUE	13	450.00	WH123	WA
ABC-456	210	GREEN	5	525.00	WH123	WA
ABC-123	65	BLUE	13	450.00	WH456	TX
DEF-456	75	-	23	1250.00	WH456	TX

You have completed the Sample 1 exercise. Compare your work to Figure 23-4 below.

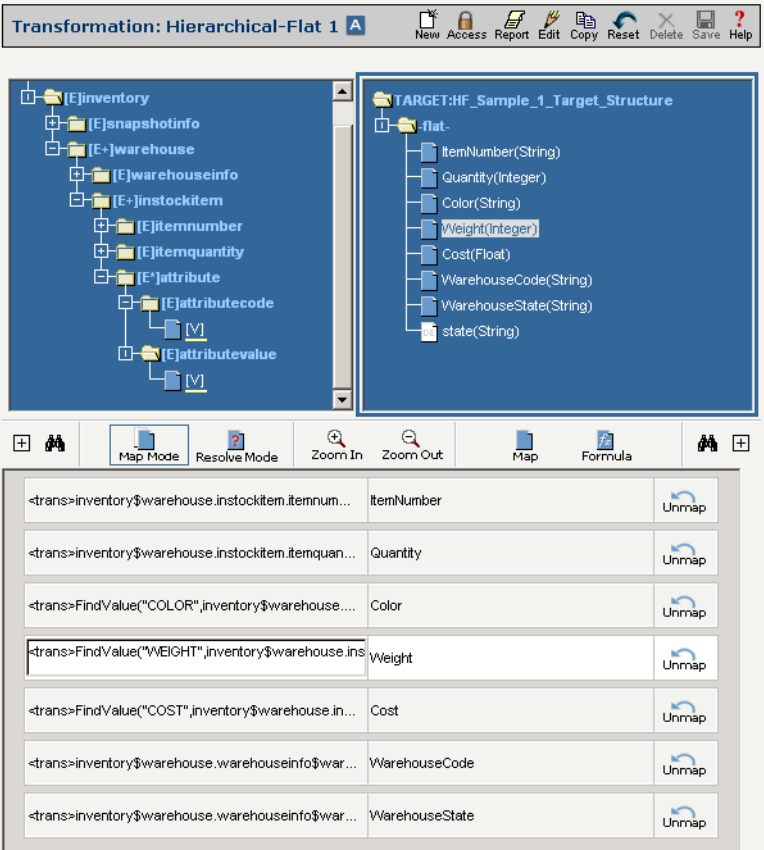


Figure 23-4. The completed Sample 1 transformation.

Sample Situation 2

This sample is similar to that of Sample Situation 1, except the structure of the source document is a bit different. Also, instead of mapping the item information, we will be assembling records-based warehouse code.

Document Structures and Data

There are three documents associated with Sample Situation 2:

- **Source Document Structure:** The source document is an XML document with many levels, some of which loop. Note that this DTD is different from the one in Sample Situation 1: In this DTD, the warehouse information is separated from the `instockitem` items.
- **Source Document Data:** This file contains sample data that mirrors the DTD file's structure.
- **Target Document Structure:** The target document is a text file. This target structure differs from the Sample 1 target because it uses a separate column to identify each warehouse.

Complete details about each of these documents are provided in the Appendix.

Scenario

Similar to Sample 1, we want to create a record for each of the item numbers, but we want to have each of the warehouses be listed by columns in the target. To do so, we need to create one record for each `instockitem` entry in the source XML file. In this example, this will equate to 3 records (`ABC-123`, `ABC-456`, `DEF-456`).

We have attributes of `instockitem`, which contains the warehouses where the item is stocked (`instockat`). Within this attribute, there can be 0 or more entries to identify all of the warehouses where the item may be found, as well as the quantity in the warehouse. What we need to do is get all the ones for `WH123`, etc. into the proper column.

The logic for item number `ABC-123` and warehouse `WH123` would be:

Get the value of the attribute "quantity" of the "ABC-123" item where the attribute "whcode" is equal to "WH123".

For example, the answer to be supplied for `WH123` for item number `ABC-123` would be `450`.

Follow these steps to correctly map and configure itemnumber:

- ❶ Map the source's itemnumber data element to the target's itemnumber.
- ❷ Map the source's itemquantity data element to the target's WH123 data element.
- ❸ WH123's data needs to be qualified. Select the target's WH123 data element and click the **Formula** button to launch the Formula Builder (see Figure 23-5 below).

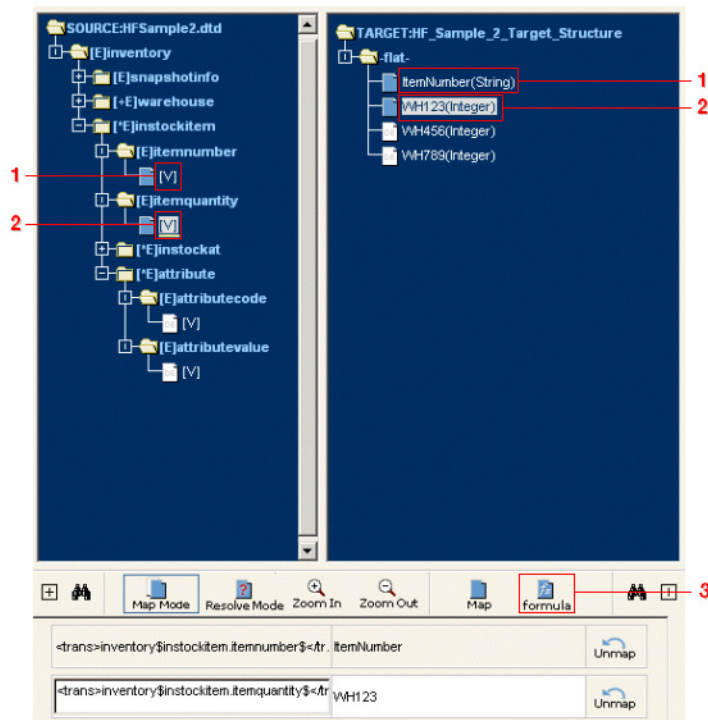


Figure 23-5. Map the itemnumber data elements, then map itemquantity to WH123 and launch the Formula Builder to configure the WH123 data element's settings.

- 4 The Formula Builder should appear. Open the **Instance** folder in the left pane, and select the **FindValue()** function.
- 5 Click the **Insert** button to add this function to your expression.
- 6 The new expression appears in the pane at the top of the dialog (see Figure 23-6 below).

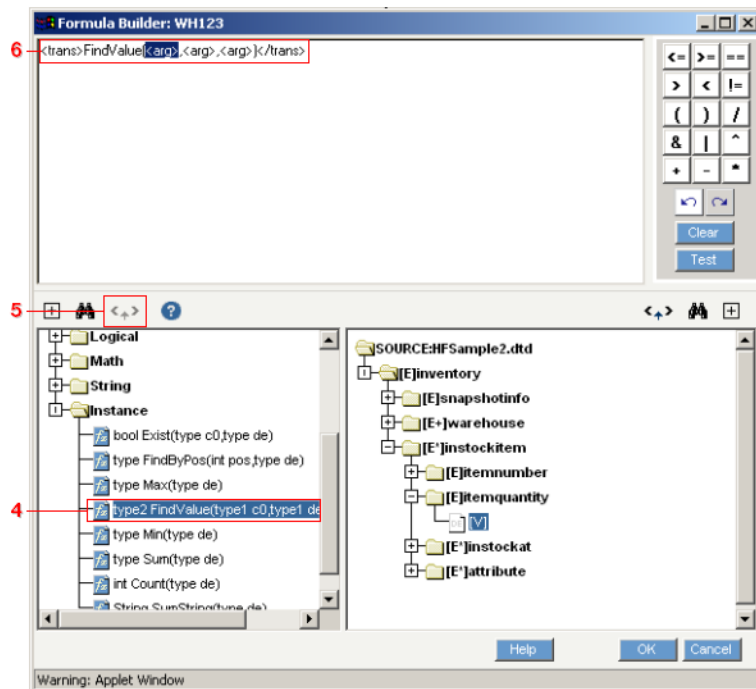


Figure 23-6. Start your expression by inserting the **FindValue()** function.

- 7 You now need to correctly configure the function's parameters:
 - a. Carefully highlight the first `<arg>` in your expression at the top of the window. This parameter should be the name of the attribute, so type "WH123", replacing the `<arg>` in the expression.
 - b. This parameter provides the code used in the source data element. Making sure the expression's second `<arg>` is highlighted, replace it by double-clicking the `attributecode`'s `[V]` data element.
 - c. The last parameter returns the source data element's value. Making sure the expression's last `<arg>` is highlighted, replace it by double-

clicking the attributevalue's [V] data element.

- 8 Compare your expression with Figure 23-3 below, then click **OK** to close the window when you are finished.

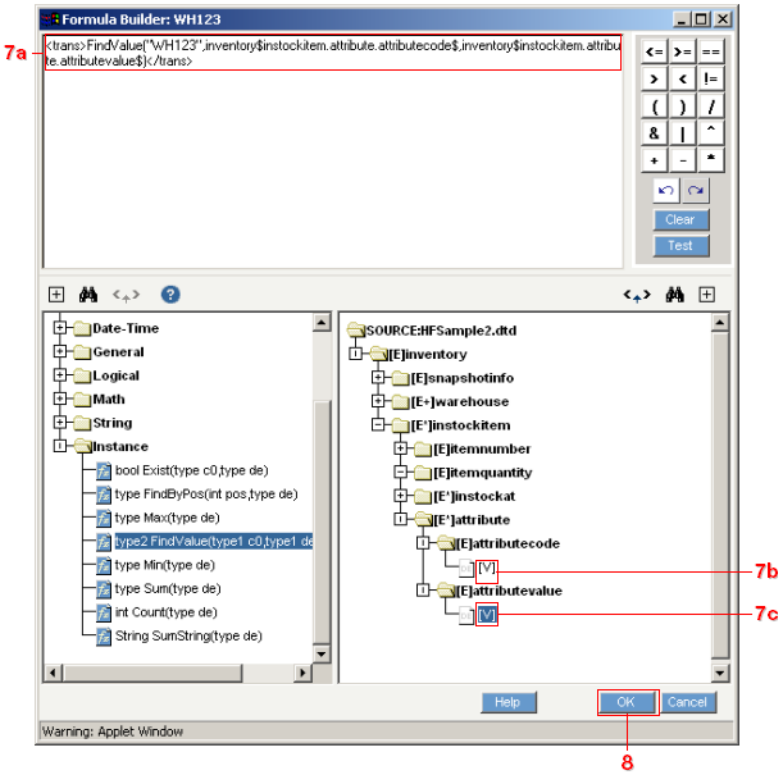


Figure 23-7. Carefully configure the **FindValue()** function's three parameters.

Complete the Sample

Repeat the steps you did above for the remaining two warehouses, WH456 and WH789, setting their values accordingly. You will then have completed the Sample 2 exercise. Compare your work to Figure 23-8 below.

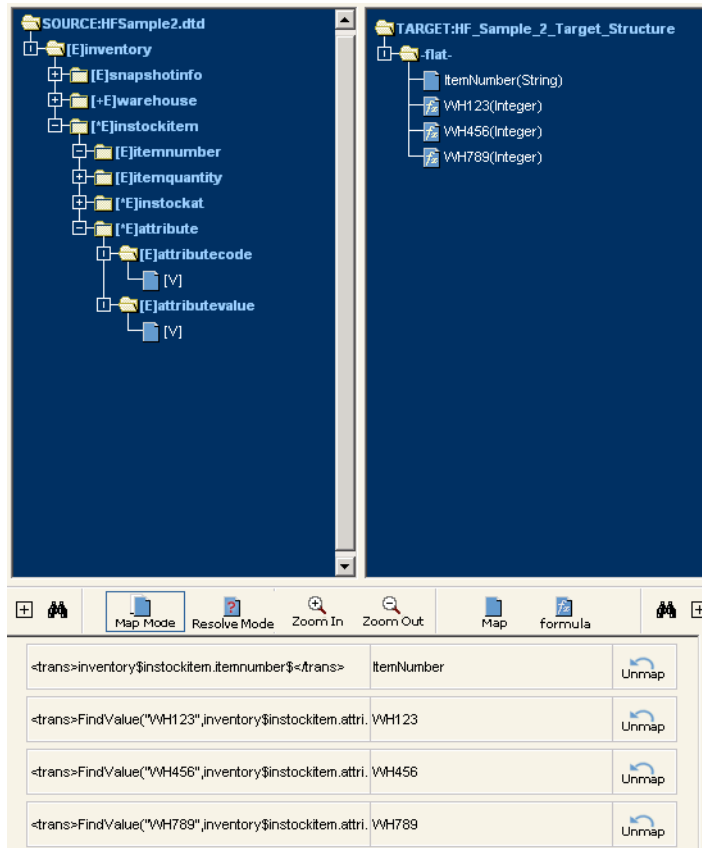


Figure 23-8. The completed Sample 2 transformation.

Related Topics

- To see a transformation mapping example using an outer join, see Chapter 22, “Mapping with Outer Joins.”
- To see a flat-to-hierarchical mapping example, see Chapter 24, “Mapping Flat-to-Hierarchical Structures.”

Chapter 24

Mapping Flat-to-Hierarchical Structures

Overview

The concept of hierarchical-to-flat, or “Instance” mapping is the idea that you need to map a hierarchical structure to a flat structure, and you will need to resolve some information from one or more previous or “higher level” records. It essentially allows the user to move row-oriented data into column-oriented data, with the number of records generated dictated by the level of the data being mapped.

This chapter provides a hierarchical-to-flat transformation mapping sample to help illustrate how this is achieved.

Sample Situation 3

Consider the situation where the source of data is a flat (de-normalized) data structure, and the target definition is hierarchical in nature. In the following example, the source data is depicted in structure that is de-normalized, such as a flat file.

Document Structures and Data

There are four documents associated with Sample Situation 3:

- **Source Document Structure:** The source document is a text file.
- **Source Document Data:** This file contains sample data that mirrors the DTD file's structure.
- **Target Document Structure:** The data structure of the target document is hierarchical in nature, with at least one header row and multiple detail rows that are assigned to the header row.
- **Target Output:** The desired end result of this transformation is output into a specific format.

Complete details about each of these documents are provided in the Appendix.

“Normal” Mapping

The first set of mappings is for items that are the same for each record (but keep in mind that there may be multiple records created at the target).

- ❶ Map each of the following source entries to its respective target:

Source	Target
Warehousecode	inventory.warehouse.warehouseinfo.warehousecode
Warehousestate	inventory.warehouse.warehouseinfo.warehousestate
ItemNumber	inventory.warehouse.instockitem.itemnumber
ItemQuantity	inventory.warehouse.instockitem.itemquantity

- ❷ Once you’ve mapped these first four elements, compare your work to Figure 24-1 below.

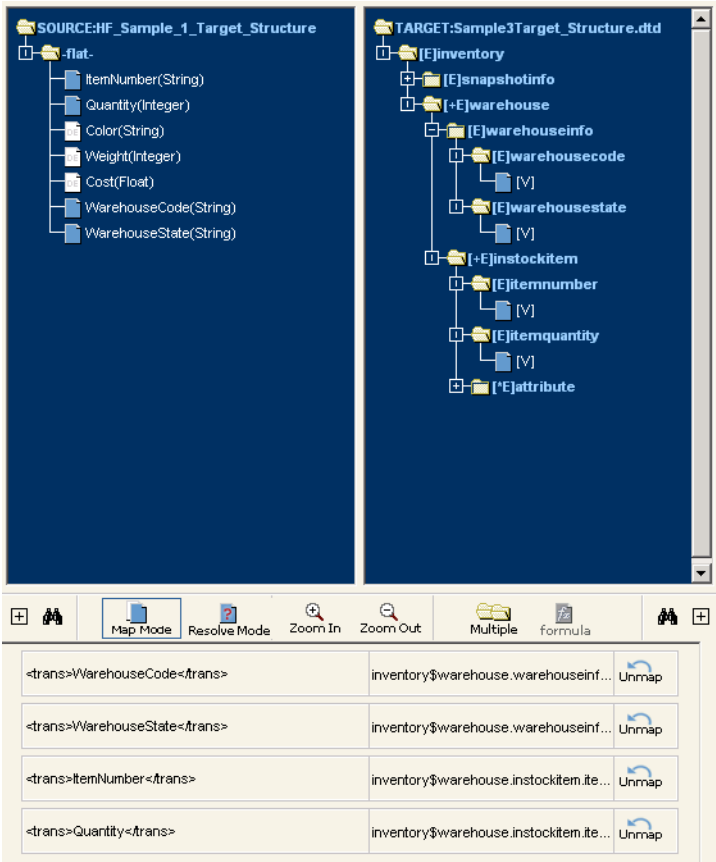


Figure 24-1. Start by mapping the source data elements that are the same for each record.

Add Extra Folders

The remaining source data elements, *Color*, *Weight*, and *Cost*, will each require their own “copy” of the target folder.

- ❶ Select the name of the folder you want to duplicate (in this case, *instockitem*).
- ❷ Click the **Multiple** button. In this example, it is the attribute folder under the *instockitem* folder.



Figure 24-2. To create extra folders, select the folder you want to copy, then click the **Multiple** button.

- 3 The **Mapping Options** dialog will appear (see Figure 24-3 below). Since you have three data elements you want to map separately, select the **Create... Additional Folder(s)** radio button and enter the number 3.
- 4 Click **OK** to dismiss the dialog.

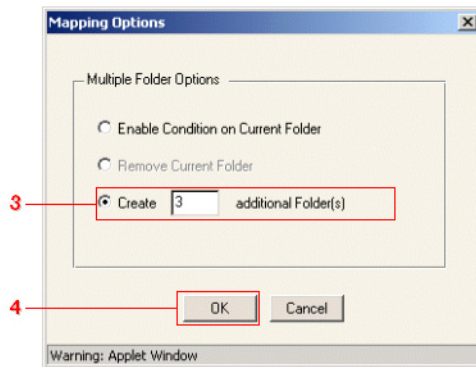


Figure 24-3. Select the **Create... Additional Folder(s)** radio button to add extra folders.

- 5 You will now have three extra copies of the `instockitem` folder, indicated by the #1, #2, and #3 at the end of their folder names (see Figure 24-4 below).

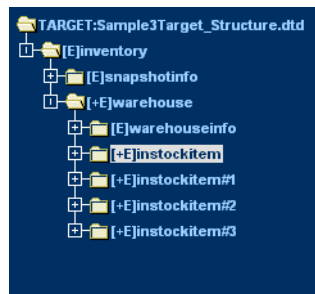


Figure 24-4. You now have three copies of the `instockitem` folder in your target.

Map Source to New Target Data Elements

Now you need to map your source data elements to these new target folders.

- ❶ Select `Color` in the **Source** pane.
- ❷ Toggle open `instockitem#1`, then open the `attribute` folder, and finally select the `attributevalue` folder's value data element (`[V]`).
- ❸ Click the **Map** button to map this relationship.
- ❹ Repeat these steps for the source `Weight` and `Cost` data elements, mapping them to the `instockitem#2`'s and `instockitem#3`'s respective `attributevalues [V]`. Compare your work to Figure 24-5 below.

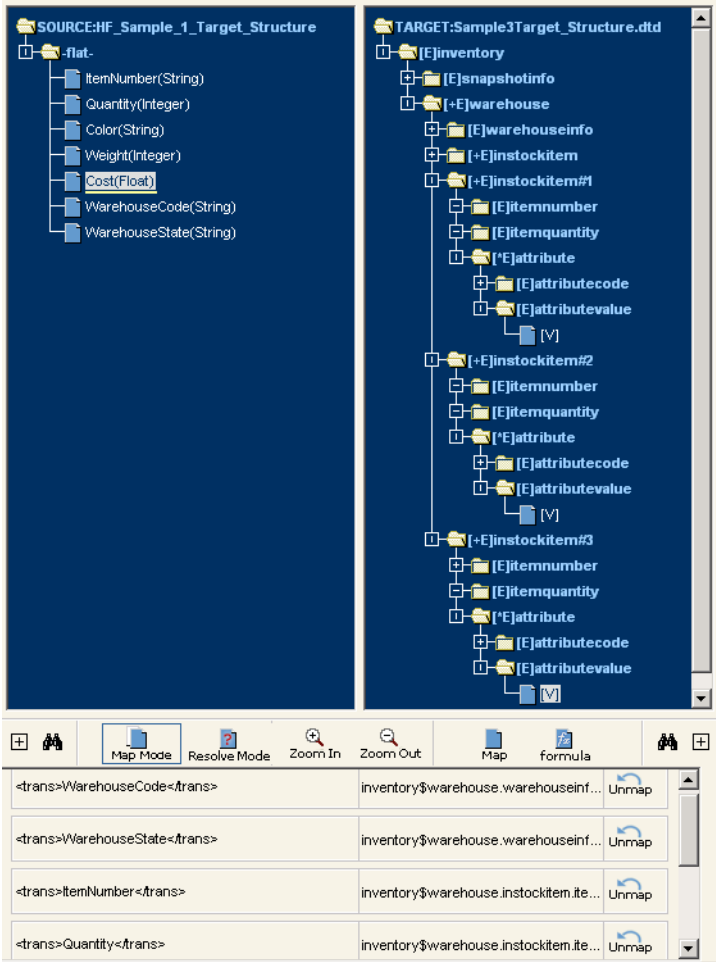


Figure 24-5. You should now have Color , Weight and Cost all mapped to the instockitem#1, 2, and 3 target data elements.

Define Associated Attribute Codes

Each of the data elements you mapped to the multiple occurrences of the folders needs to have its corresponding `attributecode` data element defined correctly:

- ❶ Select the `attributecode` folder's value data element ([V]) in `attributecode`'s `attribute` folder within `instockitem#1`.
- ❷ Click the **Formula** button to launch the Formula Builder (see Figure 24-6 below).

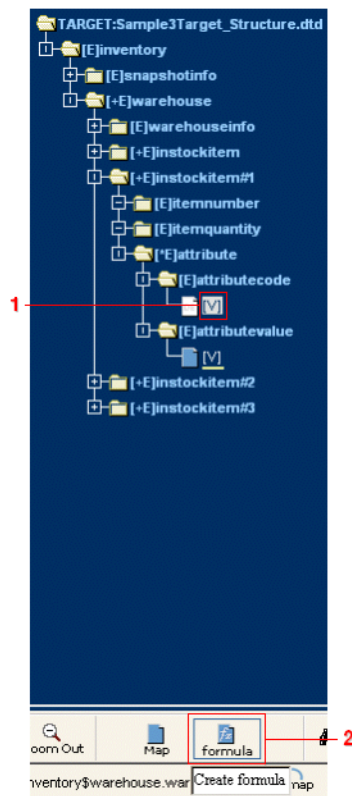


Figure 24-6. To modify a data element's value, select the desired data element, then click the **Formula** button to launch the Formula Builder.

Note: Make sure you use all capitals, as the XML target could be case-sensitive.

- ③ Type in the appropriate value for the field in the expression field at the top of the window. In this example, enter COLOR (but don't use any quotes).
- ④ This simple code is all this data element requires, so click **OK** to dismiss it (see Figure 24-7 below).

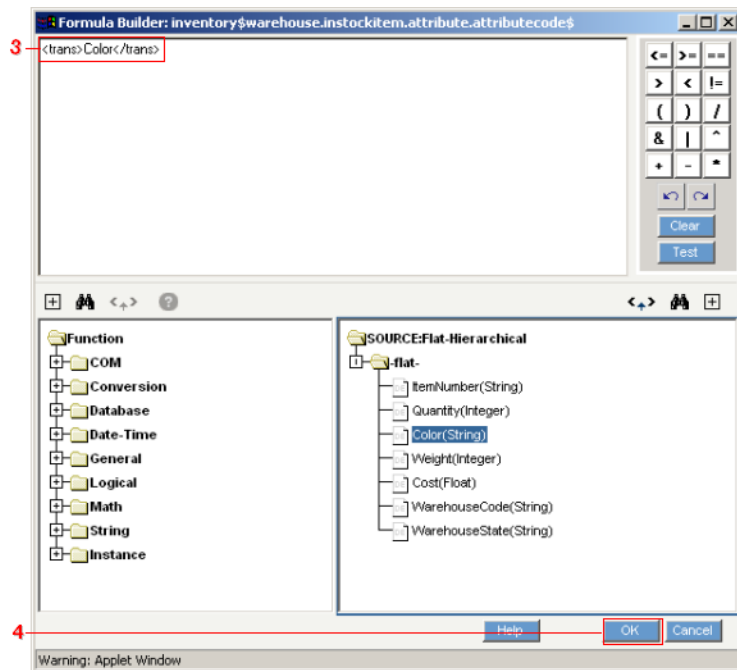


Figure 24-7. Setting the value for this attribute code means simply typing in the name of the attribute.

- ⑤ Repeat these steps for the other two folders that were created, so that each of the attribute fields in the source is mapped to their appropriate values (WEIGHT and COST) in the target.

You've completed your Transformation mapping. To test it, create an operation that references the appropriate source, target, and this transformation that you just made.

Related Topics

- To see hierarchical-to-flat mapping examples, see Chapter 23, "Mapping

Hierarchical-to-Flat Structures.”

- To see a transformation mapping example using an outer join, see Chapter 22, “Mapping with Outer Joins.”



Creating Private Processes

SECTION FIVE

Chapter 25

Introduction to CRbuilder

Overview

This section describes how to use CommerceRoute CRbuilder to create your own private processes that can integrate and automate your private, backend systems.

CRbuilder is a utility that ships with all Syncx 6200 Series Appliance Appliances. It facilitates the automation and management of custom data operations that need to flow across multiple systems, data types and protocols. These data operations allow organizations to tackle complex integration projects that require custom rules for data transformation and integration, including:

- Order in which data needs to be accessed from various systems;
- Instructions for compiling and sorting data from different sources;
- Instructions for de-compiling data once it reaches its various targets;
- Rules for the conditions and timelines under which data is delivered, and;
- Conditions which must be met to verify completion of a transaction.

CRbuilder features a drag-and-drop environment that gives users control over every aspect of data integration — from triggers and conditions to timing and escalations — and turns even the most complex integrations into simple,

intuitive configurations.

Key Features

Benefits Summary

Link Your Process With Your IT Infrastructure

Processes are the basic concept in CRbuilder. A process consists of a logical collection of tasks, routes, and rules that are designed to automate some transaction or business activity.

Within a process, you can quickly and easily create and define all the necessary tasks and routes, as well as set the rules that direct the behavior of those tasks. These tasks can also be directly linked to your organization's IT systems, such as mail servers, company databases, and legacy systems. You then deploy these processes onto the Syncx appliance using a single mouse click.

Ultimately, CRbuilder is what is used to automate your private back-end systems and integrate them with your public-facing RosettaNet processes.

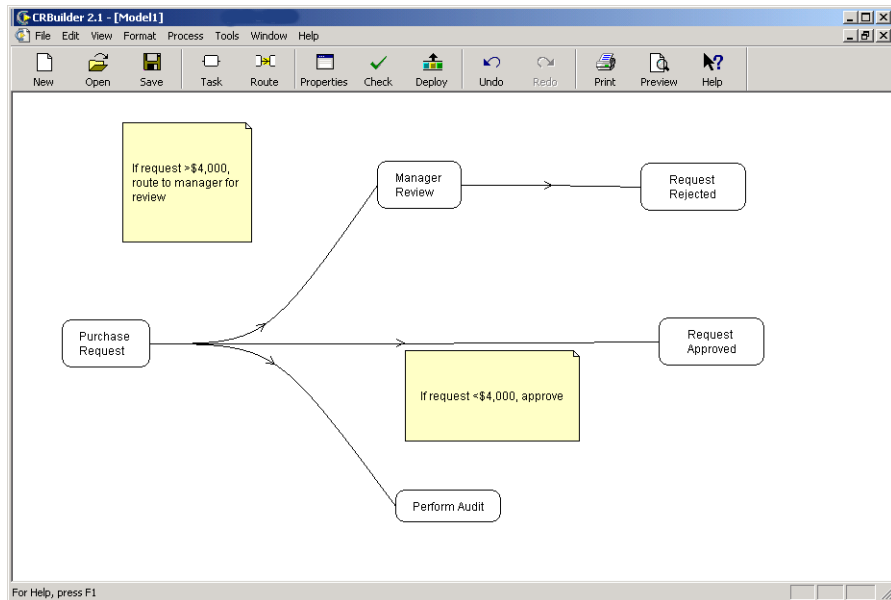


Figure 25-1. CRbuilder has an intuitive interface that makes it easy to design any kind of process.

Open Architecture

CRbuilder leverages an open architecture that enables interaction between disparate IT networks, local and remote databases, the Internet, and enterprise applications.

Unlimited Concurrent Users

CRbuilder allows for unlimited concurrent users with asynchronous processing. Batch jobs do not overload the system and transactions are executed with minimal strain to existing systems. This minimizes the possibility of system overload and failure.

Link Your Process With a Syncx Data Interchange Operation

You can link CRbuilder tasks with Syncx Data Interchange operations. This gives you a complete, end-to-end automated solution for complete integration of business logic and enterprise data within a single business process.

Manage Process Implementation

CRbuilder lets you manage process implementation; you can deploy and control multiple versions of processes.

Integrated Debugging

CRbuilder comes with a debugging feature that checks the business processes for errors and alerts users of potential problems and inconsistencies.

Chapter 26

Installation

Installing CRbuilder

Prerequisites

To be able to install and use the CRbuilder client, you will need the following:

- A system running Windows 98, 2000, or NT 4.0 with Service Pack 5 or newer.
- Authority to install applications onto your computer.

Installation Procedure

To install CRbuilder, using any machine that has an Internet connection, use a browser to navigate to the home page of the appliance and log in as a valid user to the Syncx appliance download environment (see Figure 26-1, below).

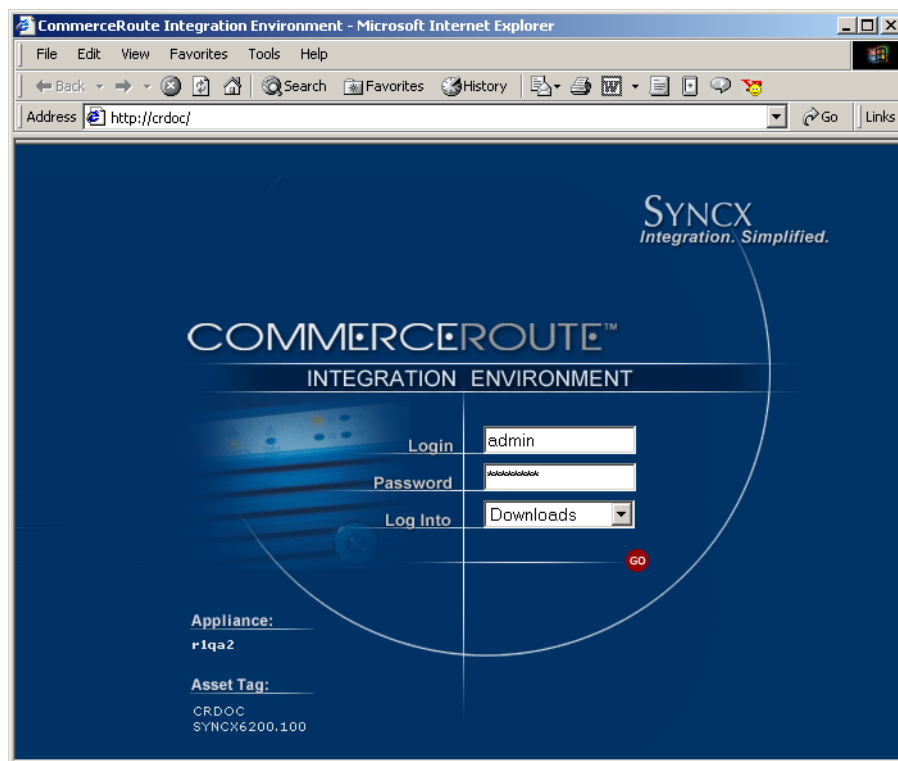


Figure 26-1. From the Appliance's login screen, select the Downloads option to begin the CRbuilder installation.

Note

The appliance's home page can be referenced either by name or IP address. To reference by name, enter a URL in your browser like `http://applianceID` where `applianceID` is the Syncx Integration Appliance identifier, found on the sticker on the back of the unit. For example, if your appliance identifier sticker reads "syncx0001" then your URL would be `http://syncx0001`. To reference by IP address, enter a URL in your browser like `http://IPaddress` where `IPaddress` is the Appliance's IP address. See your network administrator if you need help getting this address. As an example, if your appliance IP address is "203.138.9.101," then your URL would be `http://203.138.9.101`.

- ❶ The Download screen appears. Click the **Download** button next to CRbuilder to download the .exe file to your machine (see Figure 26-2, below).
- ❷ Once you the application is finished downloading, click Open on the

download dialog. This will guide you through the rest of the installation procedure.

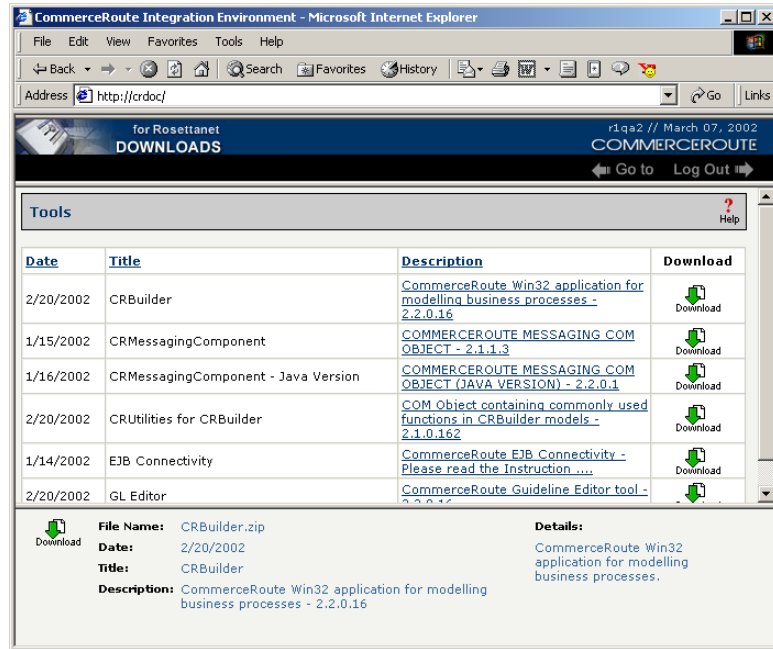


Figure 26-2. Click on the CRbuilder link in the download screen to download CRbuilder to your computer.

If you want more information on CRbuilder, click on its description to read its details in the pane at the bottom of the screen.

- ③ This will download a copy of the CRbuilder.exe to your local computer. Once you begin downloading, determine where to install CRbuilder onto your system.

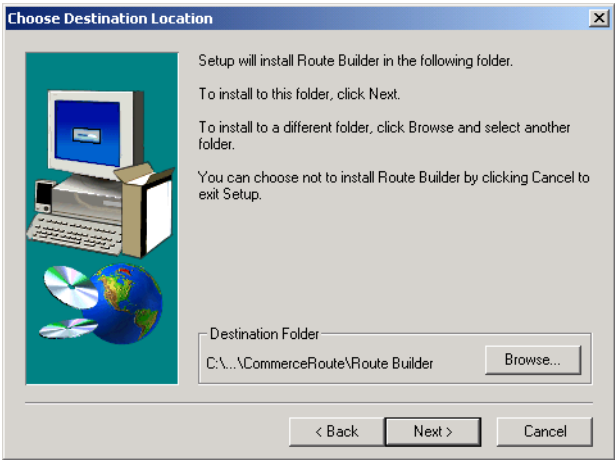


Figure 26-3. After accepting the license agreement, choose where to install CRbuilder.

- ④ After confirming your installation location, you will have an option to specify an Enterprise Java Bean Server (see Figure 26-4 below). If you are not planning to use Enterprise Java Beans, you can click the **Next** button to skip this dialog and complete the installation process

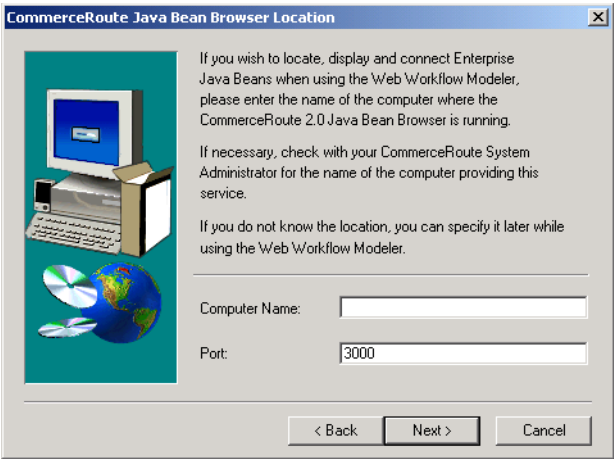


Figure 26-4. If you plan to use Enterprise Java Beans (EJB's), enter the appropriate information in this dialog screen. Otherwise, click **Next** to continue.

- 5 Once the installation is finished, click **OK** to exit the installer. You should have a new entry in your computer's Start -> Programs menu called CommerceRoute that includes the CRbuilder application.



Chapter 27

CRbuilder Development Techniques

Overview

Developing and deploying a successful automated CRbuilder process within your organization can be a complex task. However, the CRbuilder application significantly simplifies this work by streamlining the design process.

Nonetheless, it generally involves bringing together and aligning many different individuals from disparate departmental areas, such as IT and business development. In turn, those individuals need to agree on a common vision for what process CRbuilder is automating, and developing a common strategy for system methodologies.

This chapter offers suggestions and best-of-breed practices for designing, architecting, and deploying an automated CRbuilder process within your organization. In so doing, it helps you avoid many of the most common obstacles.

CRbuilder Process Development Steps

1. Define processes to be modeled before any work begins

Taken as a whole, this is perhaps the most important step for successfully implementing a stable and robust CRbuilder process: be certain that you've thoroughly analyzed and defined the process to be modeled before you begin building any of the CRbuilder process logic. Surprisingly, this step is sometimes overlooked in an organization's rush to migrate to automated business

processes. Before you begin any development work, be sure you have the necessary input from the various departments whose work will be impacted. Think through all the possible scenarios. Are all possibilities partnered for? Are you missing any important steps?

It is important for you to methodically analyze the process you're modeling before you begin any work. Make sure that you understand all elements of the automated CRbuilder process you're planning.

For more information on defining processes, see "Define Your CRbuilder process" on page 27-9.

2. Define the process tasks

A good way to think about a task is as a *unit of work to be assigned to an individual for completion*. This can mean anything from filling out a purchase request to approving a container transfer. It is important to sit down and map out the most common pathway through a process; then, fill in the process with special condition tasks, such as e-mail notifications and escalation tasks. Some of these e-mails can include a Web page URL which the recipient can click on to accept or reject some request or action.

For more information about using tasks, see Chapter 30, "Tasks".

3. Define routes between tasks

Next, define the routes that link your various tasks together. These routes are the paths traveled by CRbuilder as it runs from the beginning to the end of the process. Routes are drawn as lines that connect tasks within a process. These routes may involve multiple "loops" back into the originating task or may simply terminate at the completion of a task. Again, this involves thinking through the CRbuilder process logic to make sure that the preferred CRbuilder process path is correctly represented.

For more information about using routes, see Chapter 29, "Processes".

4. Identify e-mail recipients of tasks

One of CRbuilder's key benefits is its ability to send and receive e-mails, and most organizations are eager to leverage this benefit within their IT infrastructure. However, CommerceRoute doesn't recommend assigning an e-mail task to a specific individual. What happens if that person leaves the company or his or her e-mail changes? Your process will be more flexible and powerful if you assign tasks a "role" (such as "Treasurer") rather than to a

specific individual, who could change or move on to another position. That way, whoever happens to be associated with the role of “Treasurer” in the future will receive the correct e-mail.

5. Identify the required web pages

Using your project scope analysis, determine where in your CRbuilder process you will use web pages to achieve the required functionality. Depending on your resources, your Web author or ASP developer can then design a page specifically tailored to the functional requirements of your CRbuilder process, while reducing the possibility of going back and redesigning pages that weren’t thought out adequately.

Also, the External Dependencies dialog is a useful tool for viewing all Web pages called out in your CRbuilder process. To use it, click on the **Process** menu on the CRbuilder process toolbar, and then select the External Dependencies menu item. The External Dependencies dialog appears.

For more information on using Web pages, see “Define Your CRbuilder process” on page 27-9.

Note

When we refer to ASP pages, we mean any server side scripting technology, such as .jsp, .cfm, and .asp.

6. Identify any required Objects

As in the previous step, you need to determine where in the CRbuilder process objects will be used to achieve the desired functionality.

For more information on using objects, see Chapter 37, “Calling External Objects”.

7. Test and demonstrate the process

Demonstrating the flow of a process to end users early in the development process can help you troubleshoot and pinpoint potential problems before the CRbuilder process has become rolled out into your organization.

8. Add Objects and Web pages

Once the required Web pages and objects have been authored, you can begin to drop them into your CRbuilder process.

For more information on using objects, see Chapter 37, “Calling External

Objects”.

Development Best Practices

In the process of helping our customers design and implement CRbuilder processes, CommerceRoute has gained extensive experience in planning and deploying complex automated scenarios and can make suggestions for the best development methodologies. Adhering to some of these simple design principles will ensure a smooth deployment of your CRbuilder process.

Use Suffixes to Distinguish Similar Processes

If you are deploying your process on the Syncx Appliance, it will be easier to track and troubleshoot your process when you use the suffixes of “test,” “dev,” “prod,” etc. to the process name. This is an excellent way of emulating three separate environments during development. For example, if you are developing a CRbuilder process for your company’s Human Resources department and you want to test it, you could name one version HR_Dev and another HR_Test. Then, your team can test the “test” version, while you continue to work on your “development” version.

Use Data Elements to Identify Process and Task Instances

Use CRbuilder’s process data elements in your e-mail to quickly and easily identify unique task and process instances. To do so, open the task's Document Definition tab and drag the **GetProcessName()** and/or **GetTaskName()** data element from the Available Data Element window and drop in the **Subject** field.

In Figure 27-1, below, the Process Data Element *GetTaskName* has been inserted into the **Subject** field. This data element captures the particular Task name of this task instance.

Figure 27-1. You can use **GetTaskName()** and **GetProcessName()** data elements in the subject field to help identify unique task and process instances.

Using the configuration presented above, this e-mail will always identify the task from which this e-mail is originating.

Use Data Elements in E-mail Addresses

As stated before, one of the key benefits of data elements is that the value “held” by the data element can change without affecting CRbuilder’s ability to execute tasks. This is particularly true for e-mail addresses, and it is always best to use data elements to avoid hard-coding any e-mail addresses. By using a data element, the particular name associated with a task, such as a manager, can change and the mail will still be sent to the correct recipient. To do this, drag and drop the correct data elements from the Available Data Elements window and drop them in the **To**, **CC**, and **BCC** fields.

Forward Tasks

You may want to create a mechanism for forwarding a task to another person. You do this by inserting a **goto ROUTE** statement into the closing script. The **goto ROUTE** statement directs a task back to itself with a new user specified for the e-mail, depending on user input.

For example, in the script in Figure 27-2 below, the **goto ROUTE** statements in the task will direct the processing to go either to itself or the next task in the process. Which one it goes to depends on the user's response captured in the Action Task Data Element. In this case, the *ForwardTo* data element contains the e-mail address of the person to whom the task is being forwarded.

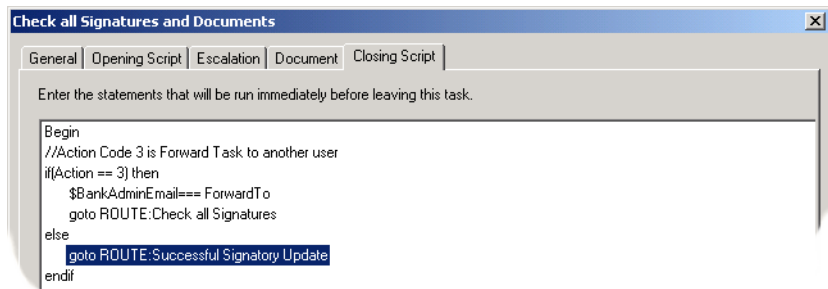


Figure 27-2. Closing Script with **goto Route** statement to provide a way to forward a task to another person.

Use Generic Web Pages

To reduce the amount of work required to create the required Web pages, we suggest you use generic “Task Completion” and “Task Approval” Web pages when designing your process. These are standard Web pages which an e-mail recipient would visit to accept or reject some request, or to complete a task. If you want the Web page to display a unique dialog to the user, you can use the Taskname and MsgID data elements to send these values to the Web page (see Figure 27-3, below).

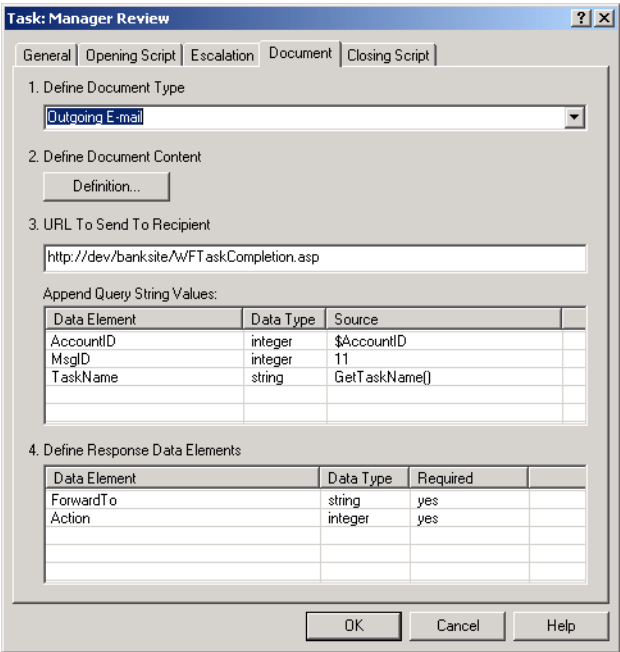


Figure 27-3. Document Tab with generic Task Completion ASP page.

Define Your CRbuilder process

Use a process interface table when you are planning your CRbuilder process. This can be a simple Excel spreadsheet that lists each task in the process, all Web pages, the e-mail recipient (if any) associated with a task, data elements that will be sent to the Web page, data elements that will be returned from the Web page, and the Message ID and escalation time (if any). Sitting down and making a comprehensive list is a valuable exercise because it forces you to be extremely specific about your process, as well as think through the role of each task and all of a tasks required elements.

A process interface table can also ease the planning of your process when you're working on a project where responsibilities for developing Web pages, objects, and models are split among several people or groups.

For examples of several tables used to document interface information, please see Chapter 42, "Appendix B: Sample Tables."

Chapter 28

CRbuilder Tutorial

About This Tutorial

This tutorial will provide you with an overview of key concepts you need to understand how to work with the CommerceRoute CRbuilder utility to integrate and automate business processes.

This tutorial walks you step-by-step through linking a CRbuilder process with Syncx operations, including creating tasks and routes, associating Syncx operations with tasks, associating and defining e-mails, as well as inserting COM Objects and database queries.

You are provided with several Syncx operations that you will need to complete this tutorial. As you work through the steps, you'll see how CRbuilder can work with Syncx to automate and share data between a manufacturer and its distributors and suppliers.

Note

To successfully complete the CRbuilder tutorial, you must have, at a minimum, user-level access, with the correct username and passwords, to access the operations on your Syncx appliance. Your system administrator must have already created the appropriate CRbuilder tutorial partner. Please speak with your system administrator to confirm you have the correct username and password information.

If you have additional questions about how to build and/or deploy Syncx operations, please refer to either the *Backend Guide*, or the *Reference Guide* for details.

Before You Start

We assume that if you are reading this document, you or your system administrator has done the first step of downloading and unzipping the Admin_CRB_Tutorial.zip file from the Appliance's Download environment.

There are some specific configuration steps that either you or your system administrator must complete in order for you to successfully finish this tutorial. Before you proceed with the tutorial, please confirm that the appropriate Syncx partner, project, and operations have been created, and that you have been provided with User-level access and password.



Warning! Please verify that your system administrator has created the appropriate CRbuilder tutorial partner with the required operations. You must have the correct username and password information.

Working with Syncx Operations

Your system administrator needs to create the appropriate CRbuilder tutorial partner with the required operations. Please verify that the partners have been properly configured, and that you have the correct username and password.

Administrator Check List

Confirm that your system administrator has configured the following on your local machine, the Syncx appliance, or both:

- **tutorial_1.dll:** This COM object must be installed and registered on both your local machine and your Syncx appliance. Check with your system administrator if you don't know how to do this.
- **Partner, Project, and Operations:** Make sure your system administrator has created the required CRbuilder partner and project, and operations used in this tutorial.
- **Set appropriate user ID and Access level:** You will need to have at least User-level access to use the required operations and to deploy the CRbuilder process once it's completed.

If you have not done so already, install the CRbuilder on your PC desktop. For instructions on how to do this, please read Chapter 26, "Installation."

Scenario: Create a Fulfilment Order Request

Figure 28-1, below, shows the completed model that you will build in this tutorial.

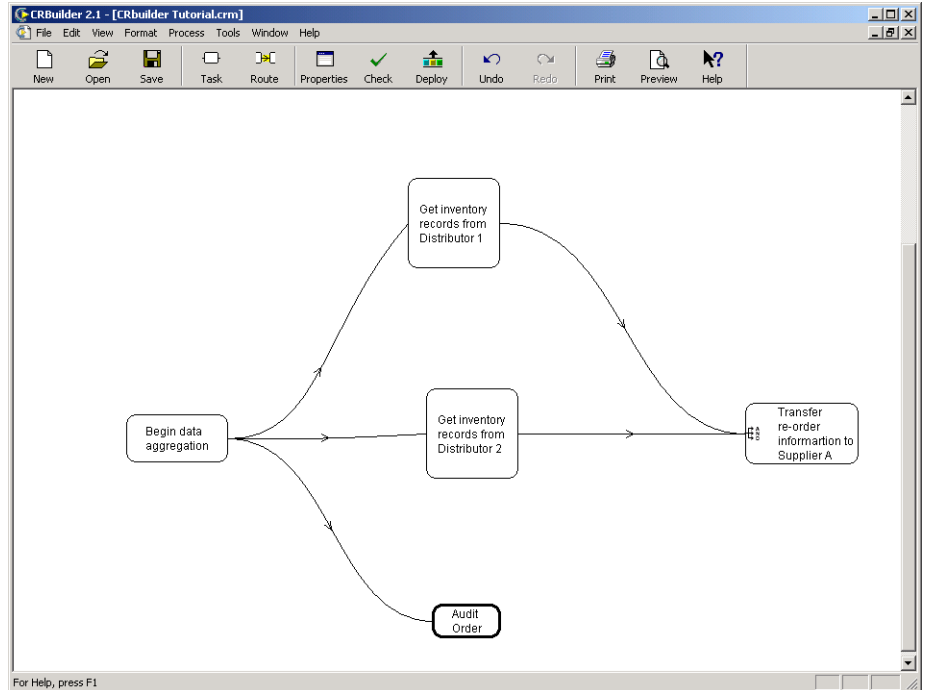


Figure 28-1. The completed Fulfilment Order Request process built in this tutorial.

In the Fulfilment Order Request scenario (above), a manufacturer sells network power supplies through a chain of distributors. Two of these distributors conduct weekly inventory sweeps to determine the number of power supplies in stock, and how many they must reorder from the manufacturer for the coming week.

These reorder numbers are handled in different ways. In the case of Distributor 1, the reorder values are written to a “reorder table” in a SQL database. In the case of Distributor 2, the reorder values are written to a flat file which is placed on their FTP site.

Using two Syncx operations, the Manufacturer aggregates these reorder numbers from the two distributors. These are transformed and transforms into

database records which are inserted into the Manufacturer’s main procurement database.

Next, based on these reorder numbers, the Manufacturer determines the number of various subcomponents that must be ordered from Supplier A in order to assemble more power supplies. These new power supplies are then shipped to the Distributors.

To facilitate the ordering of subcomponents, the order information is written to a “CorporateReorder” table in the Manufacturer’s procurement database. This reorder information is transformed into an XML document put on Supplier A’s FTP site.

Finally, Supplier A takes this XML file and writes the reorder values into the new ERP system they use to track order and inventory information.

Using this scenario, you can see how easy it would be to add more suppliers with different data formats. In future tutorials, we will do just that.

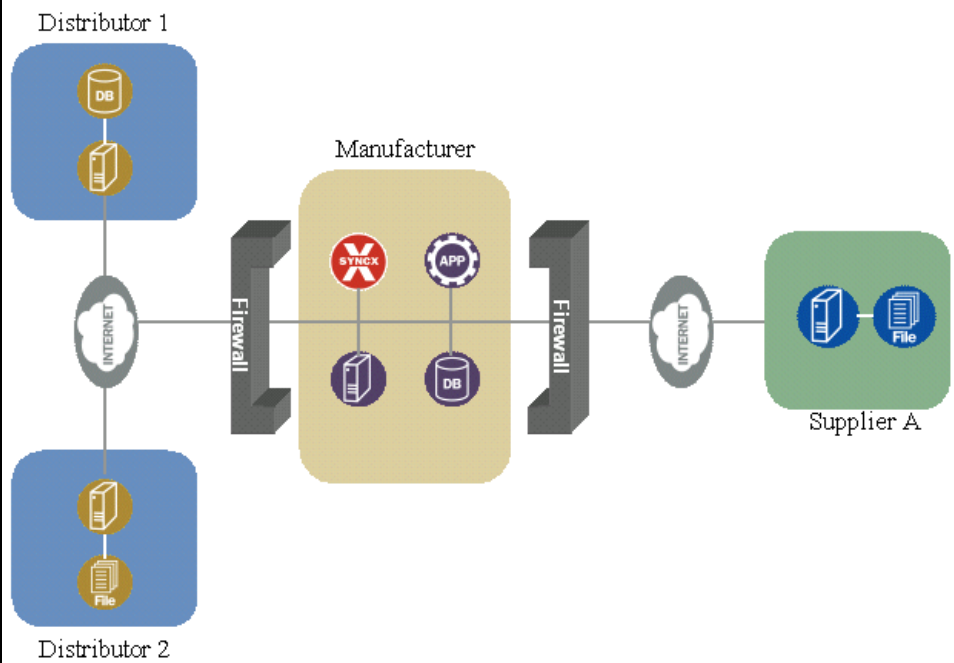


Figure 28-2. In the scenario above, two distributors use Synch operations to send their inventory information to the manufacturer’s central procurement database.

Create and Define Process Settings



Warning: The computer on which you're building this process must have access to the Internet. If you don't have Internet access, you will be unable to successfully deploy and test your completed tutorial. Please speak with your system administrator if you need assistance.

The first step in creating a process is to set the general process options that will be used throughout all tasks in a process.

Launch the CRbuilder modeler and click the **New** button on the toolbar. This will create a new process model.

Define Your General Process Options

The General Options dialog lets you define and modify process settings that are applied every time you open a new process in CRbuilder. For example, if you like, you can choose to have CRbuilder automatically create initial tasks, link tasks automatically, or set a default data type, such as “string.”

- ❶ From the **Tools** menu, click **Options**.
- ❷ Make sure you select the following checkboxes in the Layout Options screen area:
 - **Automatic Route Between Tasks** automatically creates links between tasks.
 - **Bring Up Task Properties when New Task is Created** automatically opens a task's configuration dialog when you add a task.
 - **Create Initial Task in New Model** automatically creates an initial task when you open a new process in CRbuilder.
- ❸ Since the data elements we will create in this tutorial are usually strings, select a default data type of **String**. Compare your work to Figure 28-3 below. Leave all other settings the way they are.
- ❹ Click **OK**.

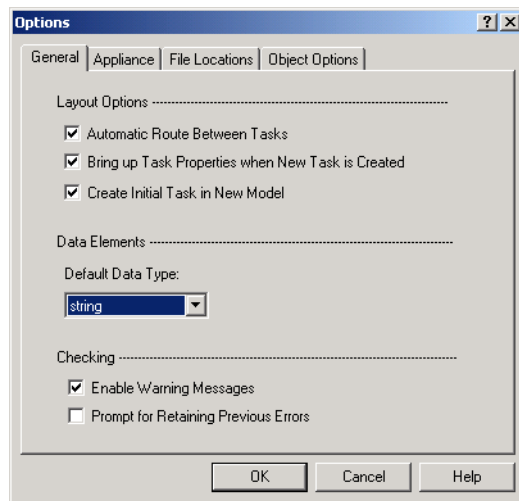


Figure 28-3. General Process Options dialog.

Configure the Process Properties

- ❶ Configure your new process by clicking on the **Properties** button on the toolbar. You will see the Process Properties dialog box like the one in Figure 28-4, below.
- ❷ Type your name in the Process Name field, e.g. John Doe .

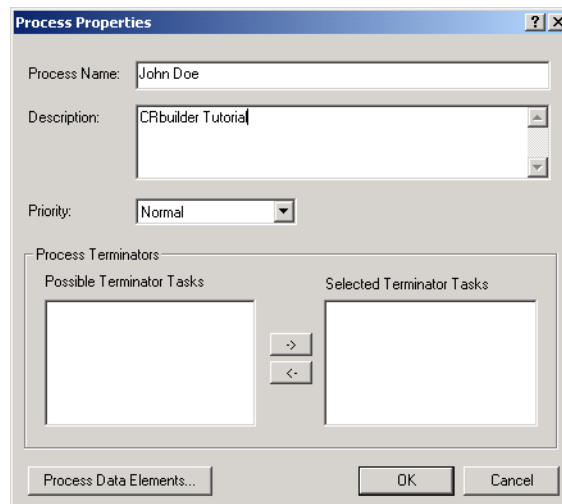


Figure 28-4. The Process Properties dialog with a Process Name and a description.


- ③ Type a description in the **Description** field.

Create Process Data Elements

Process data elements are like global variables: they are recognized throughout a process. You'll need to add two process data elements for this tutorial: RequestorEmail and OrderID.

Create RequestorEmail Data Element

- ① Click the **Process Data Elements** button on the Process Properties dialog.
- ① The Process Data Elements dialog appears. Click **Add**. In the Data Element dialog, enter the following values:
- ② Select **String** for the data type.
- ③ Type the name RequestorEmail.
- ④ Type "youremail@company.com" in the Initial Constant field. Compare your work to figure Figure 28-5, below.

 **Note:**Process data elements will automatically add the “\$” to the beginning of the name, so you don’t need to type it in yourself.

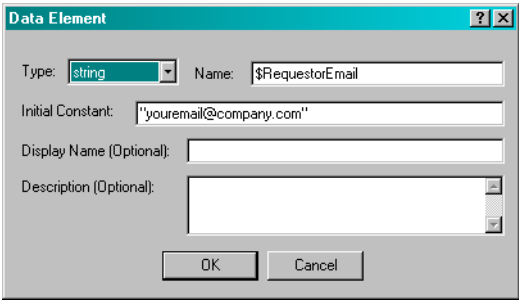


Figure 28-5. Data Element dialog with new \$RequestorEmail global data element.

- 5 You’ve finished creating this process data element, so click **OK**. Note that the new data element \$CustEmail appears in the Data Element field.

Create OrderID Data Element

- 1 Click **Add** again.
- 2 Select short_integer for the data type.
- 3 Enter the name OrderID.
- 4 Type a zero (0) in the Initial Constant field. Compare your work to Figure 28-6, below.

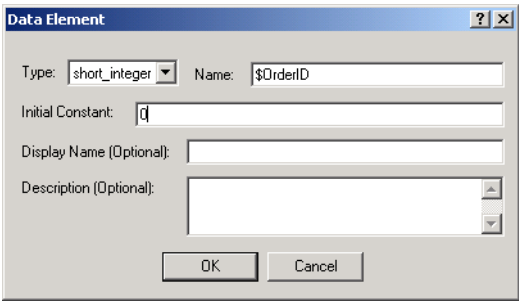


Figure 28-6. Data Element dialog with \$OrderID global data element.

- 5 Click **OK**.
- 6 You’ve now created all the process data elements you need for this tutorial. Compare your Process Data Elements dialog with Figure 28-7, below.
- 7 Click **OK** to dismiss the Process Data Elements dialog.

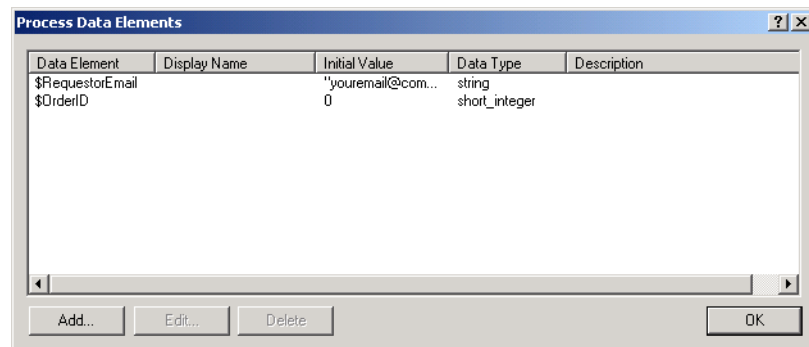


Figure 28-7. The completed Process Data Elements dialog box, with two process data elements.

- 8 You're also finished with the Process Properties dialog, so click **OK**.
- 9 Click the **Save** button on the toolbar to save your work.

Create and Link Tasks

Now you need to create and name five new tasks.

- ❶ Click on the **Task** button on the toolbar to create your first task. The Initial Task Properties dialog appears. Type *Begin Data Aggregation* in the **Task Name** field. Click **OK**.
- ❷ Select the *Data Aggregation* task, then click the **Task** button on the toolbar to create your second task. This new task will automatically be linked to the *Data Aggregation* task.
 - a. Type *Get Inventory Records from Distributor 1* in the **Task Name** field. Click **OK**.
 - b. Move it so it is aligned to the right and above *Begin Data Aggregation*, similar to the layout in Figure 28-1 above.
- ❸ Select the *Data Aggregation* task, then click the **Task** button in the toolbar to create your third task. This new task will automatically be linked to the initial task.
 - a. Type *Get Inventory From Distributor 2* in the **Task Name** field. Click **OK**.
 - b. Move it so it is aligned directly to the right of *Data Aggregation*, similar to the layout in Figure 28-1 above.
- ❹ Select the *Data Aggregation* task, then click the **Task** button in the toolbar to create your fourth task. This new task will automatically be linked to the initial task.
 - a. Type *Audit Order* in the **Task Name** field. Click **OK**.
 - b. Move it so it is aligned below and to the right of *Begin Data Aggregation* similar to the layout in Figure 28-1 above.
- ❺ Now select the *Get Inventory From Distributor 1* task, then click the **Task** button in the toolbar to create your fifth task. This new task will automatically be linked to *Get Inventory From Distributor 1*.
 - a. Type *Transfer Reorder to Supplier A* in the **Task Name** field. Click **OK**.
 - b. Move it so it is aligned to the right of *Get Inventory Records from Distributor 2*, similar to the layout in Figure 28-1 above.

Create a New Route

Take a moment to review your model: what's missing? Although you now have all the tasks you need for the tutorial, you are missing a route that links the *Get Inventory from Distributor 2* task to the *Transfer Reorder to Supplier A* task. That's easy to fix:

- ❶ Click on the **Route** button in the toolbar to create a new route.
- ❷ Select the new route's starting location by clicking on *Get Inventory from Records from Distributor 2* task. Note that the task becomes highlighted.
- ❸ Select the new route's end location by clicking on *Transfer reorder to Supplier A* task. You will now have a new route linking these two tasks.

Save Your Model

- ❶ Click the **Save** button on the toolbar to save your work.
- ❷ You now have created all the tasks and routes needed for this tutorial. Compare your model with Figure 28-1, above.

Configure the Begin Data Aggregation Task

Enter a Task Description in the General Tab

Double-click on the *Begin Data Aggregation* task. By default, tasks open to their General tab. Enter an appropriate description, such as: “This task will initiate the CRbuilder process that collects data from two separate distributors and writes it to the manufacturer’s procurement DB.” Compare your work to Figure 28-8 below.

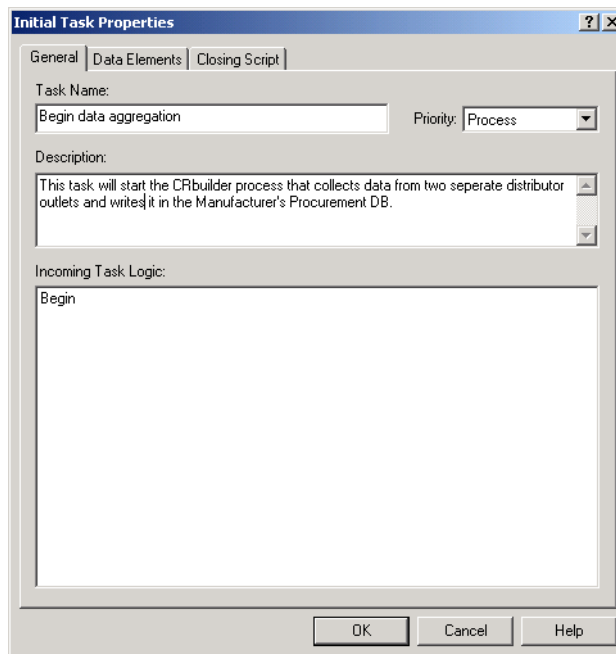


Figure 28-8. Begin Data Aggregation with a task description.

Create Initial Data Element

Now we need to create two initial data element. These are found only in initial tasks. This data element provides input to the initial task. When you start the tutorial, you will use a Web page and enter your e-mail address and name to start the process. The system will pass your e-mail address to CRbuilder; the modeler needs to know what to expect from the ASP page and what type of

value the data element will hold.

- ❶ Click the Data Elements tab, then right-click under the Data Element column and select **Add Data Element** from the drop-down list.
- ❷ In the Data Element dialog, type RequestorEmail in the **Name** field.
- ❸ Select a Data Type of **String**.
- ❹ Type double quotes (“”) in the **Display Name** field.
- ❺ If you like, type a description in the **Description** field. Compare your work to 28-9, below. Click **OK**.

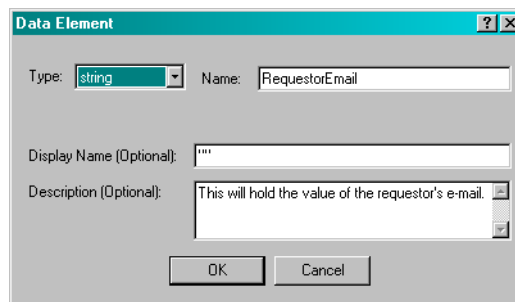


Figure 28-9. Data Element dialog with new RequestorEmail data element.

Now repeat the process above to create a RequestorName data element.

- ❶ Click the Data Elements tab, then right-click under the Data Element column and select **Add Data Element** from the drop-down list.
- ❷ In the Data Element dialog, type RequestorName in the **Name** field.
- ❸ Select a Data Type of **String**.
- ❹ Type double quotes (“”) in the **Display Name** field.
- ❺ If you like, type a description in the **Description** field. Compare your work to 28-10, below. Click **OK**.

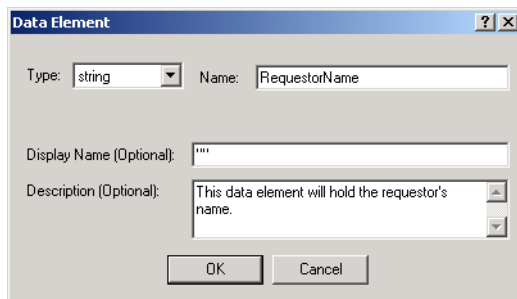


Figure 28-10. Data Element dialog with new RequestorName data element.

Set Data Types

Now you need to tell the system whether or not the field is required.

- 1 Click on the **RequestorEmail** value in the **Required** field to toggle it to **yes**. Do the same for the RequestorEmail value. That's it for the Data Elements tab. Compare your work with that of Figure 28-11 below.

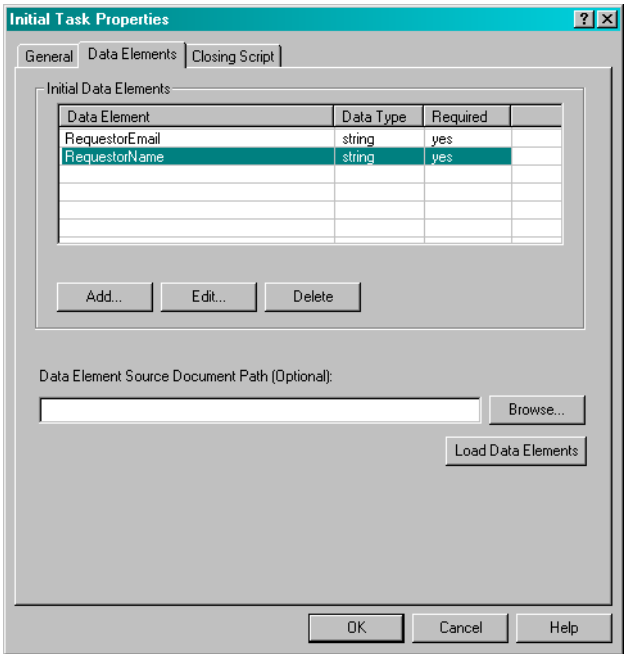


Figure 28-11. Aggregate Data with completed Data Elements tab.

Set the Task's Logic in the Closing Script Tab

Currently, the value from the data element you just created is only recognized by this one task. You need to be able to share it with other tasks throughout the process. To do that, you'll associate these "local" task data elements with "global" data elements.

- ❷ Click the Closing Script tab, then right-mouse-click on **Begin** and choose **Data Element** from the **Insert** drop-down menu.
- ❸ Choose **\$RequestorEmail** from the **Name** drop-down menu in the lower-left corner of the Task Data Element dialog box.
- ❹ Set its data type to string.
- ❺ Click on the **RequestorEmail** (string) entry under the Current Task Data in the Available Data Elements window and drag it over to the Expression field at the bottom of the dialog box. You've told the system that the process data element \$RequestorEmail will hold the value taken from the

RequestorEmail.

- 6 Compare your work to the dialog shown in Figure 28-12 below. Click **OK**.

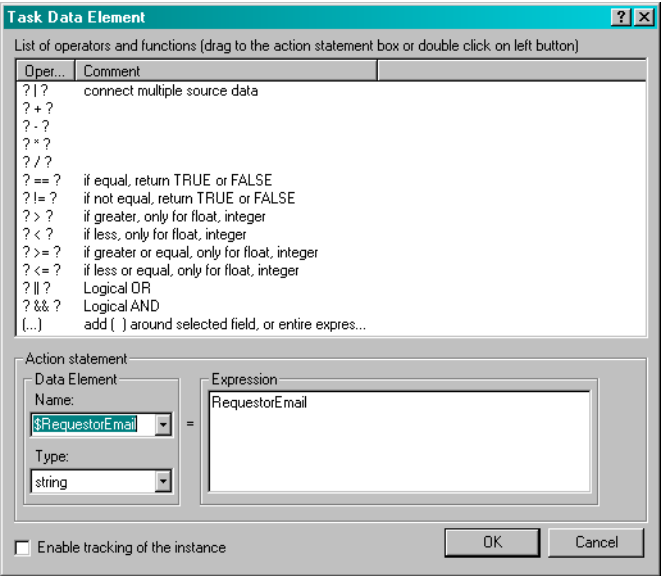


Figure 28-12. Task Data Element with \$RequestorEmail set to take the values from RequestorEmail in the ASP file.

Your closing script now contains your task data element, RequestorEmail, which is mapped to take its value from the process data element \$RequestorEmail.

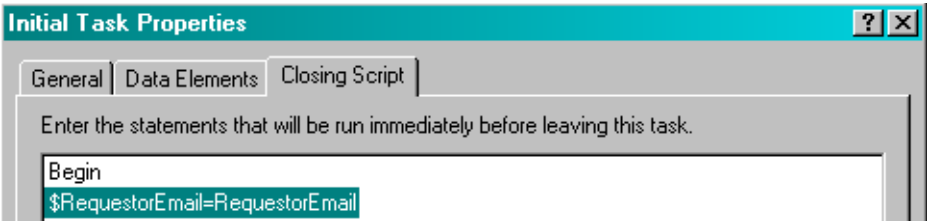


Figure 28-13. Initial Task Properties with final mapped process data elements.


Set the Task's Logic in the Closing Script Tab

The Closing Script tab is where we define process logic that will be used by downstream tasks. In this case, we are going to define two specific types of activities.

- **Delete Database action:** We will insert a Delete Database action to delete all records from the appropriate database tables. This is necessary in our scenario because we are writing records to a database on a regular basis. We need to keep the relevant database tables empty for incoming inventory or price records.
- **Audit COM Object:** CRBuilder can communicate with other applications or data sources through COM, CORBA, and EJB Objects. For this tutorial, we will insert a COM Object into the process that simulates an audit.
- **Order ID Com Object:** We will insert a COM Object that generates an Order ID number. This ID will be written to a data element and inserted into an e-mail notifying you which order is to be audited.

Insert DELETE Database Action

CRbuilder gives you the ability to have your process query a database for information, filter that information and then capture the results in a data element that can be inserted into logical expressions. However, for our purposes, we are going to insert a delete database action. This ensures that any data in the appropriate database tables is deleted before writing new records to them.

 **Tip:** You could have also used a CORBA or EJB object to achieve similar results. As noted above, this tutorial only covers COM Objects. For more information about using EJB or CORBA Objects, please read Chapter 37, "Calling External Objects."

Tip: CRbuilder also includes LDAP (Lightweight Directory Access Protocol) functionality that allows you to locate organizations, individuals, and other resources such as files and devices in a network. However, to keep this tutorial simple, we will not be covering LDAP. For more information about this feature, please read Chapter 37, “Calling External Objects.”

- ❶ If you are not already there, double-click the *Begin Data Aggregation* task, then click the **Closing Script** tab.
- ❶ Right-mouse-click on **Begin** and choose **Database Statement** from the **Insert** drop-down menu.
- ❷ Select the **Connection String** radio button, and click **Build**. The Database Connection String dialog opens. Type the following values:
 - a. **Driver:** select SQL Server driver from the **Driver** drop-down list.
 - b. **Server:** type `training.commercerooute.com`
 - c. **Database:** type `CRPROCDB` (this is the Commercerooute Procurement database).
 - d. **UID:** Type `Demo`.
 - e. **Password:** Type password. Compare your work to Figure 28-14, below.

Figure 28-14. Enter valid database parameters, then click **OK** to connect to procurement database.

- ❸ If you like, click **Test Connection** to verify you entered the connection String correctly. You will see Database Connection Successful message.
- ❹ Click **OK**.

Select CorporateInventory Table

- ❶ The CRPROC database appears in the database objects window area. Click on “+” next to Tables to view the list of tables.
- ❷ Double-click on the CorporateInventoryTable to view its records.
- ❸ Select **DELETE** from the SQL Action drop-down list.
- ❹ Click **OK**.

You have successfully created a DELETE database action. Now, whenever this process runs, all records in the CorporateInventory table will be deleted before new records are written to it.

Insert Second DELETE Database Action

You are going to insert a second DELETE database action like before. This time, however, you want to delete records from a different table—the CorporateReorder table.

- ❶ Click the **Closing Script** tab, then right-mouse-click on **Begin** and choose **Database Statement** from the **Insert** drop-down menu.
- ❷ Select the **Connection String** radio button, and click **Build**. The Database Connection String dialog opens. Type the following values:
 - a. **Driver:** select SQL Server driver from the **Driver** drop-down list.
 - b. **Server:** type `training.commerceroute.com`
 - c. **Database:** type CRPROCDB (this is the Commercerroute Procurement database).
 - d. **UID:** Type Demo.
 - e. **Password:** Type password.

Compare your work to Figure 28-15, below.

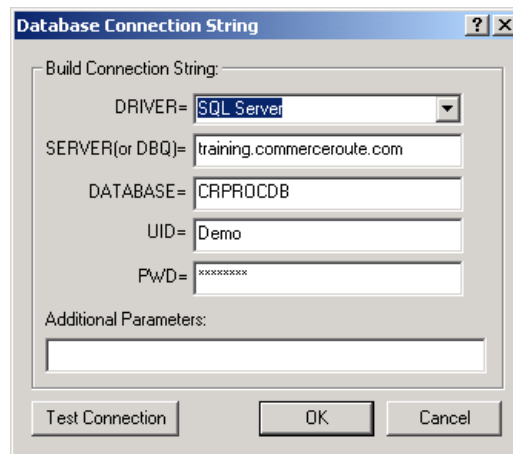


Figure 28-15. Enter valid database parameters, then click **OK** to connect to procurement database.

- ③ If you like, click **Test Connection** to verify you entered the connection String correctly. You will see Database Connection Successful message.
- ④ Click **OK**.

Select CorporateReorder Table

- ① The CRPROC database appears in the database objects window area. Click on “+” next to the Tables to view the list of tables.
- ② Double-click on the CorporateReorder Table to view its records.
- ③ Select **DELETE** from the SQL Action drop-down list.
- ④ Click **OK**.

You have successfully created a second DELETE database action. Now, whenever this process runs, all records in the CorporateReorder table will be deleted before new records are written to it.

- ⑤ Click **OK**.
- ⑥ A new line will be inserted into your closing script that will delete the appropriate database records. Compare your work to Figure 28-16 below. We have included comments in the scripting to illustrate the process logic.

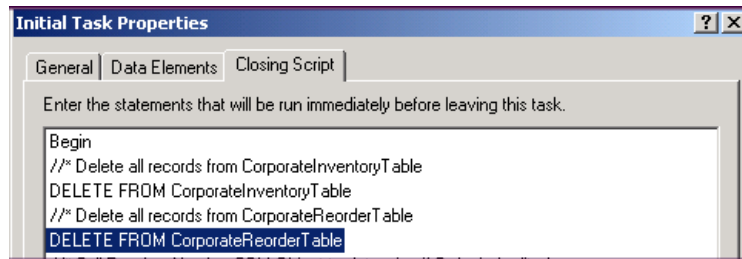


Figure 28-16. Closing Script tab with two DELETE database actions inserted which will delete old records from the CorporateInventory and CorporateReorder tables.

Insert a COM Object to Generate Order ID

Now we are going to insert a COM Object in the closing script that generates a random number. We will use this random number as a fake Order ID. We are doing this to demonstrate how CRbuilder can use data elements to dynamically assign a value which can be used in multiple tasks and e-mails.

In this case, the COM Object will generate a number between one and 1,000. We can use this random number as if it were an Order ID. Note that in a real business environment, you would probably get an Order ID from order tracking or financial software.

To emulate that, we will use write the value of our fake Order ID to a data element called \$OrderID. Later in this tutorial, you will use the \$OrderID data element in an Audit E-mail. CRbuilder will insert the Order ID in the e-mail notifying you which order is to be audited.

!!! **Warning:** For this tutorial to work, the Tutorial_1.dll COM object must be uploaded and registered on both your local machine and on the appliance to which you intend to deploy this tutorial. Please consult your system administrator for more information on how to do this. You can also read the Syncx Administrator's Guide for more information on uploading and registering COM objects.

- ❶ Right-mouse-click on the database delete action you just inserted, and choose **Insert**, then **Object Call to**, then **COM Object**. The **COM Objects** dialog appears.
- ❷ Click **Browse** and locate the directory with the Tutorial.dll COM Object. The local default installation should be c:\program files\CRbuilder\Tutorial\COM object. Please check with your system administrator if can't locate it.
- ❸ Click **Refresh**. The COM Object will appear in the COM Objects window.

- 4 In the left pane, double-click the Tutorial_1.dll COM Object, then click on its Audit Functions class, and finally, double-click on GetRandomNumber method to display its parameters in the Parameter's column. See Figure 28-19, below.

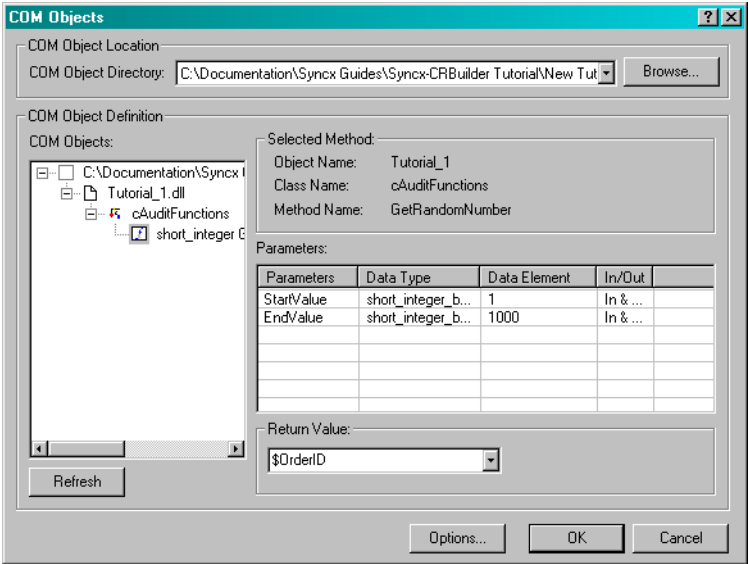


Figure 28-17. The COM Object Browser dialog with a selected Method.

The CRbuilder modeler has loaded the GetRandomNumber and its two parameters into the Data Elements column. They are **StartValue** and **EndValue**. Now you need to set the values of these parameters and use a Data Element that will hold the value generated by the Tutorial_1.dll.

- 5 Double-click in the data element column to the right of **StartValue**. Type a 1 in the **Input** dialog. Click **OK**.
- 6 Double-click in the data element column to the right of **EndValue**. Type a 1000 in the Input dialog.

This object will now generate a random number between 1 and 1000 to be used as a dummy Order ID.

Select a Data Element

You now want to select a data element to hold the random number generated by the COM Object.

- ❶ In the **Return Value** drop-down list, select \$OrderID from the drop-down field.
- ❷ Click **OK**. You now have a new entry in your closing scrip. Compare your work to Figure 28-21 below. We have inserted comments in this example to help clarify the scripting logic.



```
//Use Random Number function to generate Order ID to be written to data element.  
$OrderID=Tutorial_1.cAuditFunctions.GetRandomNumber(1/8,1000/8)
```

Figure 28-18. Aggregate Data task with COM Object inserted in the Closing Script tab.

Insert Audit COM Object

Now let's say that the manufacturer has an audit policy that randomly checks 20% of purchase requests to the supplier. To make this happen, you will insert a COM object that's a random number generator. Whenever a data aggregation process is initiated, the COM object randomly chooses an integer between 1 and 5. If the number chosen happens to be a 1 (20% of the time), the *Begin Data Aggregation* task will start the *Audit Order* task, which sends an e-mail to the Auditing Department (in this case, your e-mail).

- ❶ Right-mouse-click on the COM object you just inserted, and choose **Insert**, then **Object Call to**, then **COM Object**. The **COM Objects** dialog appears.
- ❷ If needed, click **Browse** and locate the directory with the Tutorial_1.dll COM Object. Please check with your system administrator if you aren't sure where the COM Object is located.
- ❸ In the left pane, double-click the Tutorial_1.dll COM Object, then click on its Audit Functions class, and finally, double-click on GetRandomNumber method to display its parameters in the Parameter's column. See Figure 28-19, below.

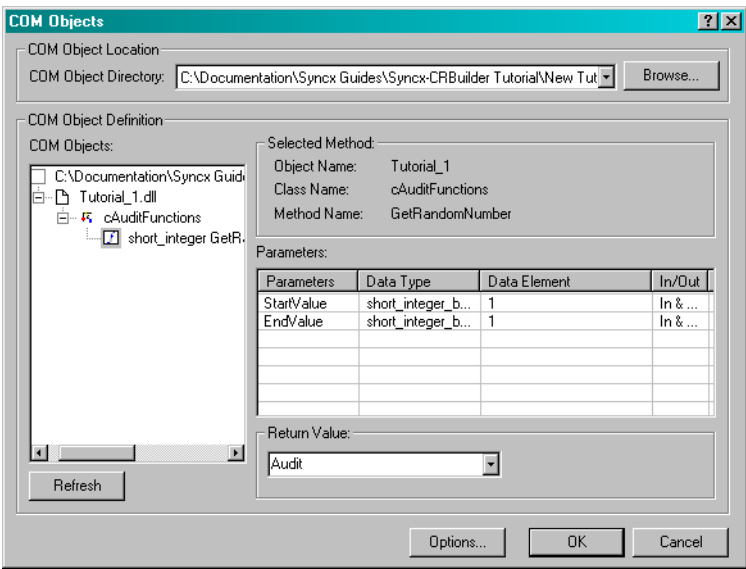


Figure 28-19. The COM Object Browser dialog with a selected Method.

The CRbuilder modeler has loaded the GetRandomNumber and its two parameters into the Data Elements column. They are **StartValue** and **EndValue**. Now you need to set the values of these parameters and use a Data Element that will hold the value generated by the Tutorial_1.dll.

- 4 Double-click in the data element column to the right of **StartValue**. Type a 1 in the **Input** dialog. Click **OK**.
- 5 Double-click in the data element column to the right of **EndValue**. Type a 1 in the **Input** dialog.

Select a Data Element

You now want to select a data element to hold the random number generated by the COM Object.

- 1 In the **Return Value** drop-down list, type **Audit** directly into the drop-down field. This shortcut lets you create a new data element. Compare your work to Figure 28-20, below.

Note: Under normal circumstances, you would type a 5 for **EndValue**. However, in order for you to test the Perform Audit task in this process, type a 1. Since both of the parameters values are set to 1, the process will send an audit e-mail every time a purchase request is made.

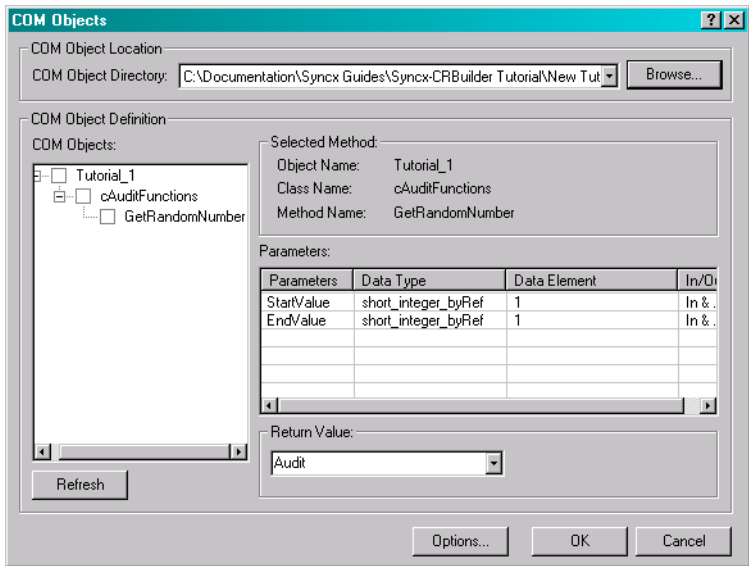


Figure 28-20. COM Objects dialog with defined parameters and new Audit data element.

- 2 Click **OK**. You will now have a new entry in your closing script. Compare your work to Figure 28-21 below. We have inserted comments in this example to help clarify the scripting logic.

```
/* Call Random Number COM Object to determine if Order is Audited
Audit=Tutorial_1.cAuditFunctions.GetRandomNumber(1/B,1/B)
```

Figure 28-21. Data Aggregation with COM Object inserted in the Closing Script tab.

Setting If/Then Statements for COM Object

Now that you have inserted the COM Object, you need to create the **If/Then** statement that tells the task what to do with the value chosen by the COM Object. Remember, it can be an integer between a 1 and 5. If it's 1, you want the **Begin Data Aggregation** task to initiate the *Audit* task.

- 1 Right-click on the COM Object you just inserted and choose **Insert, Logical**, then Insert **If/Then** from the drop-down menu.
- 2 Click and drag the **Audit** data element from the Current Task Data dialog and drop it in the **Expression** field at the bottom of the Task Data Element

dialog.

- 3 Double-click on the `? == ?` statement in the list of operations.
- 4 Type a 1 in place of the second question mark. Compare your work to Figure 28-22, below.
- 5 Click **OK**.

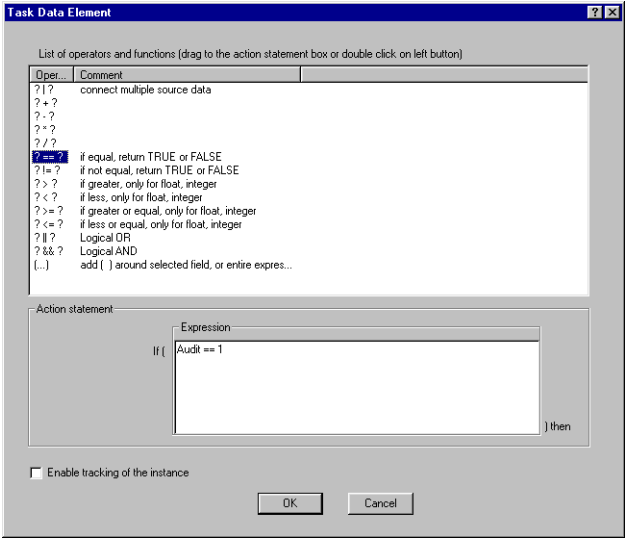


Figure 28-22. Task Data Element with the Audit expression for an **If/then** Statement.

- 6 Now click on the **ROUTE: Audit Order**, then drag it up until the **If (Audit == 1) then** expression highlights. When you release the mouse, the **ROUTE: Audit Order** will drop into the first part of the **IF** expression. Compare your work to Figure 28-23, below.

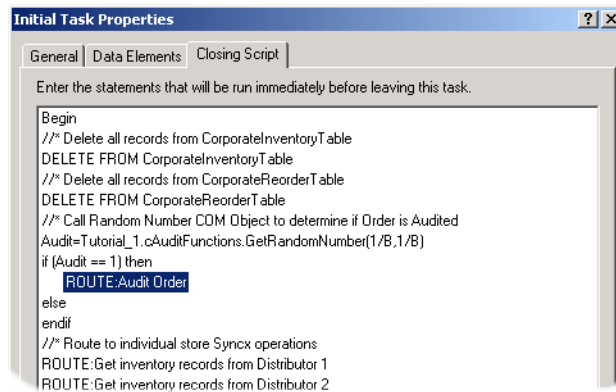


Figure 28-23. *Begin Data Aggregation task with inserted If/Then statement for Audit.*

- 7 You have finished configuring the *Begin Data Aggregation* task, so click **OK** to dismiss its dialog.

Configure the Audit Order Task

Associate and Define an E-mail in the Document Tab

You want this task to send an e-mail to the Auditing Department whenever this task is triggered. Therefore, you are going to format an e-mail requesting the Auditing Department to audit this purchase request.

- ❶ Double-click on the *Audit Order* task.
- ❷ Click the **Document** tab.
- ❸ Select **Outgoing E-mail** from the Define Document Type drop-down list.
- ❹ Click **Definition**. The Document Definition dialog appears.
- ❺ In the **To** field, you can either insert a data element or type a valid e-mail address of the person who will receive this e-mail. For this tutorial, however, drag *\$RequestorEmail* from the available data elements dialog and drop it in the To field. Remember, we set the *\$RequestorEmail* to take its value from the RequestorEmail value, which will be your e-mail. You are the requestor in this exercise, so you will receive an e-mail when you deploy your model.
- ❻ In the **Subject** field, type something like “Automated Audit Request.”
- ❼ In the **Message** field, type something like: “This is an automated audit request. Please have the Audit Department run an audit on the order ID (spacebar) being generated today. Thank you.”
- ❽ Now, highlight the extra space you made between the words “OrderID” and “being generated.” Drag the Process Data Element *\$OrderID* into the message field. Compare your work to Figure 28-24 below.

The screenshot shows a 'Document Definition' dialog box with a teal title bar. It contains several input fields for email configuration: 'From:', 'To:' (with a placeholder '\$RequestorEmail'), 'Reply To:', 'Cc:', 'Bcc:', and 'Subject:' (pre-filled with 'Automated Audit Request'). There is an 'Attachments:' field below the subject. A 'Priority:' dropdown menu is set to 'Normal'. A large text area for the 'Message:' contains the text: 'This is an automatic audit request. Please have the audit department run an audit on the order ID [OrderID] being generated today. Thank you'. Below the message area is a 'Format' section with radio buttons for 'Text' (selected) and 'MHTML', and a 'Browse...' button. At the bottom, there is a 'Message' tab, a checked 'Notification Only' checkbox, and 'OK' and 'Cancel' buttons.

Figure 28-24. Audit Order task with associated e-mail information.

- 9 Click **OK** to close the Document Definition dialog.
- 10 You are finished configuring this task, so click **OK** again to close the Audit Order task's dialog.

Configure Distributor 2 Task

Enter a Task Description in the General Tab

Double-click on the *Get Inventory From Distributor 2* task. By default, tasks open to their General tab. Enter an appropriate description, such as:

"Use a Syncx operation to take a flat file from Distributor 2's FTP site and dump it into a central manufacturing procurement database."

Link a Syncx Operation with the Task in the Document Tab

In this step, you will link a Syncx operation with a task. We provide you with the *Distributor 2* operation. In this scenario, the *Distributor 2* operation takes a flat file containing order records and transforms it into database records which are inserted into the manufacturer's procurement database.

Note

To access this operation, your System Administrator must have created a partner with the associated operations on the Syncx appliance, and provided you with the appropriate user name and password. If you don't have this information, you will not be able to complete this step. Please speak with your System Administrator to verify you have at least User-level access with the correct username and password information.

- ❶ Click the Document tab, then select Syncx Data Interchange Operation from the **Document Type** drop-down list.
- ❷ In the **Appliance Name** field, type the name of your Appliance. This is the name of the appliance with the operations that you will be using in this tutorial.
- ❸ Type your username in the **User Name** field.
- ❹ Type your password in the **Password** field.
- ❺ Select Predefined Operation from the **Operation Type** drop-down list.
- ❻ Click **Browse**. The Browse dialog will present you with a list of projects and operations to choose from. You should see e CRBuilder Tutorial project. Click it, then select the Distributor 2 operation from the list. Compare your work to Figure 28-25, below.

Note

If you don't see a CRbuilder Tutorial project, your system administrator may have created a partner with a different name. Please speak with your system administrator to find out which partner you should be using.

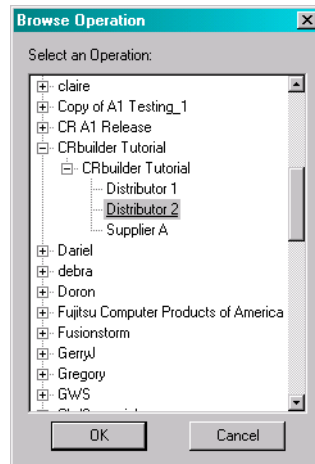


Figure 28-25. Click the Distributor 2 Operation from the CRbuilder Tutorial folder, then click **OK**.

- 7 Click **OK**. Distributor 2 is now linked to this task.
- 8 Compare your work to Figure 28-26, below.

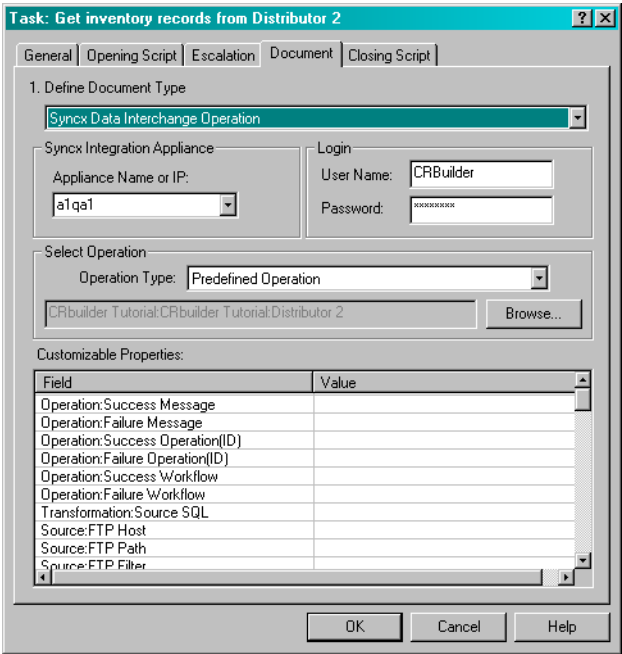


Figure 28-26. The task's document tab with an associated operation.

- 9 You are finished with this task, so click **OK** again.

Configure Distributor 1 Task

Enter a Task Description in the General Tab

Double-click on *Get Inventory Records from Distributor 1* task (Distributor 1). Enter an appropriate description in the description field, such as:

"Use a Syncx operation to take inventory records from Distributor 1's SQL DB and insert them into Manufacturer's Procurement DB."

Link a Syncx Operation with the Task in the Document Tab

In this step, you will link a Syncx operation with this task. We provide you with the *Distributor 1* operation. In this scenario, the *Distributor 1* operation grabs inventory records from the distributor's inventory SQL database and inserts them to the manufacturer's procurement database.

Note

To access this operation, your System Administrator must have created a partner with the associated operations on the Syncx appliance, and provided you with the appropriate username and password. If you don't have this information, you will not be able to complete this step. Please speak with your System Administrator to verify you have at least User-level access with the correct username and password information.

- ❶ Click the Document tab, then select Syncx Data Interchange Operation from the **Document Type** drop-down list.
- ❷ In the **Appliance Name** field, type the name of your Appliance. This is the name of the appliance with the operations that you will be using in this tutorial.
- ❸ Type your user name in the **User Name** field.
- ❹ Type your password in the **Password** field.
- ❺ Select Predefined Operation from the **Operation Type** drop-down list.
- ❻ Click **Browse**. The Browse dialog will present you with a list of Operations to choose from. Click the Distributor 1 operation from the list. Compare your work to Figure 28-27, below.

Note

If you don't see a CRbuilder Tutorial project, your system administrator may have created a partner with a different name. Please speak with your system administrator to find out which partner you should be using.

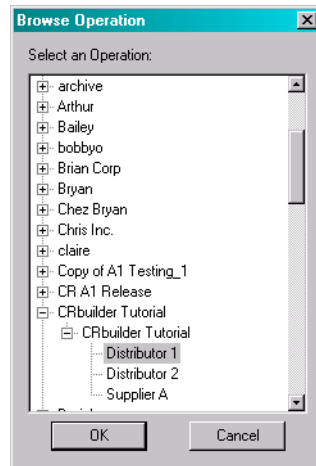


Figure 28-27. Click the Distributor 1 Operation from the CRbuilder Tutorial folder, then click **OK**.

- 7 Click **OK**. Distributor 1 is now linked to this task.
- 8 Compare your work to Figure 28-28, below.

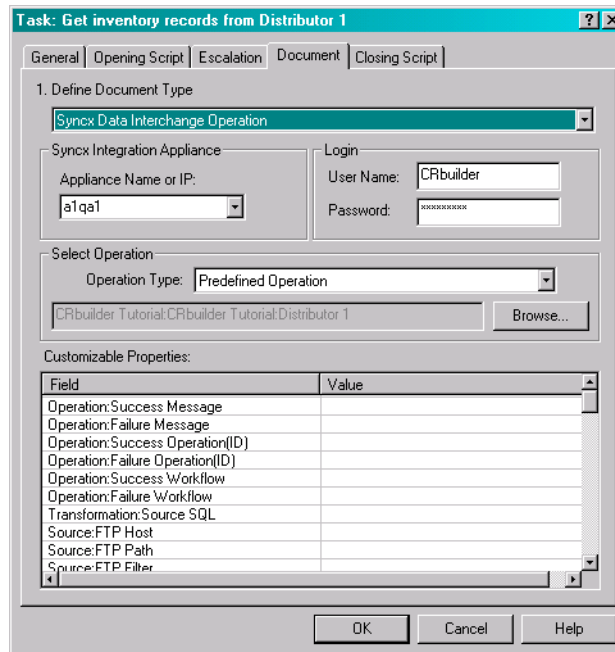


Figure 28-28. The task's document tab with an associated operation.

- 9 You are finished with this task, so click **OK** again.

Insert Check Function in Closing Script Tab

We're almost finished with this task. However, we have one more function to insert before we dismiss it.

We will insert a check inventory function that runs a process verifying that the CorporateReorderTable has been wiped clean of any old data. This ensures that the database table is prepared to accept new, incoming database records. If the Check Inventory function finds that old records still exist in the CorporateReorderTable, it will terminate the process. If it confirms that all records have been successfully deleted, it will allow the process to continue.

- 1 Click the **Closing Script** tab, then right-click on the Begin statement and select **Data Element** from the **Insert** drop-down menu.
- 2 The Task Data Element dialog appears. Type **Check** in the Data Element

name drop-down list.

- 3 Select **String** from the Data Element Type drop-down list.
- 4 In the Expression screen area, type double quotes (""). Compare you work to Figure 28-29, below.

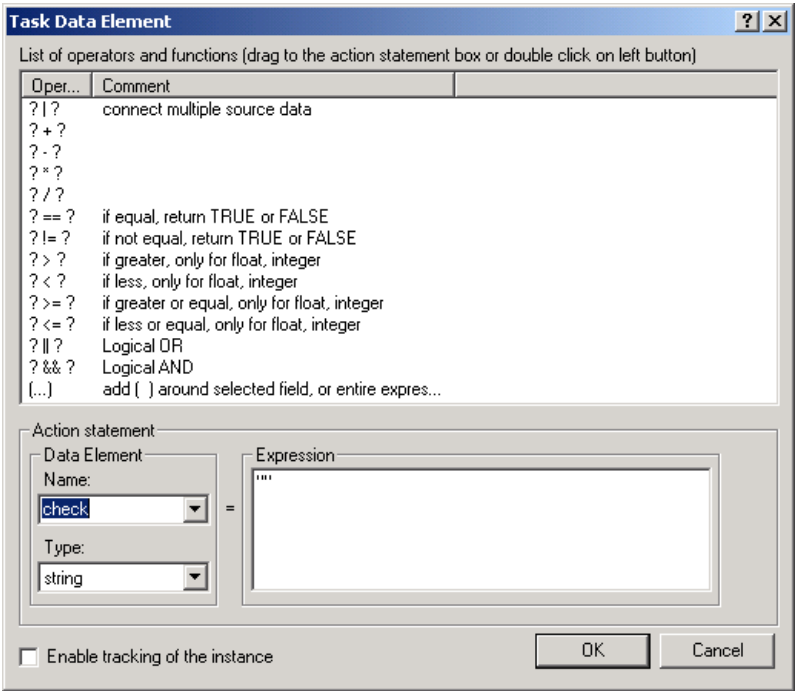


Figure 28-29. In the Task Data Element dialog, type `check` in the Data Element Name drop-down list, select a data type of string, and then type two double-quotes in the Expression field.

- 5 Click **OK** to dismiss the Task Data Element dialog. You will see the Check data element inserted under the Begin statement.

Connect to Procurement Database

- 1 Right-click on the Check data element you just inserted, and select **Database Statement** from the **Insert** menu.
- 2 Select the **Connection String** radio button, and click **Build**. The Database Connection String dialog opens. Type the following values:

- a. **Driver:** select SQL Server driver from the **Driver** drop-down list.
- b. **Server:** type training.commerceroute.com
- c. **Database:** type CRPROCDB (this is the CommerceRoute Procurement database).
- d. **UID:** Type Demo.
- e. **Password:** Type password.

Compare your work to Figure 28-30, below.

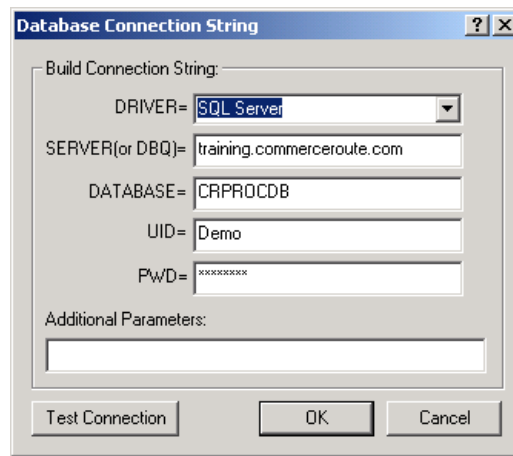


Figure 28-30. Enter valid database parameters, then click **OK** to connect to procurement database.

- ③ If you like, click **Test Connection** to verify you entered the connection String correctly. You will see Database Connection Successful message.
- ④ Click **OK**.

Insert Select Database Function

- ① The CRPROC database appears in the database objects window area. Click on “+” next to the Tables to view the list of tables.
- ② Double-click on the CorporateReorder Table to view its records.
- ③ Select **SELECT** from the SQL Action drop-down list.
- ④ Click and drag the Check data element from the Available Data Elements window and drop it in the Return Data Element column next to the SKU database column.

Now, if there are any records in the SKU column in the database will be written to the Check data element.

5 Click **OK**.

A new line will be inserted into your closing script that will write any existing records in the SKU column to the Check data element.

Insert If/Then Statement

Now we need to insert the If/Then statement. This is the logic that tells the task to allow the process to continue if no old records are found in the CorporateInventory table. Otherwise, kill the process if the Check function finds any records in the CorporateReorder table.

- 1 Right-click on the Database statement you just inserted, select Logical, then select If/Then.
- 2 Click on the Check data element and drag it from the Available Data Elements window, and drop it in the Expression window.
- 3 Double-click on the ? == ? operation from the list of operations. Now select the second ? and type double-quotes (""). Compare your work to Figure 28-31, below.

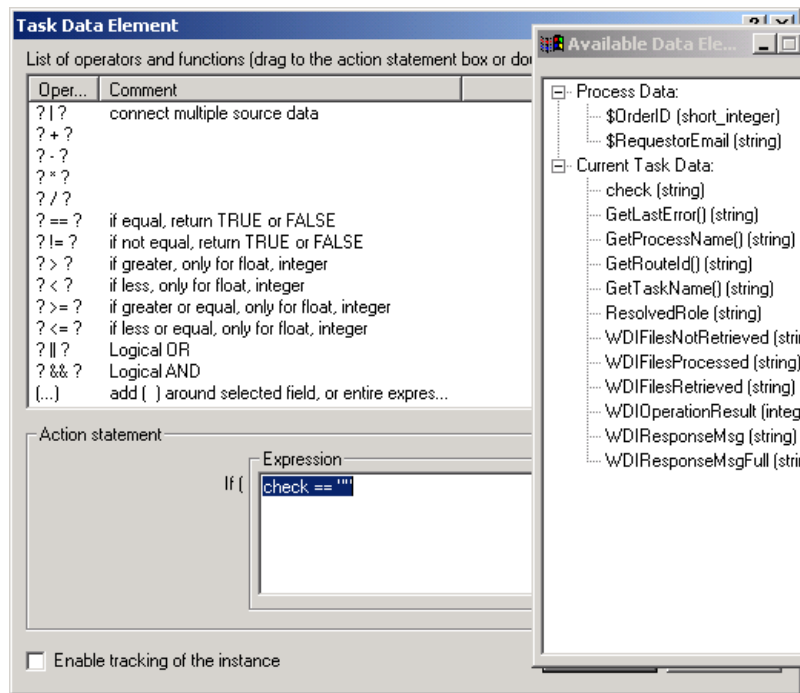


Figure 28-31. Click the Check data element and drag it to the Expression window.

- 4 Click **OK**. You will see the If/Then statement inserted just below database function you just created.
- 5 Now, click the **Route:Transfer Reorder To Supplier A** statement and drag it up until the **If (check == "") then** statement highlights and release it.
- 6 The route should now be nested between the **If/Then** and **Else** statement.
- 7 Finally, right-click on the else statement, select **Insert, Internal Process**, and then **Terminate Process** from the drop-down menu.

The TerminateProcess() function is now inserted between the **else** and **endif** statement. This tells the task to terminate the process if any value is written to the check data element from the CorporateInventory table. Compare your work to Figure 28-32, below.

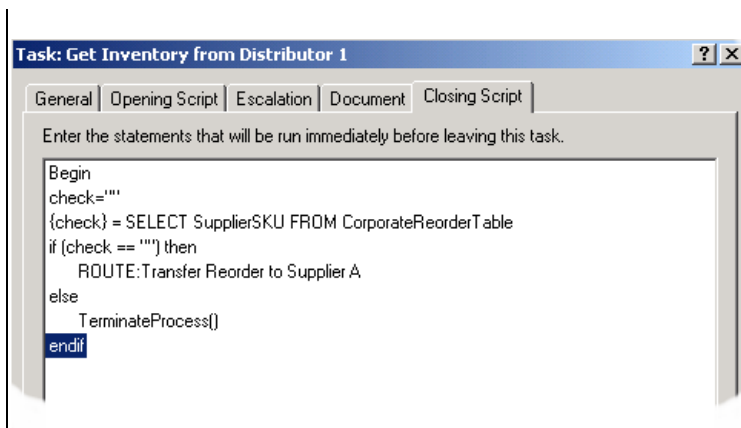


Figure 28-32. The Check procedure has been correctly inserted with the required If/Then logic statement.

- 8 You are now finished with this task, so click **OK**.

Configure the Supplier A Task

This task is the only one in our process that has two inputs. It is activated when both *Distributor 1* and *Distributor 2* tasks are complete. Because of this, it will wait for input from both of these source tasks before completing.

Enter a Task Description in the General Tab

Enter an appropriate description in the description field, such as:

"Use a Syncx operation to get the total inventory from Distributor 1 and 2, calculate the number of subcomponents to be ordered, and then transform the reorder numbers from the procurement DB to the supplier in an XML file."

Change OR Source Logic

Double-click on the *Transfer Reorder to Supplier A* task, and look at the incoming task logic area: Notice that CRbuilder has already inserted OR group logic. We need to change this to AND logic, so that this task will not be triggered until it has received input from both Distributor 1 and Distributor 2 tasks.

- ❶ Right-click on the OR group directly underneath Begin, select **Change Operator Type**, then select **AND**.
- ❷ Your two source tasks will be nested within the new AND group. Compare your work to Figure 28-33, below.

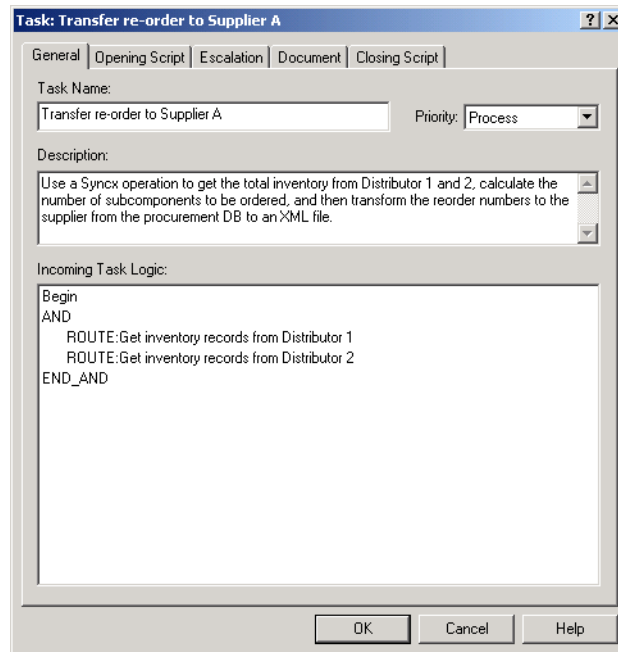


Figure 28-33. Transfer Reorder task with new AND group inserted.

Insert Stored Procedure in Opening Script Tab

Now we need to insert a stored procedure that will populate the appropriate “Reorder” table in the Manufacturer’s procurement database. This is a simple database program that aggregates the total number of power supplies requested by the Distributors, determines the number of subcomponents that must be reordered, and then writes the subcomponent reorder information to the “reorder” database table. These reorder values will be transformed into an XML order request sent to supplier A.

- ❶ If you’re not already there, double-click the *Supplier A* task, then click the **Opening Script** tab.
- ❷ Right-click under the **Begin** statement, and select Database Statement from the **Insert** drop-down menu. The Database Statement dialog appears.
- ❸ Click the **Connection String** radio button, click **Build**, and type the following values in the Database Connection String dialog:

- a. **Driver:** select SQL Server driver from the Driver drop-down list.
- b. **Server:** type training.commerceroute.com
- c. **Database:** type CRPROCDB (Commerceroute Procurement Database).
- d. **UID:** Type Demo.
- e. **Password:** Type password

Compare your work to Figure 28-34, below.

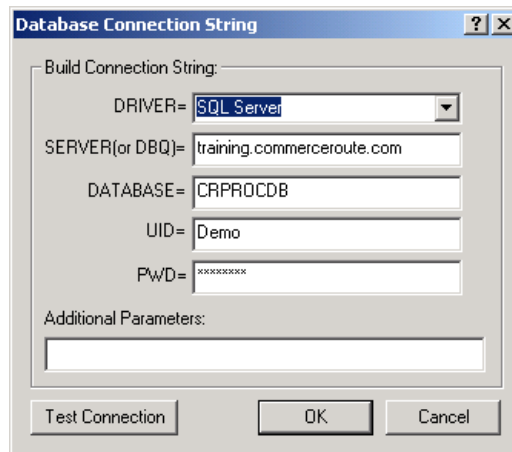


Figure 28-34. Enter valid database parameters, then click **OK** to connect to procurement database.

- ④ If you like, click **Test Connection** to verify you entered the connection String correctly. You will see Database Connection Successful message.
- ⑤ Click **OK**.

Select Stored Procedures

- ① The CRPROC database appears in the database objects window area. Click on “+” next to the Stored Procedures to view the list of procedures.
- ② Double-click on the **CreateReorderData;1** procedure.
- ③ Now drag the \$OrderID data element from the Available Data Elements window and drop it in the **Value** column next to the @OrderID database field. Compare your work to Figure 28-35, below.

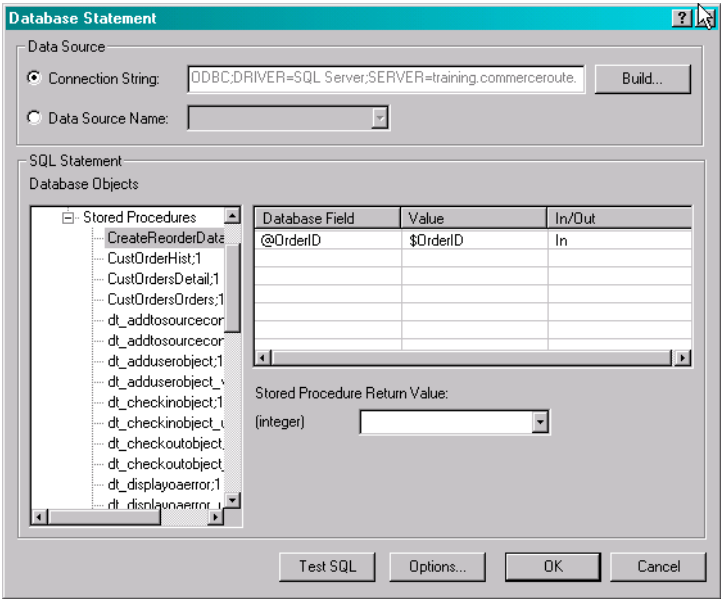


Figure 28-35. The Database Statement dialog with a Stored Procedure selected.

- 4 Click **OK**.
- 5 A new line will be inserted into your closing script that will repopulate the appropriate database records. Compare your work to Figure 28-16, below. We have included comments in the scripting to illustrate the process logic.

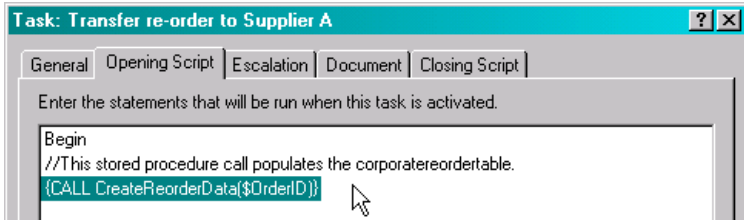


Figure 28-36. Opening Script tab with new stored procedure which will populate corporatereordertable in the Manufacturer’s procurement database.

Link a Syncx Operation with the Task

In this step, you will link a Syncx operation, *Supplier A*, with this task. In this scenario, the Supplier A operation adds the total number of power supplies requested by Distributor 1 and Distributor 2. It then determines how many subcomponents must be ordered from Supplier A. The operation grabs this order information from the manufacturer's procurement database and transforms it into an XML file. This XML file will be put on the suppliers FTP site, where the Supplier's IT department can enter it in their ERP system.

Note

To access this operation, your System Administrator must have created a partner with the associated operations on the Syncx appliance, and provided you with the appropriate username and password. If you don't have this information, you will not be able to complete this step. Please speak with your System Administrator to verify you have at least User-level access with the correct username and password information.

- ❶ Click the Document tab, then select Syncx Data Interchange Operation from the **Document Type** drop-down list.
- ❷ In the **Appliance Name** field, type the name of your Appliance. This is the name of the appliance with the operations that you will be using in this tutorial.

Note

Check with your system administrator if you don't know your appliance's name.

- ❸ Type your user name in the **User Name** field.
- ❹ Type your password in the **Password** field.
- ❺ Select Predefined Operation from the **Operation Type** drop-down list.
- ❻ Click **Browse**. The Browse dialog will present you with a list of Operations to choose from. Open the CRbuilder Tutorial folder, then click the *Supplier A* operation from the list. Compare your work to Figure 28-37, below.

Note

If you don't see a CRbuilder Tutorial project, your system administrator may have created a partner with a different name. Please speak with your system administrator to find out which partner you should be using.

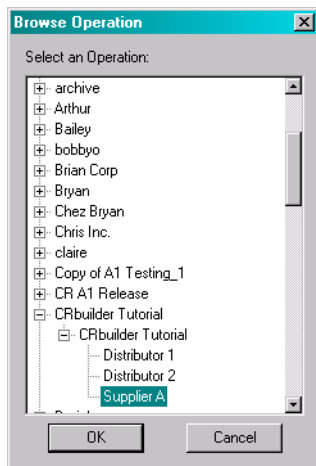


Figure 28-37. Click the Supplier A Operation from the CRbuilder Tutorial folder, then click **OK**.

- 7 Click **OK**. Supplier A is now linked to this task. Compare your work to, Figure 28-38, below

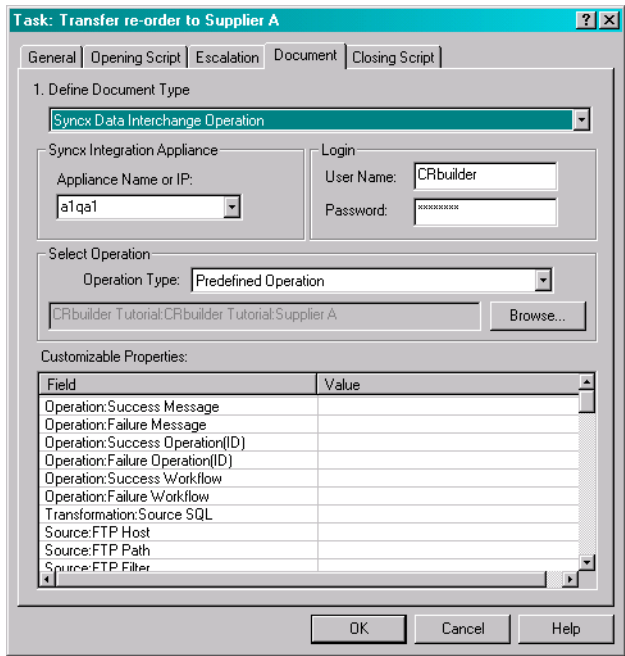


Figure 28-38. The task’s document tab with an associated operation.

Customize Your Operation

CRbuilder has the ability to let you modify parameters used in a Synx operation with values from a CRbuilder data element or a hard-coded value. In this way, when the operation is activated, you can force the system to use the parameter you provide, rather than the parameter in the Synx transformation database.

In our example, we will give a unique name to the target XML file created in the *Supplier A* transformation. This will allow you to easily identify your XML file when you go to the Supplier FTP site at the end of this tutorial.

- ❶ With the Document tab still selected, in the Customizable Properties screen area, click on the scroll bar and scroll down to the **Target:FTP Filter** field.
- ❷ Right-click in the **Value** column and select **Add** from the drop-down list. Compare your work to Figure 28-39, below.

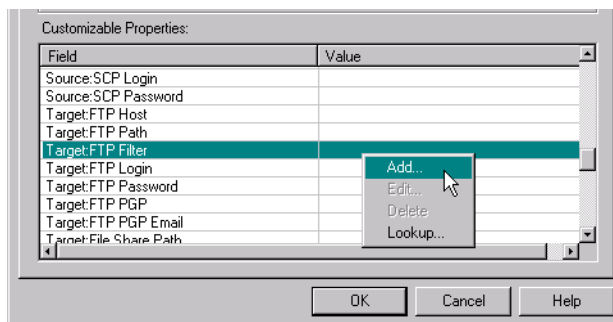


Figure 28-39. Scroll down to the **Target:FTP Filter** field, then right-click in the **Value** column and select **Add** from the drop down list.

- ③ The Input dialog appears. Using double-quotes, type some unique identifier, such as your name with an .xml extension. For example: "JohnDoe.xml". Compare your work to Figure 28-40, below.

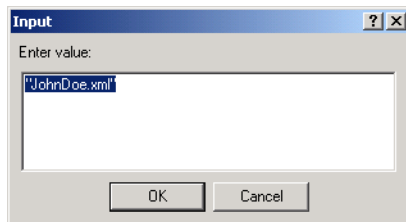


Figure 28-40. Using double-quotes, type your name in the Input dialog, then click **OK**.

- ④ Click **OK**. Now, when you deploy and execute this tutorial on your appliance, the final XML file will be renamed whatever you typed in the Input dialog, e.g. JohnDoe.xml
- ⑤ You are finished with this task, so click **OK** again.

Define Terminating Tasks

- ❶ To define the process' terminating task, click the toolbar's **Properties** button.
- ❶ Double-click on the Transfer Order to Supplier A entry in the Possible Terminating Tasks pane at the lower left corner of the dialog box. This is now your terminating task. Compare your dialog to Figure 28-41, below.

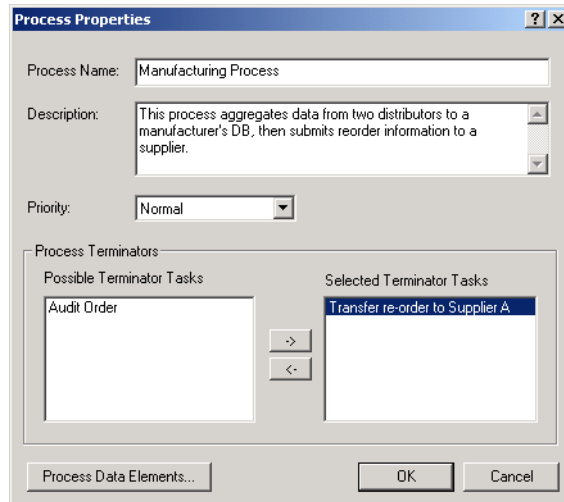


Figure 28-41. The Process dialog box with its terminating tasks defined.

- ❷ Now would be a good time to save your model. Click the **Save** button on the toolbar.

Check for Errors

The first thing you need to do is to check that there are no errors in your model. CRbuilder has a built-in process checker that will catch many types of problems, such as having unresolved routes, mismatched data element types, etc.

- ❶ Click the Toolbar's **Check** button to have the system check for any errors. Each time you check for errors, CRbuilder logs information in an error file called err.txt. This file is always written to the same location as your modeler data file (e.g. C:\Program Files\CommerceRoute\Tutorial\Tutorial2.crm). You may be prompted to either overwrite the existing log information or to append it instead.

Once the error check has finished, you will see a notification dialog box. If you have any errors, open the error file to get more details about the problem(s) in your model.

- ❷ Fix any errors that appear.

Deploy Your Model

Once you've completed the model, fixed any errors, and created all the database connection strings, you are ready to deploy your process. When we say deploy, we mean to write your new process model to the Syncx 6200 Series Appliance.



Warning! Anyone can create and design a process model. However, because this model includes a COM object dependency, an administrator must load these dependencies on to the appliance via the appliance's Administration screens.

Deploying Your Process

- ❶ You've now completed the model, checked and fixed any errors, and you are ready to implement your model. Click **Deploy** on the toolbar
- ❷ Select the name of your Syncx appliance from the drop-down list. This is the appliance to which you are deploying your new CRbuilder process. Please check with your system administrator if you aren't sure of your appliance's name.
- ❸ Enter your username and password (see Figure 28-42, below). Check with your system administrator for valid usernames and passwords.

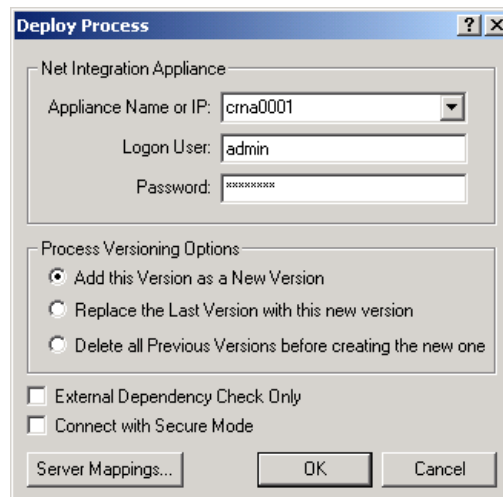


Figure 28-42. Deploy Process dialog with the device selected.

- ④ Click the first radio button to replace the last version of this process on the appliance with this one. This will make this version the newest one.
- ⑤ Click **OK**. Your model will be written to the database.

Use Your Process

- ① Now that your process has been deployed to the appliance, all you need to do is use a Web browser to navigate to the home page of your appliance, and then go to the CRBuildertutorial.asp page.
 - To reference by name, enter a URL in your browser like `http://yourappliance/tutorial/crbuilder_tutorial.asp` where your appliance is the name of your Syncx appliance.

The CRbuilder Tutorial page appears.

Note

If you don't know the name of your appliance, please consult your System Administrator for more information.

- ② Enter your e-mail address, name, and click **Submit**. Compare your work to Figure 28-43, below.

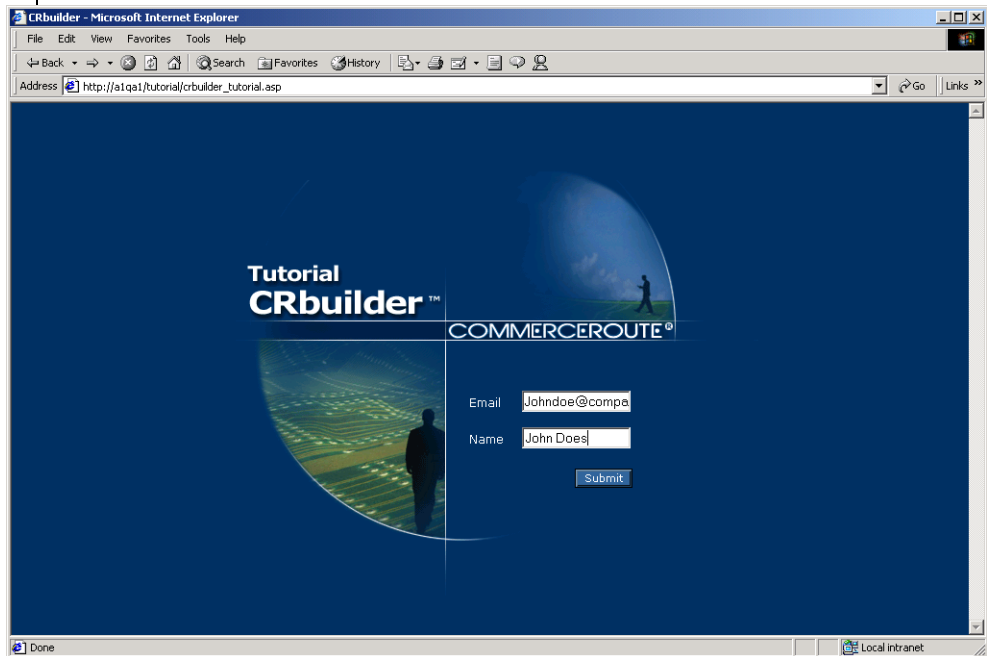


Figure 28-43. The BeginTutorial.asp with requestor's name and e-mail entered.

3 Click **Submit**.

Once you submit the request, CRbuilder will begin the data aggregation process. You will see a confirmation page that your process has been deployed. You will also receive an e-mail requesting an audit of a random order number.

View the final XML file

- 1** To view the final Supplier XML file on the Supplier's FTP site, use a Web browser and navigate to `ftp://training.commercerooute.com/CRbuilder Tutorial/Supplier A`.
- 2** Type `Learner` in the login name field, and `ne3t0n` in the password field. Note that the "0" is a the number zero, not the letter o.
- 3** Open the Supplier A folder. You will see the XML file you named earlier in when you were customizing the operation in the Supplier A task.

Note

Note that many people may be working on this tutorial at any one time and multiple

files may exist in this location. CommerceRoute reserves the right to delete all files on this FTP site.

- 4 Double-click on this file to view the XML file. Note that fields containing the subcomponent name, price, and the total number ordered. Compare to Figure 28-44, below.

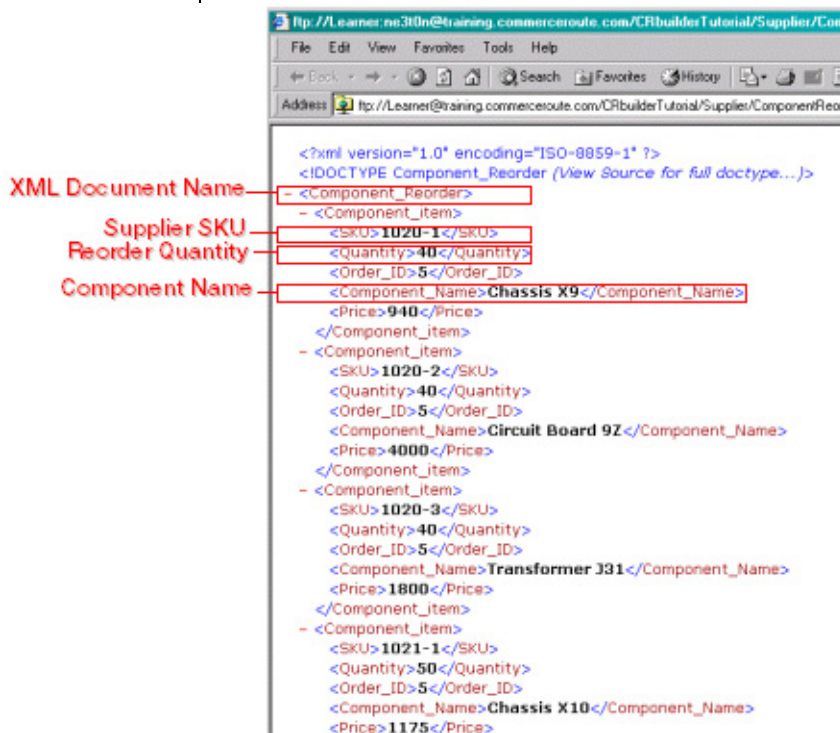


Figure 28-44. Final XML file from the Supplier's FTP site with the component reorder information, SKU, name, and quantity.

Congratulations! You have just completed the CRbuilder tutorial.

For more information about Syncx data interchange operations, please refer to the *Backend Guide*, or the *Reference Guide*.

Chapter 29

Processes

Overview

The entire CRbuilder process model is known as a *process*. A process is made up of a logical collection of tasks, routes, and rules. Processes are what you save as CommerceRoute model (*.crm) files.

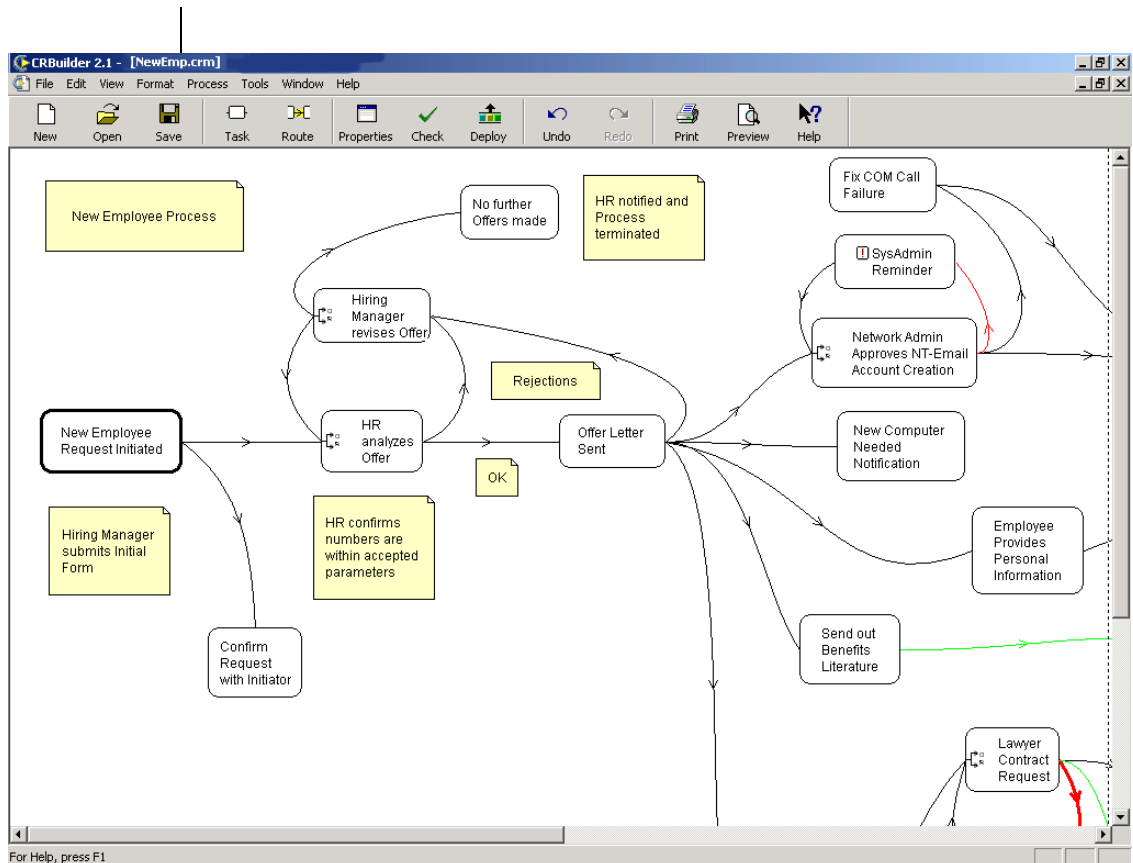


Figure 29-1. An example New Employee hire process built with CRbuilder. A process is the collection of tasks (rounded rectangles), routes (connecting lines), and rules (the logic embedded inside each task).

The process can be thought of as a blank sheet of paper that appears within the main modeler interface. You will use that sheet of paper to “draw” and define the various tasks that constitutes the process’s “work,” link those tasks with routes, and apply the route logic to automate a business process.

CRbuilder has several key concepts:

Tasks are the individual steps inside a CRbuilder process. The task is where you define the logic that determines the behavior of the CRbuilder process; it’s also where you will build and map data elements, associate Web pages and e-mail, as well as automate other process functionality.

For more information about tasks, see Chapter 30, “Tasks.”

Data Elements are variables or “containers” that hold a value. For example, you could create a data element called “ManagerEmail.” ManagerEmail would be used to hold the e-mail of a person identified as a manager in a database or an ASP page.

There are two types of data elements: *Task* and *Process* data elements. A task data element is defined within a particular task and the value associated with it is only valid for that task instance. Process data elements, however, are “global,” being recognized throughout all tasks of the process instance. Process data element names always begin with a “\$”, such as “\$RequestorID.”

For more information about Data Elements, please Chapter 32, “Data Elements.”

Instances are one specific use of a task or process. For example, many different purchase requests all use the same Purchase Request Process. One instance that requests an item costing more than \$5000 might require additional approvals—and therefore be routed differently—than an instance which requests an item for only \$100.

For more information about process instances, Chapter 29, “Processes.”

Routes: Routes are a logical link between different tasks that determines the flow of the business logic.

Route IDs: Route IDs (not to be confused with “Routes”) are data elements generated by the CRbuilder engine that provide detailed information about the process and task instance.

For more information about Route IDs, see Chapter 38, “Using Server-Side Scripting Pages.”

Creating and Defining Processes

Opening Files

Creating new processes is easy. Simply double-click the CRbuilder icon on your desktop. You will see a dialog like the one in Figure 29-2, below. You have the option of opening an existing model or creating a new one.

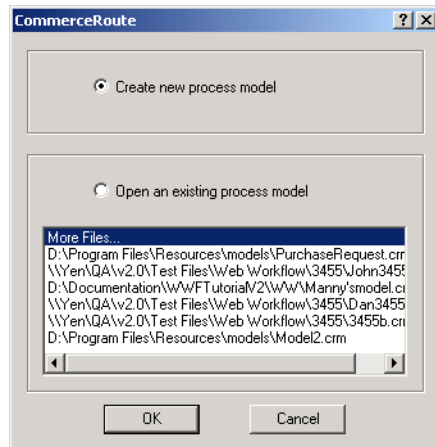


Figure 29-2. You can select an old process or create a new one.

To Open an Existing Model

- ❶ If you have an existing process you want to work on, double-click on the file name in the window and that process will open automatically.
You can also click the **More Files** item in the window, then browse the network for the process you want to work with.

To Create a Blank Model

- ❶ Click the **Create New Process Model** radio button, then click **OK**.
You will see a blank process model in the CRbuilder interface.
- ❷ You can also click **New** on the modeler toolbar at any time to open a new process.

Setting CRbuilder Options

Set Your General Process Options

This dialog lets you define and modify general options that are applied when you open a process in CRbuilder. For example, you can have the modeler create an initial task or link tasks automatically.

- ❶ From the **Tools** menu, click **Options**.
- ❷ You can select the following checkboxes in the Layout Options screen area:
 - **Automatic Route Between Tasks** automatically creates links between tasks.
 - **Bring up Task Properties when New Task is Created** automatically opens a task's configuration dialog when you add a new task to your model.
 - **Create Initial Task in New Model** automatically creates an initial task when you open a new process in CRbuilder.
- ❸ Since data elements are usually strings, you may want to select a default data type of **String** (see Figure 29-3, below).
- ❹ Click **OK**.

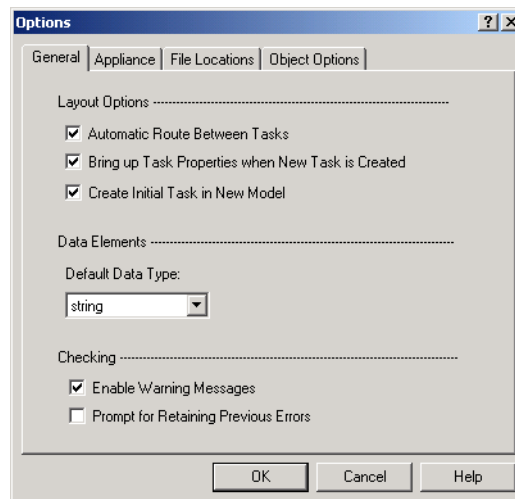


Figure 29-3. The General Process Options dialog.

CRbuilder also has the ability to identify and alert you to potential problems, such as mismatched data types. If you want to view these error messages, click the **Enable Warning Messages** checkbox.

If you want to retain old error messages when you deploy your process, click the **Prompt for Retaining Previous Errors** checkbox. CRbuilder will ask you if you want to view previous errors every time you deploy your process to the Syncx 6200 Series Appliance Backend Integration Guide.

Process Properties

Defining Process Properties

- ❶ Configure your new process by clicking on the **Properties** button. You will see the Process Properties dialog box (see Figure 29-4 below).
- ❷ Type in a process name. It can be anything you like, but it should be logically meaningful.
- ❸ Do not use any semicolons (;), periods (.), single quotes (‘), ampersands (&), percent signs (%), or quotes (“”) in the process name. Only alphanumeric characters, spaces, and upper and lower dashes (“-” and “_”) are valid as characters in a process names.

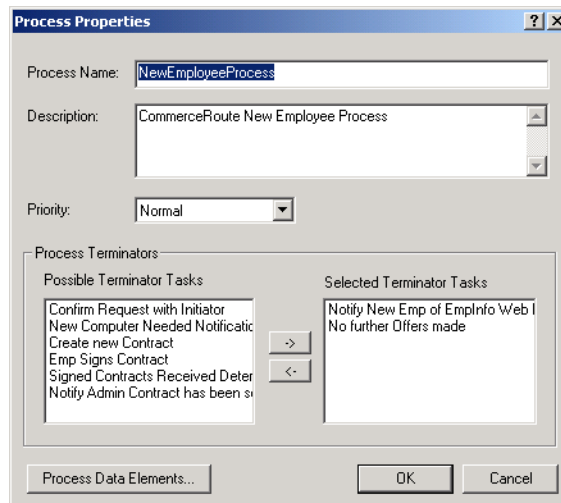


Figure 29-4. The completed **Process Properties** dialog, with the process name and a description.

- ❹ Give your process a description and set a priority for this process from the priority drop-down list.

The priority level determines the order in which processes are handled by the CRbuilder engine. For example, if you deploy several processes with the same name, but one of them has a higher priority setting, the engine will automatically begin processing the higher-priority process first. If you do not select a priority, the engine will automatically assign it a “normal” priority. Note that you can also set priority levels for individual tasks. If you set a process priority level, by default all tasks will be assigned that

same priority level.

- 5 Click **OK**.

Creating Tasks

Tasks are the individual steps inside a CRbuilder process, or the “building blocks” of each process. Within each task, you can create logical statements, insert database queries using COM, CORBA, SOAP, and EJB Objects, and link a task with e-mail, Web pages, or other documents.

Depending on the specific configuration of the task—the task’s “rules”—it will behave differently and take different routes to the next task.

Tasks appear as rounded rectangles inside a process.

Creating Tasks

Click **Task** on the toolbar to create a task. It will say Task0 (unless you have instructed CRbuilder to automatically create the initial task in a new process). This indicates that this is your first task. Once you name it, Task0 will become the name you entered.

—or—

Right click anywhere in the blank area of the new process and select **Add Task** from the drop-down menu.

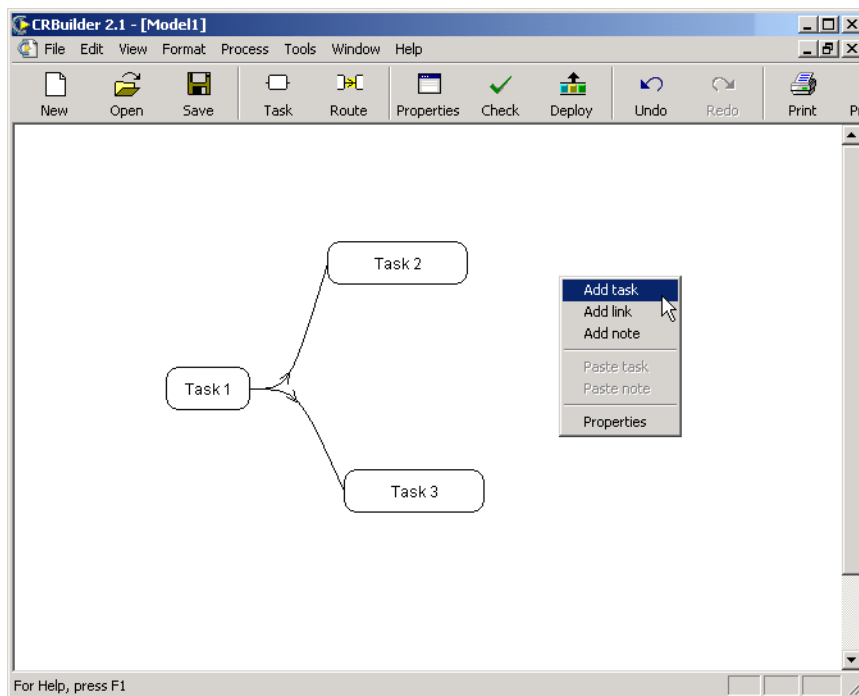


Figure 29-5. Process with new task being added.

Note

There is no limit to the number of tasks you can create within a single process. However, if you are planning a complex CRbuilder process, we recommend you instead build and link multiple processes together in order to simplify design and troubleshooting. The most effective way to do this is to insert an Object in the closing script of your terminating task that would initiate a new process. For more information on the best way to do this, please consult your own IT department or you can speak with one of CommerceRoute's Professional Services representatives.

Initial Task Configuration

- ❶ Double-click on the task. The Task Properties dialog opens to the General tab. This is where you configure the logic and various settings that will determine the task's behavior (see Figure 29-6, below).

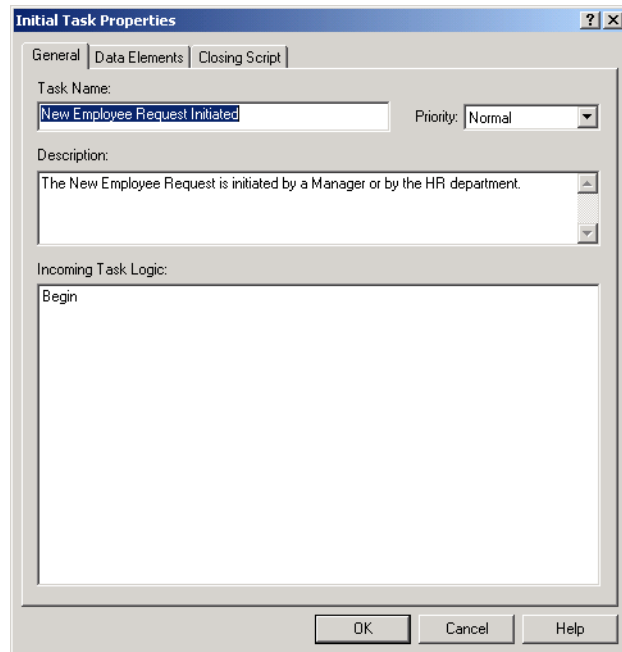


Figure 29-6. Task Configuration dialog.

Depending on whether you are configuring an initial task or a regular task, the tabs can include:

- **General** is where you modify a task name and description.
- **Data Elements (Initial Task only)** is where you enter and/or define data elements that will be read from the message that initiates a process instance.
- **Opening Script** is where you prepare data elements or set the rules that apply to this task, *before* the associated documents or Syncx integration operations are executed.
- **Escalation** is where you can define an escalation for this task.
- **Document** is where you can associate an e-mail or a Syncx integration operation with a task.

- **Closing Script** is where you define and prepare data elements, set logic rules, or perform tasks that apply to this task *after* the associated document or Syncx 6200 Series Appliance Backend Integration Guide operation is executed.

Note

For detailed information on how to use each of these, please refer to the appropriate subsections of the Task Chapter later in this document.

Linking Tasks with Routes

Routes are the links between various tasks that tie them together and let them work as a complete CRbuilder process. Routes are the paths that processes can take as it runs from the beginning to the end of the process. They are drawn as lines that connect tasks within a process.

There are two ways to create routes that link tasks;

- ❶ Click the **Route** button on the toolbar.
- ❷ Click on a starting task, then click on a destination task you want it linked to. The two tasks are now automatically linked.

—Or—

- ❸ Click the **Tools** menu on the toolbar, then select **Options** from the drop-down list. The Options dialog appears.
- ❹ Make sure the **Automatic Route Between Tasks** checkbox is selected (Refer to Figure 29-7, below).

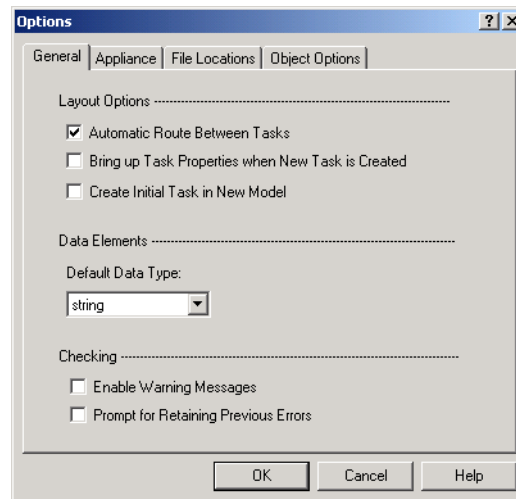


Figure 29-7. Options dialog with Auto Link checkbox selected.

- ❺ Click **OK**.
Now whenever you create a new task it will automatically be linked to the current selected task.

About Terminator Tasks

💡 Before you can deploy a process, you must first define a terminator task. All processes must have at least one terminator task defined.

When CRbuilder executes a process, how does it know when it has finished all the tasks assigned to it and is complete? This happens through *Terminator Tasks*.

Terminator Tasks represent the completion of a process and end a particular process instance. For example, a process called “Purchase Request” might only have two possible outcomes: the approval or rejection of a purchase request. If you were designing this process, you could create two tasks, Purchase Request Approved and Purchase Request Rejected, and designate both of them as Terminator Tasks. When CRbuilder executed the Purchase Request process, it would know that it had come to the end of the process when it encountered either one of these two tasks.

Creating Terminator Tasks

- ❶ Create your process with all associated tasks.
- ❷ Click the toolbar’s **Properties** button. The Process Properties dialog appears.
- ❸ Double-click the entries in the **Possible Terminator Tasks** pane that you want to make into terminating task(s). They appear in the **Selected Terminator Tasks** pane. These are your terminating tasks.

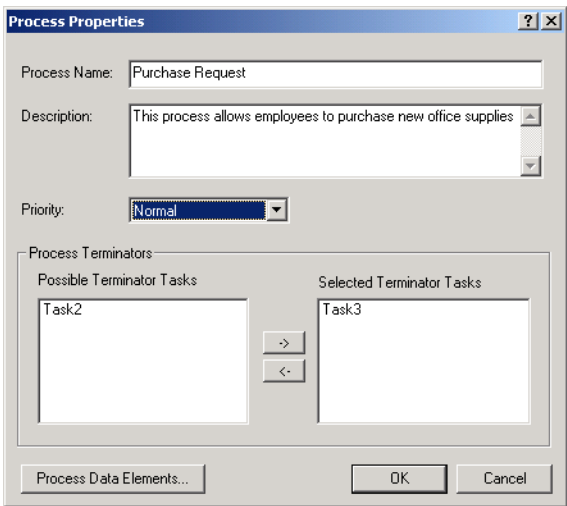


Figure 29-8. The Process dialog box with its terminating tasks defined.

- ❹ Click **OK**.
- ❺ Click the **Save** button on the toolbar.

Note

A process instance will also be terminated if it encounters a ***TerminateProcess()*** internal function in the script. For more information about internal functions, see Chapter 31, “Scripting Functions.”

Notes

Notes are small areas of descriptive text that can be inserted into your CRbuilder process. They are a good way of describing your model's process logic so that people who come after you—whether IT personnel or a Business Development Manager—can clearly understand how your process operates.

For example, if you have a task that accepts input from two other tasks, you can insert a note describing how the process is directed over one or the other route.

Adding Notes

- ❶ With a model open, right-mouse click on any object in the CRbuilder process, and select **Add Note** from the drop-down menu.
- ❷ A text box appears. Type in your text and press **Enter** when you are finished.
- ❸ You can now drag the note anywhere in the modeler window (see Figure 29-9, below).

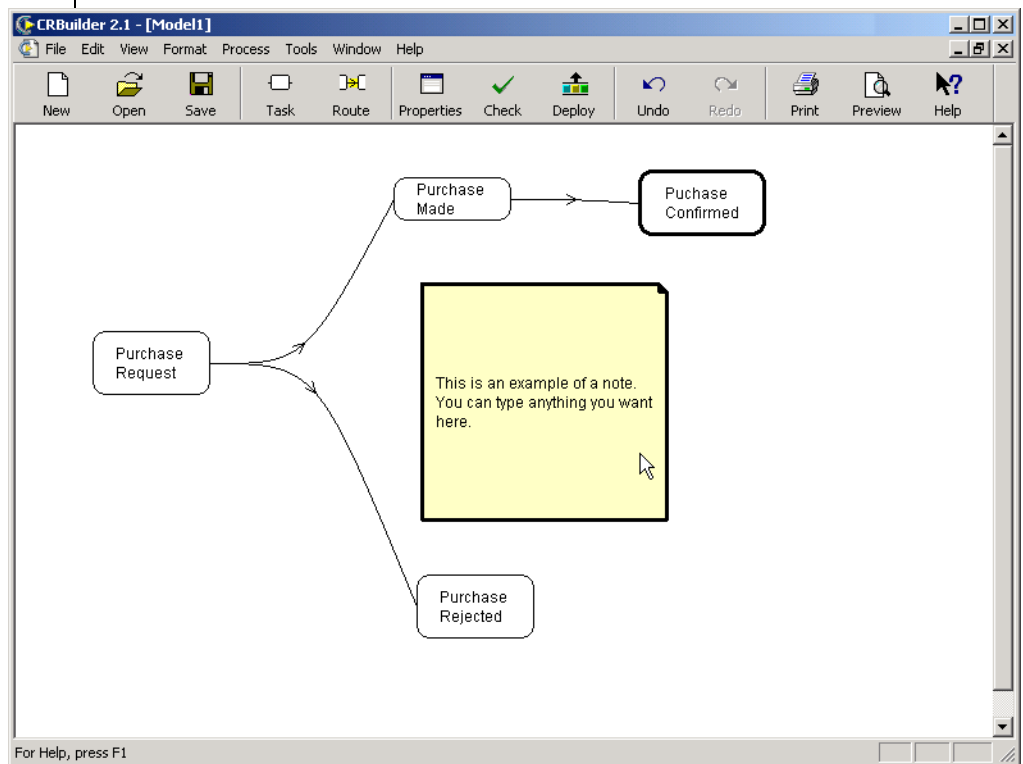


Figure 29-9. A CRbuilder process with an inserted note.

- 4 Click **Save** on your toolbar to save your work.

Chapter 30

Tasks

Tasks—The Building Blocks of Processes

Tasks are the building blocks of CRbuilder processes. Tasks are where you define the logic that determines how the workflow will behave and how the process will interact with other applications, such as databases, CORBA and COM Objects, or e-mail.

Each task represents one step in a process. A process can have any number of different tasks, and each task has its own unique set of responsibilities and work. This work is determined by rules and logical definitions that you create and associate with each task. Depending on which rule is applied, a task may, for example, send an e-mail, escalate to another task, conduct a database lookup, and so on.

Tasks are the rounded rectangles inside a process (see Figure 30-1, below).

This chapter is devoted to exploring how tasks work, how to configure them, and how you can use them most effectively.

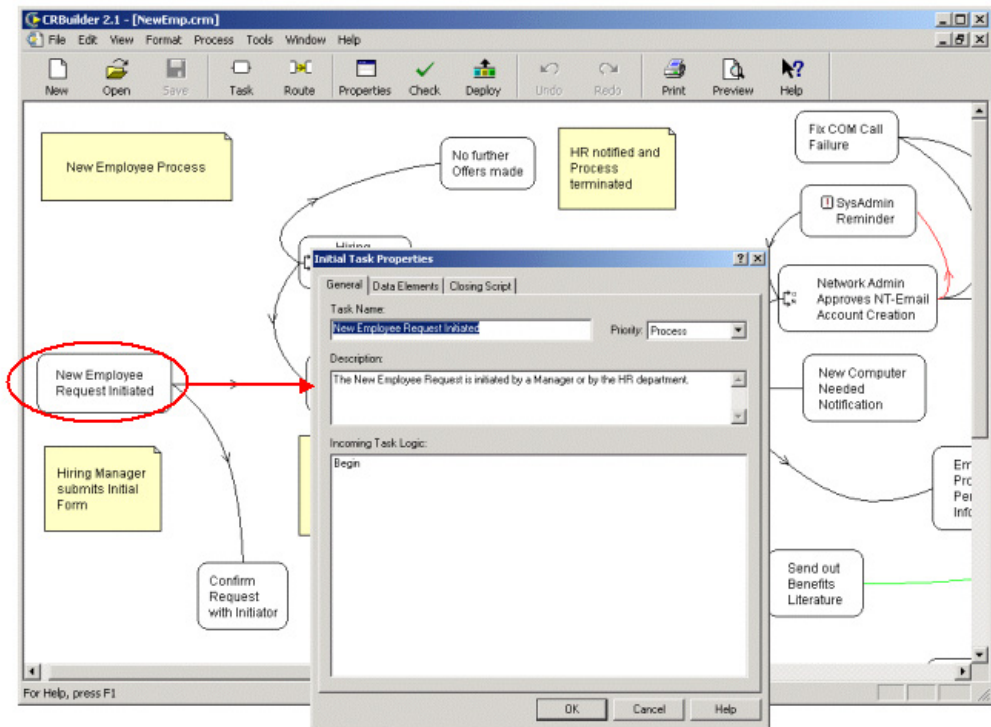


Figure 30-1. Tasks are the building blocks of a process. Double-clicking on a task opens its configuration dialog box.

Defining Task Data

To define and set the task data that determines the action of a task, open a process and double-click on any task. The Task Configuration dialog appears. Note that you will see different tabs depending on whether you opened an Initial Task or a Regular Task.

Open the Initial Task and you will see the **General**, **Data Elements**, and **Closing Script** tabs (refer to Figure 30-2, below).

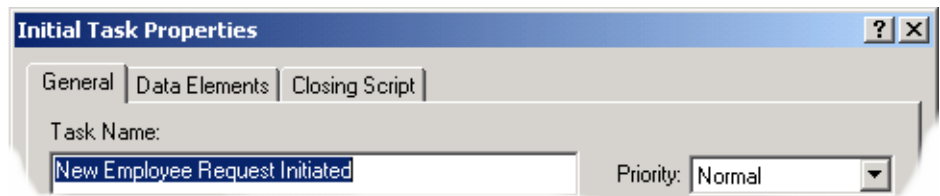


Figure 30-2. The Initial Task configuration dialog with the General, Data Elements, and Closing Script tabs.

Open any other task and you will see the **General**, **Opening Script**, **Escalation**, **Document**, and **Closing Script** tabs (refer to Figure 30-3, below).

All of these tabs allows you to define and modify different aspects of your task data. Each of the tab functionality is described below.

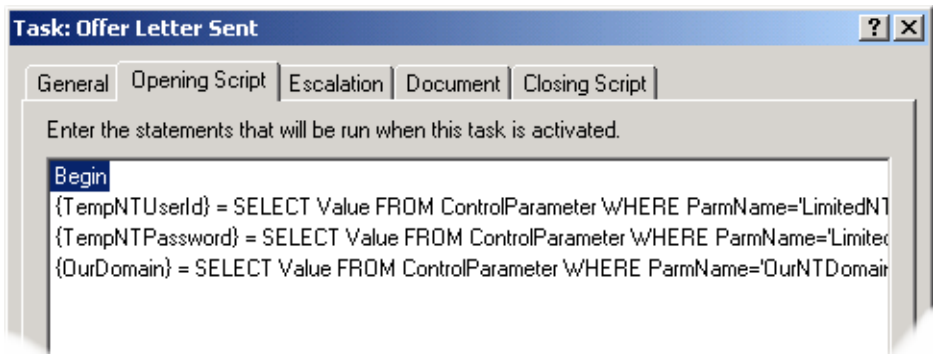


Figure 30-3. Other task configuration dialog with the General, Opening Script, Escalation, Document, and Closing Script tabs.

General Tab

Task Name and Description

This is where you name your task and give it a description. It will also list the possible sources for this task, that is, which tasks can direct CRbuilder to the current task.

Incoming Task Logic

This is where you set the logical statements that determine the conditional processing of the incoming task. You can add source tasks on the fly, as well as create empty **AND** or **OR** groups, which you use to create nested logic statements. The logical statements are described below.

Inserting Logical Statements

AND or OR Groups

This is where you resolve incoming task logic for tasks that have more than one incoming route.

For example, consider the model in Figure 30-4, below. Note that Task B and Task C are both source tasks for Task D. Depending on how you wanted to model the business rule, Task D could require both Task B and Task C to complete before starting. To accomplish this, you would insert an *AND* statement.

Or, Task D could be allowed to start after either Task B or Task C is complete. To accomplish this, you would insert an *OR* statement.

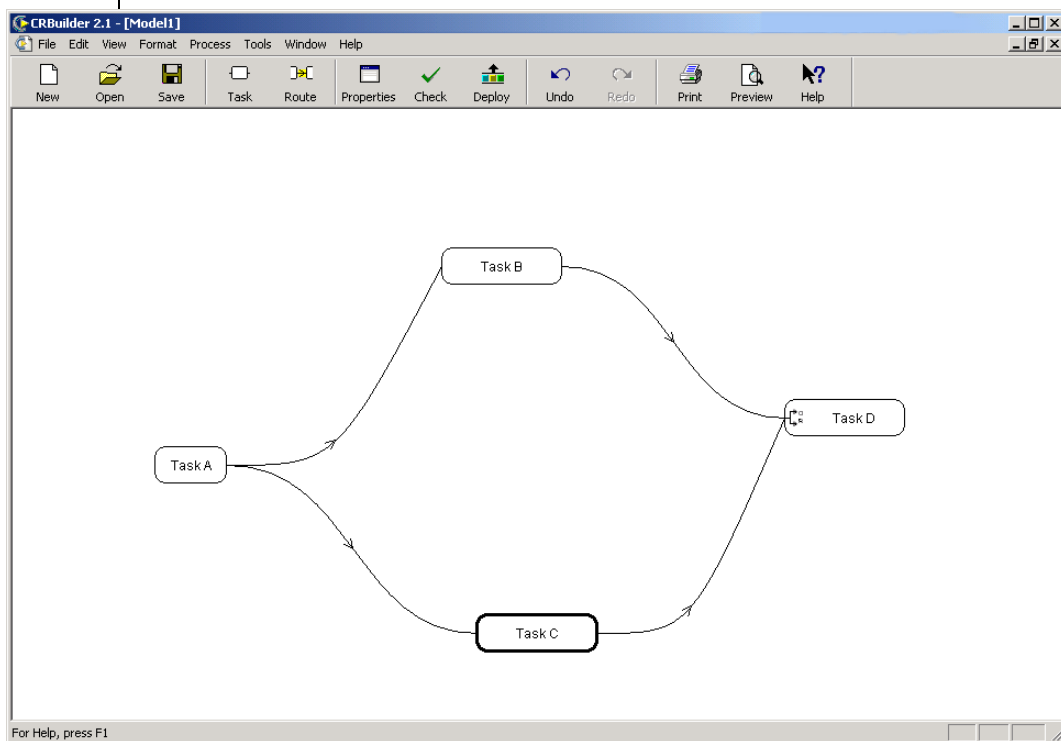


Figure 30-4. A CRbuilder process that requires a AND or OR group

If you want to ensure that Task D does not start until both Task B and Task C have completed, you would insert an **AND** group in the **General** tab of Task D (see Figure 30-5, below).

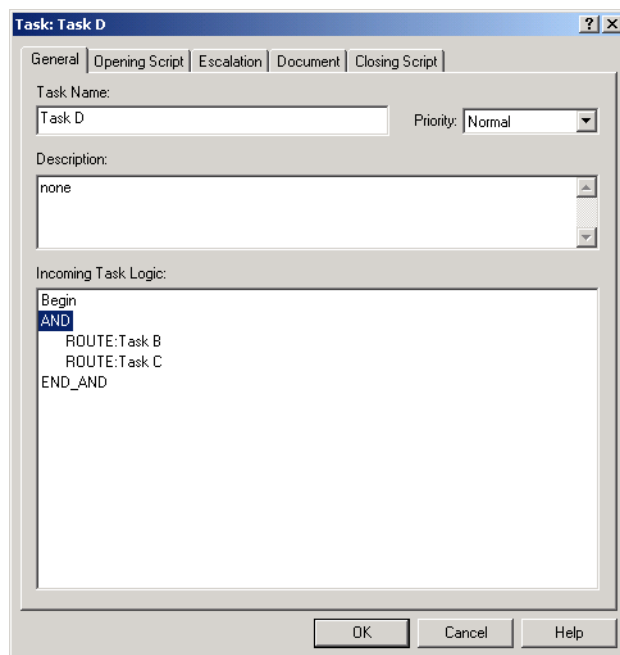


Figure 30-5. Task D with a new AND group inserted.

If, on the other hand, you want to make Task D start after Task B completes, and another instance of Task D start after Task C completes, you would insert an *OR* group (see Figure 30-6 below).

Task: Task D

General | Opening Script | Escalation | Document | Closing Script

Task Name: Task D Priority: Normal

Description: none

Incoming Task Logic:

```

Begin
OR
  ROUTE:Task B
  ROUTE:Task C
END_OR
  
```

OK Cancel Help

Figure 30-6. Task D with a new OR group inserted.

If you want Task D to start after either Task B or Task C is complete, you would insert an *OR* statement.

Inserting AND or OR Statements

- ❶ Click on the **General** tab, then click in the Incoming Task Logic screen area.
- ❷ Right-click on the Begin statement in the Incoming Task Logic area, and select either **Form an AND group** from the **Insert AND** drop-down menu; or select **Form an OR group** from the **Insert OR** drop-down menu (see Figure 30-7, below).

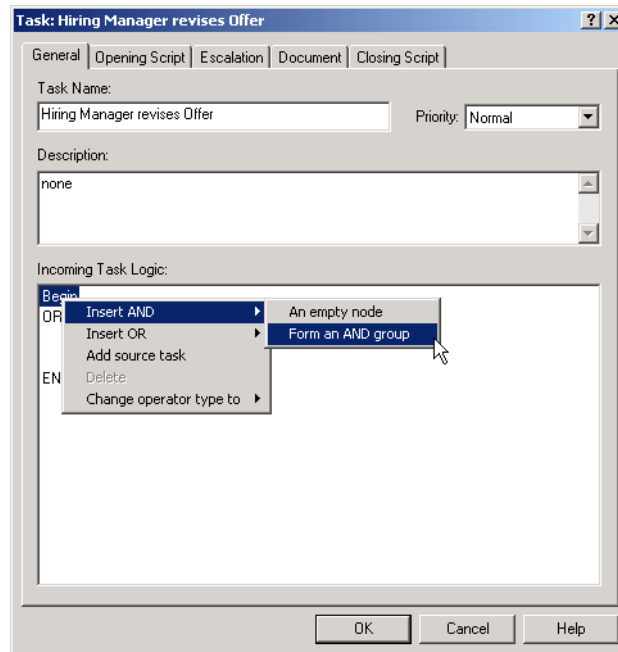


Figure 30-7. Task with Insert AND group drop-down menu.

The appropriate statement will appear in the **Incoming Task Logic** field. Click **OK**. The routes will be appropriately nested. If they are not, click on the route and drag it to the correct location in the **AND** or **OR** statement.

To Add Source Task

The Add Source Task function automatically adds a source task and route linked to the task you are currently working in. This is a convenient way to create new tasks on the fly if you are scripting CRbuilder logic and realize that you need another input step. The new task will be correctly nested within the **OR** or **AND** group.

- ❶ Right-click on the Begin statement, and select **Add Source Task** from the drop-down menu (see Figure 30-8, below).

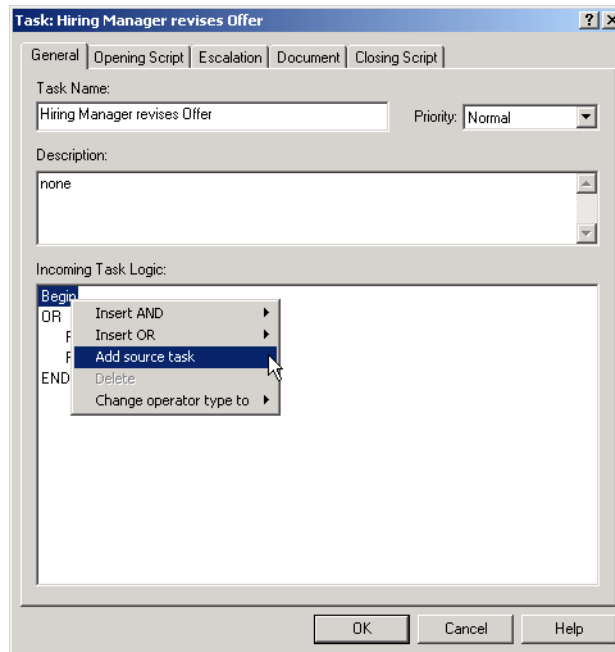


Figure 30-8. New Add Source task being inserted into Manager Review task.

- ② The Input dialog appears. Type the name of task you want to create in the **Source Task Name** field. Compare your work to Figure 30-9, below. Click **OK**.

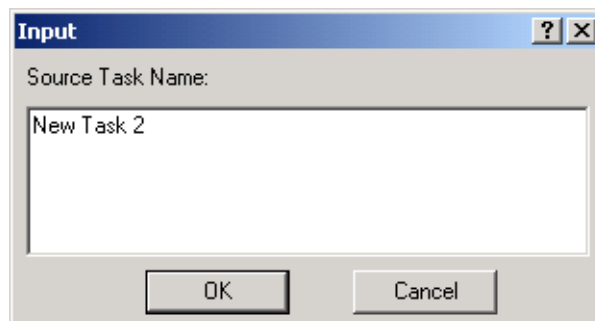


Figure 30-9. Source Task Name dialog with new task name entered.

- 3 Note that the new task is linked to the task you are currently working in, and appears above it. You can move the task to a new position if you wish.

Inserting Empty Nodes

You can insert empty nodes for *OR* and *AND* groups if you want to manually arrange the task and route logic within the *OR/AND* operation instead of having CRbuilder do it for you.

- 1 Right-click on the General tab, then right-click on the Begin statement, and select **Insert Empty Node** from either the **Insert AND** or **Insert OR** drop-down menu (see Figure 30-10, below).

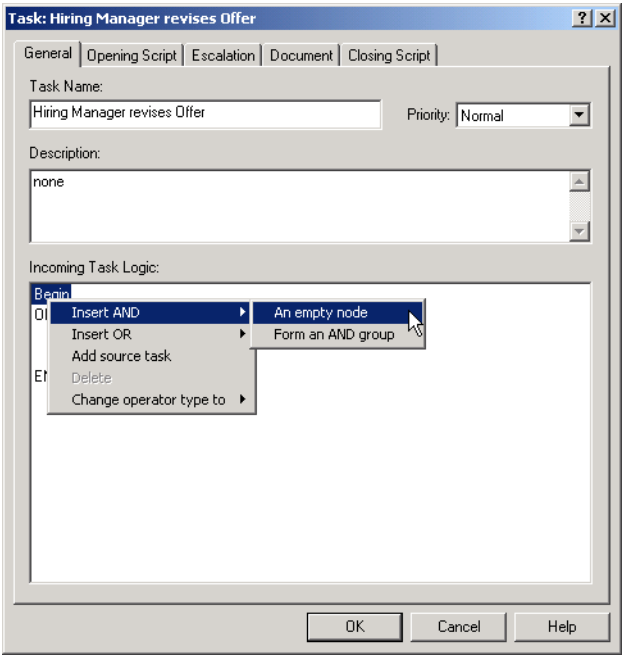


Figure 30-10. You can insert an empty node or form an *AND* or *OR* group.

- 2 The empty logic block appears. Now click and drag the routes into the appropriate location in the statement.

Change Operator Type To

If you want to change an *AND* group to an *OR* group, or vice-versa, the Change Operator type function is a convenient way to modify the operator type without deleting or reinserting anything.

Once you've inserted an operator group, simply click on the first AND or OR, select the available operator from the Change operator type to drop-down menu. Your operator type will automatically change to the new setting (see Figure 30-11, below).

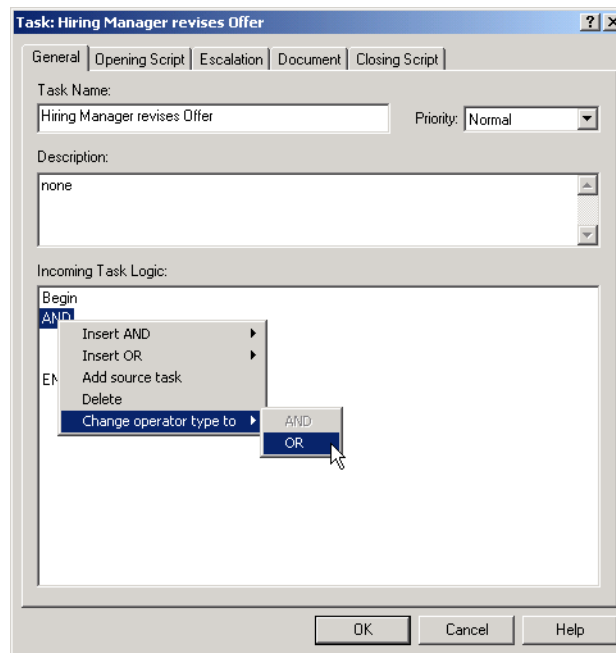


Figure 30-11. General tab with *Change operator type to* function selected

Data Elements Tab (Initial task only)

Defining Data Elements

This is where you can associate a document, (such as an Active Server Pages file) with a task and define the data elements that will hold the values sent to the CRbuilder engine. The value held by the data element is usually determined by user input, such as clicking on an ASP page. You must define these elements because CRbuilder needs to know what to do with any data elements being sent from the ASP page.

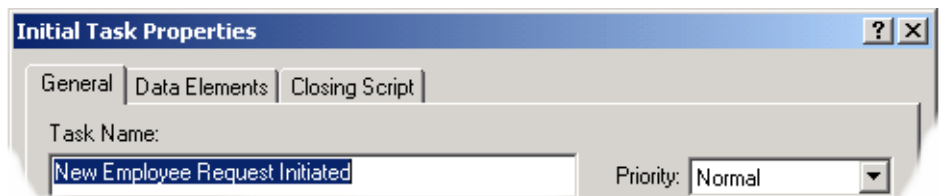


Figure 30-12. The Data Elements tab is where you can manually add data elements, or associate a document (such as an .ASP page) with the task and define any data elements that will be sent by the CRbuilder engine.

There are two ways to define data elements:

- If you have a document you want to associate with the task, select it and any data elements embedded in the document are automatically read into the task. You would then define the data type and whether the data element is required.
- Manually add data elements. If you do this, you will need to define all aspects of the data element.

Note

For more detailed information about creating and using data elements, see Chapter 32, "Data Elements."

Opening and Closing Script Tabs

The **Opening** and **Closing Script** tabs are where you will set the value of data elements and define and set the rules and logic that will be run on this task (refer to Figure 30-13, below).

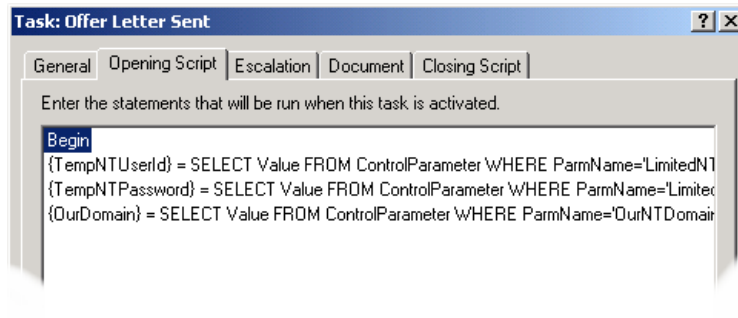


Figure 30-13. Offer Letter Sent task with Opening and Closing Scripts.

The menu structure is based around available script items (see Figure 30-14, below).

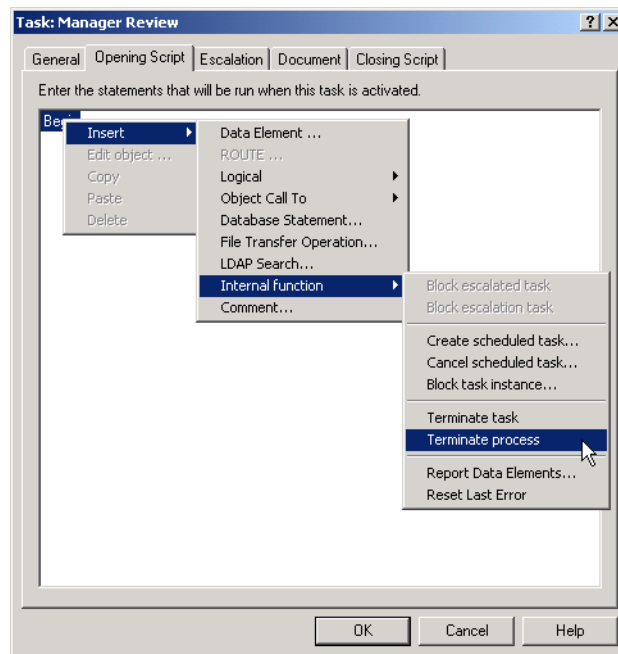


Figure 30-14. Opening Script tab with scripting menus displayed.

The **Opening Script** tab has five main functions and 13 sub-functions.

The **Closing Script** tab has six main functions and 13 sub-functions (which it shares with the **Opening Script** tab). Each of these can be used accessed by going to the appropriate tab, right-clicking on the **Begin** statement, and selecting the function you want to use from the Insert drop-down menu. The functions are:

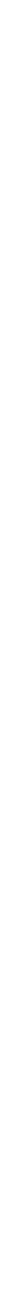
- **Data Element:** Lets you create data elements and set their values.
- **Route (Closing Script only):** Lets you create a route linking two or more tasks together.
- **Logical:** Lets you insert If/Then statements to manipulate the task logic.
- **Object Call To:** Lets you insert COM, CORBA, SOAP, and EJB Objects that can carry out other functions, such as communicating with other software applications.

- **Database Statement:** Lets you build an ODBC database query to extract information from a database.
- **File Transfer Operation:** Lets you insert FTP, HTTPS, SCP, or HTTP statements so that you can send or receive files via FTP sites or the Internet.
- **LDAP Search:** Lets you search for individuals or resources (such as files and devices) in a network.

Internal Functions:

- a. **Block Escalated Task:** This function is available only in the Closing Script of an escalated task. It prevents the escalation task from being completed.
- b. **Block Escalation Task:** This function is available only in the Closing Script of an escalated task. It prevents the escalation task from being executed.
- c. **Create Scheduled Task:** Creates a task that activates after a specified time period.
- d. **Cancel Scheduled Task:** Stops the execution of a scheduled task.
- e. **Block Task Instance:** This function “kills” an instance of a task. This is useful when you have multiple branches running simultaneously in your process, and the results of one branch causes you to want to stop a different branch.
- f. **Terminate Task:** “Kills” the task instance.
- g. **Terminate Process:** “Kills” the process instance.
- h. **Report Data Elements:** A debugging tool that records the current value of data elements at a specific point in the CRbuilder process. This information is written out to the Windows Event Log for review.
- i. **Comment:** Lets you insert explanatory comments about the task logic that can be read by other developers.

We will cover each of these in detail in the following section.



Chapter 31

Scripting Functions

Data Elements

As mentioned earlier, the **Opening** or **Closing Script** tab is where you create task data elements, as well as assign values to process data elements and task data elements. Remember: the value of using data elements is that they are much more flexible and allow you to reuse information powerful than simply hard-coding information everywhere it occurs.

Creating Data Elements

- ❶ To create a data element, double-click on any task, select the **Opening** or **Closing Script** tab, right-click on the Begin statement, then select **Data Element** from the **Insert** drop-down menu. The Task Data Element dialog appears.
- ❷ Type the name of the data element you are creating in the Data Element drop-down list. Or you can select a data element that you want to map from the list.
- ❸ Select the data type from the data type drop-down list.
- ❹ Drag a data element from the Available Data Elements window. This is the data element that you want to map to the new data element (see Figure 31-1, below).

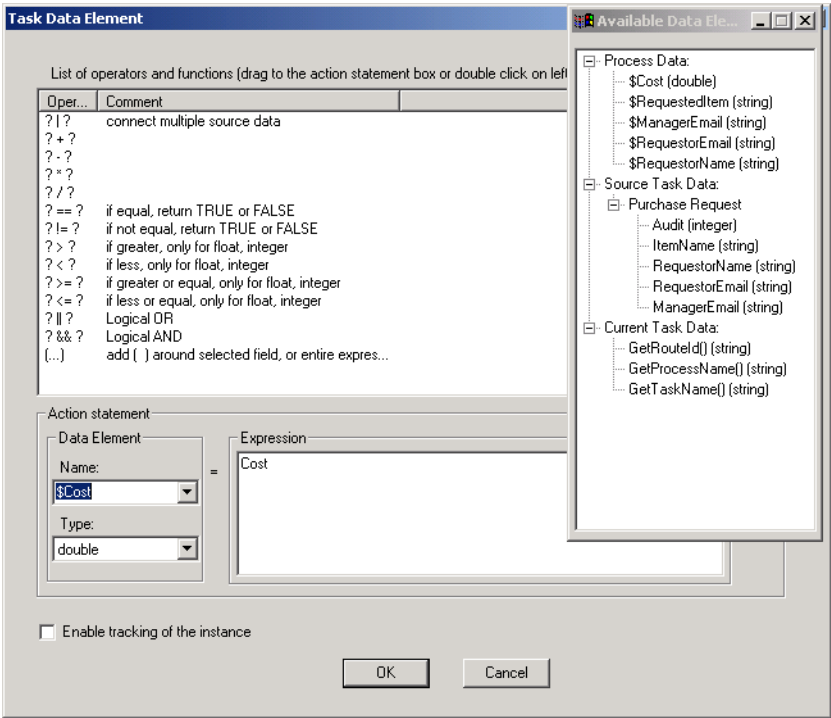


Figure 31-1. The Task Data Element dialog with the data element \$Cost being set to take the value of the Cost data element.

- 5 Click **OK** to save your work. You will see the data element inserted into the **Opening** or **Closing Script** tab

As mentioned earlier, once you have created data elements, you can configure them to hold information from virtually any data source (see Figure 31-2, below).

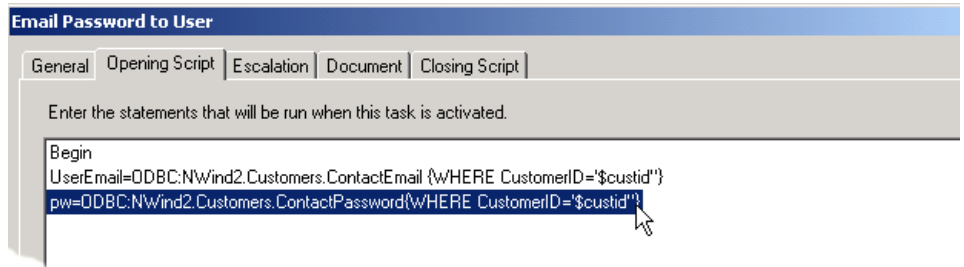


Figure 31-2. A task configuration dialog's **Opening Script** tab. In this example, we've configured two data elements (variables) to hold information that was read from a database.

Routes

This function is only available in the **Closing Script** tab. It lets you add a route from the current task to another existing task, or create an entirely new task. In the example below, a route is being added from Task D to a new task called New Task.

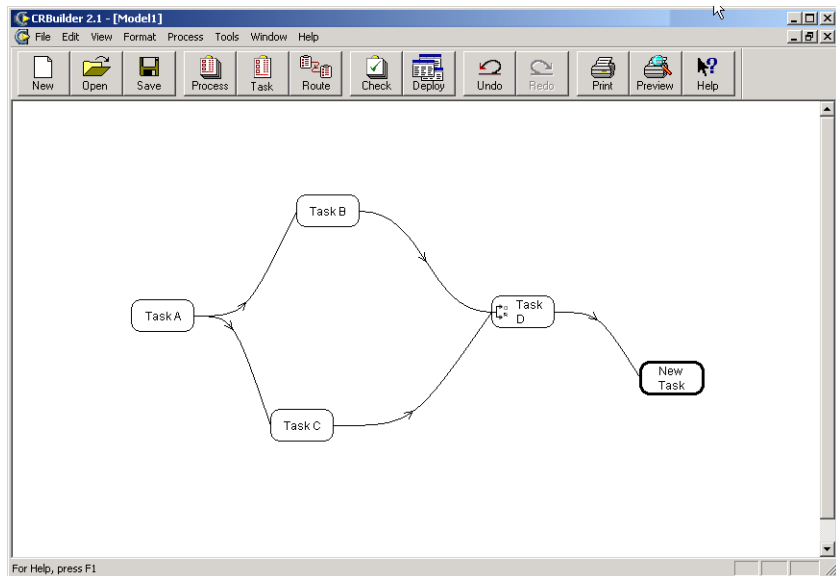


Figure 31-3. A CRbuilder process with new task being added and linked to Task D.

Adding a Route

To add a new route, click **Route** in the toolbar, then click on the two tasks you wish to have linked. The route will appear.

—Or—

- ❶ To add a new route, double-click a task. The Task Configuration dialog appears. Click the **Closing Script** tab (this function only works in the Closing Script tab).
- ❷ Right-click on the Begin statement and select **ROUTE**, from the **Insert** drop-down menu. The Target Task dialog appears. Type the name of the task you want to add a route. Or, double-click on a task name from the list of tasks (see Figure 31-4, below).

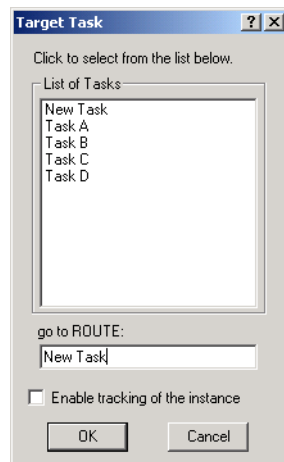


Figure 31-4. Target task dialog with new task.

- ③ Click **OK**. The new task and route has been added to your process.

Logical

The Logical menu item is where you insert *If/Then* Statements. If/Then Statements are a way of creating conditional processing. When you use If/Then statements, you are creating an either/or situation in which one or another occurrence will happen, but not both. These are required when you have conditional branching in your CRbuilder process.

For example, you could create an If/Then statement that says, if Data Element=1, then go on to Task 2, else go to Task 3. An English reading of this would translate as, “if the Data Element receives a value of 1, move on to Task 2. If the Data Element receives a value other than 1, move on to Task 3.”

When you choose an IF statement, the IF statement builder window appears. Use the list of operators and functions to build the IF portion of an IF-Then-Else statement. Note that the double equal (“==”) denotes equality, while a single equal (“=”) denotes assignment.

Inserting If/Then Statements

- ❶ To insert an If/Then statement, double-click on any task. The Task Configuration dialog appears.
- ❷ Select the **Opening Script** or **Closing Script** tab, right-click on the Begin statement, select **Insert**, select **Logical**, then select **IF(...)THEN** (see Figure 31-5, below).

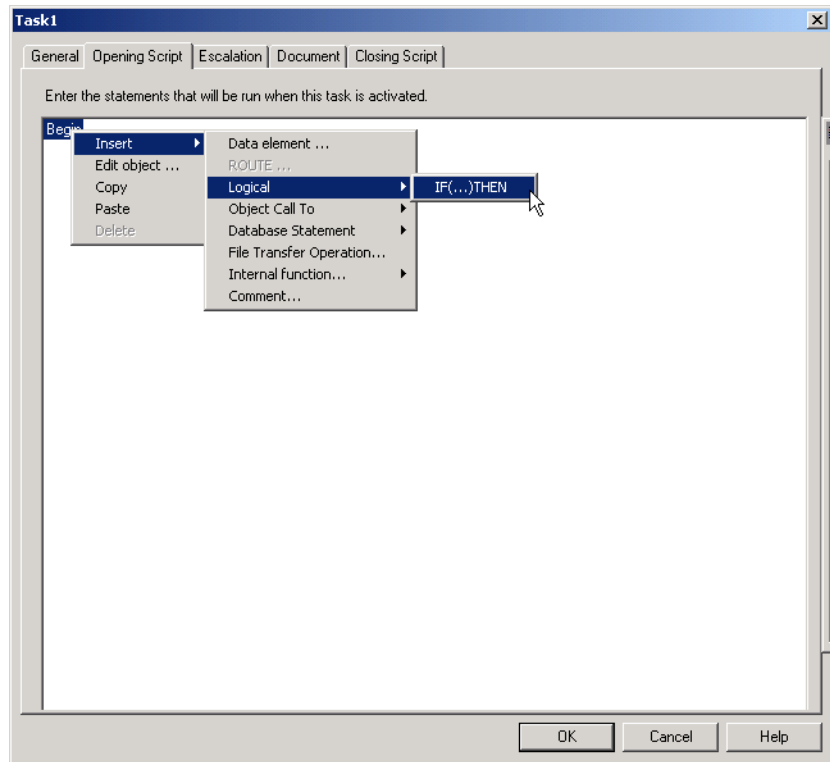


Figure 31-5. Opening Script tab with new If/Then statement being inserted.

- ③ The Task Data Element dialog appears. This is where you build your If/Then Statement using data elements and operators or functions (see Figure 31-6, below).

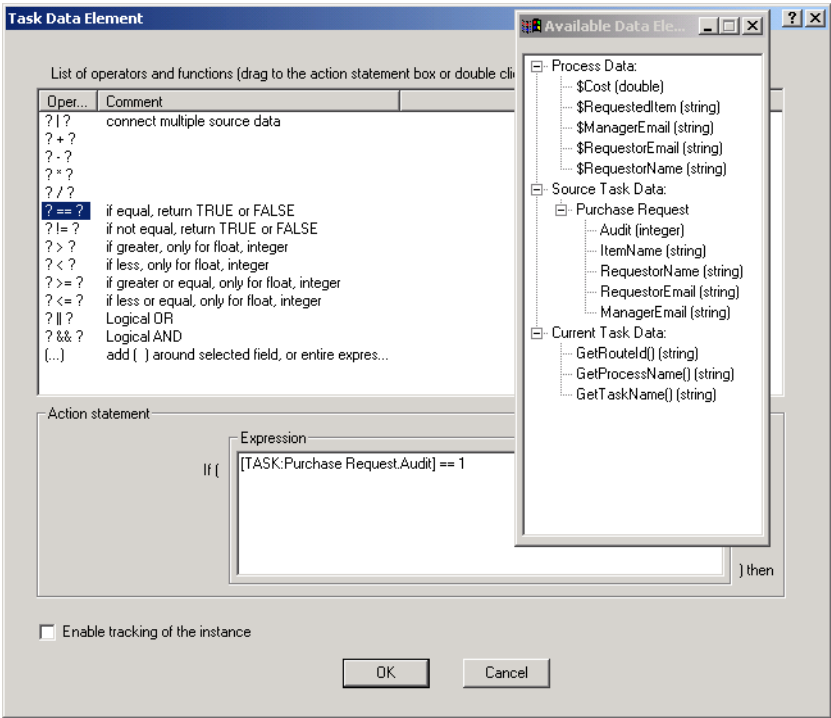


Figure 31-6. Building an If/Then Statement with the Audit data element.

- 4 Click on the data element you want to use and drag it into the **Expression** field. Note that it is bracketed by the **If** statement on the left, and the **Then** statement on the right.

Note

For more information about the different types of operators, see “Using Operators” on page 31-37.

- 5 Next, double-click on the operator you want to use. The operation determines the logic of the way in which If/Then statement interacts with the data element
For example, if you select a data element of \$Cost, you could double click on the ? > = ? operation. You could then type 2000 where the second ? is. In this instance, the **If/Then** statement would be driven by the value of whether the \$Cost data element equals 2000.
- 6 Click **OK**. You are now back in the Task Configuration dialog. Note that

your If/Then statement is nested under the Begin statement. You can now set the flow of the If/Then logic by inserting script on either side of the If/Then statement.

Object Call To

Use the *Object Call To* menu to insert COM, CORBA, SOAP, and EJB objects in your CRbuilder process. All of these object types allow you to expand the modeler's functions by letting your process communicate with other applications or data sources. For example, you could create a CORBA object that goes to a regularly updated database and finds the current value of the Euro, and then translates that value into American dollars. You could then write that value to a process data element so that it could be used in every task of your process.

Using COM Objects

COM (Component Object Model) is a set of standard API's (Application Programming Interfaces) and tools that allow programmers to develop client applications that use common objects across remote servers. COM and its extension, Distributed COM, were developed by Microsoft® and their use results in reusable objects that are language independent, can be distributed in binary form, upgraded without recompilation, and implemented on different machines.

As mentioned earlier, you can integrate COM into your CRbuilder process in order to extend the range of the CRbuilder's functions; COM objects can communicate with other applications or data sources.

COM Objects are comprised of classes. Those classes are comprised of properties and methods. Those methods may have parameters. When you load a COM Object into the modeler, you are selecting methods and properties of that object and associating them with a data element to carry out certain functions.

See "Using COM Objects" on page 37-14 for more information on using COM Objects in your CRbuilder process.

Using CORBA Objects

CRbuilder can use the Common Object Request Broker Architecture (CORBA) to communicate with other applications and data sources on your network. CORBA is a specification for creating, distributing, and managing distributed objects in a network.

See "Using CORBA Objects" on page 37-18 for more information on using CORBA Objects in your CRbuilder process.

Using SOAP

Simple Object Access Protocol (SOAP) uses XML and HTTP to access services, objects, and servers in a platform-independent manner. Acting as the glue between heterogeneous software components, SOAP provides intra-process communication across machines. CRbuilder lets the user choose a SOAP endpoint and then create the methods and parameters of the SOAP object.

See “Using Simple Object Access Protocol (SOAP)” on page 37-6 for more information on using Soap Objects in your CRbuilder process.

Using Enterprise Java Beans (EJB)

CRbuilder can use Enterprise Java Beans (EJB) architecture to communicate with other applications or data sources. EJB is a way of setting up program components, written in Java, that run in the server parts of your computer network.

See “Using Enterprise Java Beans” on page 37-1 for more information on using Enterprise Java Beans in your CRbuilder process.

Database Statement

ODBC

There may be instances when you want to structure a CRbuilder process to include information extracted from a database. CRbuilder lets you query a database for information (such as an employee ID number), create a set of criteria to filter that information, and then insert that information into a logical expression. You can also update, insert, and delete rows in a database.

To do this, CRbuilder uses ODBC, the industry-standard database communication protocol. You will need to manually build the query syntax that defines the exact location of any external databases for CRbuilder.

See “Database Connectivity” on page 36-1 for more information about ODBC and extracting information from databases.

LDAP

CRbuilder includes LDAP (Lightweight Directory Access Protocol) functionality that lets you search for organizations, individuals, and other resources (such as files and devices) in a network. LDAP is particularly useful for looking up e-mail addresses. Whatever data you're looking for, the results of your search can be written to a data element and inserted into your CRbuilder process logic.

For more information on using LDAP in your CRbuilder process, see See “Using Lightweight Directory Access Protocol” on page 37-10.

File Transfer Operation

Overview

The File Transfer operation lets you insert FTP (File Transfer Protocol), HTTP, SCP (secure copy) and HTTPS (GET and POST) statements into your CRbuilder process. These statements consist of a document source, a document target, and one of four operations.

These operations let you download or upload files or Web pages from an Internet URL or FTP location to a local shared server or other URL or FTP location.

Using Data Elements

To do this, you will create a data element that will be used in one of the following four ways:

- ❶ The data element contains the name of the file created after the file transfer operation.
- ❷ The data element contains the name of the source file of the file transfer operation.
- ❸ The data element will contain the contents of the remote file or URL after the file transfer is complete.
- ❹ The data element contains the source data to be sent to the designated URL in the transfer operation.

In options one and two, the data element must contain a valid network path relative to the engine server.

File Transfer Options

You can choose from one of four data transformation options.

Will be the name of the file to be retrieved from

This option downloads files from an Internet location to a local NETBIOS path. If the transfer was successful, a data element you select will contain the name of the local file that was transferred. This file name is assigned by the CommerceRoute server. Examples of valid local paths are:

- C:\incomingfile (local to the CommerceRoute server machine)

- `W:\incomingfile\` (where W is a mapped network drive on the Syncx appliance)
- `\\server1\share1\incomingfile` (UNC type path)

To specify a source location of the file, select a protocol (e.g., http/ftp) and a URL. These two elements together form the source location.

Is the name of the file to be sent to

This option uploads files from a local location to a URL on the Internet. To do this, you must create a data element that contains the name of the source file of the operation. The data element must contain a valid local path relative to the engine server. Examples of valid local paths are:

- `C:\incomingfile` (local to the CommerceRoute Server machine)
- `W:\incomingfile\` (where W is a mapped network drive on the CommerceRoute server machine)
- `\\server\share1\incomingfile` (UNC-type path)

To specify a target location, select a protocol (e.g., http/ftp) and a URL. These two elements together form a target location.

Will be the contents of the file to be retrieved from

This option retrieves Web page results (HTML) or text/XML data from a URL and then writes them to a data element. This data element contains the contents of the remote file or URL after the operation is complete.

To specify a source location of the file, select a protocol (e.g., http or ftp) and a URL. These two elements together form the source location.

Is the contents of the file to be file to be sent to

This option sends data in the specified data element to the URL. Web page results (HTML) or text/XML data from an FTP location or an HTTP location to a URL on the Internet. To do this, you must create a data element that contains the source data to be sent to the designated URL in the transfer operation.

To specify a target location, select a protocol (e.g., http/ftp) and a URL. These two elements together form a target location.

File Transfer Protocol Options

Once you have selected a data element, and one of the four file transfer options, (e.g., will be the contents of the file to be retrieved from) you must select a file transfer protocol.

The file transfer protocol, along with the URL, forms either a source or target location. You have five options. Which option you choose depends on the location of the file you are either “getting” or “putting.”

- **File:** Use this option if the file you are getting or putting is in a fileshare location, such as `c:\server\share\filename`. After you select this, type the network path to the file in the URL field.
- **FTP:** Use this option if the file you are getting or putting is on an FTP server. After you select this, type a valid URL address to the FTP server in the URL field.
- **HTTP:** Use this option if the file you are getting or putting is on a Web server. You can optionally use HTTPS if you need the transaction to be secure. After you select this, type a valid URL for a Web server in the URL field.
- **HTTPS:** Use this option if the file you are getting or putting is on a Web server, and the transaction must be secure. You can optionally use HTTP if the transaction doesn't need to be secure. After you select this, type a valid URL for a Web server in the HTTPS field.
- **SCP:** Use this option if the file you are getting or putting is on a Unix machine and you want to use SCP keyrings. After you select this option, type the valid address to a Unix machine.

Example File Transfer Operation

In this example, we will create a **will be the contents of the file to be retrieved from** file transfer operation.

- ❶ To insert a file transfer operation, double-click on any task, select the **Opening or Closing Script** tab, right-click on the Begin statement, then select **File Transfer Operation** from the **Insert** drop-down menu. The File Transfer dialog appears.
- ❷ Select or enter the **Data Element** you want to use from the available data elements in the drop-down data element list.

- ③ Select the **will be the contents of file to be retrieved from** operation from the second drop-down list.
- ④ Select **FTP** from the list of transport protocols.
- ⑤ Type a valid FTP location and path to the source data (see Figure 31-7, below).

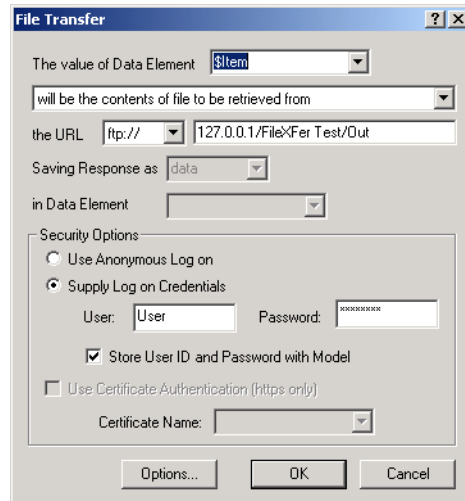


Figure 31-7. Select the data element you want to associate with the file operation, then select the desired file transfer option.

Note

You must have created a data element (of type “String”) that will refer to the file information that will be retrieved. See Chapter 32, “Data Elements” for more information about creating data elements.

- ⑥ If you wish, select a security options:
 - a. Click the **Use Anonymous Logon** if you don’t need to enter a user ID and password.
 - b. Click **Supply Logon Credentials**, then enter your username and password.

Note

If you wish to save your username and password information, click the **Store User ID and Password** with Model checkbox.

Using HTTPS

If you are using HTTPS, you have the option of using certificate authorization. The certificate authorization ensures that your file transfer operation is encrypted and secure.

- ❶ Click **Use Certificate Authentication** checkbox.
- ❷ Enter or select your security certificate name.
- ❸ Click **OK**.

Note

For more information about security certificates, please contact your Syncx appliance administrator or your system administrator.

Using SCP

If you are using SCP (Secure Copy Protocol), you must enter your user ID information.

- ❶ Enter your user name in the **User** field.
- ❷ Enter your password in the **Password** field.
- ❸ Click **OK**.

Internal Functions

Internal functions let you tailor CRbuilder process logic to accommodate unique circumstances in your automated business process. For example, you might want to create an escalated task that's assigned to a manager's manager after a certain time period has elapsed. You could then use a block escalated task so that once the task had escalated, the person to whom the task was originally assigned will be unable to complete it. At that point, the task can *only* be completed by the Manager's manager. All the internal functions are listed below:

Block Escalated Task

This function is available in the escalation task. It prevents the escalated task from being executed. Escalation tasks let you create CRbuilder process logic in which tasks that are time sensitive are activated or killed after a certain time to ensure that key tasks are completed within a specific time frame.

For example, you could create a CRbuilder process in which immediately after escalation occurs, the escalation task is "blocked," that is, no messages are processed for the current instance of the task. Any attempts to send messages for the task are ignored by the CommerceRoute engine, and the person assigned to that task will be unable to complete that task.

Note

The Block Escalated Task function can only be called from an escalation task.

- ❶ To block an escalated task, click on an escalation task, then click the **Closing Script** tab, right-click on a statement, select the **Insert** drop-down menu, select the **Internal Functions** drop-down menu, and select **Block Escalated Task** (see Figure 31-8, below).

Note

See Chapter 33, "Escalation & Document Tabs" for more information about escalation practices.

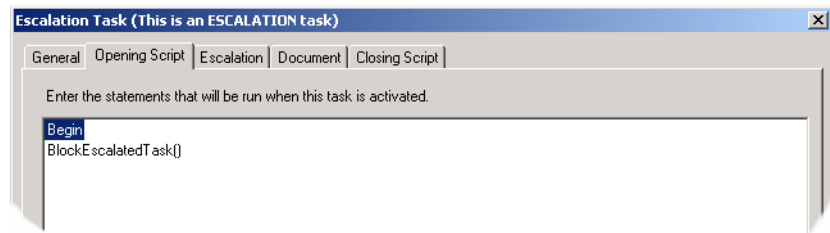


Figure 31-8. Inserting a Block Escalated Task function in the Closing Script.

The **Block Escalated Task** function is now inserted in the **Closing Script** CRbuilder process logic. It can be identified by the **BlockEscalatedTask()** command in the **Closing Script** tab (refer Figure 31-9, below).

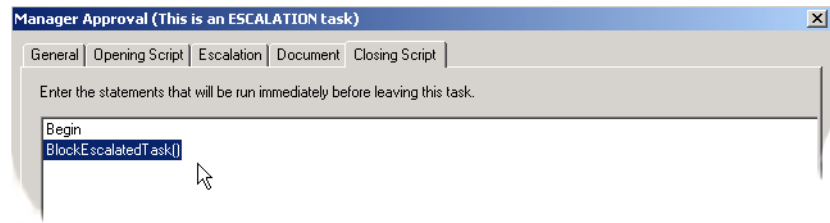


Figure 31-9. The Manager Approval escalation task with the BlockEscalatedTask() function.

Block Escalation Task

Like the **BlockEscalatedTask()** function, the **BlockEscalationTask()** function blocks one of the tasks involved in an escalation. It is called from the escalated task and blocks the escalation task from completing.

Note

To use the Block Escalation Task function, you must first create an escalation task. If you don't know how to do this, please refer to the "Escalation" section for more information on creating escalations.

- ❶ Click on an escalated task, then click the **Closing Script** tab, right-click on a statement, select the **Insert** drop-down menu, select the **Internal Functions** drop-down menu, and select **Block Escalation Task** (see Figure 31-10, below).

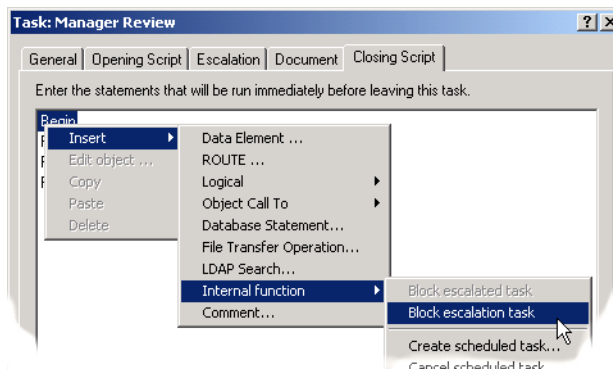


Figure 31-10. The Manager Review escalated task with the `BlockEscalationTask()` being inserted.

Note

For more information about escalation practices, see Chapter 35, “Advanced Escalation Scenarios.”

The **Block EscalationTask** function is now inserted in the **Closing Script** CRbuilder process logic. It can be identified by the **Block EscalationTask()** command in the **Closing Script** tab (refer Figure 31-11, below).

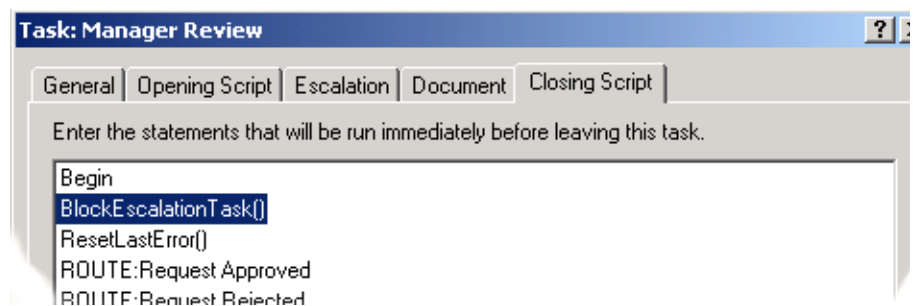


Figure 31-11. The Manager Review escalated task with the `BlockEscalatedTask()` function.

Create Scheduled Task

This function lets you create a task to be run at a later date. In Figure 31-12, below, a new task called Future Task is created and scheduled to run one week after the script is executed. You can also use a data element containing the

relative scheduled time.

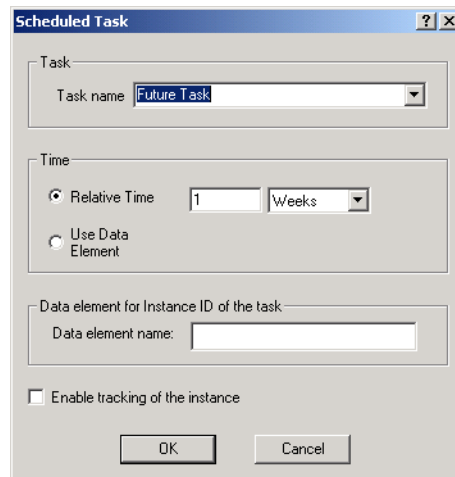


Figure 31-12. Scheduled Task dialog with a new task called Future Task.

- ❶ To create a scheduled task, click on the **Opening** or **Closing Script** tab, right-click on a statement, select the **Insert** drop-down menu, select the **Internal Functions** drop-down menu, and select **Create Scheduled Task** (see Figure 31-13, below).

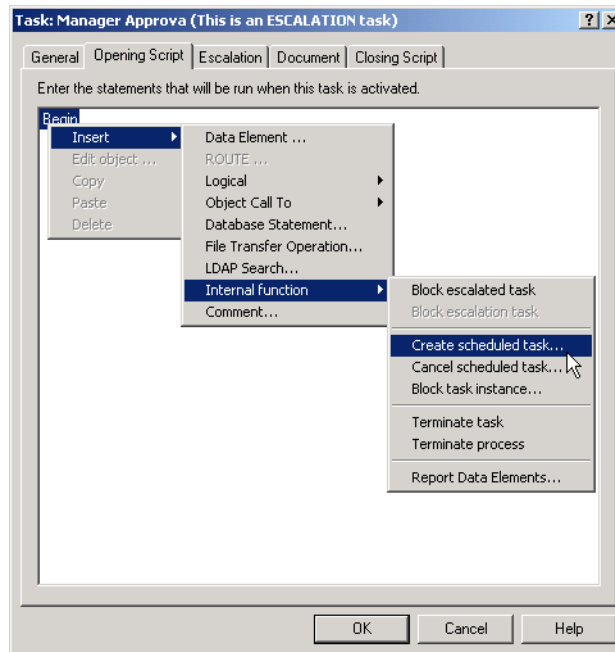


Figure 31-13. Creating a Scheduled Task.

The Scheduled Task dialog appears (see Figure 31-13, above).

- ② Type the task name in the **Task Name** field.
- ③ Click either the **Relative Time** radio button or the **Use Data Element** radio button.
- ④ If you selected the **Relative Time** radio button, select a unit of time (e.g., minutes, hours, days, weeks) from the drop-down list. Type the number of units (e.g., 1 week).
- ⑤ If you selected the **Use Data Element** radio button, select the data element you want to use from the drop-down list.
- ⑥ If you want to track the instance ID of this Scheduled Task, type the name of the data element that will hold the Instance ID.
- ⑦ Click **OK**. The Scheduled Task will now appear in your CRbuilder process linked the current task. The clock icon identifies it as a Scheduled Task (see Figure 31-14, below).

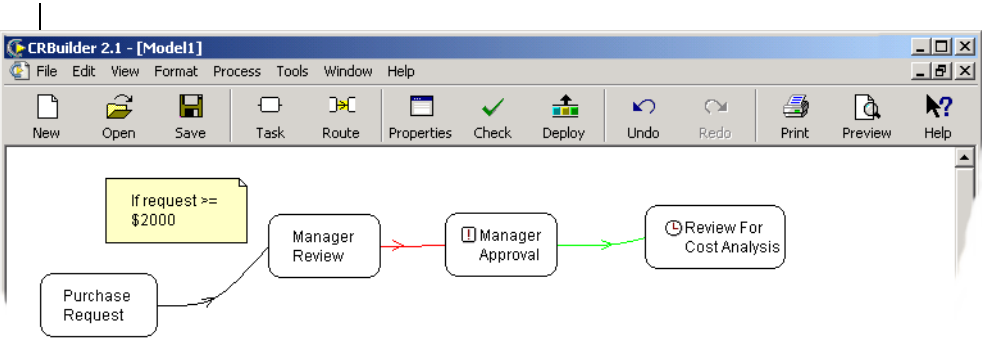


Figure 31-14. A CRbuilder process with new scheduled task.

Cancel Scheduled Task

This function lets you stop a previously scheduled task from executing.

- 1 To cancel a scheduled task, click on the **Opening** or **Closing Script** tab, right-click on a statement, select the **Insert** drop-down menu, select the **Internal Functions** drop-down menu, then select **Cancel Scheduled Task** (see Figure 31-15, below).

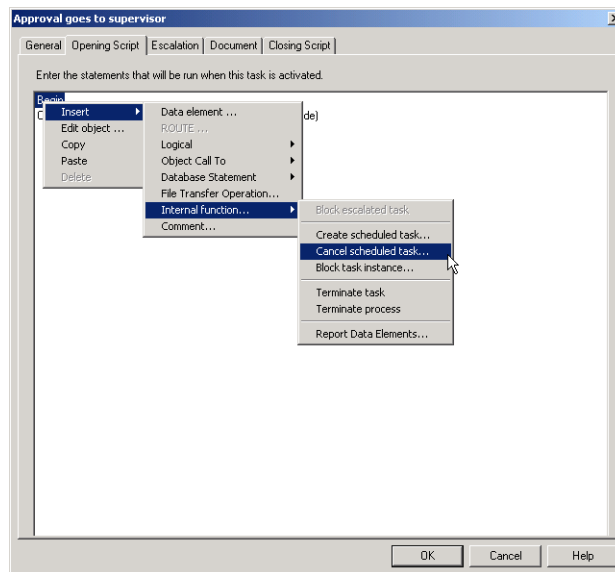


Figure 31-15. Task Configuration dialog with the Cancel Scheduled Task function selected.

- 2 The **Cancel Scheduled Task** dialog appears. Select the name of the task you want to cancel from the drop-down list.
- 3 Type the name of the data element that contains the task instance ID. This is the data element that you specified in the Create Scheduled Task (See Figure 31-16, below).

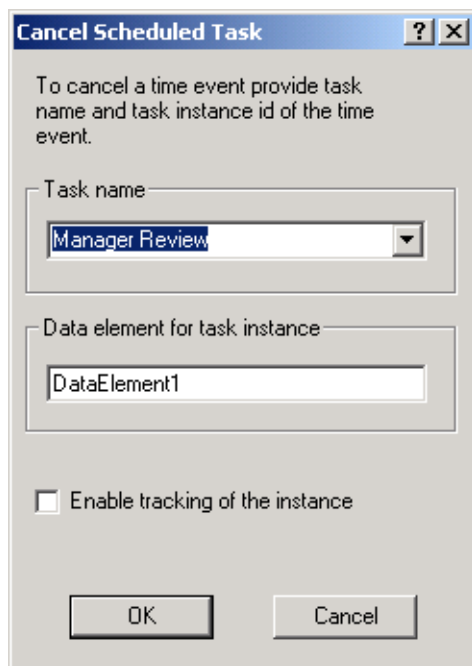


Figure 31-16. Cancel Scheduled Task dialog with Task name and a data element containing task instance ID.

- ④ Click **OK**. The Cancel Scheduled Task function is now inserted into your CRbuilder process script.
- ⑤ To edit the canceled task, simply double-click on the newly inserted script function. The Cancel Scheduled Task dialog appears and you can change all values.

Block Task Instance

This function lets you kill a particular instance of a task.

- 1 To block a task instance, click on the **Opening** or **Closing Script** tab, right-click on a statement, select the **Insert** drop-down menu, select the **Internal Functions** drop-down menu, then select **Block Task Instance** (see Figure 31-17, below).

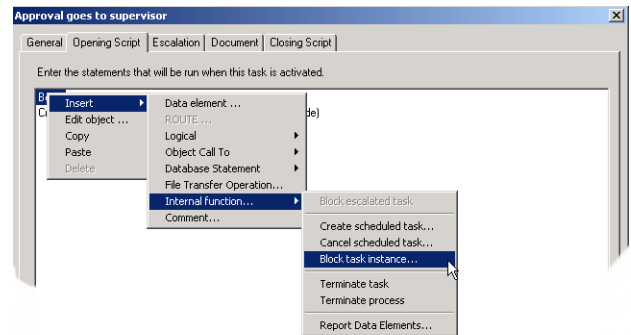


Figure 31-17. Task Configuration dialog with the Block Task Instance function selected.

- 2 The Block Task Instance dialog appears. Select the name of the task you want to block from the drop-down list.
- 3 Type the name of the data element that contains the task route ID. (See Figure 31-18, below).

Note

You can get the route id of a task by using the `GetRouteID()` data element from the Available Data Elements window. You would do so in the task whose instance you want to block.

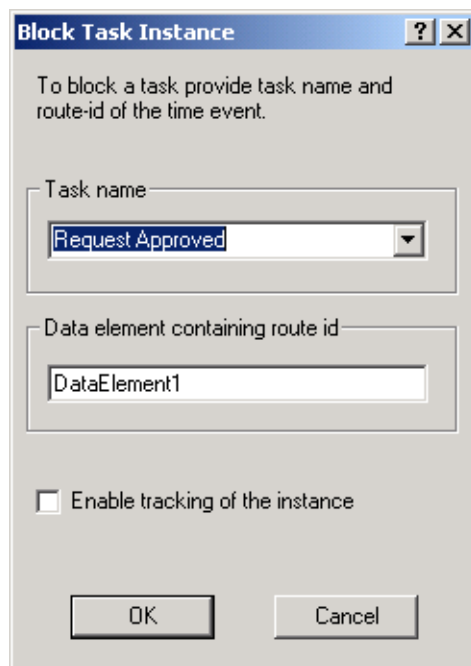


Figure 31-18. Block Task Instance dialog with Task name and a data element containing route ID.

- ④ Click **OK**. The Block Task Instance function is now inserted into your CRbuilder process script. This task instance will be blocked the next time this process runs.
- ⑤ To edit the blocked task, simply double-click on the newly inserted script function. The Block Task Instance dialog appears and you can change any values you wish.

Terminate Task

This function lets you stop any further processing of the current task instance.

- 1 To terminate a task, click on the **Opening** or **Closing Script** tab, right-click on a statement, select the **Insert** drop-down menu, select the **Internal Functions** drop-down menu, then select **Terminate Task** (see Figure 31-19, below).

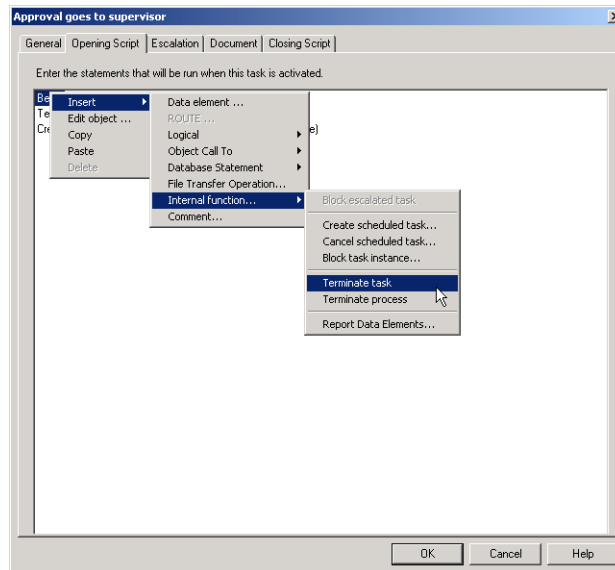


Figure 31-19. Opening Script tab with the Terminate Task function selected.

- 2 The terminate task function is inserted into the CRbuilder process script. To delete the terminate task function, right-click on it and select **Delete** from the drop-down menu.

Terminate Process

This function lets you halt any further processing of the current process instance.

- 1 To terminate a process, click on the **Opening** or **Closing Script** tab, right-click on a statement, select the **Insert** drop-down menu, select the **Internal Functions** drop-down menu, then select **Terminate Process** (see Figure 31-20, below).

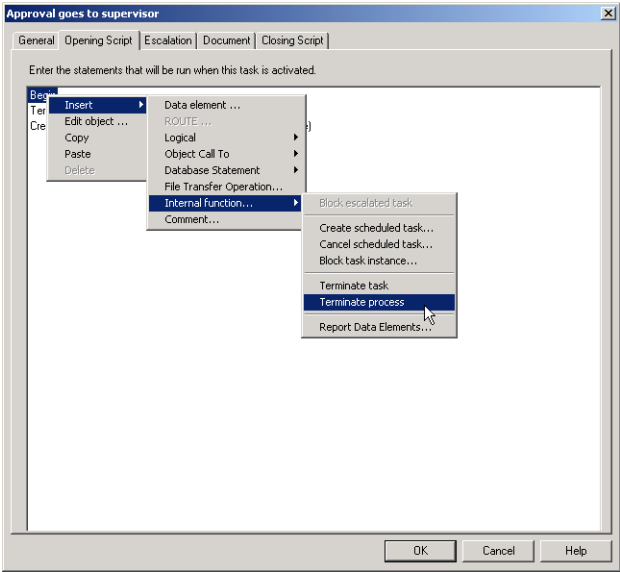


Figure 31-20. Opening Script tab with Terminate Process function selected.

The Terminate Process function is inserted into the CRbuilder process script. To delete the terminate process function, right-click on it and select Delete from the drop-down menu.

Report Data Elements

This function lets you track the contents of the process and/or task data elements. Their contents are written to the CRbuilder event log, which you can review later for troubleshooting.

- 1 To report data elements, click on the **Opening** or **Closing Script** tab, right-click on a statement, select the **Insert** drop-down menu, select the **Internal Functions** drop-down menu, then select **Report Data Elements** (see Figure 31-21, below). The Report Data Elements dialog appears.

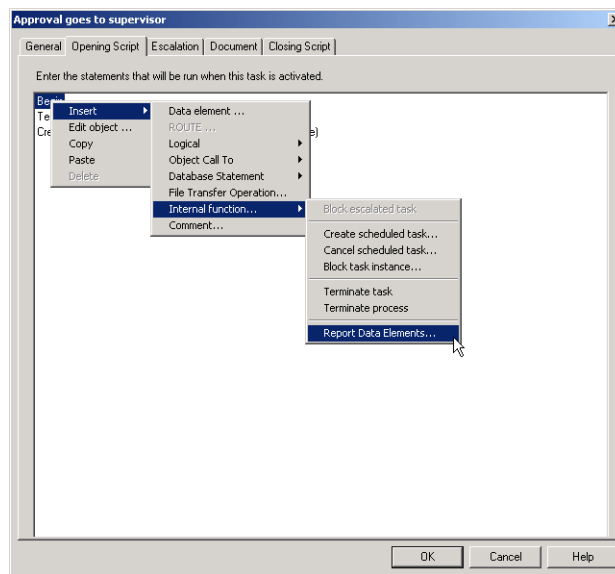


Figure 31-21. Opening Script tab with Report Data Elements function selected.

- 2 If you want to view a log containing information about all data elements in this task, click the **Report All Data Elements...** radio button.
- 3 If you want to view a log containing information about a single data element, click the **Report a Data Element** radio button.
- 4 If you selected the **Report a Data Element** option, select the data element you want to view information for from the drop-down list (see Figure 31-22, below)

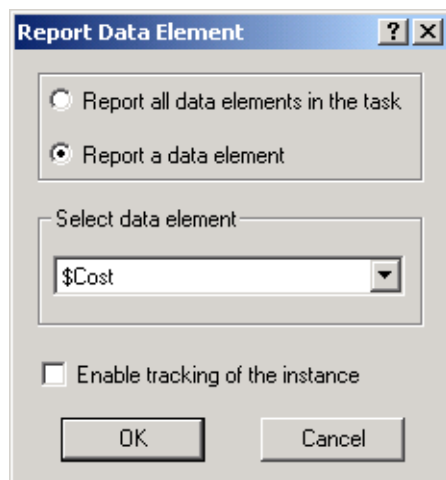


Figure 31-22. You can track the data elements in your process with the Report Data Elements dialog. In the example above, the user only wants to view information about one task data element, \$Cost.

- 5 Click **OK**. The report data elements function is inserted into the CRbuilder process script.

Comment

The Comment function lets you insert descriptive text into the body of the opening or closing script statement. This can be helpful if you want other users or developers who come after you to be able to quickly understand the logic or architecture of a CRbuilder process. Comments are preceded by a “//”.

- 1 Double-click on any task, select the **Closing** or **Opening Script** tab, right-click anywhere on any statement, and select **Comment** from the **Insert** drop-down menu. The Comments dialog appears (see Figure 31-23, below).

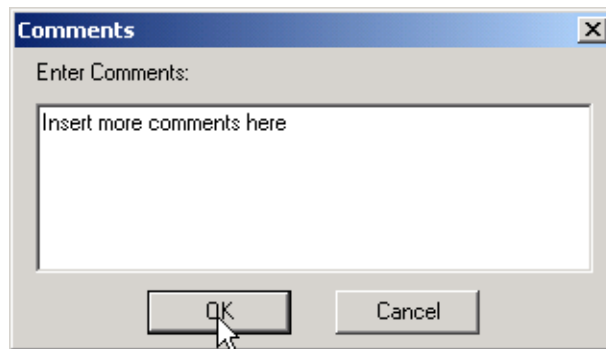


Figure 31-23. Comments dialog with the comments to be inserted in the opening or closing script.

- 2 Click **OK**. You are taken back to the **Opening** or **Closing Script** tab. Note that your comments have been inserted in the text.

Special Functions

CRbuilder supports several other features that make using and manipulating your process even easier.

Edit Object

The edit object function lets you modify the definition of most of the “objects” in your CRbuilder process, such as task definitions, escalations, as well as database queries and objects. For example, if you wanted to change the task defined in a **Delete Scheduled Task** function, you would simply right-click on the Delete Scheduled Task script in your CRbuilder process, then select **Edit Object** from the drop-down menu. The Delete Scheduled Task dialog appears. You could then modify any variable.

- ❶ To edit an object, click on any line of script whose function contains an object (for example, the terminate task function contains no object and will not work with this option). Select **Edit Object** from the drop-down menu.
- ❷ The dialog associated with that function type will appear. Modify any values.
- ❸ Click **OK**.

Copy & Paste

- ❶ To copy an object, right-click on any line of script whose function contains an object (for example, the terminate task function contains no object and will not work with this option). The object will be copied.
- ❷ Right-click on any line of script and select **Paste** from the drop down menu. The object will be pasted where you clicked.

Delete

To delete a portion of script, right-click on the script item and select **Delete** from the drop-down menu.

GetLastError() Function

The GetLastError() function is a troubleshooting feature that lets you determine whether any errors occurred when you called a COM, CORBA, or EJB Object, or executed a file transfer operation. It also works for database statements. All errors are written to the NT Event Log by the CommerceRoute

engine, and an error description can be e-mailed to the appropriate programmer or systems administrator.

An object call in CRbuilder can fail in two ways:

- The object may not be accessible, as in the case of a network outage or not being properly registered, or
- An error may occur inside the object, raising an error or throwing an exception.

In both cases, you can use the `GetLastError()` function to spot the error and get a description.

`GetLastError()` is a read-only data element (like `GetRouteID`) that appears in the Available Data Elements window.

Here's an example of how to handle errors in CRbuilder. In a task's Closing Script, type:

```
res = MyObject.Func()
if( GetLastError() != "" )
theErr = GetLastError()
theTask = GetTaskName()
theRoute = GetRouteId()
goto:ROUTE Handle Error
else
endif
```

You would then create a task called “Handle Error” configured to send an email to an administrator to notify him/her that an error has occurred. In the Opening Script of “Handle Error,” you would insert the following:

```
theErr = [Task.Call Object.theErr]
theTask = [Task.Call Object.theTask]
theRoute = [Task.Call Object.theRoute]
```

Lastly, you would create an e-mail like the one in figure Figure 31-24, below.

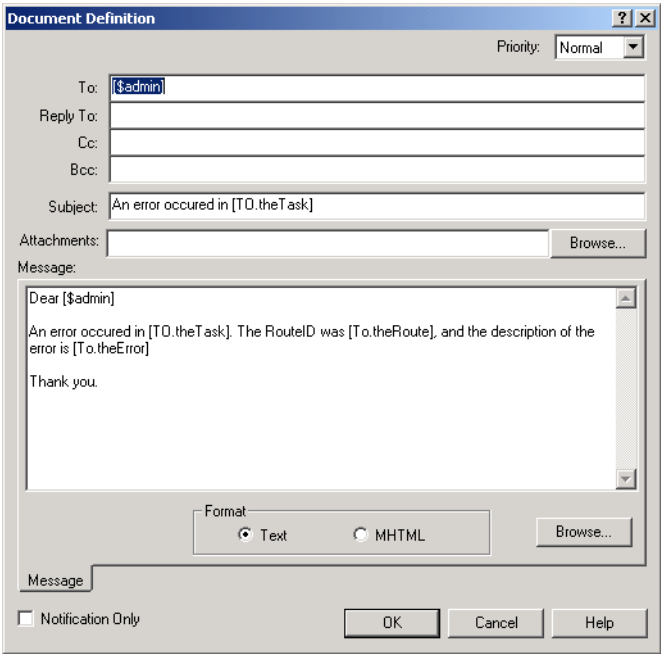


Figure 31-24. Notification e-mail for GetLastError() information. This will provide an administrator with information about the task, the route ID, and the nature of the error.

Using Operators

CRbuilder provides a list of standard operators from which you can build the *If/Then* statements that determine the CRbuilder process logic. These operations define the relationship between one or more data elements within the nested *If/Then* logic. They can include such logical expressions as equivalency, less than, greater than, or some combination of all of them.

To select an operation, double-click on one from the list in the Task Data Element dialog, then select the data element you want to insert from the Available Data Element dialog. Then replace the missing values with one you want to use in your statement (see Figure 31-25, below).

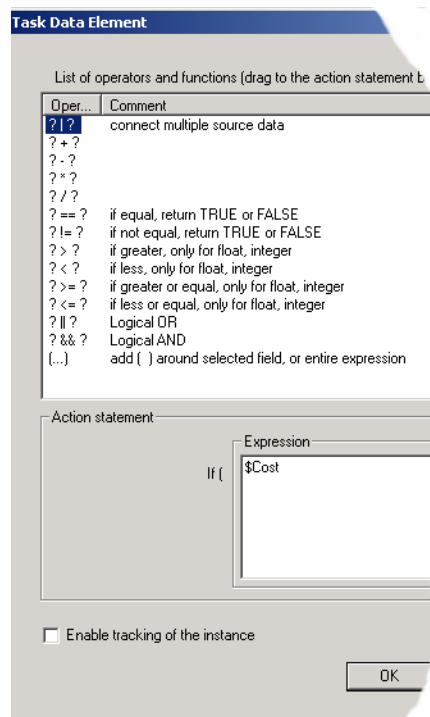


Figure 31-25. Task Data Element with its list of operations.

- **? | ?** Is used when you specify source data elements to be used in expressions. The first element that is defined is the one that will be used.
- **? + ?** Lets you add two numbers or concatenate two strings.

- **? - ?** Lets you subtract two numbers.
- **? * ?** Lets you multiply two numbers.
- **? / ?** Lets you divide two numbers.
- **? == ?** Lets you build equality “IF” operators, i.e. both values are equal.
- **? != ?** Lets you build “IF” not equal operators, i.e., both values are not equal.
- **? > ?** Lets you build greater than operators.
- **? < ?** Lets you build less than operators.
- **? > = ?** Lets you build greater than or equals operators.
- **? < = ?** Lets you build less than or equals operators.
- **? || ?** Lets you build logical OR operators.
- **? && ?** Lets you build logical AND operators.
- **(...)** Lets you put parenthesis to group to affect the operator procedure.

Chapter 32

Data Elements

Data Elements

Data elements are variables or “containers” that hold a value. These containers are empty until they “take” a value from some input source. This input can be data from another task, or it could be entered from a Web page or a database lookup. These elements and their data can then be set within a script and used within various tasks in a process.

For example, you could create a data element called “ItemCost.” ItemCost would probably be used to hold the number that represents the cost of an item, like \$5000. A different data element, “EmployeeName,” might hold the text string “David Jones.”

There are two types of data elements: *Task Data Elements* and *Process Data Elements*. In a Task Data Element, the value of that data element is only valid for that task instance. On the other hand, process data elements are “global,” being recognized throughout all tasks of the process instance. Process data elements always begin with a “\$”, such as “\$RequestorID.”

Data Elements also let you “link” or pass data between tasks. You do this by creating a new task data element and linking its source to the upstream task’s data element. For example, you may have a data element in Task1 called “UserEmail.” If your current task (“Task2”) needs to reference this data element, you would create a new task data element in Task2 called “UserEmail” and set it to equal the “UserEmail” data element from Task1.

Creating Process Data Elements

- 1 On the toolbar, click **Properties**. The Process Properties dialog appears.
- 2 Click **Process Data Elements**. The Process Data Elements dialog appears (see 32-1, below).

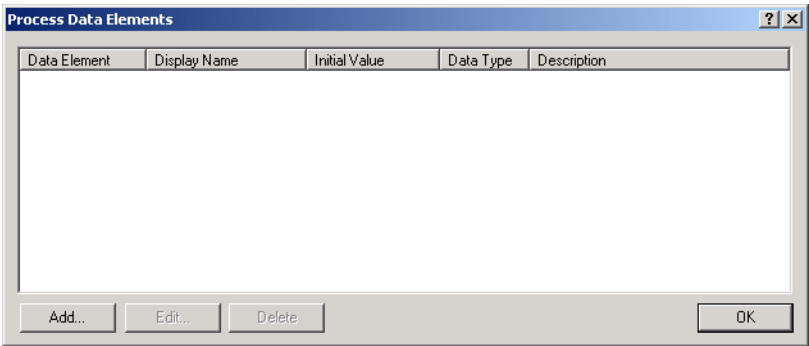


Figure 32-1. Process Data Elements dialog with no new Process Data Elements.

- 3 Click **Add**. In the Data Element dialog, choose the values you want to use:
 - a. Select a data type, such as “Double.”
 - b. Enter a name, such as “Cost.”
 - c. If you like, you can type a value in the Initial Constant field. However, if you aren’t sure, CRbuilder will automatically insert the correct initial constant, depending on the data type you selected.

Note

If your data type is Double, Single, Float, or Integer, you can enter any integer without quotes. If your data type is a string, you can enter any value surrounded by double quotes (“”). If your data type is Boolean, you must enter True or False. If you’re data type is Variant, you can enter anything. But you must enter an Initial Constant value in order to save your Process Data Element.

- d. Click **OK**.

You’ve finished creating this process data element, so click **OK**. Note that the new data element will appear with a **\$** in the **Data Element** field (see Figure 32-2, below).

💡 Process data elements will automatically add the “\$” to the beginning of the name, so you don’t need to type it in yourself.

- e. Click **OK** to dismiss the Process Data Elements dialog.

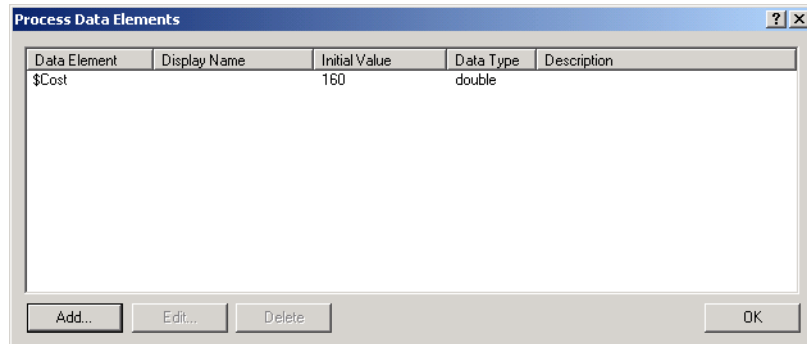


Figure 32-2. A completed Process Data Elements dialog box, with a new process data element.

Creating Task Data Elements

Because the value assigned to a Task Data Element is only valid for that particular task instance, you can create task data elements on the fly by entering the data element’s name and then setting its value.

The most common way of creating task data elements is through the **Opening Script** tab on the Task Configuration dialog.

- ❶ With your process open, double-click on a task. The Task Configuration dialog appears. Click the **Opening Script** tab.
- ❷ Right-click on **Begin** statement, then select **Data Element** from the **Insert** drop-down menu. The Task Data Element dialog appears.

!!! Since the task’s logic flows from the first tab to the last, any data elements whose values will be used in the **Escalation** tab (such as an EscalationTime data element that contains the time until the escalation activates) or in the **Document** tab (such as a ManagerEmail data element that contains a manager’s e-mail address) *must* be set before these tabs, i.e., in the **Opening Script** tab.

- ❸ Type the name of the data element you want to create in the **Data Element Name** combo box.
- ❹ Select the data type you want for this data element.
- ❺ To assign a value to the data element, drag a data element from the **Available Data Elements** window and drop it in the **Expression** field.

- 6 Select the operator you want to perform. You use operators to build the If/Then statements that determine the CRbuilder logic. These define the relationship between one or more data elements within the nested If/Then logic. They can include such logical expressions as equivalency, less than, greater than, or some combination of all of them.

Note

For more information about Operators, refer to the “Using Operators” section later in this chapter.

- 7 You can also type information directly into the *Expression* field at the bottom of the dialog (see Figure 32-3, below).

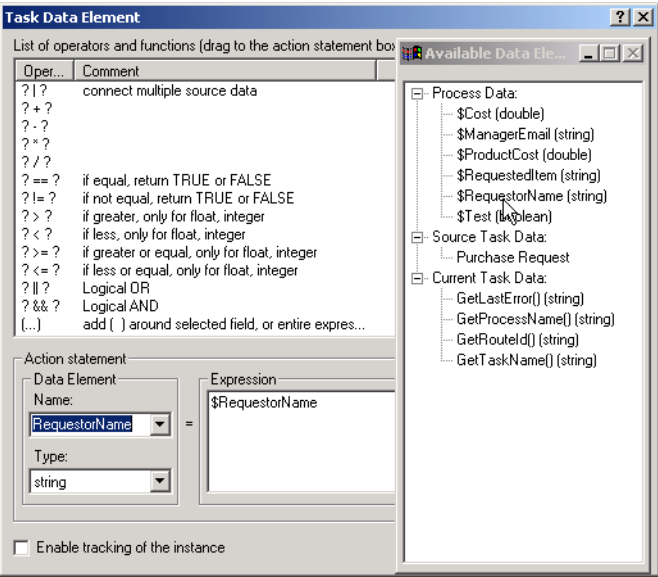


Figure 32-3. The **Task Data Element** dialog is where you configure a task’s data element. In this example, we are setting the value of a new data element (**Employee**) by dragging the **RequestorName** data element from the **Available Data Elements** window into the dialog’s **Expression** field.

Initial Task Data Elements

Found only in initial tasks, the **Data Element** tab is where you prepare data elements and/or associate a source document (such as an Active Server Pages or any server side scripting technology) with the task to provide input to the initial task.

These data elements will be sent from the source and used by the CRbuilder modeler.

- ❶ With your process open, double-click on the Initial Task. The Initial Task Properties dialog appears.
- ❷ Right-click in the **Data Element** column and click **Add**. The Data Element dialog appears.
- ❸ Enter a name you want to assign to the data element.
- ❹ You can optionally enter a display name and description (see Figure 32-4 below).

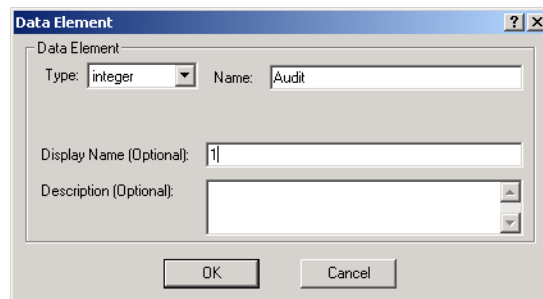


Figure 32-4. Data Element dialog with new Audit data element.

- ❺ Click **OK**.
- ❻ Now set the required status by simply clicking in the **Required** column to change the Yes/No status (see Figure 32-5, below).

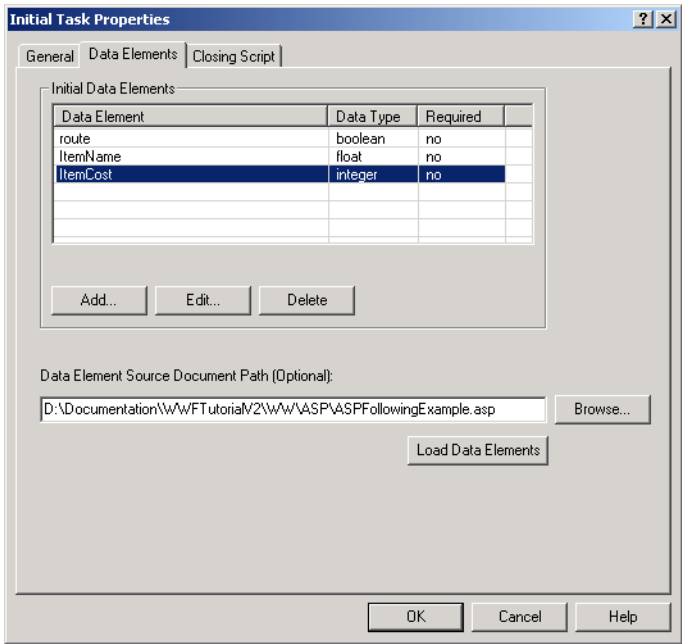


Figure 32-5. Initial Task dialog with new Task data elements.

Loading Data Elements From an Associated Document

- 1 Double-click on the initial task. The task configuration dialog opens.
- 2 Click the **Data Elements** tab.
- 3 Type the path name to the document you want to associate with this task, e.g., C:\CRbuilderproject\files\asp. Or, click **Browse** and find the correct document on your local computer or server.

Note

Remember that the source document must already contain the appropriate data elements for CRbuilder to read the data element information.

- 4 Any data elements will be loaded into the task.
- 5 Note that the data type and required status is not defined. Right-click under the **data type** column for each data element and select the data type (e.g., Boolean, string, integer, etc.) from the drop-down menu.

- 6 Click in the **Required** column to toggle the required value. Typically, you want data elements to be required, since only required data elements will be available to other tabs within this task and/or to other downstream tasks.

Working with Data Elements

As mentioned earlier, using data elements allows for tremendous flexibility in your CRbuilder process because their data can be dynamic rather than static. This allows them to be reused in different tasks and relieves you of the need to hard-code information in every task.

A few examples of ways in which you can use data elements might include embedding them in e-mail; using them to set the timing of an escalation task; using them in a ODBC database lookup; or using them with a COM or CORBA Object. In other words, data elements can hold virtually any value you assign them, regardless of the mechanism you use to generate the value.

We will use just one example of how you can use a Data Element in an e-mail. Refer to later sections for more detail on how to use them with other functions.

Using Data Elements in E-mail

CRbuilder lets you send people e-mail or associate Web pages with a particular task. If you use a data element for your e-mail address, the value of this data element can change, supporting any e-mail address a user places in an associated web page.

- ❶ Right-click on any task except the Initial task. The Task Configuration dialog appears.
- ❷ Click the **Document** tab.
- ❸ Select **Outgoing E-mail** from the **Define Document Type** drop-down list.
- ❹ Click **Definition**. The **Document Definition** dialog appears.
- ❺ You can now insert a data element into any of the fields. For example, in the **To** field, you can either insert a data element (such as \$Email) or type a valid e-mail address of the person who will receive this e-mail. Drag **desired data element from** the available data elements dialog and drop it in the **To** field (see Figure 32-6, below).

Note

Remember, in order to do this, you must have already created the data elements you want to use in this document.

The screenshot shows a 'Document Definition' dialog box with a title bar containing a question mark and a close button. The 'Priority' is set to 'Normal'. The 'From' field is empty. The 'To' field contains the placeholder text '\$RequestorEmail'. The 'Reply To', 'Cc', and 'Bcc' fields are empty. The 'Subject' field contains the text 'Confirmation for New Employee Request for: \$FirstName \$LastName'. The 'Attachments' field is empty. The 'Message' section contains a text area with the following text: 'Thank you for your request to process \$FirstName \$LastName as a new employee. Your request was successfully received, and is now in process.' Below the text area is a 'Format' section with two radio buttons: 'Text' (selected) and 'MHTML'. There is a 'Browse...' button next to the 'MHTML' radio button. At the bottom left, there is a 'Message' tab and a checked checkbox labeled 'Notification Only'. At the bottom right, there are 'OK' and 'Cancel' buttons.

Document Definition

Priority: Normal

From:

To: \$RequestorEmail

Reply To:

Cc:

Bcc:

Subject: Confirmation for New Employee Request for: \$FirstName \$LastName

Attachments:

Message:

Thank you for your request to process \$FirstName \$LastName as a new employee.
Your request was successfully received, and is now in process.

Format

☒ Text ☐ MHTML

Browse...

Message

☒ Notification Only

OK Cancel

Figure 32-6. New Employee Confirmation task with associated e-mail information.

About Data Types

You are required to select a data type for every data element. There are ten data element types. They are:

- **Integer:** Use for positive or negative values that are whole numbers, such as 10, 43243, and -7844. Integer variables can range from -32,768 to 32,767.
- **Long Integer:** Use for positive or negative values that need to be very large whole numbers, such as 2,147,483,647. Long variables can range from -2,147,483,648 to 2,147,483,647.
- **Float:** Use for real number values (that is, numbers that contain a fractional part). Examples are 3.4E +/- 38 (7 digits).
- **Double:** Use for values that need to be very large real numbers, such as 3, 245, 483, 432.6. Double variables can hold negative values between -1.79769313486232E308 to -4.94065645841247E-324; or positive values between 4.94065645841247E-324 to 1.79769313486232E308.
- **Single:** Use for real number values (that is, numbers that contain a fractional part). Examples are 3.4E +/- 38 (7 digits)
- **Short Integer:** Use for real number values (that is, numbers that contain a fractional part). Examples are 3.4E +/- 38
- **String:** Use for values that need to be variable-length character data, such as “Bob Jones” or “Bob@company.com.”
- **Boolean:** Use for values that must return a value of either True or False. For example, the expression $2 < 5$ (2 is less than 5) is a boolean because the answer is either true or false.
- **Variant:** Use for any system-defined types of data. For characters, this variable can hold the same range as String. For number, this variable can hold the same range as Double.
- **Date:** Use for any values that take a date in a month/date year format (1/15/2001).

Note

If you attempt to define a data element with a particular data type, such as string, and then build an expression that returns an value incompatible with the selected data type, you will see a warning that you need to reset the data type.

Chapter 33

Escalation & Document Tabs

Escalation Tab

The Escalation tab is where you define and set escalation tasks that are associated with the current task. Escalation tasks are special, time-sensitive tasks that can be triggered to ensure that time-dependent actions (like a credit approval), are completed in the required time frame (see Figure 33-1, below).

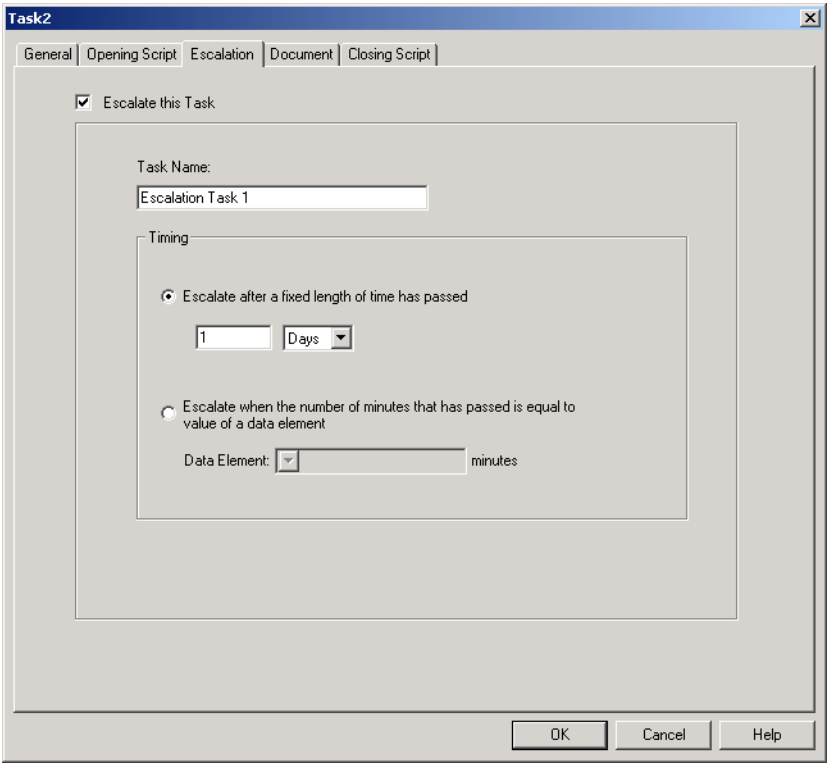



Figure 33-1. A Task Configuration dialog’s **Escalation** tab.

 **Tip:** For more information about CRbuilder Escalation, see Chapter 35, “Advanced Escalation Scenarios”.

There are two timing mechanisms for creating escalated tasks:

- Using a hard-coded time value, such as one week. In this case, the escalation task fires off after the specified time has elapsed.
- Using a dynamic data element. In this case, the escalation task fires off after the time contained in minutes in the data element has elapsed.

You can identify an escalation task by the exclamation icon (see Figure 33-2, below).

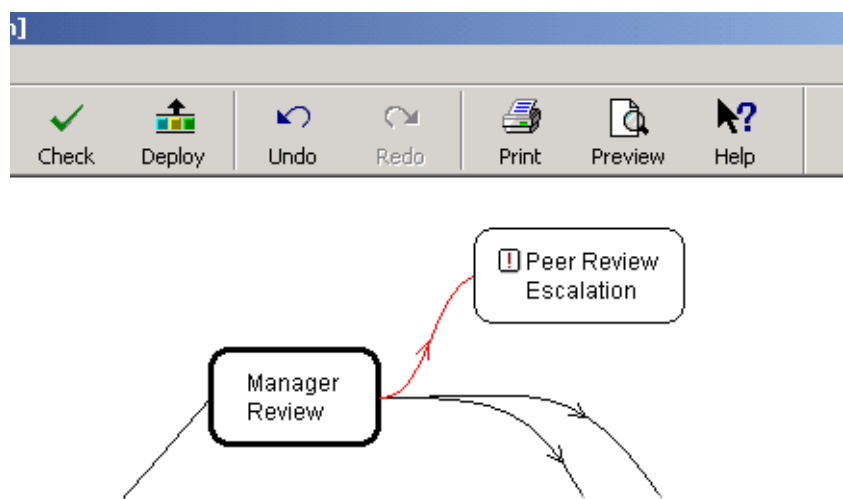




Figure 33-2. An escalation task can be identified by the exclamation point icon.

Document Tab

 **Tip:** For more information about associating a Syncx operation with a CRbuilder task, see Chapter 34, “Associating Tasks with Syncx Operations.”

 **Tip:** For more information about Syncx operations, please refer to the *Backend Guide*.

CRbuilder lets you incorporate e-mails, Web pages, or even Syncx appliance operations in your automated process. You do this through the Document tab. This ability to integrate disparate data sources makes it easy for you to create processes that direct users to interact with Web pages, send alerts or directives via e-mail, or interact with legacy applications via .ASP pages.

CRbuilder gives you complete control over all elements of your document, including the message recipients, document definition, and priority settings. You also have the choice of formatting in either plain text or HTML, which you can preview in a browser.

For example, you could create a task that would send an e-mail to the partnering department, requesting the audit of a specific purchase. In Figure 33-3, below, a Web file is associated with this task. The system will automatically read through the Web file and load any data elements it finds. The bottom pane is where you can configure each data element and associate an appropriate source (if any).

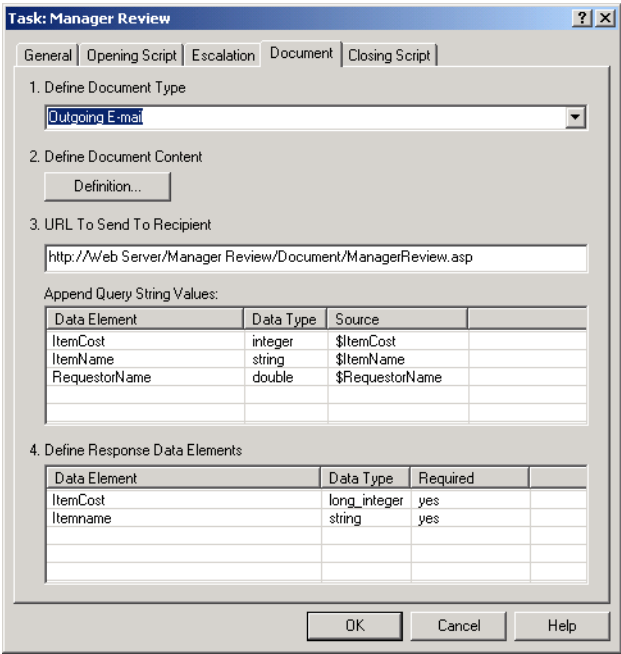


Figure 33-3. A task configuration dialog’s Document tab.

Associate an E-mail with a Task


If you want to send an outgoing e-mail associated with your task, do the following:

- ❶ Double-click on the task and select the **Document** tab, then select **Outgoing E-mail** from the **Type** drop-down list.
- ❷ Click **Definition**. The Document Definition dialog appears (see Figure 33-4, below).

Figure 33-4. The Document Definition dialog is where you define all the outgoing e-mail's document parameters.

You can use data elements in addressing e-mails, or you can directly hard-code an address if you are confident that the e-mail recipient will not be changing. The advantage of using a data element is that the value of this data element can change, supporting any e-mail address a user places in an associated web page.

- ❸ If desired, insert data element into any of the fields. For example, in the **To** field, you can either insert a data element (such as \$Email) or type a valid

 **Tip:** To use data elements in your e-mail you must have already created the data elements you want to use in this document. For more information about creating Data Elements, read Chapter 32, “Data Elements.”

e-mail address of the person who will receive this e-mail. Drag the desired data element from the available data elements dialog and drop it in the **To** field.

- ④ In the **Subject** field, type the e-mail’s subject.
- ⑤ In the **Message** field, type the body of the message.
- ⑥ If you wish to attach a data element holding some value, simply drag and drop it in the **Attachment** field. Note, however, that you cannot send a document as an attachment to an e-mail.
- ⑦ If you wish, you can set the priority level of this e-mail.
- ⑧ Now, you could use data elements where appropriate in the body of the message. Your outgoing e-mail might look something like the one in Figure 33-5, below.

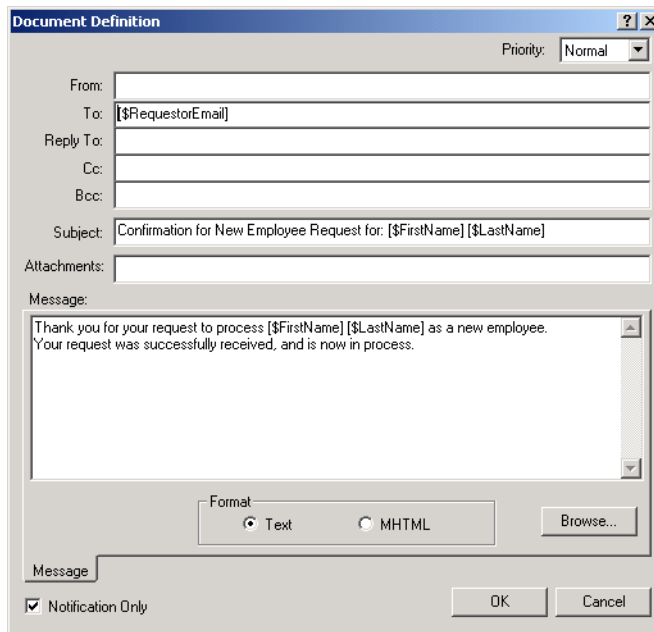


Figure 33-5. Task with associated e-mail information.

- ⑨ Now select whether you want the body of the e-mail to appear in plain text or MHTML. If you select the MHTML button, you can code your message in HTML and include an image or graphic. You can click the Preview tab to see how it will look in a Web browser.

Note

If you have a template document that you want to use for all outgoing e-mails, you can click the Browse button and search for it manually.

- ⑩ You can also click the **Notification only** checkbox. This tells the CRbuilder engine to jump directly to the closing script tab, rather than wait for a response to an e-mail.
- ⑪ Click **OK**. You are now back in the document tab.

Using URLs in Outgoing E-mail

As mentioned previously, you can associate an ASP document with an outgoing e-mail that notifies the recipient to go to a Web page. For example, you might send an e-mail requesting the recipient to go to a particular URL that displays an approval page. They could then approve or reject a particular action.

- ① If you want the e-mail to contain a URL link to a Web page, go back to the Document tab and type a URL in the **URL to Send To Recipient** field. For example, this could be something like: `http://yourcompany.com/purchaseorder/approval.asp`. Check with your system administrator if you aren't sure of the URL address for the Web server on which your documents reside.

Now, whenever you type [URL] in the body of an e-mail, Workflow will automatically insert the URL you typed in the **URL to Send To Recipient** field. If you don't include [URL] in the body, the URL will automatically be appended to the e-mail body when it's sent. For example, you could type: "Dear [\$Customer], please click here: [URL]." The URL will be automatically inserted.

You will probably want any data elements loaded from the ASP page to be available throughout your process. Therefore, you will want to associate each ASP data element to a Process Data Element.

- ② Right-click under the Data Element column and select **Add Data Element** from the drop-down menu. The Data Element dialog appears (see Figure 33-6, below).

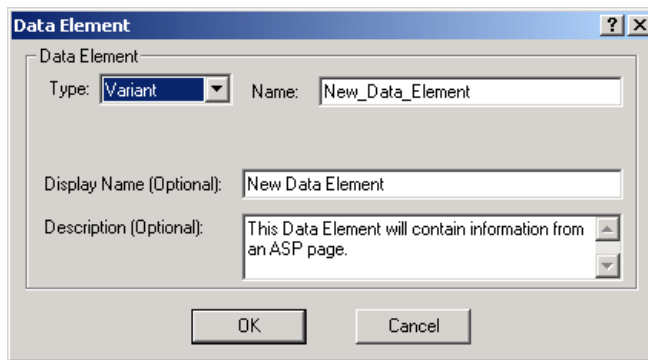



Figure 33-6. You can create new data elements that are associated with ASP data elements.

- ③ Select the data element type from the type drop-down list. Type the name of the data element, and, if you wish, a display name and description. The data element name cannot contain any spaces or special characters. For example, you would make a long name something like:
New_Data_Element_Name.
- ④ Click **OK**. The data element has been added to the **Data Element** column in the **Document** tab dialog.
- ⑤ Now drag a data element from the Available Data Elements dialog and drop it in the source column. You can also right-click under the **Source** column and select **Display and Edit Source** from the drop-down column. The Input dialog appears (see Figure 33-7, below).

 **Tip:** For more information about appropriate data types, read Chapter 32, “Data Elements.”

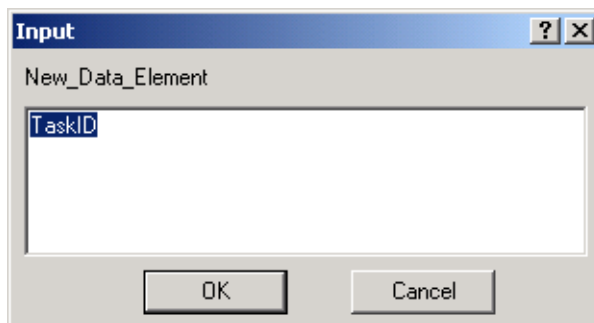


Figure 33-7. Input dialog with new data element input value.

- ⑥ Enter the value that will read into the data element.

Define Response Data Elements

Depending on the structure of the ASP file and how it's being used, you may need to define **Response Data Elements**. These are data elements that hold any value passed back by the ASP page when someone goes to that ASP page and executes some action, such as approving or rejecting a purchase request. These need to be defined and associated with data elements so that they are available in other tasks.

- ① Right-click in the **Define Response Data Elements** window and select **Add Data Element** from the drop-down list.
- ② Select a data element type.
- ③ Enter a name for the data element.
- ④ If you wish, you can enter a display name and a description.
- ⑤ Click **OK**. The new data element appears in the **Response Data Element** column.
- ⑥ Right-click on the **Required** column to toggle the required status. Most Return Data Elements should have a required status to yes. If you set the required status to no, they will not appear as available process data elements in the Available Data Elements dialog.
- ⑦ Click **OK**.

The response data elements appear in the Document tab under the response data elements tab.



Chapter 34

Associating Tasks with Syncx Operations

Overview

You can associate Syncx Operations with your CRbuilder process. CRbuilder's powerful logic processing lets you control every aspect of data integration within the operation — from triggers and conditions to timing and escalations — and turns even the most complex integrations into simple, intuitive configurations.

You can also use CRbuilder data elements to dynamically alter the operation, or a component of that operation.

How to Link an Operation to a Task

Follow these steps to associate a Syncx operation with a CRbuilder process.

- ❶ Double-click on a task and select the **Document** tab, then select Syncx operation from the **Type** drop-down list.
- ❷ Type the name of the appliance or the IP address in the **Appliance Name** field. This should be the appliance on which the desired operation resides. The system will remember names you enter, and the drop-down list will be populated by appliance names you've entered previously.

Note

If you don't know the name of the appropriate appliance, please consult your Syncx administrator.

- ❸ Type a user name and password in the **User Name** and **Password** field. This is the combination required to access the appliance.

Note

If you don't know your password and login name, please talk to your network administrator.

Pre-defined vs. Dynamically Resolved Operations

Choose an Operation Type

From the drop-down list, select the type of operation you want to perform. You have two options:

- a. **Predefined Operation:** Select the partner and operation you want to execute.
- b. **Resolve Operation when Task Executes:** Select a data element containing the operation ID of the operation you want to execute.

If you selected a Predefined Operation:

- ❶ Click **Browse**. You will see a list of all the available partners and operations. See Figure 34-1, below.

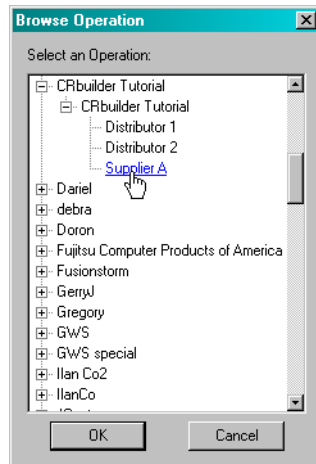


Figure 34-1. The Browse Operation dialog displays a list of valid Syncx operations you can associate with a CRbuilder process. Double-click on any operation and it will automatically be linked with the process.

- ② Click on the operation you want to use, then click **OK**. The transformation path appears in the text box to the left of the **Browse** button. See Figure 34-2, below.

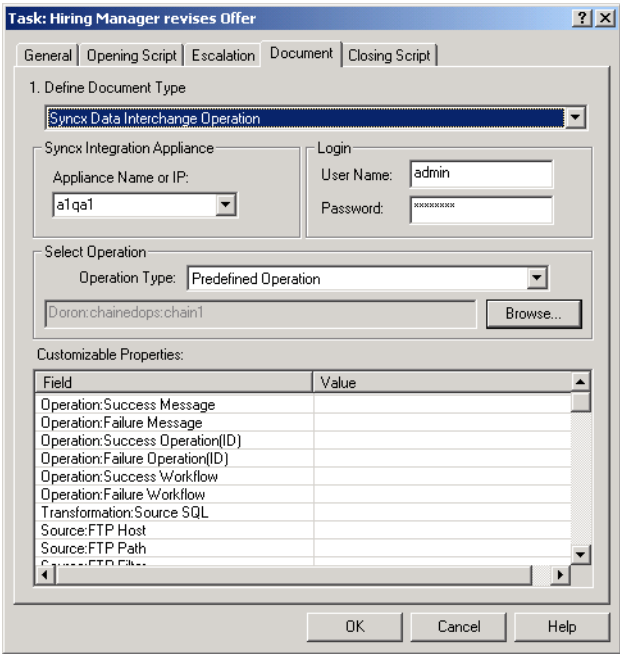


Figure 34-2. You can associate a Syncx data interchange operation with a CRbuilder process by selecting **Syncx Appliance Operation** from the drop-down menu and entering in the correct appliance and password information.

If you selected Resolve Operation when Task Executes:

Use this option if you want to use a data element to determine which operation will execute each time the CRbuilder process runs. The data element you select must contain an operation ID of an operation you want to activate. Normally, you would populate the data element by making an ODBC or object call to return the desired operation number.

- ❶ Select a data element from the Data Element drop-down list. See Figure 34-3, below.
- ❷ Click **OK**.

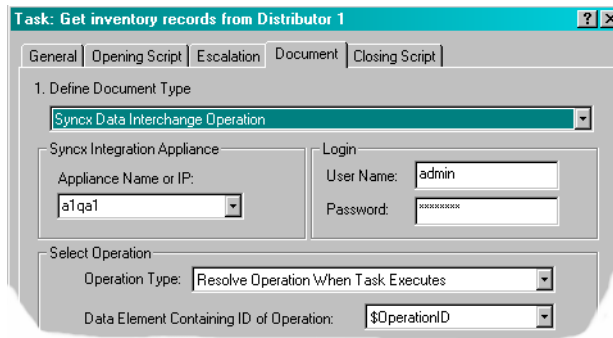



Figure 34-3. To use a data element to call an operation, select **Resolve Operation When Task Executes** from the **Operation Type** drop-down list, then select a data element containing an Operation ID from the **Data Element** drop-down list.

 **Tip:** For more information about using data elements, please refer to Chapter 32, “Data Elements.”

Using Data Elements to Customize Operations

Because CRbuilder and Syncx are able to share data back and forth, you can substitute properties in a Syncx operation, such as a Success Message, with values from CRbuilder data element so that when the operation is activated, the system will use the parameter you provided rather than the parameter in the TranDB. You can also substitute properties from one operation with properties taken from a different operation.

For example, if you have a data element called “InvoiceID” containing an invoice number, you could drag the InvoiceID data element from the Available Data Elements dialog and drop it in the Value column next to the **Operation:Global Properties**.

This Global Properties function will pass the value contained in the InvoiceID data element to the Syncx operation you specified earlier. You could then use this value in formula builder expression and use it in all instances of the Syncx operation.

Using this function, you can eliminate the need for Syncx to use database lookups and COM calls on each record it processes to retrieve a frequently used value

Note

For more information about using Syncx transformations and formulas, please refer to the *Reference Guide* that came with your appliance.

To use a Data Element from CRbuilder

- 1 Right-click under the Value column next to the field you want to change, and select **Add** from the drop-down list.
 - 2 Type the name of a data element or a value you want to associate with the operation.
 - 3 Click **OK**.
- Or—
- 1 You can also drag a data element from the Available Data Elements window and drop it in **Value Column** of the property you want to change. The property in the Value Column will be substituted for the value in the CRbuilder Data Element.
 - 2 Click **OK**. See Figure 34-4, below.

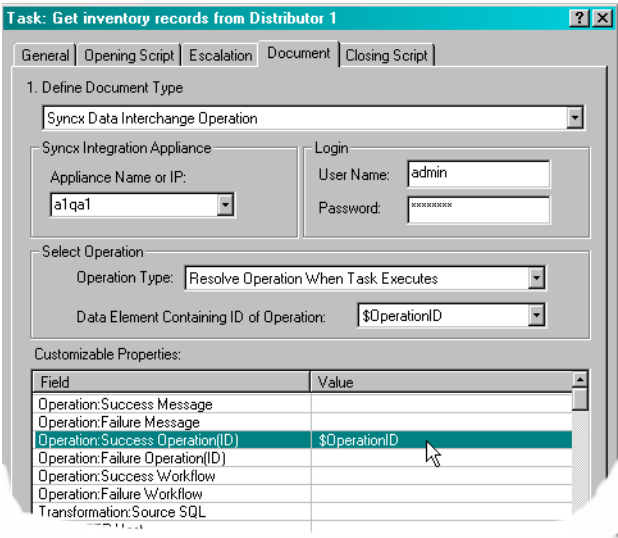


Figure 34-4. To customize an operation with a CRbuilder data element, simply drag a data element from the Available Data Elements dialog and drop it next to the value you want to replace.

To Use Properties From One Operation In a Different Operation

If you wish, you can use properties from one operation in a second, different operation. For example, if you have a failure message associated with Operation 1, you can apply that failure message in Operation 2, rather than using the failure message you originally created for Operation 2.

- ❶ Right-click under the **Value** column next to the Property you want to change, and select **Lookup** from the drop-down list.
- ❷ The Parameter Lookup dialog appears with a list of available parameter values. Click on the parameter you want to use. See Figure 34-5, below.

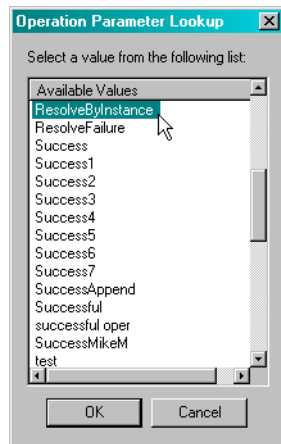


Figure 34-5. Select a parameter from the list of available parameters, then click **OK**.

- ❸ Click **OK**. The parameter from the original operation will now be substituted with the parameter value you selected.

Chapter 35

Advanced Escalation Scenarios

What Is an Escalation?

This chapter describes CommerceRoute’s recommended practices for implementing escalation tasks in a CRbuilder model.

An *Escalation* is a special type of task whose function is determined by a time setting that you define with a data element or a fixed day/time value.

Because of their unique time-dependent nature, you can direct a task to perform functions after a specific amount of time has passed. For example, what if you had a purchase request that needed a manager’s approval to complete. What would happen if that manager was on vacation for three weeks? Using an escalation task, you could direct the task to “escalate” and route to the manager’s supervisor after a period of time had elapsed, such as two days. In this way, you can ensure that time-dependent tasks are completed in a timely manner.

Escalation is an advanced CRbuilder process feature and requires a solid understanding of the basics of CRbuilder process design.

Consider the CRbuilder model in Figure 35-1 below. Tasks 0, 1, and 2 are considered the normal, desired path for the CRbuilder process. If Task1 is not completed in a certain amount of time, the task named Escalation Task is started and the escalated task (Task1) is said to be “in escalation.” Depending upon the processing logic built into Escalation Task, the CRbuilder process may continue with the Too Late task or it may loop back to Task1.

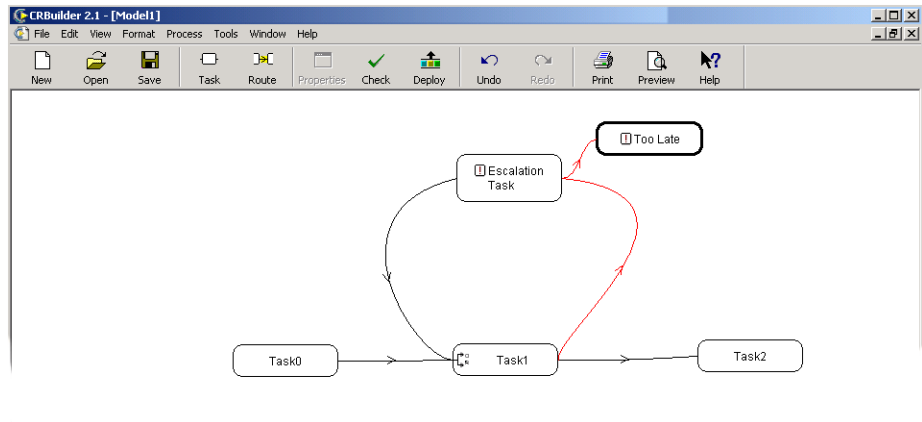


Figure 35-1. A CRbuilder process model with a simple escalation task.

Creating an Escalation Task

- ❶ To create an escalation task, click on the task you want to associate with an escalation task, then click the **Escalation** tab. (see Figure 35-2, below).

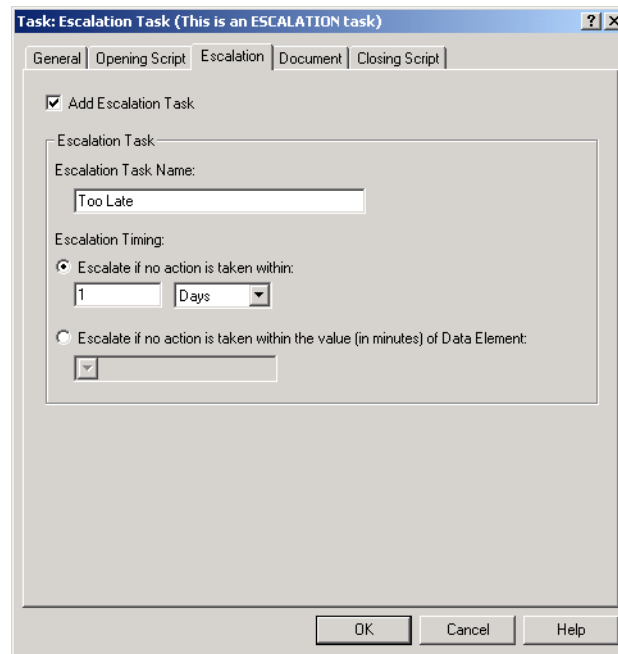


Figure 35-2. A task configuration dialog's **Escalation** tab.

- ② Click the **Add Escalation Task** checkbox.
- ③ Type the name of the escalated task.

Note

We call the task being escalated (the one you are currently working in) the “Escalated” task. The new task linked to the current task with a red line is called the “Escalation” task.

- ④ Next, set the timing mechanism in the timing area of the dialog. To set a fixed time value, click the **Escalate if no action is taken within:** radio button.
- ⑤ Select a unit of time from the drop-down menu (e.g., weeks, days, hours, minutes) and type the number associated with the unit (e.g., 30 minutes).
- ⑥ To use a data element, select the **Escalate if no action is taken within the value (in minutes) of data element....** radio button.
- ⑦ Select the data element from the data element drop-down list.
- ⑧ Click **OK**. You will see the new escalation task in your CRbuilder process

(see Figure 35-3, below).

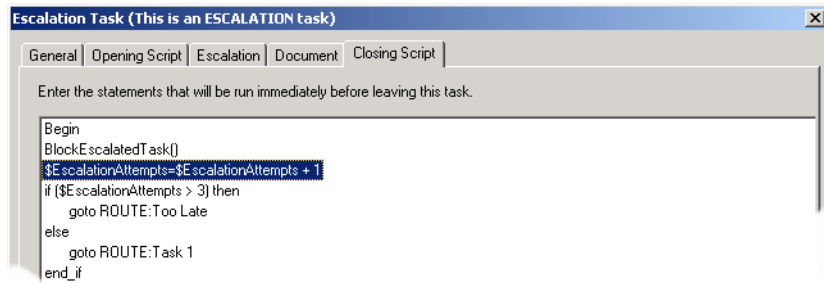


Figure 35-3. Escalation task with BlockEscalatedTask called out in Closing Script.

Escalation Scenarios

The placement of the `BlockEscalatedTask()` function in the escalation task determines the behavior of the escalation itself. In other words, depending on where you call the `BlockEscalatedTask()` function, you can create very different user scenarios to handle different situations. There are three main types of scenarios the user can create. They are:

- ❶ *Allow no processing of the escalated task after escalation.*
- ❷ *Task 1 processing can continue until the escalation task is completed.*
- ❸ *Task 1 is not interrupted.*

Each of these is covered in detail below.

Allow no processing of the escalated task after escalation

In this scenario, no messages will be processed for the current instance of the escalated task (Task 1) immediately after escalation occurs. Any attempts to send messages for the task are ignored by the CommerceRoute engine. This means the person assigned to Task 1 is no longer able to complete the task. To make this happen, the **`BlockEscalatedTask()`** function must be called out in the **Opening Script** of the Escalation Task, as show in Figure 35-4, below. If, in the **Closing Script** of the Escalation Task, processing is returned to Task 1, a new task instance of Task 1 is created.

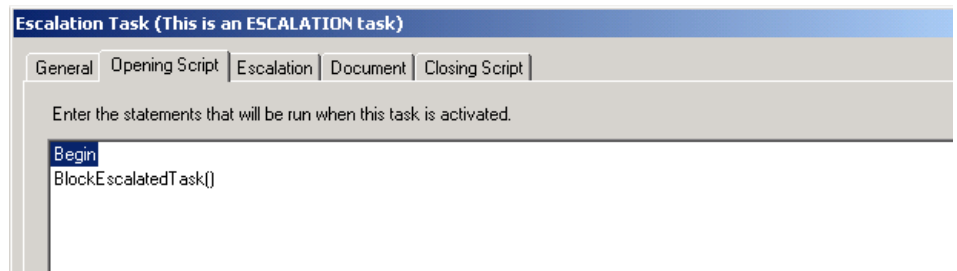


Figure 35-4. Escalation Task with **`BlockEscalatedTask()`** function inserted to allow no processing of the original task after escalation occurs.

Task 1 processing can continue until the escalation task is completed

In this scenario, the person assigned to complete Task 1 can complete the task up until the time the person assigned to complete the escalation task finishes. To make this happen, the **BlockEscalatedTask()** function is called out in the **Closing Script** of the escalation task, as shown in Figure 35-5, below. If, in the **Closing Script** of the escalation task, processing is returned to the Task 1, a new Task 1 is created.

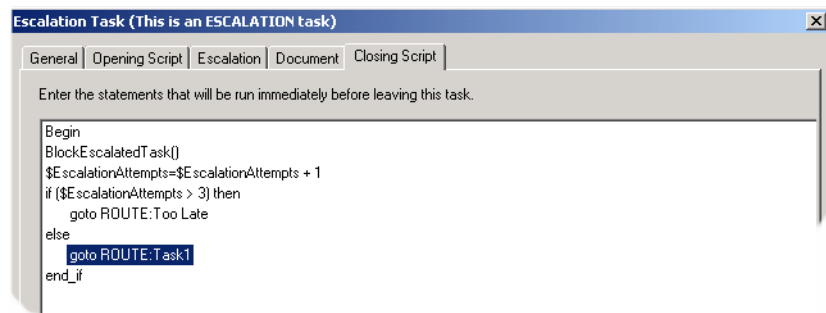


Figure 35-5. Block EscalatedTask function set to allow Task 1 to continue processing until the Escalation Task is completed.

Task 1 processing is not interrupted

In this scenario, users can work on Task 1 until it is either completed or the process is terminated. To make this happen, the **BlockEscalatedTask()** function is not called out in the Escalation Task. This scenario is common in the situation where the purpose of the escalation is to send a reminder to the person or their manager to complete the task. If, in the Closing Script of the escalation task, processing is returned to Task 1, a new instance of Task 1 is not created.

Due to the logic in the business script, scenarios two and three are typically combined in the same escalation.

You can create various conditions that continuously reminds a person to complete their assigned task or kills the task and continues with another task. In example Figure 35-6, below, the escalation task will be initiated four times. In the first three instance, control is passed back to the original Task1. On the

fourth instance, though, processing of Task 1 will be halted by the **BlockEscalatedTask()** function and control will pass to the Too Late task.

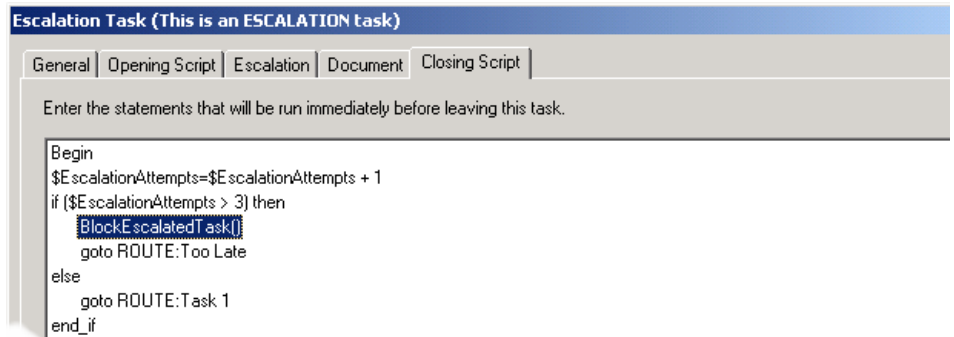


Figure 35-6. Escalation Task with the BlockEscalationTask set to allow control to be passed back to the original Task 1 three times. On the fourth time, however, it will be passed to task Too Late.

To Insert BlockEscalatedTask function

- 1 From your Escalated task, click on the **Opening Script** tab, right-click on the Begin statement, and select **Internal Function**, then select **Block Escalated Task** (see Figure 35-7, below).

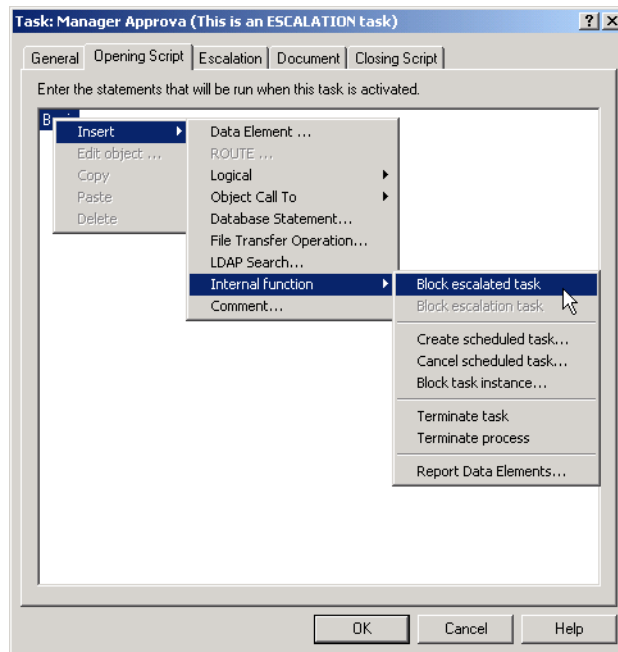


Figure 35-7. Escalation Task with Block Escalated Task being inserted.

- ② The **Block Escalated Task** function appears in the **Opening Script** tab. This will automatically block any processing of the original task after the escalation occurs.

Note

As indicated previously, you will typically be using the `BlockEscalatedTask` function in the Closing Script tab of your escalated task. In that case, you don't need to insert the function manually because CRbuilder does it for you.

Using `BlockEscalationTask()` Function

Like the `BlockEscalatedTask()` function, the `BlockEscalationTask()` function blocks one of the tasks involved in an escalation. However, where `BlockEscalatedTask()` blocks the original Task (Task 1), `BlockEscalationTask()` blocks the Escalation Task itself (EscalationTask).

You could use the `BlockEscalationTask()` function in scenarios two and three above. In both cases, it is possible for Task 1 to complete before the Escalation

Task. When the Escalation Task completes, it may route back to Task 1. In that case, since Task 1 is already completed, a new instance of Task 1 is started (although this is not usually what the business logic calls for). Calling the **BlockEscalationTask()** function in the closing script of Task 1 immediately blocks any more processing of the Escalation task.

Using Block Task Instance Function

The Block Task Instance function can be used when you want to halt a particular task instance from running again. You would enter the particular route ID of the task, which would then be blocked from executing.

This function lets you stop a particular instance of a task from executing again.

- 1 To block a task instance, click on the **Opening** or **Closing Script** tab, right-click on a statement, select the **Insert** drop-down menu, select the **Internal Functions** drop-down menu, then select **Block Task Instance** (see Figure 35-8, below).

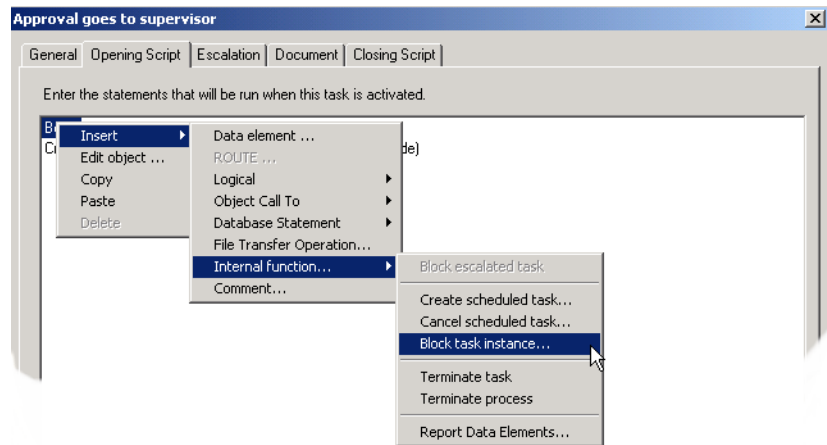


Figure 35-8. Task Configuration dialog with the **Block Task Instance** function selected.

- 2 The Block Task Instance dialog appears. Select the name of the task you want to block from the drop-down list.
- 3 Type the name of the data element that contains the task route ID. (See Figure 35-9, below)

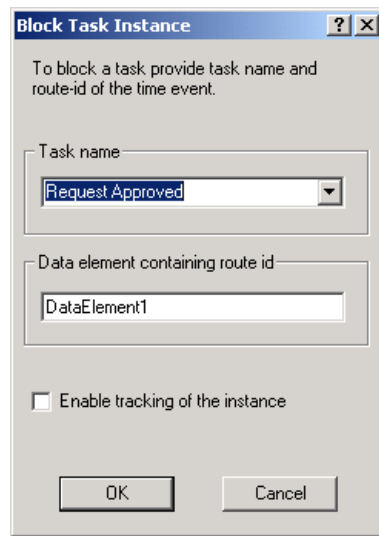


Figure 35-9. Block Task Instance dialog with Task name and a data element containing route ID.

- ④ Click **OK**. The Block Task Instance function is now inserted into your CRbuilder process script. This task instance will be blocked in the next instantiation of this process.

Chapter 36

Database Connectivity

Extracting Information from Databases

Once you have created an ODBC DSN setting for a particular database, you can connect to that database to extract and filter the information you're interested in.

While you can optionally connect to a predefined system DSN, CommerceRoute recommends that you manually create a connection string. Note that if you decide to create a database DSN on your local machine, you must copy that DSN and database to the appliance or you will not be able to correctly deploy your model. Please speak with a database or system administrator for assistance.

CRbuilder lets you hook into your organization's database infrastructure, extract information from those databases, and use it in your CRbuilder process logic.

You can also insert an LDAP search for other resources within your organization.

Inserting ODBC Database Lookup

- 1 Click on any task, click on the Opening or Closing Script tab, then right click on the Begin statement and choose **Database Statement** from the **Insert** drop-down menu.(see Figure 36-1, below).

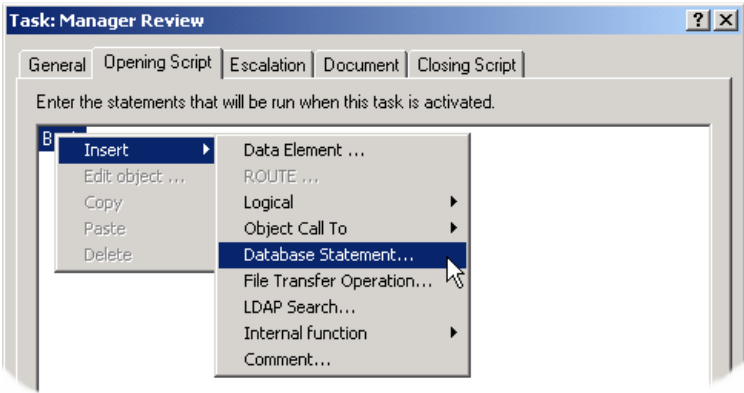


Figure 36-1. Selecting **Database Statement...** is the first step in interfacing your task with a database.

2 The Database Statement dialog appears. (See Figure 36-2, below).

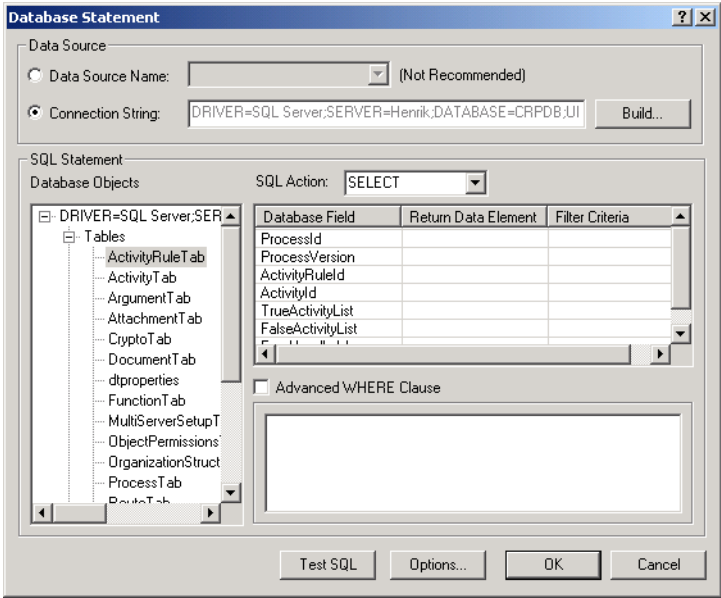


Figure 36-2. Database statement dialog with ActivityRule Table selected.

- 3 Click the **Connection String** radio button, then click **Build**. The Database Connection string dialog opens.
- 4 Type a connection string. This allows for connection to databases without a pre-existing DSN on the server (see Figure 36-3, below).

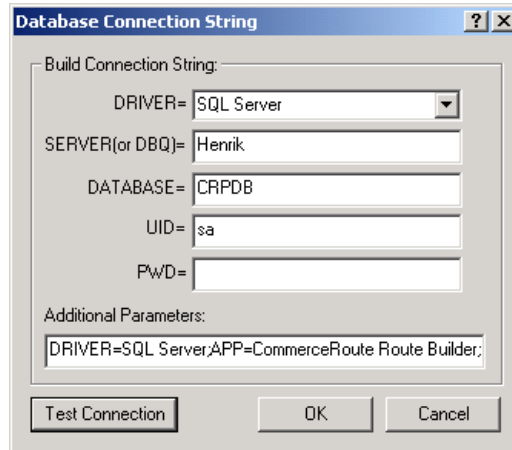


Figure 36-3. You can use the Database Connection String dialog to manually create a database connection query. To do so, enter the appropriate database, driver, password, and user ID information.

- 5 Type the following information into the appropriate fields:
 - a. **Driver:** Enter a valid driver name, such as *SQL Server*. The driver is a program that translates standard SQL statements into proprietary language that can be used and understood by a particular database. Each type of database has a unique driver.
 - b. **Server:** Enter a valid server name, such as *Test Machine 2*. The server is the server on which the database resides.
 - c. **Database:** Enter a valid database name, such as *Northwind*. This is the database you are attempting to access.
 - d. **UID:** (User ID) Enter a valid user ID (if required), such as *sa*. This is the user ID required to access the database.
 - e. **PWD:** (Password) Enter a valid password (if required). This is the password required to access the database.
 - f. **Additional Parameters:** If you are accessing a database that requires any special parameters or values, enter them here. For example, if you are accessing an Excel database, you would be required to enter

“Driver ID=790”.

Note

You need to know the information listed above (such as the required type of database driver) before you can access a database. Please see your system or database administrator if you need more information.

- 6 Click **OK**.

—Or—

- 7 You have the option to click the **Data Source Name** radio button and select a predefined DSN data source from the drop-down box. This is a list of all available system DSN's. The default DSN will be the first one in the list.



CAUTION! While you can optionally connect to a predefined system DSN, CommerceRoute recommends that you manually create a connection string. Note that if you decide to create a database DSN on your local machine, you must copy that DSN and database to the appliance or you will not be able to correctly deploy your model. Please speak with a database or system administrator for assistance.

- 8 In the SQL statement screen area, double-click on the database of choice, then click the “+” to display a list of tables and views in the database.
- 9 Double-click on the desired table. Click the “+” next to the table or view to display the list of fields in the table. The table or view will populate the **Database Field** column.
- 10 Select a SQL operation that you want to perform from the **SQL Action** drop-down menu. Your choices are: *Select* (default), *Insert*, *Update*, and *Delete*. Depending on the SQL operation you select, you will see the following columns in the filter grid below:

Select

This function allows you to select and search any ODBC-compliant database for particular values and then use those values in data elements.

- a. **Database Field:** Lists the fields in the database table or view you selected.
- b. **Return Data Element:** Drag and drop a data element from the Available Data Elements dialog into the Return Data Element column. This is the data element that holds the results of your SQL query. You can also right-click on the Return Data Element column. The Data Element dialog appears. You can then create a new data element on the fly that will hold a return value.

- c. **Filter Criteria:** Drag and drop the data element you want to use to filter your query. For example, you may only want the e-mail address for a customer whose customer ID is “CUST112.” Drag that data element from the Available Data Elements window to the matching database column. This creates the appropriate filter.

Delete

This function allows you to search for and delete records from an ODBC-compliant database.

- a. **Database Field:** Lists the fields in the database table or view you selected.
- b. **Filter Criteria:** Drag and drop the data element you want to use to filter your query.

Insert

This function allows you to insert values into any ODBC-compliant database.

- a. **Database Field:** Lists the fields in the database table or view you selected.
- b. **Assigned Value:** Enter the value that will be used in the SQL Insert command to be assigned to the database fields.

Update

This function allows you to update information in any ODBC-compliant database.

- a. **Database Field:** Lists the fields in the database table or view you selected.
- b. **Assigned Value:** Enter the value that will be used in the SQL Update command to be assigned to the database fields.
- c. **Filter Criteria:** Drag and drop the data element you want to use to filter your query. For example, you may only want the e-mail address for a customer whose customer ID is “CUST112.” Drag that data element from the Available Data Elements window to the matching database column. This creates the appropriate filter.

Filtering Your Query Using an Advanced WHERE Clause

You have the option of creating more sophisticated database queries using advanced custom Where clauses.

- 1 Click the **Advanced WHERE Clause** checkbox.
- 2 Drag and drop the appropriate data elements from the Available Data Elements window to formulate the query statement.

Filtering Your Query Using the Filter Criteria

As an alternative to the Advanced WHERE Clause, you can also create a SQL statement using the filter criteria column. This lets you construct a SQL statement without having to produce syntactically correct SQL.

- 1 Select the table or view that you want to filter; the database field column is populated with the database fields in the selected table or view.
- 2 Select the appropriate SQL action from the **SQL Action** drop-down field. For example, if you want to update a database, select **Update** from the drop-down field.
- 3 Drag a data element from the Available Data Elements window and drop it in the **Return Data Element** column. This data element will be assigned the value of the corresponding field name when the query is executed. This allows the engine to return values from a single query to multiple data elements.
- 4 Drag a data element from the Available Data Elements dialog and drop it in the **Filter Criteria** column. You can also right-click under the **Filter Criteria** column and type a constant you want to use as a filter. This is the value that will be used for filtering the records returned by the query.
- 5 If you like, click the **Test SQL** button to test the SQL statement.
- 6 Click **OK** when you've finished.

Note

All combinations of filter criteria are considered to be ANDed together.

Modifying Column Values

You have the option of selecting a “modification” of a particular field, rather than selecting the field itself

For example, if you have a table called *Items*, with three columns: *ItemId*, *Color* and *Cost*. If you want to know the cost of the item with *ItemId* = 23 you could create the following SQL statement:

```
SELECT Cost FROM Items WHERE ItemId = 23
```

If, however, you want to know the total cost of all red items you would use:

```
SELECT Sum(Cost) FROM Items WHERE Color = 'Red'.
```

In this case, you would insert Sum as a modifier.

To Modify Column Values

- 1 With the appropriate database table and the **Database Fields** column populated, right-click on a database field. The Modify Column Values dialog appears.
- 2 Enter the value you want to use to modify the column value. Click **OK**. The column value has been modified.

Example of SQL Actions Using the Filter Grid

The following are examples of what the filter grid would look like with each action. Remember, the possible actions are Select, Insert, Update, and Delete.

Select SQL Action

In the example below, the following SQL statement is represented: SELECT LastName, FirstName, Zipcode FROM EmployeeTable WHERE empID = \$empid AND Age <30.

Database Field	Return Data Element	Filter Criteria
EmpID		\$empid
LastName	lname	
FirstName	fname	
MI		
Age		<30
Zipcode	\$zip	

Insert SQL Action

In the example below, the following SQL statement is represented: INSERT INTO EmployeeTable LastName, FirstName, Zipcode VALUES (lname, fname, \$zip). Note that lname, fname, and \$zip are data elements. In this instance, when the record is inserted, the return value (EmpID) should be placed into the data element \$empid. This is especially useful for retrieving an autonumber or counter filed when performing a database INSERT.

Database Field	Return Data Element	Assigned Value
EmpID	\$empid	
LastName		lname
FirstName		fname
MI		
Age		
Zipcode		\$zip

Update SQL Action

In the example below, the following SQL statement is represented: UPDATE EmployeeTable SET LastName= 'lname', FirstName = 'fname', ZipCode = '\$zip' WHERE EmpID = \$empid;

Database Field	Assigned Value	Filter Criteria
EmpID		\$empid
LastName	lname	
FirstName	fname	
MI		
Age		
Zipcode	\$zip	

Delete SQL Action

In the example below, the following SQL statement is represented: DELETE FROM EmployeeTable WHERE EmpID = \$empid. Note that any data elements in the data element column are ignored in this statement.

Database Field	Filter Criteria
EmpID	\$empid
LastName	
FirstName	
MI	
Age	
Zipcode	

Using Stored Procedures

Stored procedures are an easy way to execute a batch file of SQL script when you don't want to list every line of SQL script in the database query.

To use a stored procedure, click the **Data Source Name** radio button and select a predefined DSN data source from the drop-down box. This is a list of all available system DSN's. The default DSN will be the first one in the list.

—Or—

- ❶ If you do not have a predefined DSN data source, click **Connection String** radio button, then click **Build**. The Database Connection string dialog opens.
- ❷ Type a connection string for a DSN-less connection. This allows for connection to databases without a preexisting DSN on the server.
- ❸ In the Database Objects screen area, double-click on the Stored Procedure you want to use. This will populate the **Stored Procedure** screen column area.
 - a. The **Parameter** column lists the parameters read from the stored procedure (e.g., @employeeid).
 - b. The **Data** column lists the data elements or value that will be providing input to the procedure's parameters. Drag a data element from the Available Data Elements dialog and drop it in the data

column. Or, alternately, you can right-click under the **Data** column and type the input value you want to use.

- c. The **In/Out** column is a read-only value that tells you whether parameter is an input or output type.
 - d. The **Output DE** (Data Element) displays the data element that will hold any returned value coming from the procedure's parameter. Drag a data element from the Available Data Elements dialog and drop it in the **Output DE** column. Or, alternately, you can right-click under the column and type the name of the data element you want to use.
- ④ Select a data element from the **Stored Procedure Return Value** drop-down box. This is the data element that will hold the stored procedure's return value.

Chapter 37

Calling External Objects

Using Enterprise Java Beans

CRbuilder can use Enterprise JavaBeans (EJB) architecture to communicate with other application or data sources. EJB is way of setting up program components, written in Java, that run in the server parts of your computer network. EJB is structured on the JavaBeans technology for distributing program components to clients in a network. Enterprise JavaBeans offers your organization the advantage of being able to control change at the server rather than having to update each individual computer with a client whenever a new program component is changed or added.

Inserting an EJB

- ① Double-click on a task to open it, then click the **Closing** or **Opening** script.
- ② Right-click on the **Begin** statement, select **Insert**, then **Object Call To**, then **EJB** (see Figure 37-1, below).

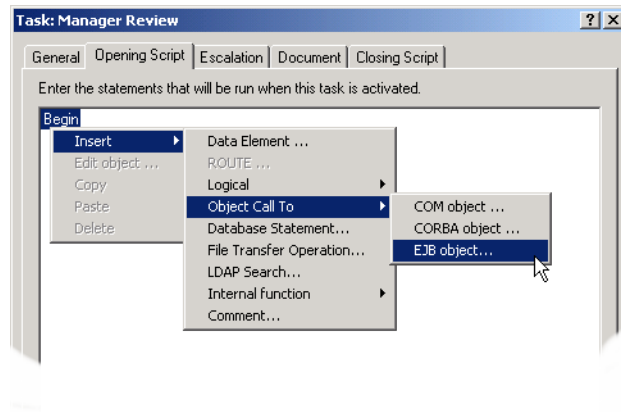


Figure 37-1. Closing Script tab with EJB being inserted into the **CRbuilder process** logic.

- ③ The EJB Browser appears. Type the name of the third-party provider hosting your EJB in the **Provider** field, then type the provider's URL in the **URL** field.
- ④ Click **Refresh**. You will be prompted for password and ID information to access the provider's URL. If you don't know this information, please consult your system administrator.
- ⑤ You are taken to the provider and any registered Java Beans are loaded. You will see all registered Java Beans in the **Objects** list box (see Figure 37-2, below).

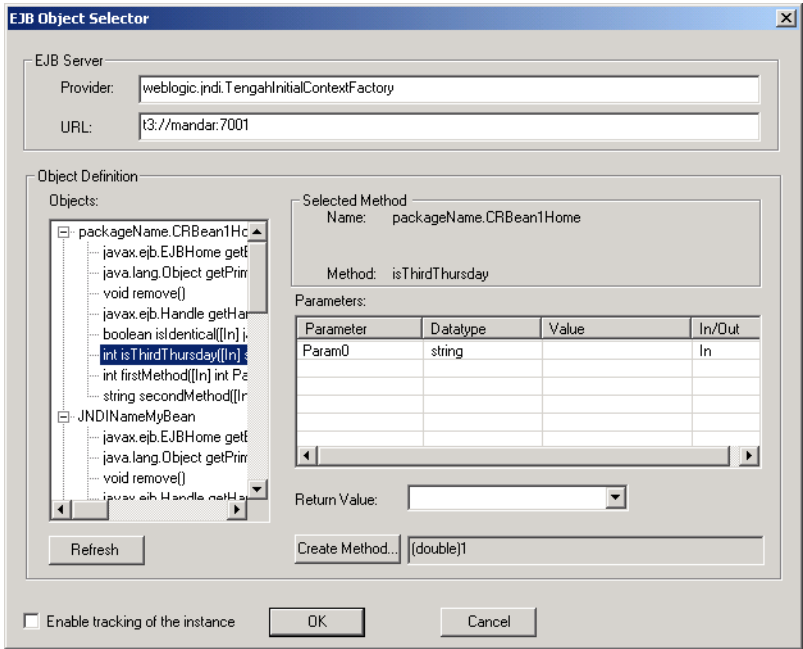


Figure 37-2. EJB Browser dialog with an Object and its methods selected.

- 6 Click on the “+” next to the object to expand it, then click on the method to select it. Any parameters associated with the selected method will be loaded automatically in the parameter window. Next, you need to set the parameters’ value (if any).

Set the Parameters’ Values

In EJB, parameters can only be of type “In.” These provide input to the method. You must define a value that will be sent to a method.

- 1 Right-click under the **Value** column and select **Add** from the drop-down list.
- 2 Type the value that you want to be read to the method (refer to Figure 37-3, below). You can also click and drag a data element from the available data elements window and drop it in the **Data Element** column.

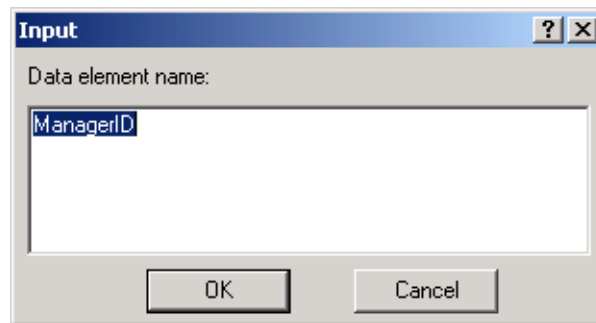


Figure 37-3. The Input dialog with a data element that will be providing input to the method.

- ③ If you wish, select a data element from the **Data Element for Return Value** drop-down box. Typically, this is the data element that will hold the status returned by the method. For example, if a database update method has been executed, it might return a value of “Update” to indicate that the database had been successfully updated.

Create Method

Each EJB has one or more Create() methods. Before any other method is called, one of those Create() methods needs to be created. The default Create() method is one without arguments and it is always present.

The EJB programmer can provide other Create() methods. When he/she does so, one of them must be selected in the CRbuilder so that the EJB is created properly.

- ① In the Objects window, click on the EJB and the method you want to use. Once you have selected the method you want to use, click the **Create Method** button. The Select A Create Method dialog appears.
- ② Click on the **Create() Method** you want to use. The **Parameter** and **Datatype** column is populated.
- ③ Right-click on the Value column and select **Add** from the drop-down menu (see Figure 37-4, below).

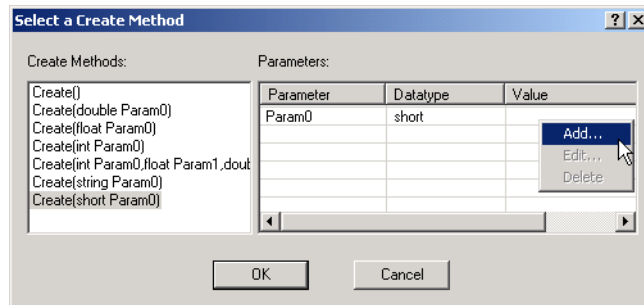


Figure 37-4. Right-click under the value column to assign a value to a parameter.

- ④ Type the value you want to assign to the parameter.
- ⑤ Click **OK**.

Using Simple Object Access Protocol (SOAP)

The Simple Object Access Protocol (SOAP) lets you use XML and HTTP in your CRbuilder process to access services, objects, and servers in a platform-independent manner. SOAP is a protocol that acts as the glue between heterogeneous software components; as long as you are using HTTP and XML, SOAP offers a mechanism for bridging competing technologies in a standard way.

Inserting SOAP Object Call

- ❶ Double-click on a task, then click the **Closing** or **Opening** script.
- ❷ Right-click on the **Begin** statement, select **Insert**, then **Object Call To**, then **SOAP Object** (see Figure 37-5, below).

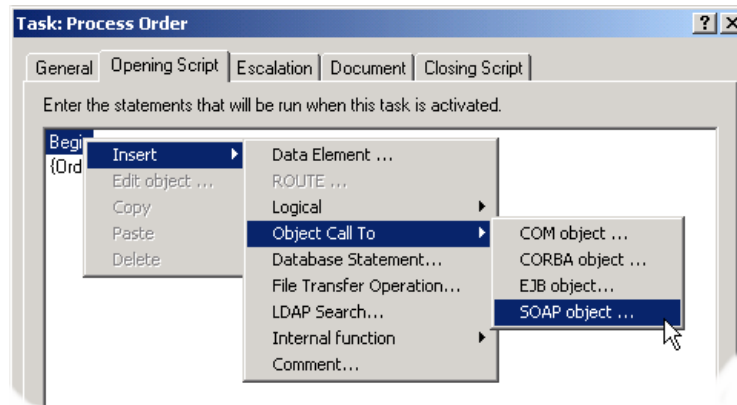


Figure 37-5. Opening Script tab with a SOAP Object call being inserted into the CRbuilder process.

- ❸ The Insert SOAP Object Call dialog appears. Type a URL in the **End Point** field, or select a URL from the drop-down list. The End Point is the URL of the Soap listener and points to a uniform resource identifier (URI). For example, this could be an Active Server Page (ASP).
- ❹ If you entered an HTTPS address in the **End Point** field, you have the option of entering the name of a security certificate in the certificate field. This certificate will be presented to the SOAP listener for authentication.

Attempt M-Post

- 5 Click the **Attempt M-Post** checkbox if you want the SOAP request to enforce use of the HTTP Extension Framework.

Note

If you do not select the M-Post checkbox, the SOAP request will be sent as a standard HTTP Post. Also, if M-Post is checked but the request fails, standard HTTP Post will then be attempted.

- 6 Enter a namespace string that uniquely identifies the SOAP service in the in the **Namespace** field (e.g., URI).
- 7 Enter a Prefix in the Prefix address field. The request headers are prefixed with this two digit number.

Note

If you do not select the M-Post checkbox, the **Namespace** and **Prefix** fields are disabled.

Define the SOAP Object

- 8 If you like, enter an interface that defines the object associated with the method being called.
- 9 Enter a method type in the **Method** field. The method field contains the name of the method to be called in the SOAP request. When you enter the method name, it will also be dynamically altered in the payload area.

Add SOAP Parameters

The Parameter List contains the list of parameters that will be used in the method call.

- 10 To add a parameter, right-click on the SOAP Parameter grid and select **Add** from the popup. The SOAP Parameter dialog appears (see Figure 37-6, below).

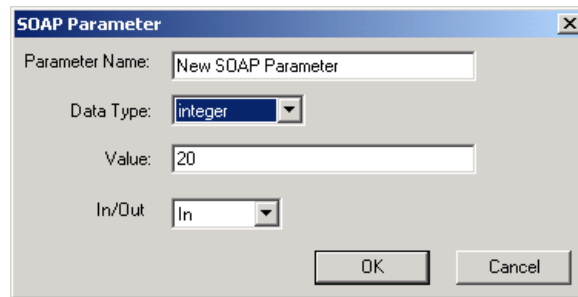


Figure 37-6. The SOAP Add Parameter Dialog

- ⑪ Enter a parameter name for the parameter to be passed to the method.
- ⑫ Select a parameter data type from the **Data Type** drop-down menu. The data type must be able to be translated to a SOAP compatible data type.
- ⑬ Type a value in the **Value** field. This will be passed to the method for the parameter. You can also drag a data element from the Available Data Elements dialog and drop it in the **Value** field.
- ⑭ Select a value from the **In/Out** drop-down list. This identifies whether the parameter is an input or output parameter, or both.
- ⑮ Click **OK**.

Use Data Element to Save SOAP Response

When a request is made to a SOAP object, the SOAP listener processes the request and returns a response to the requesting client. This response is in XML format. You can save the entire XML document to a data element to be used later.

- ⑯ Select the data element you want to use from the **Save SOAP Response in Data Element** drop-down list (see Figure 37-7, below).

Insert SOAP Object Call

End Point:

Certificates:

☒ Attempt M-POST

Namespace:

Prefix:

SOAP Object Definition

Interface:

Method:

Param Name	Data Type	Value	In/Out
X	integer	200	In
Y	integer	500	In
NewSOAPParameter	integer	20	In

Save SOAP Response in Data Element:

Figure 37-7. SOAP Object Call dialog with complete end path, interface, method, and parameter information.

Test SOAP Object Call

- 17 To test the SOAP call and verify that you entered the correct information, click **Test Object Call**.
- 18 You will see a dialog displaying the resultant HTTP Request text and the HTTP Response returned from the request.
- 19 Click **OK**. You will see the new SOAP Object Call inserted into the script in your CRbuilder process.

Using Lightweight Directory Access Protocol

CRbuilder includes Lightweight Directory Access Protocol (LDAP) support. LDAP functionality in CRbuilder can be used to search (but not update) internet and intranet directories. The results of that search can be assigned to a data element and inserted into your CRbuilder process logic.

Information describing users, applications, files, printers, and other resources accessible from a network is often collected into a special database, called a directory. As the number of different networks and applications has grown, the number of specialized directories of information has also grown, resulting in islands of information that cannot be shared and are difficult to maintain.

The Lightweight Directory Access Protocol (LDAP) is an open industry standard that has evolved to meet these needs. LDAP defines a standard method for accessing and updating information in a directory.

Naming Model

The LDAP naming model defines how entries are identified and organized. Entries are organized in a tree-like structure called the Directory Information Tree (DIT). Entries are arranged within the DIT based on their Distinguished Name (DN). A DN is a unique name that unambiguously identifies a single entry. DNs are made up of a sequence of Relative Distinguished Names (RDNs). Each RDN in a DN corresponds to a branch in the DIT leading from the root of the DIT to the directory entry.

Executing LDAP Search

- ❶ Double-click on a task to open it, then click the **Closing** or **Opening** script.
- ❷ Right-click on the **Begin** statement, select **LDAP Search** from the **Insert** menu (see Figure 37-8, below).

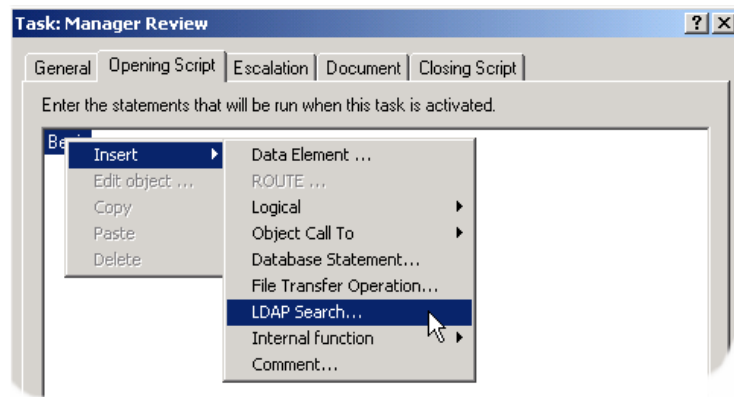


Figure 37-8. Closing Script tab with LDAP functionality inserted into CRbuilder process logic.

- ③ The LDAP dialog appears (see Figure 37-9, below).

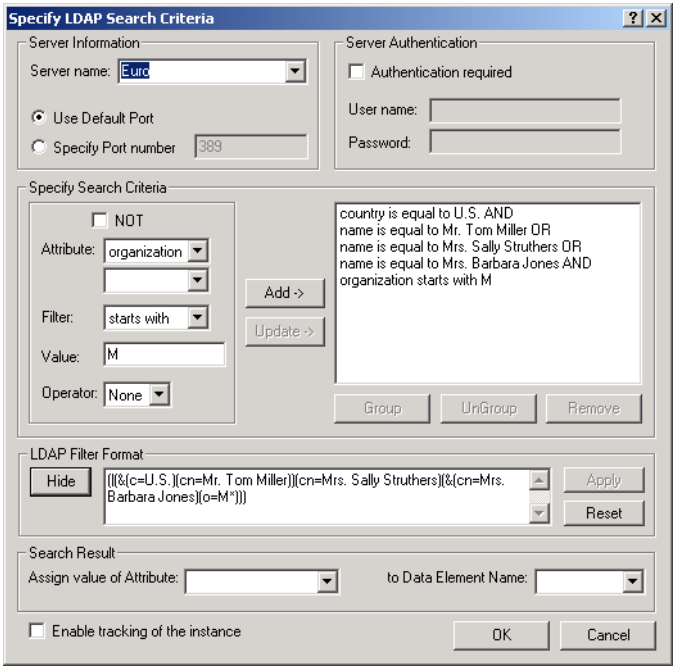


Figure 37-9. The LDAP dialog lets you build sophisticated search queries for individuals or resources without knowing where they are located on the network.

- 4 Specify a server name and port number. This is the name of the server hosting your LDAP directory. To use the LDAP default port 389, check the **Use Default Port** check box.

Specify Your Search Query

- 1 To build your query using the Specify Search Criteria area, click the **Not** check box to build complex queries, select the attributes and filters, specify their values, and use **AND/OR** operators. For example, you can select the attribute “Country,” select the filter “is equal to,” and specify the value “U.S.” Depending on search criteria selected in the first drop-down list, the second drop-down list will be populated accordingly.
- 2 To group two or more filter strings between parenthesis, select the query filter strings you want to group from the drop-down list and click **Group**.
- 3 Click **Ungroup** to remove the parenthesis.

- ④ To delete an entry from the list box, click that entry and click **Remove**. If you want to update an entry, click that entry, modify the values that appear in the **Specify Search Criteria** screen area, and select **Update**.
- ⑤ Click **Add Criterion** to add your query in the Search Criteria list box.

Manually Building Search Query

If you prefer, you can also build your query syntax manually.

- ① Click **Show** in the LDAP filter format group area, then enter an LDAP search filter in the edit box. Clicking **Reset** will overwrite the filter in the field with that of the selected criteria in the drop-down list.
- ② Click **Apply**. Note, however, that if the search filter in the list field and the drop-down list don't match, then the list field is disabled.
- ③ Select the output attribute and the data element you want to use to capture the search results. The value of the attribute in the Search Result screen area will be assigned to the data element in the Search Result group box.
- ④ Click **OK**. Your LDAP directory search is inserted in your opening or closing script.

Using COM Objects

COM is Microsoft's framework for developing and supporting program component objects. These component objects are reusable program building blocks that can be combined with other components in the same or other computers in a distributed network to form an application.

CRbuilder can integrate and use these COM Objects to communicate with other applications or data sources on your network. For example, you could have a COM Object in a CRbuilder process that would automatically create a new NT or Microsoft Outlook partner for a new hire whenever that particular CRbuilder process was triggered.

Inserting COM Objects

The **Opening** or **Closing** script tab allows you to insert a COM Object (.dll or.exe) and invoke it.

Note

In order for a COM Object to be successfully instantiated in your CRbuilder process, it must first be registered in your local machine's registry. Please consult your system administrator for more information about how to do this.

- ❶ Double-click on any task, and click the **Opening** or **Closing** Script tab.
- ❷ Right-click on the Begin statement, and select **Object Call To**, then **COM Object** from the **Insert** drop-down menu. The COM Objects dialog appears (see Figure 37-10, below).

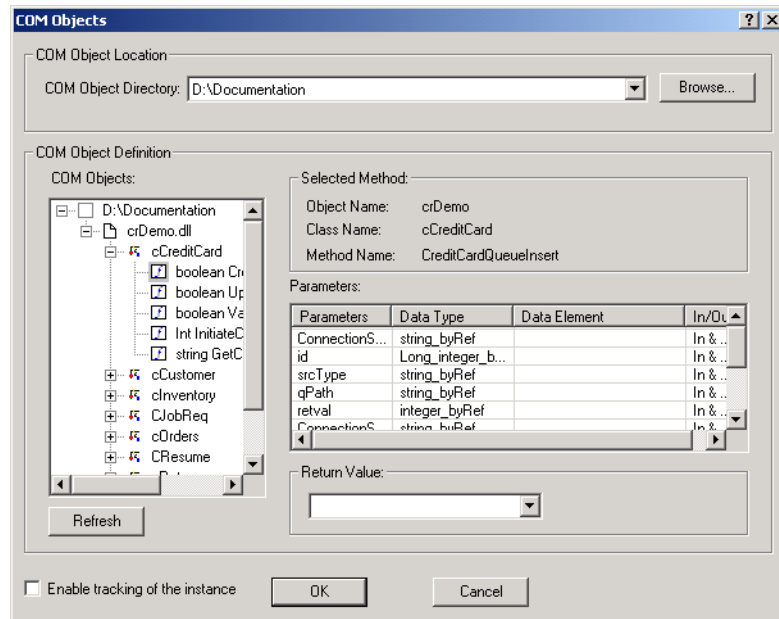


Figure 37-10. The COM Objects dialog where you choose the location holding the COM Object.

- ③ Type the path to the directory holding the object. Or, click **Browse** and go to the correct location.
- ④ All of the registered objects in that directory appear in the COM Objects window. Double-click on the desired object. Click on the “+” next to the object to list all its classes. Double-click the “+” next to the classes to list all the properties and methods. Double-click the “+” next to the desired method or property to list its parameters (see Figure 37-11, below).

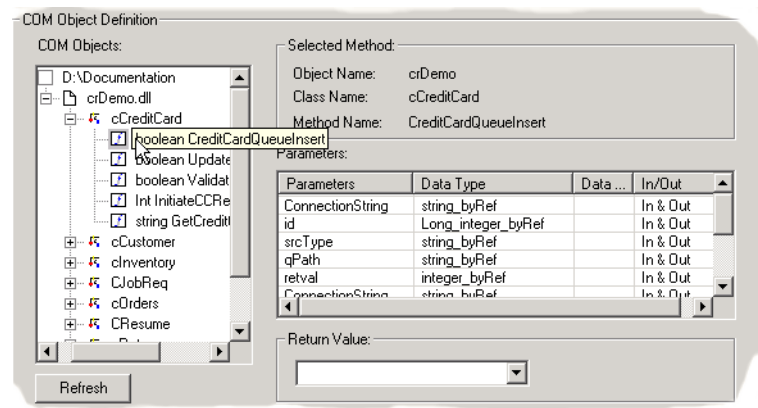


Figure 37-11. The COM Object Browser with selected methods and parameters.

Set the Parameter's Values

Parameters can either provide input to the method, receive data from the method, or both. You need to define a value that will be sent into a method, received from a method, or both.

- ❶ In the **Value** column, right-click and select **Add** from the drop-down menu.
- ❷ Type the value that you want to be read to the method.
 - a. If the parameter is of type “**In**,” then the value can be a constant of the same data type or a data element of the same data type.
 - b. If the parameter is of type “**In/Out**,” the value should be a data element of the same data type as that of the parameter. It can also accept constant values, in which case the output is ignored.
 - c. If the parameter is of type “**Out**,” the value should be a data element of the same data type as that of the parameter (refer to Figure 37-12 below). You can also click and drag a data element from the available data elements window and drop it in the **Data Element** column.

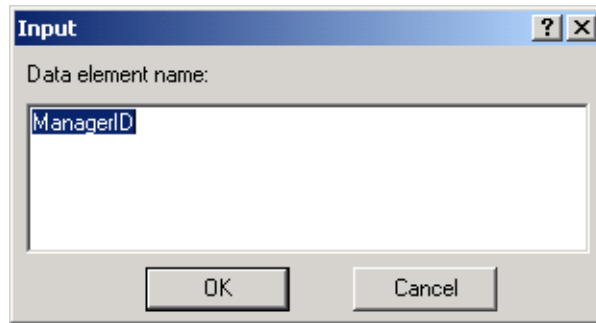


Figure 37-12. The Input dialog with a data element that will be providing input to the method.

- ③ If you prefer, you can select a data element from the **Data Element for Return Value** drop-down box. Typically, this is the data element that will hold the status returned by the method. For example, if a database update method has been executed, it might return a value of “Update” to indicate that the database had been successfully updated.
- ④ Click **OK**.

Using CORBA Objects

CRbuilder can use the Common Object Request Broker Architecture (CORBA) to communicate with other applications and data sources on your network. CORBA is a specification for creating, distributing, and managing distributed objects in a network. The main concept behind CORBA is the Object Request Broker (ORB). The ORB is the middleware that establishes the client-server relationships between objects. Using an ORB, a client can transparently invoke a method on a server object, which can be on the same machine or across a network. The ORB intercepts the call and is responsible for finding an object that can implement the request, pass it the parameters, invoke its method, and return the results. The client does not have to be aware of where the object is located, its programming language, its operating system, or any other system aspects that are not part of an object's interface.

Inserting CORBA Object

Because CORBA and COM are similar concepts, the method of invoking and using CORBA is almost identical to that used for COM Objects.

- ❶ Double-click on a task to open it, then click the **Closing** or **Opening** script.
- ❷ Right-click on the **Begin** statement, select **Insert, Calling External Objects**, then **CORBA Object** (see Figure 37-13, below).

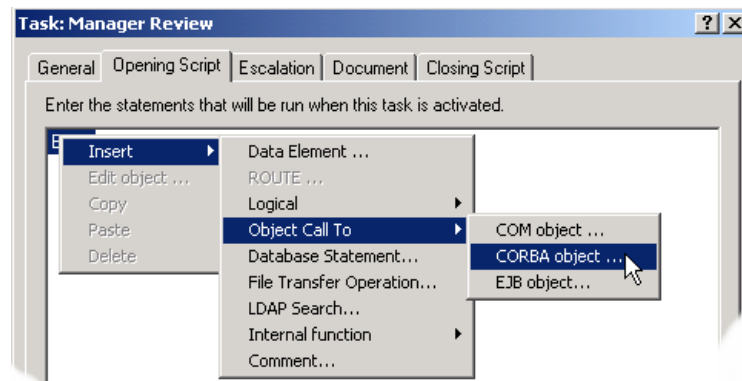


Figure 37-13. Closing script tab with CORBA Object being inserted into the CRbuilder process logic.

- ❸ The CORBA Object picker appears. Type the network path to the server

holding the CORBA interface repository, then specify the port number the CORBA interface repository is monitoring (refer to Figure 37-14, below). Please talk to your system administrator if you aren't sure which port or server this is.

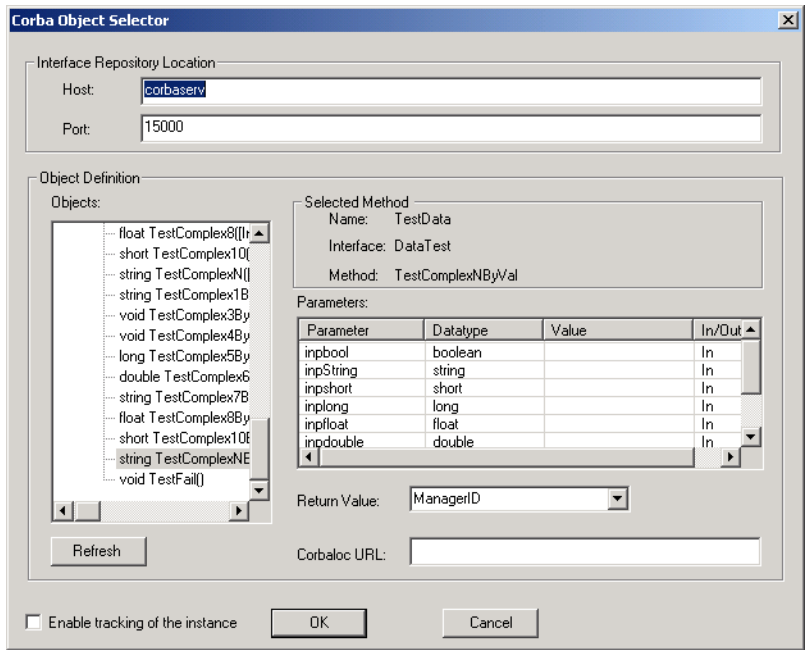


Figure 37-14. CORBA Browser dialog with the CORBA server and port number defined.

- 4 Double-click on the desired CORBA object. Click on the “+” next to the object to list all its classes. Double-click the “+” next to the classes to list all the properties and methods. Double-click the “+” next to the desired method to populate the **Parameters column** with the method’s parameters (refer to Figure 37-15, below).

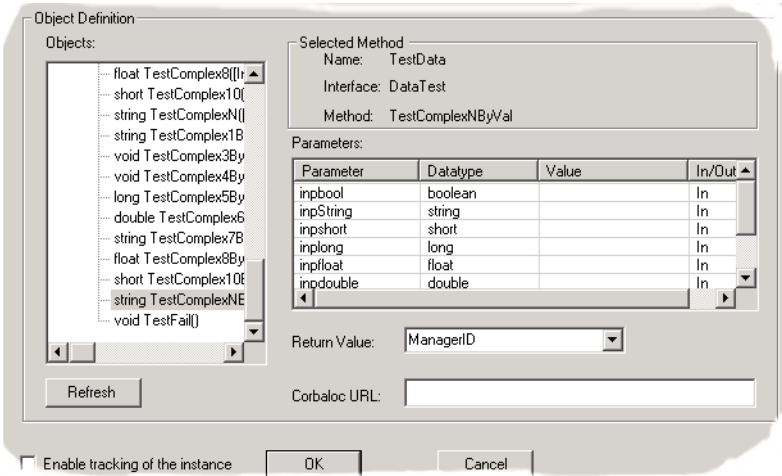


Figure 37-15. CORBA Object with its classes, methods, and parameters selected.

Set the Parameter's Values

Parameters can either provide input to the method, receive data from the method, or both. You need to define a value that will be sent to a method, received from a method, or both.

- 1 Double-click under the **Data Type** column. The Data Type dialog appears.
- 2 Type the value that you want to be read to the method. This will be an integer. Or, type the name of the data element that will hold the value it receives from the method (refer to Figure 37-16, below). You can also click and drag a data element from the available data elements window and drop it in the **Data Element** column.

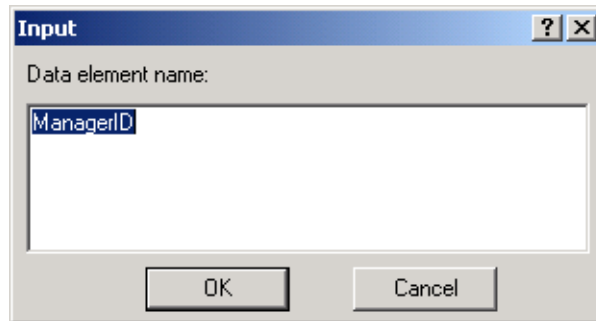


Figure 37-16. The Input dialog with a data element that will be providing input to the method.

- ③ If you wish, you can select from a data element from the **Data Element for Return Value** drop-down box. Typically, this is the data element that will hold the status returned by the method. For example, if a database update method has been executed, it might return a value of “Update” to indicate that the database had been successfully updated.

Using the Corbaloc URL

- ④ In the **Corbaloc URL** field, type the location where the Object is instantiated. The CORBALOC field can take one of the following four options:
 - a. **A Corbaloc URL.** A Corbaloc URL is a standard URL for locating CORBA objects. It has the following form:
`corbaloc: [protocol] : <server> : <port> / <obj name>` where
 [protocol] is optional, <server> and <port> refer to the location of the actual CORBA object that should be invoked at run-time, and <obj name> is the name by which the developer of the object registered the object with the Portable Object Adapter (POA) manager.
 To use Corbaloc, you need to use an ORB that is CORBA 2.3 compliant and that implements the Interoperable Naming Service (INS).
 - b. **A stringified IOR (Interoperable Reference).** Refer to your ORB's documentation for a description of how stringified IORs are generated. This method works for all versions of CORBA.

- c. **A string data element containing a stringified IOR.** This method works for all versions of CORBA.
- d. **A URL** (file://, http://, https:// or ftp://) that refers to a file containing a stringified IOR. This method works for all versions of CORBA.

5 Click **OK**.

Chapter 38

Using Server-Side Scripting Pages

Writing Messages to the Appliance

In order to write an initial process message instance from CRbuilder to the Syncx appliance, you will need to insert the CRMSGGR COM Object or Java Class into a server-side scripting page (ASP, JSP, etc.). Once invoked, the CRMSGGR object makes the necessary call to write a message to the message database (MDB) on the appliance.

The object provides all the information the appliance requires for processing, including the process name, the task name, any data elements, appliance name, and any required password information.

After the initial call has been made, the message will be written to the message queue in the message database.

When the Syncx appliance sends a response e-mail message back to you, it will embed a Route ID in the URL that appears in the e-mail. If you respond back to the engine through some action (such as hitting a “submit” button on a intranet Web page), the system will send this Route ID back to the engine. Whatever the mechanism you use for this process, this system-generated Route ID must be provided back to the engine in order for CRbuilder to know its location the process, and which task needs to be activated next.

Message Types

There are two categories of messages:

- **Start** always initiates a CRbuilder process instance.
- **Respond** is always handled by the CRbuilder system. Therefore, you should never modify any part of a respond message, but only reference them by making the appropriate object call within the server-side scripting page.


What's a Route ID?

A Route ID is a data element generated by the CRbuilder engine that resides on the CRbuilder server. This data element references what instance of a process and task is running.

Note

Respond messages are generated by the CRbuilder engine, and should never be altered. Do not attempt to manipulate the values within any respond message.

An Active Server Pages Example

 Remember to register your CRMSEGR COM object before attempting to invoke it.

A new process instance message creates a new process instance that will be managed by the engine. Server-side scripting pages reference these instances (via the Route ID variable) in order to communicate with the Syncx engine. You need to manually add the CRMSEGR object to your ASP page to send a message to the message queue on the appliance to start a process.

To start a New Process Instance

Use the CRMSEGR object to send a new process instance message from the ASP file to the Syncx server. The CRMSEGR object can be obtained from CommerceRoute. You will need to install and register them before they can be invoked in your ASP script as described below.

The code sample shown in Figure 38-1 below illustrates how you invoke the CRMSEGR object and the values it creates in your ASP file.

```

1  |
2  | <%@ LANGUAGE = VBScript %>
3  | <HTML>
4  | <HEAD><TITLE>PlaceOrder</TITLE>
5  | </HEAD>
6  | <BODY BGCOLOR="#FFFFFF"><FONT FACE="ARIAL,HELVETICA">
7  |
8  | <%
9  | Dim ErrCode
10 | Dim ErrDesc
11 |
12 | 'Create an instance of the CRMSEGR object
13 | Dim Msg as New CRMSEGR.message
14 |
15 | 'Read data elements from the process
16 | Msg.CreateMessage
17 | Msg.ProcessName = "PlaceOrder"
18 | Msg.Taskname = "Contact Vendor"
19 | Msg.AddDataElement "MyOrderID", "12345", "Integer"
20 | Msg.AdddataElement "Employee", "Mary Jones", "String"
21 |
22 | 'Write the message to the message database
23 | Msg.PostMessage "crna0001", "admin", "pwd"
24 |
25 | ErrCode=Msg.ErrorCode
26 | ErrDesc=Msg.ErrorDescription
27 | %>
28 |
29 |
30 | </FONT>
31 | </BODY>
32 | </HTML>

```

Figure 38-1. An example of part of an ASP file associated with new process instance. The CRMSEGR object communicates with the Syncx server.

To Respond to a New Process Instance

Once you have submitted a message to the Syncx appliance for processing, it may respond to the new process instance by sending you an e-mail message directing you to a web page to activate some process, such as approving a purchase request. Typically, you would then go to the specified Web page and execute some action, which sends the engine the appropriate Route ID and tells it to “do” something, such as processing the next task. For ASP files that are associated with a Respond to a new Process call, information about the processes’ Route ID is obtained from the Syncx system by entering the following Visual Basic Script code:

```
<%  
Dim route  
route=Request.QueryString("route");  
%>
```

An example that uses this code is provided in Figure 38-3 below. Note that the value of this Route ID is received from the Syncx 6200 Series Appliance Backend Integration Guide system via the querystring variable and are left unchanged. This works because the URL the user clicked on to get to this .ASP page included ?route=1.2.3.4; in other words, the Route ID was passed by the CommerceRoute server as a variable to the .ASP page.

```

2  <% LANGUAGE = VBScript %>
3  <HTML>
4  <HEAD><TITLE>Approved</TITLE>
5  </HEAD>
6  <BODY BGCOLOR="#FFFFFF"><FONT FACE="ARIAL,HELVETICA">
7
8  <%
9  DIM ErrCode
10 DIM ErrDesc
11 'Create an instance of the CRMMSG object
12 Dim Msg as New CRMMSG.message
13
14 'Read data elements from the process
15 Msg.CreateMessage
16
17 Route ID → Msg.Route = "1.2.3.4"
18 Msg.AddDataElement "Approval Code", "12345", "Integer"
19 Msg.AdddataElement "ApproverID", "j44578", "String"
20
21 'Write the message to the message database
22 Msg.PostMessage "crna0001", "adain", "pwd"
23
24 ErrCode=Msg.ErrorCode
25 ErrDesc=Msg.ErrorDescription
26
27 %>
28 </FONT>
29 </BODY>
30 </HTML>

```

Figure 38-2. An example of part of an ASP file associated with a response. Note the syntax for calling system-generated Route IDs.

A Java Server Pages Example

JSP files communicate with the CRbuilder Server by using a Java-based CRMSGR object. The CRMSGR Java object is included with your CRbuilder product download, located in the \JAVA_CRMSGR\ folder.

The CRMSGR Java object can be installed onto your system in two different ways:

- Place the CRMSGR.class file in the directory where your client object resides (i.e., the JSP page or java class), or
- Have your CLASSPATH environment variable point to the CRMSGR.class file.

For example, if you copied the Sxmgsr class file to C:\JavaClasses\Sxmgsr Object directory, your updated CLASSPATH variable will look similar to:

CLASSPATH= ; C:\JavaClasses\CRMSGR;

To Start a New Process Instance

The code sample shown in Figure 38-3, below, illustrates how you invoke the CRMSGR object to send a message back to the Syncx appliance, and the values it creates in a JSP page.

```

1  <HTML><HEAD><TITLE>JSP CRMSGR Object Example</TITLE>
2  </HEAD>
3  <BODY>
4
5  <%@ page import = " com.commercetroute.*" %>
6
7  public class TestCRMessage
8  {
9      public static void main(String[] args) throws Exception
10     {
11         CRMsgR cre = new CRMsgR();
12         cre.a_ProcessName = "SPtest";
13         cre.a_TaskName = "Task0";
14
15         cre.addDataElement("iTest", "123", "Integer");
16         cre.addDataElement("sTest", " This is string l ", "String");
17         cre.addDataElement("dTest", "0.248273497", "Double");
18         cre.addDataElement("fTest", "12.333", "Float");
19         cre.addDataElement("lTest", "12345678", "Long");
20         cre.addDataElement("shortTest", "888", "Integer");
21         cre.addDataElement("vTest", "true", "Variant");
22         cre.addDataElement("boolTest", "false", "Boolean");
23
24         long IMsgId = cre.postMessage("crserver", "admin", "password");
25         System.out.println(cre.getResponse());
26     }
27 }
28
29 </FONT>
30 </BODY>
31 </HTML>

```

Route ID

Figure 38-3. An example of part of a JSP file associated with a new process instance. Note

the system defined values that make up a Route ID.

To Respond to a New Process Instance

Once you have submitted a message to the Syncx appliance for processing, it may respond to the new process instance.

For JSP files in which the Syncx appliance is responding to your new process instance, information about the process is generated by the Syncx appliance. An example of this is provided in below. Note that the values of this process instance are received from the CRbuilder system by the querystring and are left unchanged.

```

1
2 <HTML><HEAD><TITLE>JSP CRMSGR Object Example</TITLE>
3 </HEAD>
4 <BODY>
5
6 <%@ page import = " com.commercerooute.*" %>
7 <html>
8 <%
9   CRMsgR cre = new CRMsgR();
10   cre.m_ProcessName = "SPtest";
11   cre.m_TaskName = "Task0";
12
13   cre.addDataElement("iTest", "123", "Integer");
14   cre.addDataElement("sTest", " This is string 1 ", "String");
15   cre.addDataElement("dTest", "0.248273497", "Double");
16   cre.addDataElement("fTest", "12.333", "Float");
17   cre.addDataElement("lTest", "12345678", "Long");
18   cre.addDataElement("shortTest", "888", "Integer");
19   cre.addDataElement("vTest", "true", "Variant");
20   cre.addDataElement("boolTest", "false", "Boolean");
21
22   long INMsgId = cre.postMessage("crserver", "adain", "password");
23   %>
24   Data Written to the server successfully !
25
26 %>
27
28 </FONT>
29 </BODY>
30 </HTML>

```

Route ID

Figure 38-4. An example of part of a JSP file associated with a respond to a new process instance call. Note the syntax for calling system-generated Route ID

Launching a Syncx Interchange Operation

As with the other examples, you can also invoke a Syncx Data Interchange operation from within CRbuilder by inserting the CRMSGR object with an appropriate server-side scripting page and calling the operation name (see Figure 38-5, below).

```

1
2  <%@ LANGUAGE = VBScript %>
3  <HTML>
4  <HEAD><TITLE>Example of Launch Syncx Operation</TITLE>
5  </HEAD>
6  <BODY BGCOLOR="#FFFFFF"><FONT FACE="ARIAL,HELVETICA">
7
8  <%
9  'Create an instance of the CRMSGR object
10  Dim Msg as New CRMSGR.message
11
12  'launch a Syncx operation
13  Msg.CreateMessage
14  Msg.OperationName = "ConvertP0"
15  Msg.PostMessage "crna0001", "admin", "pwd"
16
17
18  %>
19
20
21  </FONT>
22  </BODY>
23  </HTML>

```

Operation Name →

Figure 38-5. An example of an ASP page with the CRMSGR object invoking a Syncx operation.

Linking a Task to a Server-Side Scripting Page

As was described earlier, you use a task’s **Document** tab to enter the URL to the appropriate server-side scripting page that you want to use. Once selected, CRbuilder will automatically read through the file and create data elements that reference the file’s fields.

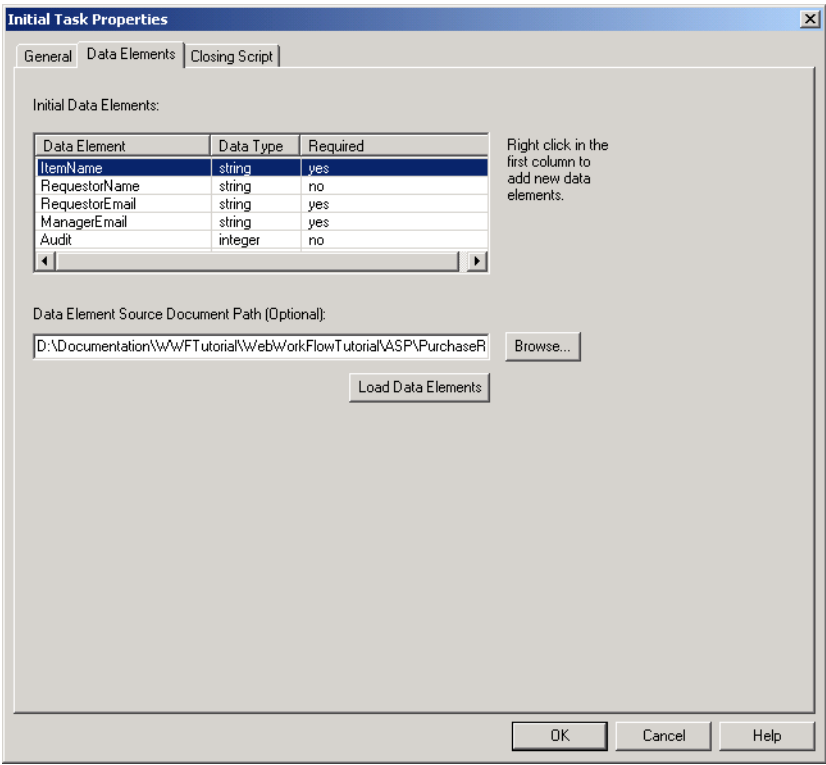


Figure 38-6. Link a task to a particular server-side scripting page (such as the ASP file shown here) in the task’s **Document** tab. CRbuilder will automatically read through the file and create data elements that match the file’s fields.



Chapter 39

Deploying Your Process

Checking and Fixing Errors

Now that you've created your process, defined your tasks and routes, and set the data elements and parameters, you're ready to check your model for errors. Your CRbuilder process could have several different types of errors—everything from mismatched data types to missing routes. CRbuilder has a built in error detection utility that will catch most of these problems.

When you begin the error check utility, the CRbuilder modeler logs information in an error file called err.txt. By default, this file is written to the same location as your modeler data files. However, you can change this value by selecting **Options** from the **Tools** menu on the modeler toolbar (see Figure 39-1, below).

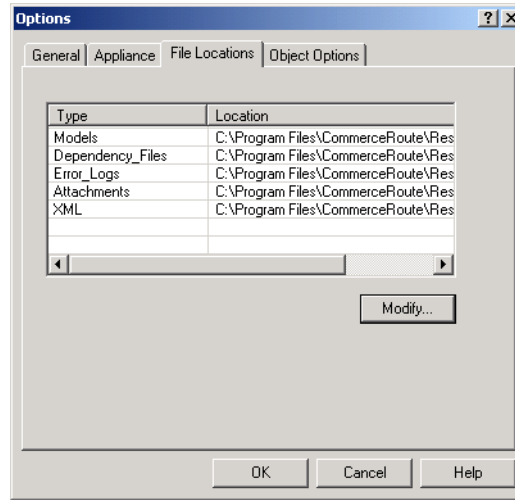


Figure 39-1. The Options dialog with the File Locations tab selected. To change the default location of one of these settings, click on the item, then click **Modify**.

Select the object whose location you want to change, click **Modify**, then browse to a new default location and click **OK**.

You may be prompted to either overwrite the existing log information or to append it instead. You can then refer to this file for more detailed information about the nature of any errors.

To Check for Errors

- ❶ With your process open, click the **Check** button on the toolbar to have the system check for any errors.
- ❷ If you have already encountered errors and you have not changed the error file location, then you will see a dialog asking if you want to save or overwrite previous errors.
- ❸ Once the error check has finished, you will see a notification dialog box (see 39-2, below). You can then either go to the referenced trouble spot and fix your error, or fix the error later by viewing the error file (see Figure 39-3, below).

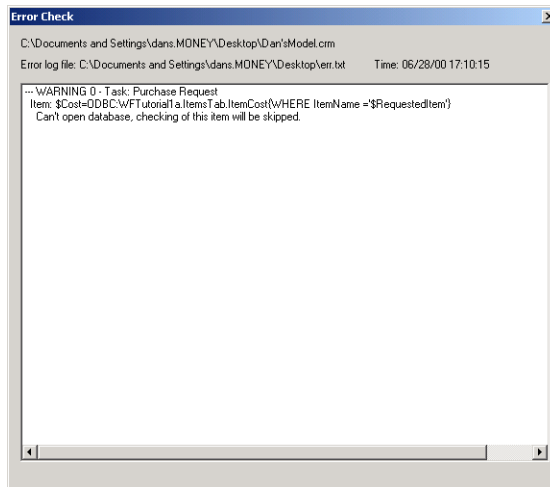


Figure 39-2. The error notification dialog tells you which task and which object in the task needs to be fixed.

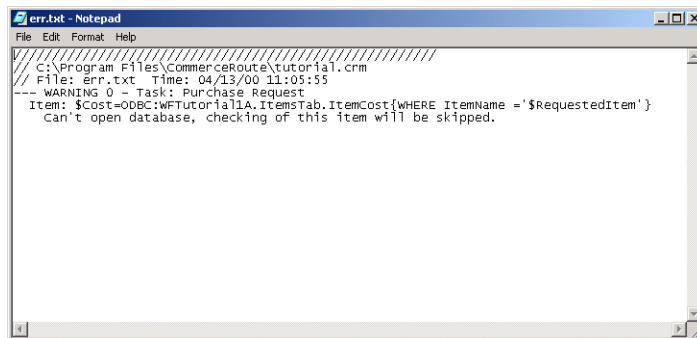


Figure 39-3. Errors are logged in err.txt file. It may also contain information about errors for other models that you have previously encountered.

- 4 Use the information above to troubleshoot and fix any errors that appear in your model. For example, in the text above, you can see that the Purchase Request task has a faulty ODBC call that needs to be fixed. In this case, the modeler can't locate the database and you would check that your DSN settings are connected to the server on which it resides.

Deploy Your Process

Once you've completed the model, fixed any errors, and created all the database connection strings, you are ready to deploy your process. When we say deploy, we mean to write your new process model to the Appliance.

Anyone can create and design a process model. However, if your model includes dependencies (such as COM Objects or database DSNs) that are not registered locally on the appliance, an administrator must load these dependencies on to the appliance via the appliance's Administration screens.

Note

For more information about resolving dependencies and registering objects and database DSN's on the appliance, please consult your Syncx appliance administrator.

There are four main steps involved in copying and deploying your CRbuilder model to the Syncx appliance.

- ❶ Copy the model from your client machine to the Syncx appliance.
- ❷ The appliance then reads through the model and checks for any external dependencies that need to be copied on to the appliance.
- ❸ If the model has an external dependencies that need to be loaded on to the appliance, the deployment is aborted. A list of the missing dependencies will appear.
- ❹ If the model has no external dependencies, or if all its dependencies are available on the appliance, the files are written to the CRsync system and it is successfully deployed.

Deploying Your Process

- ❶ To implement your model, choose **Deploy** from the Process menu.
- ❷ Choose the correct device you want to use from the drop-down list.
- ❸ Enter your username and password (see Figure 39-4, below).

Note

When deploying, the modeler checks the integrity of your process and will not let you deploy if there are any errors. You will be notified if there are any errors.

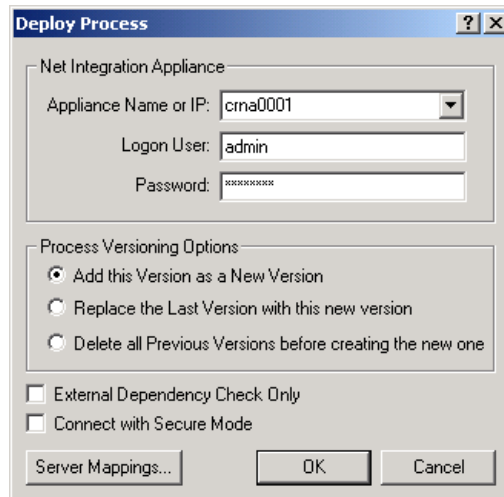


Figure 39-4. Deploy Process dialog with the device selected.

- 4 Select the process versioning option you want to use. CRbuilder can track and use multiple versions of a single process. This is helpful when you want to run two versions simultaneously. For example, if you are halfway through running an instance of version 5 of the Return, you could allow version 5 to continue running while you start version 6, which could be slightly different.
 - a. Click the first radio button if you want to replace the last version of this process on the appliance with this one. This will make this version the newest one.
 - b. Click the second radio button if you want to keep your last version, but make this newest version the latest one.
 - c. Click the third radio button if you want to delete all previous versions of this process. The version you are currently deploying with then be the only one on the appliance.
- 5 Click the **Connect with Secure Mode** checkbox if you want to deploy using HTTPS instead of HTTP. This ensures that the deployment is secure.

Note

To Connect with Secure Mode, your appliance must be configured for HTTPS. Please check with your Syncx appliance administrator for more information on how to do this.

- 6 Click **OK**. Your model will be written to the appliance.

If a message appears notifying you that the process was not successfully deployed, along with a list of dependencies that need to be copied to the appliance, please see your Syncx appliance administrator for assistance in registering the missing information on the appliance.

Deploying for External Dependency Check Only

You have the option of deploying the process for the purpose of receiving notification of any external dependencies that exist.

- ❶ Choose the correct device you want to use from the drop-down list
- ❷ Enter your username and password.
- ❸ Click the **External Dependency Check Only** checkbox (see Figure 39-5, below).

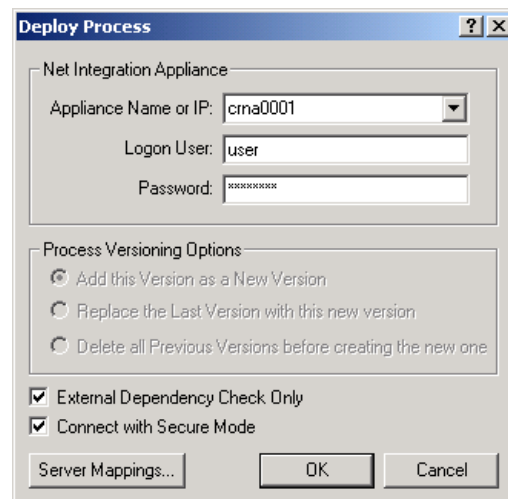


Figure 39-5. The Deploy Dialog with **External Dependency Check Only** check box selected.

- ❹ Click **OK**.

The appliance checks the process for external dependencies. You will see a list of all dependencies which will need to be copied to the Syncx appliance before you can successfully deploy.

Chapter 40


Contacting CommerceRoute

Getting Help

In addition to this manual, CommerceRoute provides technical resources to answer questions about virtually every aspect of your Syncx 6200 Series Appliance Appliance. In many cases, you can find the necessary information to solve your problem using these other resources.

Online Help

A complete online help system provides you with tips and troubleshooting advice.

To access the online help, click the  button on the toolbar. This opens the CRbuilder online help system that gives you information on virtually every object throughout the entire environment.

As you work within CRbuilder, you may have a question about the functionality of an object or the syntax of a particular field. You can also access the context-sensitive help by either right-mouse clicking and selecting the **What's This?** button, or clicking on the object of interest and pressing your computer's **F1** key. The online help system will appear, displaying information relevant to the object you selected. Once you've finished, simply close the window and return to the main CRbuilder environment.

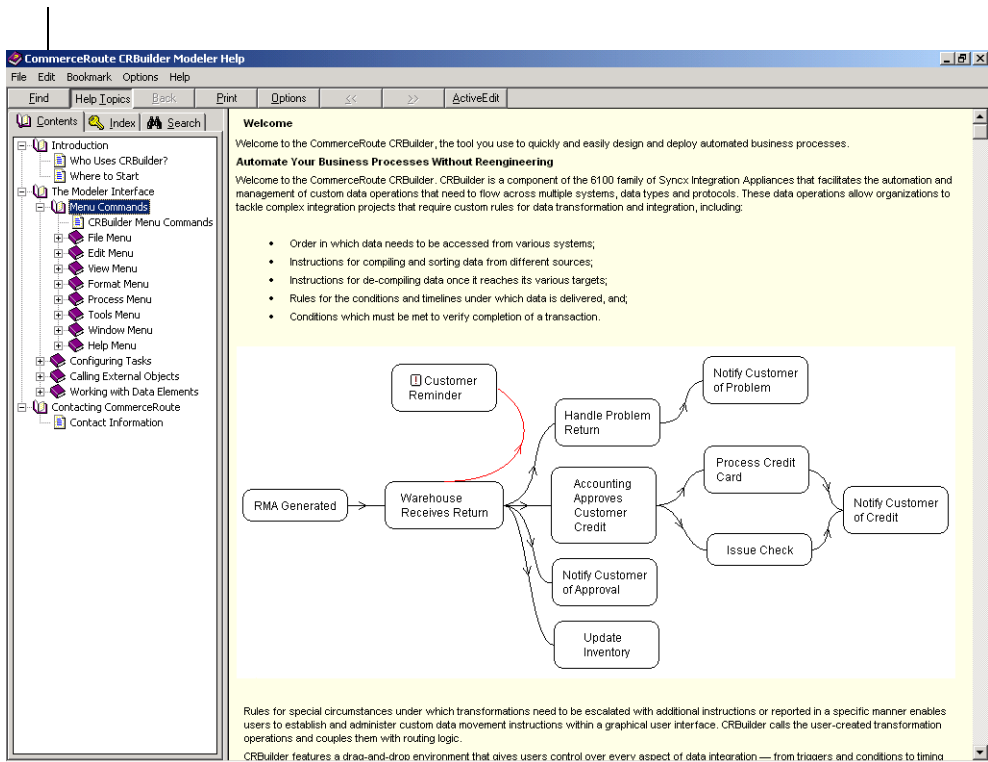


Figure 40-1. CRbuilder's Online Help system is accessed through the **Help** menu. You can also get context-sensitive help by right-clicking your mouse on virtually any object in the user interface.

Contact Information

Use this list of resources to get more information about our company and products.

Address Information

Internet: http://www.commerceroute.com/Company/Contact_Us/contact_us.html

Email: info@commerceroute.com

Professional Services Assistance

Internet: <http://www.commerceroute.com/Support/support.html>

Email: support@commerceroute.com

Technical Support

Internet: <http://www.commerceroute.com/Support/support.html>

Email: support@commerceroute.com

Career Opportunities

Internet: <http://www.commerceroute.com/Company/Careers/careers.html>

Email: hr@commerceroute.com

Additional Product Information

Telephone: 1-888-800-2776

Email: info@commerceroute.com



Chapter 41

Appendix A: Properties and Methods Supported by the CRMSGRA Object

The following pages provide a reference to each of the properties and methods that are supported by the CRMSGRA object.

Validate (Property)

Description:	Instructs the message object to perform a message validation prior to submitting the message to the message queue.
Data Type(s):	Boolean
Valid Values:	TRUE or FALSE YES or NO 1 or 0
Default Value:	TRUE
Examples:	Message.Validate = TRUE Message.Validate = 0

Route (Property)

Description:	Specifies the route information to be provided back to the device for process instance context.
Data Type(s):	Character String
Valid Values:	Valid route id's are generated by the engine and should be passed unchanged.
Default Value:	There is no default value. This is required for all messages that are not process initiating messages. For Process-initiating messages, refer to the CreateNewInstance method.
Examples:	From an ASP Query String: Message.Route = Request.QueryString("Route") In an ASP Variable: Message.MessageType = <%=route%>

Priority (Property)

Description:	Specifies the priority of the message. Messages with higher priorities are executed before messages with lower priorities.
Data Type(s):	Integer or String
Valid Values:	<p>Valid values are integers between 1 and 9, with 9 being the highest priority, or the names of the priorities (strings). Valid name values are:</p> <p>Priority Name—Numeric Value</p> <p>Highest— 9</p> <p>Very High— 8</p> <p>Higher —7</p> <p>High— 6</p> <p>Normal —5</p> <p>Low —4</p> <p>Lower—3</p> <p>Very Low— 2</p> <p>Lowest— 1</p> <p>If a message priority is supplied, then that priority will override any other priorities.</p>
Default Value:	If not provided, the message will be assigned a priority of the task that it is meant for. If the message is for a WDI operation, it will use priority 8.
Examples:	<p>Message.Priority = 2</p> <p>Message.Priority = "High"</p>

ProcessName (Property)

Description:	Specifies the Name of the Process to instantiate a new instance from.
Data Type(s):	String
Valid Values:	Valid values are strings that represent process names of deployed processes.
Default Value:	none
Examples:	Message.ProcessName = "OrderProcess"

TaskName (Property)

Description:	Specifies the Name of the Initiating Task of the process specified in the ProcessName property.
Data Type(s):	String
Valid Values:	Valid values are strings that represent initial task names of deployed processes.
Default Value:	none
Examples:	Message.TaskName = "Receive Order"

OperationName (Property)

Description:	Specifies the Name of the Data Interchange operation that should be launched.
Data Type(s):	String
Valid Values:	Valid values are strings representing valid Data Interchange operation names.
Default Value:	None
Examples:	Message.OperationName = "ConvertToXML"

From (Property)

Description:	Contains free-form text content intended to hold a "from" designator or "from" email address.
Data Type(s):	String
Valid Values:	String Values (<=255 chars)
Default Value:	None
Examples:	Message.From = "FinSystem"

To (Property)

Description:	Contains free-form text content intended to hold a “to” designator or “to” email address.
Data Type(s):	String
Valid Values:	String Values (<=255 chars)
Default Value:	None
Examples:	Message.To = “FinProcess”

Cc (Property)

Description:	Contains free-form text content intended to hold a “cc” designator of an email address.
Data Type(s):	String
Valid Values:	String Values (<=255 chars)
Default Value:	None
Examples:	Message.cc = “acme”

Bcc (Property)

Description:	Contains free-form text content intended to hold a “bcc” designator of an email address.
Data Type(s):	String
Valid Values:	String Values (<=255 chars)
Default Value:	None
Examples:	Message.bcc = “acme”

Subject (Property)

Description:	Contains free-form text content intended to hold a “subject” or “subject” email content line.
Data Type(s):	String
Valid Values:	String Values (<=255 chars)
Default Value:	None
Examples:	Message.Subject = “Balance Adjustment”

CreateMessage (method)

Description:	Creates a new message object for sending to the message queue.
Parameters	none
Data Type(s):	none
Examples:	Message.CreateMessage

Data (Property)

Description:	This property holds a potentially long string value which will be sent as data for a Syncx operation.
Parameters	none
Data Type(s)	String
Examples:	Message.Data = "<xml>.....</xml>" Message.Data = sDataVal

AddDataElement (method)

Description:	Adds a data element and its value to the contents of the message. Data elements should be passed in messages when the process is expecting them, and are required for correct process execution.
Parameters	DataElementName (string) DataElementValue (string) DataElementType (string)
Data Type(s)	The following data types are valid when creating a data element for the message: Integer Long Short String Boolean Double Float
Examples:	Message.AddDataElement "id", "100", "Integer" Message.AddDataElement "id", ordered, "integer" Message.AddDataElement "zip", "98765", "String"

PostMessage (method)

Description:	Sends the message to the device, using the route, data elements, and message format values.
Parameters	Device: (string) The device name, FQDN, or IP address of the device. UserID: (string) The user id of a valid user on the device that has rights for writing messages to the queue. Password: (string) The password that corresponds to the provided UserID.
Return Values:	Integer code representing the message posting status. Valid return codes are as follows: Message Post Successful 0 Message Post Failed – Reason Unknown. 1 Unable to Locate Device 2 Invalid UserID or Password 3 User Does Not Have Authority for this action 4 Route is invalid 5 Expected Data Elements Not Supplied 6 Process Name does not Exist 7 Task Name does not Exist 8

Notes

Error Return Codes 4-8 can only be returned if the Validate property is set to TRUE. If it is true, any routes, data element requirements, process names, and task names are checked prior to posting the message. If one of these codes is returned, the message is not inserted into the queue.

When a message is posted, the valid WDI userid should be captured and stored in the message database in a column called “MsgOwner”.

Chapter 42

Appendix B: Sample Tables

In the chart below, *Web Page* refers to the ASP page for processing tasks, *e-mail* refers to the recipient of the document (either task or e-mail), *Querystring Data Elements* refers to any items sent to the ASP, *Response Data Elements* refers to items sent with the message to the Syncx 6200 Series Appliance Backend Integration Guide engine, *MsgID* refers to the ID of the message to be shown on the WFTaskCompletion page, and *Escalation* refers to the time threshold of escalation processing.

Sample Interface Table

Task Order	Task Name	Web Page (ASP)	E-mail To	Query String Elements	Response Data Elements	MsgID	Escalate
1	Request Update Signatories	None	N/A	N/A	PartnersID, Addstatus, RequestorAlias	N/A	N/A
2	Review Requestors legitimacy and authority	Update Signatories	GCM, Analyst	partnerID, Task Name	ForwardTo, Action, OC, Reason	N/A	N/A
3	Treasure Review Partner Request	Update Signatories	Treasurer	partnerID, TaskName	ForwardTo, Action, OCC, Reason	N/A	N/A

Task Order	Task Name	Web Page (ASP)	E-mail To	Query String Elements	Response Data Elements	MsgID	Escalate
4	Notify Requestor and Controller Of Approval	None	Requestor, Controller	N/A	N/A	N/A	N/A
5	Notify Requestor of Request Rejection	None	Requestor	N/A	N/A	N/A	N/A
6	Notify Bank of Changes and Get New Signature Card	WFTask Completion	Bank Admin	partnerID, MSgID, Taskname	ForwardTo, Action	1	N/A
7	Gather Documents & Send to Corporate	WFTask Completion	Requestor, Controller	partnerID, MSgID, Taskname	ForwardTo, Action	1	3 wks
8	Receive Documents from Subsidiary	WFTask Completion	Bank Admin	partnerID, MSgID, Taskname	ForwardTo, Action	3	2 wks
9	Fill in Signature Card	WFTask Completion	Bank Admin	partnerID, MSgID, Taskname	ForwardTo, Action	4	N/A
10	Generate SAL	WFTask Completion	Treasurer	partnerID, MSgID, Taskname	N/A	6	2 wks
11	Sign Signature Card and SAL	WFTask Completion	Treasurer	partnerID, MSgID, Taskname	N/A	6	2 wks
12	Check all signatures and documents	WFTask Completion	Bank Admin	partnerID, MSgID, TaskName	ForwardTo, Action	7	1 wk
13	Email Success	None	Requestor, Controller	N/A	N/A	N/A	N/A

Data Element Descriptions

Like the interface table above, you should also create a spreadsheet listing each data element, a data element description, and the input sources. The table below gives an example of what such a Data Element spreadsheet could look like.

Data Element Name	Description	Type	Source
partnerID	Partner ID	Integer	ASP user input/CR Engine
Action	Code for which button user clicked.	Integer	ASP submit button pressed.
AddStatus	=1 if any signatures are being added; =0 if not.	Integer	ASP input
OCC	List of additional aliases to be cc'ed in request rejection.	String	ASP user input
ForwardTo	Alias to forward task to	String	ASP user input
MsgID	Asp Message ID	Integer	Model

Action Codes

An action code table would list the action code data elements and a description of every possible value returned by the element.

Action	Description
1	Approve/Submit
2	Reject
3	ForwardTo

Chapter 43

Appendix C: Advanced Mapping Document Details

This appendix lists the file structure and data details for the samples given in the “Advanced Mapping Concepts” Section, starting in Chapter 18.

Sample Situation 1

Situation 1 comprises a source XML document that contains a looping structure with many levels that will be mapped to a de-normalized (flat) target document. This could occur in other types of transformations, such as EDI-to-database, etc.

Document Structures and Data

Details about the source and target documents for Sample Situation 1 are listed below.

Source Document Structure

The source document is an XML document with many levels, some of which loop:

```
<!ELEMENT inventory (snapshotinfo, warehouse+)>
  <!ELEMENT snapshotinfo (snapshotdate, snapshotuser, snapshotsource)>
    <!ELEMENT snapshotdate (#PCDATA)>
    <!ELEMENT snapshotuser (#PCDATA)>
    <!ELEMENT snapshotsource (#PCDATA)>
  <!ELEMENT warehouse (warehouseinfo, instockitem+)>
    <!ELEMENT warehouseinfo (warehousecode, warehousestate)>
      <!ELEMENT warehousecode (#PCDATA)>
      <!ELEMENT warehousestate (#PCDATA)>
    <!ELEMENT instockitem (itemnumber, itemquantity, attribute*)>
      <!ELEMENT itemnumber (#PCDATA)>
      <!ELEMENT itemquantity (#PCDATA)>
      <!ELEMENT attribute (attributecode, attributevalue)>
        <!ELEMENT attributecode (#PCDATA)>
        <!ELEMENT attributevalue (#PCDATA)>
```


Source Document Data

Data for this sample hierarchical-to-flat transformation is displayed below, conforming to the appropriate DTD criteria:

```
<?xml version="1.0"?>
<inventory>
  <snapshotinfo>
    <snapshotdate>2/1/2001</snapshotdate>
    <snapshotuser>manager1</snapshotuser>
    <snapshotsource>batchjob</snapshotsource>
  </snapshotinfo>
  <warehouse>
    <warehouseinfo>
      <warehousecode>WH123</warehousecode>
      <warehousestate>WA</warehousestate>
    </warehouseinfo>
    <instockitem>
      <itemnumber>ABC-123</itemnumber>
      <itemquantity>450</itemquantity>
      <attribute>
        <attributecode>COLOR</attributecode>
        <attributevalue>BLUE</attributevalue>
      </attribute>
      <attribute>
        <attributecode>WEIGHT</attributecode>
        <attributevalue>13</attributevalue>
      </attribute>
      <attribute>
        <attributecode>COST</attributecode>
        <attributevalue>450.00</attributevalue>
      </attribute>
    </instockitem>
    <instockitem>
      <itemnumber>ABC-456</itemnumber>
      <itemquantity>210</itemquantity>
      <attribute>
        <attributecode>COLOR</attributecode>
        <attributevalue>GREEN</attributevalue>
```

```

        </attribute>
        <attribute>
            <attributecode>WEIGHT</attributecode>
            <attributevalue>5</attributevalue>
        </attribute>
        <attribute>
            <attributecode>COST</attributecode>
            <attributevalue>525.00</attributevalue>
        </attribute>
    </instockitem>
</warehouse>
<warehouse>
    <warehouseinfo>
        <warehousecode>WH456</warehousecode>
        <warehousestate>TX</warehousestate>
    </warehouseinfo>
    <instockitem>
        <itemnumber>ABC-123</itemnumber>
        <itemquantity>65</itemquantity>
        <attribute>
            <attributecode>COLOR</attributecode>
            <attributevalue>BLUE</attributevalue>
        </attribute>
        <attribute>
            <attributecode>WEIGHT</attributecode>
            <attributevalue>13</attributevalue>
        </attribute>
        <attribute>
            <attributecode>COST</attributecode>
            <attributevalue>450.00</attributevalue>
        </attribute>
    </instockitem>
    <instockitem>
        <itemnumber>DEF-456</itemnumber>
        <itemquantity>75</itemquantity>
        <attribute>
            <attributecode>LENGTH</attributecode>

```

```
        <attributevalue>72</attributevalue>
      </attribute>
      <attribute>
        <attributecode>WEIGHT</attributecode>
        <attributevalue>23</attributevalue>
      </attribute>
      <attribute>
        <attributecode>COST</attributecode>
        <attributevalue>1250.00</attributevalue>
      </attribute>
    </instockitem>
  </warehouse>
</inventory>
```

Target Document Structure

The target document structure for this hierarchical-to-flat transformation is a text file with the structure depicted below.

Item Number	Quantity	Color	Weight	Cost (\$)	Warehouse Code	Warehouse State
ABC-123	450	BLUE	13	450.00	WH123	WA
ABC-456	210	GREEN	5	525.00	WH123	WA
ABC-123	65	BLUE	13	450.00	WH456	TX
DEF-456	75	-	23	1250.00	WH456	TX

Sample Situation 2

Document Structures and Data

Details about the source and target documents for Sample Situation 1 are listed below.

Source Document Structure

The source document is an XML document with many levels, some of which loop. Note that this DTD is different from the one in Sample Situation 1: In this DTD, the warehouse information is separated from the instock items:

```
<!ELEMENT inventory (snapshotinfo, warehouse+, instockitem*)>
  <!ELEMENT snapshotinfo (snapshotdate, snapshotuser, snapshotsource)>
    <!ELEMENT snapshotdate (#PCDATA)>
    <!ELEMENT snapshotuser (#PCDATA)>
    <!ELEMENT snapshotsource (#PCDATA)>
  <!ELEMENT warehouse (warehousecode, warehousestate)>
    <!ELEMENT warehousecode (#PCDATA)>
    <!ELEMENT warehousestate (#PCDATA)>
  <!ELEMENT instockitem (itemnumber, itemquantity, instockat*,
attribute*)>
    <!ELEMENT itemnumber (#PCDATA)>
    <!ELEMENT itemquantity (#PCDATA)>
    <!ELEMENT instockat (whcode?,quantity?)>
      <!ELEMENT whcode (#PCDATA)>
      <!ELEMENT quantity (#PCDATA)>
    <!ELEMENT attribute (attributecode, attributevalue)>
      <!ELEMENT attributecode (#PCDATA)>
      <!ELEMENT attributevalue (#PCDATA)>
```

Source Document Data

Data for this sample hierarchical-to-flat transformation is displayed below, conforming to the appropriate DTD criteria:

```
<?xml version="1.0"?>
  <inventory>
    <snapshotinfo>
      <snapshotdate>2/1/2001</snapshotdate>
      <snapshotuser>manager1</snapshotuser>
      <snapshotsource>batchjob</snapshotsource>
    </snapshotinfo>
    <warehouse>
      <warehousecode>WH123</warehousecode>
      <warehousestate>WA</warehousestate>
    </warehouse>
    <warehouse>
      <warehousecode>WH456</warehousecode>
      <warehousestate>TX</warehousestate>
    </warehouse>
    <warehouse>
      <warehousecode>WH789</warehousecode>
      <warehousestate>CA</warehousestate>
    </warehouse>
    <instockitem>
      <itemnumber>ABC-123</itemnumber>
      <attribute>
        <attributecode>COLOR</attributecode>
        <attributevalue>BLUE</attributevalue>
      </attribute>
      <attribute>
        <attributecode>WEIGHT</attributecode>
        <attributevalue>13</attributevalue>
      </attribute>
      <attribute>
        <attributecode>COST</attributecode>
        <attributevalue>450.00</attributevalue>
      </attribute>
    </instockitem>
```

```

        <whcode>WH123</whcode>
        <quantity>450</quantity>
    </instockat>
    <instockat>
        <whcode>WH456</whcode>
        <quantity>210</quantity>
    </instockat>
</instockitem>
<instockitem>
    <itemnumber>ABC-456</itemnumber>
    <itemquantity>210</itemquantity>
    <attribute>
        <attributecode>COLOR</attributecode>
        <attributevalue>GREEN</attributevalue>
    </attribute>
    <attribute>
        <attributecode>WEIGHT</attributecode>
        <attributevalue>5</attributevalue>
    </attribute>
    <attribute>
        <attributecode>COST</attributecode>
        <attributevalue>525.00</attributevalue>
    </attribute>
    <instockat>
        <whcode>WH123</whcode>
        <quantity>75</quantity>
    </instockat>
    <instockat>
        <whcode>WH789</whcode>
        <quantity>250</quantity>
    </instockat>
</instockitem>
<instockitem>
    <itemnumber>DEF-456</itemnumber>
    <itemquantity>75</itemquantity>
    <attribute>
        <attributecode>LENGTH</attributecode>

```

```
        <attributevalue>72</attributevalue>
    </attribute>
    <attribute>
        <attributecode>WEIGHT</attributecode>
        <attributevalue>23</attributevalue>
    </attribute>
    <attribute>
        <attributecode>COST</attributecode>
        <attributevalue>1250.00</attributevalue>
    </attribute>
    <instockat>
        <whcode>WH123</whcode>
        <quantity>60</quantity>
    </instockat>
    <instockat>
        <whcode>WH456</whcode>
        <quantity>50</quantity>
    </instockat>
    <instockat>
        <whcode>WH789</whcode>
        <quantity>40</quantity>
    </instockat>
</instockitem>
</inventory>
```


Target Document Structure

The target document is a text file. This target structure differs from the Sample 1 target because it uses a separate column to identify each warehouse:

Itemnumber	WH123	WH456	WH789
ABC-123	450	210	0
ABC-456	75	0	250
DEF-456	60	50	40

Sample Situation 3

Document Structures and Data

Details about the source and target documents for Sample Situation 3 are listed below.

Source Document Structure

The source document is a tab-delimited text file, with the following structure:

Field Name	Sequence
ItemNumber	1
Quantity	2
Color	3
Weight	4
Cost	5
WarehouseCode	6
WarehouseState	7

Source Document Data

The table below displays Sample 1’s source data, adhering to the data structure noted above:

Item Number	Quantity	Color	Weight	Cost (\$)	Warehouse Code	Warehouse State
ABC-123	450	BLUE	13	450.00	WH123	WA
ABC-456	210	GREEN	5	525.00	WH123	WA
ABC-123	65	BLUE	13	450.00	WH456	TX
DEF-456	75	-	23	1250.00	WH456	TX

Target Document Structure

The data structure of the target document is hierarchical in nature (XML), with at least one header row and multiple detail rows that are assigned to the header row:

```
<!ELEMENT inventory (snapshotinfo, warehouse+)>
  <!ELEMENT snapshotinfo (snapshotdate, snapshotuser, snapshotsource)>
    <!ELEMENT snapshotdate (#PCDATA)>
    <!ELEMENT snapshotuser (#PCDATA)>
    <!ELEMENT snapshotsource (#PCDATA)>
  <!ELEMENT warehouse (warehouseinfo, instockitem+)>
    <!ELEMENT warehouseinfo (warehousecode, warehousestate)>
      <!ELEMENT warehousecode (#PCDATA)>
      <!ELEMENT warehousestate (#PCDATA)>
    <!ELEMENT instockitem (itemnumber, itemquantity, attribute*)>
      <!ELEMENT itemnumber (#PCDATA)>
      <!ELEMENT itemquantity (#PCDATA)>
      <!ELEMENT attribute (attributecode, attributevalue)>
        <!ELEMENT attributecode (#PCDATA)>
        <!ELEMENT attributevalue (#PCDATA)>
```

Target Output

The desired end result of this transformation is output into a specific format, based upon the target's DTD.

```
<?xml version="1.0"?>
  <inventory>
    <snapshotinfo>
      <snapshotdate>2/1/2001</snapshotdate>
      <snapshotuser>manager1</snapshotuser>
      <snapshotsource>batchjob</snapshotsource>
    </snapshotinfo>
    <warehouse>
      <warehousecode>WH123</warehousecode>
      <warehousestate>WA</warehousestate>
    </warehouse>
    <warehouse>
      <warehousecode>WH456</warehousecode>
      <warehousestate>TX</warehousestate>
    </warehouse>
    <warehouse>
      <warehousecode>WH789</warehousecode>
      <warehousestate>CA</warehousestate>
    </warehouse>
    <instockitem>
      <itemnumber>ABC-123</itemnumber>
      <attribute>
        <attributecode>COLOR</attributecode>
        <attributevalue>BLUE</attributevalue>
      </attribute>
      <attribute>
        <attributecode>WEIGHT</attributecode>
        <attributevalue>13</attributevalue>
      </attribute>
      <attribute>
        <attributecode>COST</attributecode>
        <attributevalue>450.00</attributevalue>
      </attribute>
    </instockitem>
```

```

        <whcode>WH123</whcode>
        <quantity>450</quantity>
    </instockat>
    <instockat>
        <whcode>WH456</whcode>
        <quantity>210</quantity>
    </instockat>
</instockitem>
<instockitem>
    <itemnumber>ABC-456</itemnumber>
    <itemquantity>210</itemquantity>
    <attribute>
        <attributecode>COLOR</attributecode>
        <attributevalue>GREEN</attributevalue>
    </attribute>
    <attribute>
        <attributecode>WEIGHT</attributecode>
        <attributevalue>5</attributevalue>
    </attribute>
    <attribute>
        <attributecode>COST</attributecode>
        <attributevalue>525.00</attributevalue>
    </attribute>
    <instockat>
        <whcode>WH123</whcode>
        <quantity>75</quantity>
    </instockat>
    <instockat>
        <whcode>WH789</whcode>
        <quantity>250</quantity>
    </instockat>
</instockitem>
<instockitem>
    <itemnumber>DEF-456</itemnumber>
    <itemquantity>75</itemquantity>
    <attribute>
        <attributecode>LENGTH</attributecode>

```

```
        <attributevalue>72</attributevalue>
    </attribute>
    <attribute>
        <attributecode>WEIGHT</attributecode>
        <attributevalue>23</attributevalue>
    </attribute>
    <attribute>
        <attributecode>COST</attributecode>
        <attributevalue>1250.00</attributevalue>
    </attribute>
    <instockat>
        <whcode>WH123</whcode>
        <quantity>60</quantity>
    </instockat>
    <instockat>
        <whcode>WH456</whcode>
        <quantity>50</quantity>
    </instockat>
    <instockat>
        <whcode>WH789</whcode>
        <quantity>40</quantity>
    </instockat>
</instockitem>
</inventory>
```

Index

A

Advanced Transformation Map Tools

- Mapping report 18-13
- Remove data nodes 18-12
- Show all nodes 18-11
- Show data nodes 18-11
- Test operation 18-8
- Test source data 18-2
- Test transformation 18-6

Append Projects

- Definition 5-4
- How to Create 5-4
- See also Chained Operations

B

Block Escalated Task

- in CRbuilder 30-15, 31-19, 35-7

Block Escalation Task

- in CRbuilder 30-15, 31-20, 35-8

Block Task Instance

- in CRbuilder 30-15, 31-27, 35-9

Browser

- Disable Auto-Select 1-5
- Internet Options 1-6

Button

- Formula 17-2

- Map 17-2

- Schedules 6-2

Buttons

- Map Mode 21-2
- Resolve Mode 21-2

C

Calling External Objects

- in CRbuilder 37-1

Cancel Scheduled Task

- in CRbuilder 30-15, 31-25

Chained Operations

- Definition 10-8
- How to chain operations 10-8
- See also Append Projects
- Source from previous operation 10-10

Closing Script Tab

- in CRbuilder 30-13

COM

- in CRbuilder 37-14

COM Objects

- in CRbuilder 31-10

Comment

- in CRbuilder 30-15, 31-33

Complex Text Documents

- Delimited 9-9

- Fixed-Length 9-14
- Condition** 22-8
- CORBA**
 - in CRbuilder 37-18
- CORBA Objects**
 - in CRbuilder 31-10
- CR Interchange Tour**
 - Data Transformation Overview 2-3
 - Document Definitions 2-16
 - Formula Builder 2-19
 - History 2-25
 - Partners and Projects 2-6
 - Pending Processes 2-24
 - Process Messages 2-20
 - Schedules 2-13
 - Sources 2-14
 - System Log 2-23
 - Target Messages 2-21
 - Targets 2-15
 - Transformation Mapping 2-18
 - Transformations 2-17
- CR Interchange tour**
 - Operations 2-9
- CR Interchange Tutorial**
 - Create a Document Definition 3-9
 - Create a Process Message 3-12
 - Create a Project 3-26
 - Create a Schedule 3-3
 - Create a Source 3-5
 - Create a Standard Trading Partner definition 3-24
 - Create a Target 3-7
 - Create a Transformation 3-14
 - Create an Operation 3-28
 - Logging in 3-2
 - Overview 3-1
 - Transformation Mapping 3-22
 - View Pending Processes 3-30
 - View System Log 3-30
- CRbuilder**
 - Associating a Syncx operation 34-1
 - Associating e-mail with task 33-5
 - Best practices 27-5
 - Block Escalated Task 35-7
 - Block Escalation Task 35-8
 - Block Task Instance 35-9
 - Calling external objects 37-1
 - Checking for errors 39-2
 - Closing Script tab 30-13
 - COM 37-14
 - CORBA 37-18
 - Creating tasks 29-9
 - Data elements 32-1
 - Data Elements tab 30-12
 - Database Connection String 36-3
 - Database statements 31-12
 - Defining a process 27-9
 - Defining data elements 30-12
 - Defining task data 30-3
 - Deploying a process 39-4
 - Deploying processes 39-1
 - Document tab 33-4
 - Edit objects 31-34
 - EJB 37-1
 - Escalation tab 33-1
 - External dependency check 39-6
 - Extracting database information 36-1
 - File transfer operation 31-14
 - General tab 30-4
 - GetLastError() function 31-34
 - Initial task configuration 29-10
 - Initial task data elements 32-5
 - Inserting COM objects 31-10
 - Inserting CORBA objects 31-10
 - Inserting logical statements 30-4
 - Installation 26-1
 - Internal functions 30-15
 - Key features 25-3
 - LDAP 37-10
 - Linking an operation to a task 34-2
 - Online help 40-1
 - Opening Script tab 30-13
 - Overview 27-1
 - Process data elements 32-2
 - Process options 29-5
 - Process properties 29-7
 - Routes 31-4
 - Scripting functions 31-1
 - SOAP 37-6
 - Special functions 31-34
 - Supported e-mail formats 33-6
 - System requirements 26-1
 - Task data elements 32-3
 - Terminator tasks 29-14
 - Tutorial 28-1
 - Types of data elements 32-10

- Using EJB 31-11
- Using LDAP 31-13
- Using operators 31-37
- Using SOAP 31-11
- CRbuilder Notes** 29-16
- CRbuilder Process**
 - as a Target 8-2
 - How to create 29-1
 - Transforming
 - EDI to CRbuilder Process 11-2, 12-2
 - Text to CRbuilder Process 15-2
 - XML to CRbuilder Process 13-2, 16-2
- CRbuilder Task**
 - Adding notes 29-16
- Create Scheduled Task**
 - in CRbuilder 30-15, 31-21
- Creating escalation tasks** 35-1
- CRMSGR**
 - in Active Server Pages 38-3
 - in Java Server Pages 38-6
- CRMSGR Object**
 - About 38-1
 - Launching Syncx operation 38-8
 - Supported properties and methods 41-1

D

- Data Elements**
 - Customizing operations 34-5
 - Data types 32-10
 - How to define 30-12
 - in CRbuilder 32-1
 - in e-mail 32-8, 33-8
 - in SOAP response 37-8
 - Loading from document 32-6
- Data Elements Tab**
 - in CRbuilder 30-12
- Data Transformation** 17-1
- Database Connection String**
 - in CRbuilder 36-3
- Database Statements**
 - in CRbuilder 31-12
- Databases**
 - as a Source 7-2
 - as a Target 8-4
 - Extracting data in CRbuilder 36-1
 - Transforming
 - Database to Database 11-16

- Database to EDI 11-38, 12-22
- Database to SAP 14-2
- Database to Text 11-112, 15-18
- Database to XML 11-68, 11-138, 13-20, 16-20
- EDI to Database 11-54, 12-8
- Text to Database 11-126, 15-6
- XML to Database 11-83, 11-155, 13-7, 16-7

Defining a CRbuilder Process 27-9

Defining escalations 35-1

Defining Task Data
in CRbuilder 30-3

Delimited Files
Complex 9-9
Simple 9-3

Developing a CRbuilder Process 27-1
DIFF

See Optimization Options

Disable Auto-Select 1-5

Disable Temporary File Names 8-12

Do Now Button 10-11

Document Definitions

- Complex Text Files
 - Delimited 9-9
 - Fixed-Length 9-14
- How to Create 9-2
- in the CR Interchange tour 2-16
- in the CR Interchange tutorial 3-9
- Simple Text Files
 - Delimited 9-3
 - Fixed-Length 9-6

Document Tab
in CRbuilder 33-4

E

EDI

- Options in an operation 10-6
- Transforming
 - Database to EDI 11-38, 12-22
 - EDI to CRbuilder Process 11-2, 12-2
 - EDI to Database 11-54, 12-8
 - EDI to EDI 12-38
 - EDI to SAP 12-63, 14-18
 - EDI to Text 12-71, 15-39
 - EDI to XML 12-47, 12-85, 13-43, 16-45
 - Text to EDI 12-78, 15-32
 - XML to EDI 12-55, 12-95, 13-35, 16-37

Edit Objects

in CRbuilder 31-34

EJB

in CRbuilder 31-11, 37-1

E-mail

Associate with CRbuilder task 33-5

Embedded data elements 33-8

Response data elements 33-9

Supported formats 33-6

using URLs 33-7

Error Checking

in CRbuilder 39-2

Escalation

Definition 35-1

Escalation Tab

in CRbuilder 33-1

Examples

Conditional Output 20-2

Mapping an outer join 22-2

Mapping flat to hierarchical structures 24-1

Mapping hierarchical to flat structures 23-1

Expression Builder 19-1

Sample Usage 22-8

Usage Example 20-4, 24-9

External Dependency Check

in CRbuilder 39-6

F

File Name Variables 7-6, 7-9, 8-8, 8-11, 8-21

File Share

as a Source 7-5

as a Target 8-7

File Transfer Operation

in CRbuilder 31-14

Fixed-Length Files

Complex 9-14

Simple 9-6

Formula Builder 19-2

in the CR Interchange tour 2-19

Formula Button 17-2**FTP**

as a Source 7-8

as a Target 8-10

Disable temporary file names 8-12

G**General Tab**

in CRbuilder 30-4

GetLastError() Function

in CRbuilder 31-34

H**History**

in the CR Interchange tour 2-25

HTTP

as a Source 7-11

as a Target 8-14

I

If/Then statements 31-6

Initial Task Data Elements

in CRbuilder 32-5

Inserting If/Then statements 31-6

Inserting Logical Statements

in CRbuilder 30-4

Internal Functions

Block Escalated Task 30-15, 31-19

Block Escalation Task 30-15, 31-20

Block Task Instance 30-15, 31-27

Cancel Scheduled Task 30-15, 31-25

Comment 30-15, 31-33

Create Scheduled Task 30-15, 31-21

in CRbuilder 30-15

Report Data Elements 30-15, 31-31

Terminate Process 30-15, 31-30

Terminate Task 30-15, 31-29

Internet Options 1-6**K****Key Concepts**

Data Transformation 2-3

Management hierarchy 2-6

Operations 2-9

L**LDAP**

in CRbuilder 31-13, 37-10

Local Database

See Databases

Login

- to CR Interchange tour 2-2
- to CR Interchange tutorial 3-2

M**Map Button** 17-2**Map Mode** 21-2**Map Mode Button** 21-2**Mapping** 17-1

- Checking Errors 21-1
- Condition 22-8
- Flat to Hierarchical Structures 24-1
- Hierarchical to Flat Structures 23-1
- Transformations 17-1

Mapping Options Dialog

- Adding Condition Example 20-2, 22-6
- Adding Extra Folders Example 22-3, 24-5

Mapping Report 18-13**Mapping Resolution Dialog** 21-2**Messages**

- Writing to the Appliance 38-1

MHTML

- in CRbuilder 33-6

M-Post

- in CRbuilder 37-7

N**Notes**

- Adding to CRbuilder 29-16

O**Opening Script Tab**

- in CRbuilder 30-13

Operations 10-2

- How to Create 10-2
- in the CR Interchange tour 2-9
- in the CR Interchange tutorial 3-28
- Manually Activating 10-11
- Output from previous operation 10-10
- Overview 2-9

Optimization Options 10-5**Output From Previous Operation** 10-10**P****Pending Processes**

- in the CR Interchange tour 2-24
- in the CR Interchange tutorial 3-30

PGP 7-5, 7-8, 8-7, 8-10**Process Data Elements**

- in CRbuilder 32-2

Process Messages

- in the CR Interchange tour 2-20
- in the CR Interchange Tutorial 3-12

Projects

- Chaining operations 10-8
- How to Create 5-1
- in the CR Interchange tour 2-8
- in the CR Interchange tutorial 3-26

R**Remove Data Nodes** 18-12**Report Data Elements**

- in CRbuilder 30-15, 31-31

Resolve Mode 21-2**Resolve Mode Button** 21-2**Response Data Elements**

- in CRbuilder 33-9

Route ID

- in CRbuilder 38-2

Routes

- in CRbuilder 31-4

S**SAP**

- as a Target 8-17
- Transforming
 - Database to SAP 14-2
 - EDI to SAP 12-63, 14-18
 - Text to SAP 11-96, 14-33, 15-59
 - XML to SAP 13-51, 14-26, 14-40, 16-71

Schedules 6-1

- How to Create 6-1
- in the CR Interchange tour 2-13
- in the CR Interchange tutorial 3-3

Schedules Button 6-2

SCP
 as a Source 7-13
 as a Target 8-20

Scripting Functions
 in CRbuilder 31-1

Server-Side Scripting Pages
 Linking to a task 38-9

Server-side Scripting Pages 38-1

Setting Logic
 in CRbuilder 31-6

Setting task logic
 escalation 35-1

Show all nodes 18-11

Show Data Nodes 18-11

Simple Text Documents
 Delimited 9-3
 Fixed-Length 9-6

SMTP
 as a Target 8-23

SOAP
 Attempting M-Post 37-7
 in CRbuilder 31-11, 37-6, 37-9
 in data elements 37-8

Sources
 Definition Types
 Database 7-2
 File Share 7-5
 FTP 7-8
 HTTP 7-11
 SCP 7-13
 in the CR Interchange tour 2-14
 in the CR Interchange tutorial 3-5

Special Functions
 in CRbuilder 31-34

SQL Actions
 in CRbuilder 36-7, 36-9

Standard Trading Partner Definition
 in the CR Interchange tutorial 3-24

Standard Trading Partner Definitions
 in the CR Interchange tour 2-6

Standard Trading Partners
 How to create 4-2

System Log
 in the CR Interchange tour 2-23
 in the CR Interchange tutorial 3-30

T

Target Messages

in the CR Interchange tour 2-21

Targets

Definition Types

CRbuilder Process 8-2

Database 8-4

File Share 8-7

FTP 8-10

HTTP 8-14

SAP 8-17

SCP 8-20

SMTP 8-23

in the CR Interchange tour 2-15

in the CR Interchange Tutorial 3-7

Task Data Elements

in CRbuilder 32-3

Tasks

Inserting empty nodes 30-10

inserting If/Then statements 31-6

Inserting logical statements 30-4

Setting logic 31-6

Terminator 29-14

Terminate Process

in CRbuilder 30-15, 31-30

Terminate Task

in CRbuilder 30-15, 31-29

Test Operation

18-8

Test Source Data

18-2

Test Transformation

18-6

Text

Transforming

Database to Text 11-112, 15-18

EDI to Text 12-71, 15-39

Text to CRbuilder Process 15-2

Text to Database 11-126, 15-6

Text to EDI 12-78, 15-32

Text to SAP 11-96, 14-33, 15-59

Text to Text 15-66

Text to XML 13-64, 13-71, 15-46, 15-

71, 16-62, 16-84

XML to Text 13-58, 13-80, 15-53, 15-

79, 16-55, 16-78

Text File Definitions

See Document Definitions

Tour

Partners and Projects 2-8

Trading Partners

Standard 4-2

Transfer History

See History

Transform

Database to Database 11-16

Database to EDI 11-38, 12-22

Database to SAP 14-2

Database to Text 11-112, 15-18

Database to XML 11-68, 11-138, 13-20, 16-20

EDI to CRbuilder Process 11-2, 12-2

EDI to Database 11-54, 12-8

EDI to EDI 12-38

EDI to SAP 12-63, 14-18

EDI to Text 12-71, 15-39

EDI to XML 12-47, 12-85, 13-43, 16-45

Text to CRbuilder Process 15-2

Text to Database 11-126, 15-6

Text to EDI 12-78, 15-32

Text to SAP 11-96, 14-33, 15-59

Text to Text 15-66

Text to XML 13-64, 13-71, 15-46, 15-71, 16-62, 16-84

XML to CRbuilder Process 13-2, 16-2

XML to Database 11-83, 11-155, 13-7, 16-7

XML to EDI 12-55, 12-95, 13-35, 16-37

XML to SAP 13-51, 14-26, 14-40, 16-71

XML to Text 13-58, 13-80, 15-53, 15-79, 16-55, 16-78

XML to XML 16-92

Transformation

Report 18-13

Transformation Map Tools

Mapping report 18-13

Remove data nodes 18-12

Show all nodes 18-11

Show data nodes 18-11

Test operation 18-8

Test Source data 18-2

Test transformation 18-6

Transformation Mapping

in the CR Interchange tour 2-18

in the CR Interchange tutorial 3-22

Transformations 17-1

in the CR Interchange tour 2-17

in the CR Interchange tutorial 3-14

Mapping 17-1

Overview 2-3

Tutorial

CR Interchange 3-1

CRbuilder 28-1

U**UNC**

See File Share

URLs

in e-mail 33-7

Using Operators

in CRbuilder 31-37

V**Variables**

File Name 7-6, 7-9, 8-8, 8-11, 8-21

X**XML**

Transforming

Database to XML 11-68, 11-138, 13-20, 16-20

EDI to XML 12-47, 12-85, 13-43, 16-45

Text to XML 13-64, 13-71, 15-46, 15-71, 16-62, 16-84

XML to CRbuilder Process 13-2, 16-2

XML to Database 11-83, 11-155, 13-7, 16-7

XML to EDI 12-55, 12-95, 13-35, 16-37

XML to SAP 13-51, 14-26, 14-40, 16-71

XML to Text 13-58, 13-80, 15-53, 15-79, 16-55, 16-78

XML to XML 16-92

