

JD Edwards EnterpriseOne Tools

Delta Process Guide

Release 9.1

E24222-01

December 2011

Copyright © 2011, Oracle and/or its affiliates. All rights reserved.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this is software or related documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, the following notice is applicable:

U.S. GOVERNMENT RIGHTS Programs, software, databases, and related documentation and technical data delivered to U.S. Government customers are "commercial computer software" or "commercial technical data" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, the use, duplication, disclosure, modification, and adaptation shall be subject to the restrictions and license terms set forth in the applicable Government contract, and, to the extent applicable by the terms of the Government contract, the additional rights set forth in FAR 52.227-19, Commercial Computer Software License (December 2007). Oracle America, Inc., 500 Oracle Parkway, Redwood City, CA 94065.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Xeon are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Opteron, the AMD logo, and the AMD Opteron logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software or hardware and documentation may provide access to or information on content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services.

Contents

| | |
|---|------|
| Preface | v |
| Audience | v |
| Documentation Accessibility | v |
| Related Documents | v |
| Conventions | vi |
| | |
| 1 Getting Started with Delta Process | |
| 1.1 JD Edwards EnterpriseOne Delta Process Overview | 1-1 |
| 1.2 JD Edwards EnterpriseOne Delta Process Implementation | 1-1 |
| 1.2.1 Delta Process Implementation Steps..... | 1-1 |
| | |
| 2 Working with the Delta Process for Translation Tables | |
| 2.1 Understanding the Delta Process | 2-1 |
| 2.1.1 Prerequisite | 2-1 |
| 2.2 Setting Up a Database Instance..... | 2-1 |
| 2.2.1 Understanding Database Instances..... | 2-2 |
| 2.2.2 Forms Used to Set Up a Database Instance..... | 2-2 |
| 2.2.3 Setting Up a Database Instance | 2-3 |
| 2.2.4 Adding a New Environment..... | 2-3 |
| 2.2.5 Creating the Environments | 2-4 |
| 2.2.6 Using JD Edwards EnterpriseOne Translation Tools to Create an Environment | 2-4 |
| 2.2.7 Setting Up User Profiles..... | 2-5 |
| 2.2.8 Adding User Security..... | 2-5 |
| 2.3 Copying the Data from a Prior Release | 2-5 |
| 2.3.1 Understanding Data from a Prior Release | 2-6 |
| 2.3.2 Understanding Compare Environment Tables | 2-6 |
| 2.3.3 Understanding the Control Tables for the Code Page Environments | 2-7 |
| 2.3.4 Forms Used to Copy the Data from a Prior Release | 2-9 |
| 2.3.5 Copying Data from a Prior Release..... | 2-9 |
| 2.3.6 Editing the Language Master..... | 2-10 |
| 2.4 Working with the Delta Process | 2-10 |
| 2.4.1 Understanding the Delta Process and Translation Tables..... | 2-11 |
| 2.4.2 Forms Used to Work with the Delta Process | 2-11 |
| 2.4.3 Adding Translation Tables to the Delta Process | 2-12 |
| 2.4.4 Revising Translation Tables Included in the Delta Process..... | 2-13 |

| | | |
|---------|--|------|
| 2.4.5 | Running the Delta Process..... | 2-13 |
| 2.4.5.1 | Standard Procedures for Running the Delta Process | 2-13 |
| 2.4.6 | Running the Delta Process..... | 2-14 |
| 2.4.7 | Viewing the Progress of the Delta Process..... | 2-15 |
| 2.4.8 | Using jde.log | 2-16 |
| 2.4.8.1 | Using jdedebug.log | 2-16 |
| 2.4.9 | Tracking the Status of Each Delta Process | 2-16 |
| 2.4.10 | Using Preview Functionality..... | 2-17 |
| 2.5 | Working with Delta Process Advanced Options | 2-17 |
| 2.5.1 | Understanding Delta Process Advanced Options | 2-18 |
| 2.5.2 | Forms Used to Work with Delta Process Advanced Options | 2-18 |
| 2.5.3 | Purging and Rebuilding Delta Tables..... | 2-18 |
| 2.5.4 | Fixing Status Record Problems | 2-20 |
| 2.5.5 | Using Content Builder Batch Applications..... | 2-20 |
| 2.5.6 | Creating Non-BLOB FDA specifications | 2-21 |
| 2.5.7 | Updating FDA and RDA Tables with Translated Text | 2-22 |
| 2.6 | Code Page Character Sets | 2-22 |

Index

Preface

Welcome to the *JD Edwards EnterpriseOne Tools Delta Process Guide*.

Audience

This guide is intended for translators and developers who are responsible for editing translation tables.

This guide assumes you have a working knowledge of the following:

- The principles and customary practices of your business area.
- The development process and translation tables.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

Related Documents

You can access related documents from the JD Edwards EnterpriseOne Release Documentation Overview pages on My Oracle Support. Access the main documentation overview page by searching for the document ID, which is 876932.1, or by using this link:

<https://support.oracle.com/CSP/main/article?cmd=show&type=NOT&id=876932.1>

To navigate to this page from the My Oracle Support home page, click the Knowledge tab, and then click the Tools and Training menu, JD Edwards EnterpriseOne, Welcome Center, Release Information Overview.

This guide contains references to server configuration settings that JD Edwards EnterpriseOne stores in configuration files (such as `jde.ini`, `jas.ini`, `jdbj.ini`, `jdolog.properties`, and so on). Beginning with the JD Edwards EnterpriseOne Tools Release 8.97, it is highly recommended that you only access and manage these settings

for the supported server types using the Server Manager program. See the *Server Manager Guide*.

Conventions

The following text conventions are used in this document:

| Convention | Meaning |
|-------------------|--|
| Bold | Indicates field values. |
| <i>Italics</i> | Indicates emphasis and JD Edwards EnterpriseOne or other book-length publication titles. |
| Monospace | Indicates a JD Edwards EnterpriseOne program, other code example, or URL. |

Getting Started with Delta Process

This chapter contains the following topics:

- [Section 1.1, "JD Edwards EnterpriseOne Delta Process Overview"](#)
- [Section 1.2, "JD Edwards EnterpriseOne Delta Process Implementation"](#)

1.1 JD Edwards EnterpriseOne Delta Process Overview

Delta Process is used to determine the development changes that have occurred in translation tables.

1.2 JD Edwards EnterpriseOne Delta Process Implementation

This section provides an overview of the steps that are required to implement Delta Process.

In the planning phase of the implementation, take advantage of all JD Edwards sources of information, including the installation guides and troubleshooting information.

1.2.1 Delta Process Implementation Steps

This table lists the steps for the Delta Process implementation.

1. Set Delta Process for each release.

See [Understanding the Delta Process](#).

2. Set up default location and printers.

See "Working with Report Printing Administration" in the *JD Edwards EnterpriseOne Tools Report Printing Administration Technologies Guide*.

Working with the Delta Process for Translation Tables

This chapter contains the following topics:

- [Section 2.1, "Understanding the Delta Process"](#)
- [Section 2.2, "Setting Up a Database Instance"](#)
- [Section 2.3, "Copying the Data from a Prior Release"](#)
- [Section 2.4, "Working with the Delta Process"](#)
- [Section 2.5, "Working with Delta Process Advanced Options"](#)
- [Section 2.6, "Code Page Character Sets"](#)

2.1 Understanding the Delta Process

The delta process determines the development changes that have occurred in translation tables. The process compares the translation tables as they are at the time that you run the process with the translation tables as they were when you last ran the process. The process identifies the changes and indicates to translators or developers any new development in the translation tables that they need to edit. You determine the timing of the delta process. You can run the delta process as often as necessary.

You must perform setup tasks at the beginning of each JD Edwards EnterpriseOne software release. After you perform the setup, you can run the delta process as often as necessary. You should establish a schedule for running the delta process so that you can keep current on development changes to JD Edwards EnterpriseOne software.

2.1.1 Prerequisite

You must perform these setup procedures before you run the delta process. These procedures create the appropriate database instances and environments, and populate the data from the previous JD Edwards software release. After you finish these setup procedures, you can run the delta process.

You must complete all of these tasks before you run the delta process for the first time.

2.2 Setting Up a Database Instance

This section provides an overview of database instances and discusses how to:

- Set up a database instance.
- Add a new environment.

- Create the environments.
- Use translation tools to create an environment.
- Set up user profiles.
- Add user security.

2.2.1 Understanding Database Instances

Your database administrator must set up a database instance for each compare and language code page set that you use.

This table lists the possible environments or databases:

| Environment | Language Group |
|-----------------|---------------------|
| T1B9 or T1B7333 | Tier I |
| T2B9 or T2B7333 | Tier II |
| T3B9 or T3B7333 | Tier III |
| WEUB7333 | Western European |
| CEUB7333 | Central European |
| SCHB7333 | Simplified Chinese |
| TCHB7333 | Traditional Chinese |
| JPNB7333 | Japanese |
| KORB7333 | Korean |
| RUSB7333 | Russian |

Work with the database administrator to set up libraries or database instances, or both, that apply to your current system environments, depending on your operating system platform and database server.

Note: Each database has specific setup requirements for each code page. Please follow the database administration guidelines for the current release of the database and Open Database Connectivity (ODBC) setup for code pages.

2.2.2 Forms Used to Set Up a Database Instance

| Form Name | Form ID | Navigation | Usage |
|-------------------------|----------|--|--|
| Machine Search & Select | W986115E | System Administration (GH9011), Data Source Management, Database Data Sources. | Locate and copy a machine name and database. |
| Machine Search & Select | W986110D | In the web client or Microsoft windows client, enter P986110 in the Fast Path. W986115E | Add a new environment. |

| Form Name | Form ID | Navigation | Usage |
|---|----------|--|---|
| Work with Environments | W0094E | System Administration Environment (GH9053), Environment Master. | Enter an existing compare environment. Enter a new environment name. |
| Work With Batch Versions - Available Versions | W98305A | Delta Environment Administration (GH793), Create and Compare and Code Page Environment | Select the batch version that you want to run. Select Processing Options from the Row menu. |
| Work With User/Role Profiles | W0092D | System Administration Tools (GH9011), User Management, User Profiles | Select a user. Set up a profile for the user. |
| Work with User Security | W980WSCE | Security Administration (GH9052), Security Maintenance, User Security | Find a user and add the appropriate security. |

2.2.3 Setting Up a Database Instance

Access the Machine Search & Select form.

1. Click the current machine name and data source for administering environment data sources in the detail area, and then click Select.
2. On the Work With Data Sources form, complete the Data Source Name field in the detail area, and then click Find.
3. In the detail area, click the row for the current data source mapping, and then click Copy.
4. On the Data Source Revisions form, complete the Data Source Name field, and then click OK.
5. Enter the new ODBC information and click OK.

2.2.4 Adding a New Environment

1. Enter P986110 in the Fast Path to access the Machine Search & Select form.
2. Click the data source mapping environment in the detail area, and then click Select.
3. On the Work With Object Mappings form, click Add.
4. On the Object Mapping Revisions form, complete these fields and click OK:
 - Environment Name
 - Object Type
 - Primary Data Source
 - Data Source Mode
 - Allow QBE
5. Map all the tables listed in this guide to the translation compare environment.

All other tables can be mapped according to the standard OCM setup.

Note: You should set up a translation compare environment as a login environment. The code page environment is used only for table mappings and can have one OCM mapping for the DEFAULT TABLE mapping.

2.2.5 Creating the Environments

You must create the environments that are needed to run the delta process. You can complete these tasks manually by using Oracle's JD Edwards EnterpriseOne System Administration tools or Oracle's JD Edwards EnterpriseOne Translation Tools applications.

Access the Work With Environments form.

1. Enter an existing compare environment in the Environment Name query by example line, and click Find.
2. Click the existing compare environment in the detail area.
3. From the Row menu, select Copy Environment to duplicate the environment.
4. Complete the New Environment field, select the Copy *Public Records Only option, and then click OK.

Use Oracle's JD Edwards EnterpriseOne OCM to modify the mappings of each environment to reflect your enterprise setup and the mapping for the data sources.

2.2.6 Using JD Edwards EnterpriseOne Translation Tools to Create an Environment

Access the Create and Compare and Code Page Environment form.

1. On the Processing Options form, complete these fields:
 - Compare Environment Prefix
 - Release Postfix
2. On the Work With Batch Versions - Available Versions form, select the version that you want to run, and then select Processing Options from the Row menu.
3. On the Processing Options form, complete the Language Environment Path Code field and click OK.
4. On the Work With Batch Versions - Available Versions form, select the version that you want to run, and then click Select.

On Version Prompting, you can use data selection or data sequencing to further define the version that you are running. The version is set to create all of the environments. You must create the compare environment, but you can use data selection to have the batch process create only those language code page environments that you need.

5. After completing any data selection or sequencing on the Version Prompting form, click Submit.
6. On the Report Output Destination form, select one of these options and click OK:
 - On Screen
 - To Printer

You have finished creating the base language environments.

7. Use OCM to modify the mappings of each environment to reflect your enterprise setup.

Note: You must have all of the OCM mappings modified before you run the delta process.

2.2.7 Setting Up User Profiles

Each translator or developer needs to be set up correctly. The translators have additional setup criteria that indicate the language that they use.

Access the Work With User/Role Profiles form.

1. Complete either of these fields and click Find:
 - User/Role
 - Address Number
2. Select a user and click Select.
3. On the User Profile Revisions form, select Translation Pref from the Form menu.
4. On the Translation Preferences form, complete the Language field and click OK.
You can enter the translator type, but it is not required.
5. On the User Profile Revisions form, enter the language preference for the translator and click OK.

Some languages require runtime language processing to edit the data.

6. Set up the user profiles for each translator.

2.2.8 Adding User Security

Each data source might require user security. User security acts like a proxy that transforms the current user into another user when accessing the data. User security is generally required for language setup of user profiles. A user profile often contains language information that you need to convert characters between code pages. The wrong user profile can cause data corruption or data source connection problems. User profiles must be set up correctly on each database server and in JD Edwards software to perform user security.

Access the Work With User Security form.

1. Complete the User ID/Role field and click Find.
2. Add all of the necessary data source connections for each user and click OK.
3. Repeat this task for each user ID that accesses the data source's setup.

2.3 Copying the Data from a Prior Release

This section provides overviews of data from a prior release, compare environment tables, and control tables for the code page environment, and discusses how to:

- Copy the data from a prior release
- Edit the language master

2.3.1 Understanding Data from a Prior Release

You must copy data from a prior release to the current release. You can perform this process by using database administration tools or by using a series of batch processes defined as table conversions. JD Edwards EnterpriseOne has a series of batch processes for copying the compare environment, and another series of batch processes to copy to the language code page environments. You need to run all of these batch processes.

Note: The connection of the user profile is critical when copying data between code pages. The code page conversion becomes corrupt when users connect to data sources with the wrong user profile.

See "Working with Logs" in the *JD Edwards EnterpriseOne Tools Object Management Workbench Guide*.

2.3.2 Understanding Compare Environment Tables

These tables are from the compare environment, which you can access from the Status (Compare Environment) menu (GH7931):

| Table Types | Table Descriptions |
|------------------------|---|
| Control Tables | User Defined Code Types (F0004) and Language Status (F00041) |
| Control Tables | User Defined Codes (F0005) and Language Status (F00051) |
| Control Tables | Menu Text Override File (F0083) and Language Status (F00831) |
| Control Tables | Task Master (F9000) and Task Relationships (F9001) and Language Status (F90021) |
| Control Tables | Variant Description (F9005) and Language Status (F90051) |
| Control Tables | Variant Detail (F9006) and Language Status (F90061) |
| Control Tables | Component Definition (F9060) |
| Control Tables | Workspace Definition (F9061) |
| Control Tables | Top-Level Navigation Icon Definition (F9062) |
| Control Tables | Secondary Navigation Definition (F9063) |
| Data Dictionary Tables | Data Field Display Text (F9202) and Data Dictionary Row Description Language Status (F92021) |
| Data Dictionary Tables | Data Item Alpha Descriptions (F9203) and Data Dictionary Alpha Description Language Status (F92031) |
| Data Dictionary Tables | Media Objects storage (F00165) and Generic Text Language Status (F001651) |
| Pristine Tables | Date Title (F83100) and FASTR Date/Title Language Status (F831001) |
| Pristine Tables | Column Headings (F83110) and FASTR Column Headings Language Status (F831101) |

| Table Types | Table Descriptions |
|------------------------------|--|
| Pristine Tables | Favorites Relationships and Properties (F91100) and Favorites Language Status (F911001) |
| Central Object Tables | Forms Design Aid Extracted Spec (F79751) and Forms Design Aid Extracted Text Language Status (F797501) |
| Central Object Tables | Report Design Aid Extracted Spec (F79761) and Report Design Aid Extracted Spec Language Status (F797601) |
| Central Object Tables | Processing Option Text (F98306) and Processing Option Text Language Status (F983061) |
| Service Pack Resource Tables | Resource Text Translation Work File (F7920) and Resource Text Translation Language Status (F79201) |
| Translation Tables | Language Master (F7901) |
| Translation Tables | Delta Table Inclusion (F7902) |
| Translation Tables | User Overrides Table (F98950) |

2.3.3 Understanding the Control Tables for the Code Page Environments

This table lists the Code Page environments:

| Table Types | Environments |
|------------------------|---|
| Control Tables | User Defined Codes - Alternate Language Descriptions (F0004D) |
| Control Tables | User Defined Codes - Alternate Language Descriptions (F0005D) |
| Control Tables | Menu Text Override File (F0083) |
| Control Tables | Task Alternate Descriptions (F9002) |
| Control Tables | Variant Description Alternate Description (F9005D) |
| Control Tables | Variant Detail Alternate Description (F9006D) |
| Control Tables | Component Definition - Alternate Description (F9060D) |
| Control Tables | Workspace Definition - Alternate Description (F9061D) |
| Control Tables | Top-Level Navigation Icon Definition - Alternate Description (F9062D) XE Code Page environments: F9062D (Top-Level Navigation Icon Definition - Alternate Description) |
| Control Tables | Secondary Navigation Definition - Alternate Description (F9063D) |
| Data Dictionary Tables | Data Field Display Text (F9202) |
| Data Dictionary Tables | Data Item Alpha Descriptions (F9203) |
| Data Dictionary Tables | Media Objects storage (F00165) |

| Table Types | Environments |
|-----------------------|---|
| Pristine Tables | Date Title (F83100) |
| Pristine Tables | Column Headings (F83110) |
| Pristine Tables | Favorites - Alternative Description (F91100D) |
| Central Object Tables | Forms Design Aid Extracted Text (F79750) |
| Central Object Tables | Report Design Aid Extracted Text (F79760) |
| Central Object Tables | Processing Option Text (F98306) |
| Suggestion Table | Translations Suggestions (F7910) |

Note: You can copy the F7910 to preserve existing suggestions or you can generate a new table without any data. You should consider the needs of each translation group when you determine the pre-loading of this data.

This table lists the JD Edwards Content Builder compare environments:

| Table Types | Environments |
|------------------------|---|
| Data Dictionary Tables | Data Field Display Text (F9202) and Data Dictionary Row Description Language Status (F92021) |
| Data Dictionary Tables | Data Item Alpha Descriptions (F9203) and Data Dictionary Alpha Description Language Status (F92031) |
| Data Dictionary Tables | Media Objects storage (F00165) and Generic Text Language Status (F001651) |
| Data Dictionary Tables | Forms Design Aid Extracted Spec. (F79751) and Forms Design Aid Extracted Text Language Status (F797501) |
| Data Dictionary Tables | Report Design Aid Extracted Spec. (F79761) and Report Design Aid Extracted Spec Language Status (F797601) |
| Data Dictionary Tables | Processing Option Text (F98306) and Processing Option Text Language Status (F983061) |
| Code Page | Media Objects storage table (F00165) is the only table included in the Code Page or workspace. |

2.3.4 Forms Used to Copy the Data from a Prior Release

| Form Name | Form ID | Navigation | Usage |
|---|---------|--|--|
| Work With Batch Versions - Available Versions | W98305A | From the Delta Environment Administration menu (GH793), copy the data from both the Compare and Code Page environments and data sources. | Select a code page to copy. Select the version that you want to run and submit it. |
| Translation Tools Language Master | W7901A | Delta Process Administration (GH792) menu, Language Master | Edit the language master and verify that the values are correct. |

2.3.5 Copying Data from a Prior Release

Access the Work With Batch Versions - Available Versions form.

Note: The table mappings in Object Configuration Manager should be based on the standard location, except for the tables in the Content Builder compare environment. The tables in the Content Builder compare environment should always be mapped to the compare environment and the code page environments. The naming convention of the environment and data source should be synonymous.

1. Right-click the compare environment or Code Page environment that you want to copy.
2. Select Prompt For, and then click Version.
3. On the Work With Batch Versions - Available Versions form, select the version that you want to run.
4. From the Row menu, select Processing Options.
5. On Processing Options, complete these fields on the Environments tab:
 - From Environment
Enter the language environment name from the prior software release.
 - To Environment
Enter the language environment name of the current software release.
6. Select the Conversion Process tab, complete these fields and then click OK:
 - Conversion Program Name
The system populates this field, but you can overwrite it with the name of any of the language table conversion batch applications.
 - Program Version
The system populates this field, but you can overwrite it with any of the language table conversion batch application versions, as long as it applies to the conversion program name.

7. On the Work With Batch Versions - Available Versions form, select the version that you want to run, and then click Select.
8. On the Version Prompting form, click Submit.
9. On the Report Output Destination form, select one of these options and click OK:
 - On Screen
 - To Printer

You have finished copying production data from the prior JD Edwards software release to the current release.

2.3.6 Editing the Language Master

The language master is an integral part of the delta process and translation tools. The delta process uses the language master to define which status records are maintained during the change process. To use all of the necessary tools, you also need code page mapping information and other setup information.

Access the Translation Tools Language Master form.

1. Edit the records for the appropriate languages that match the status records in the compare environment.

Any languages that are missing status records, or any status record without a language master corrupts the database when you run the delta process.

During the copy, languages should exist from the data for the previous release.

2. Verify and edit the correct record or records for these fields, and then click OK:

- Code Page

This value comes from user-defined code table H79/CP.

- L

- MS Word Language ID

- Code Page

This value is the code page data source.

Note: Complete all of the preceding tasks before you run the delta process for the first time. You should verify the environments and data sources for accuracy, especially code page conversions for all languages. Ensure that users are able to enter the compare environment and edit changes before running the delta process.

2.4 Working with the Delta Process

This section provides an overview of the delta process and translation tables, and discusses how to:

- Add translation tables to the delta process.
- Revise translation tables included in the delta process.
- Run the delta process.
- View the progress of the delta process.
- Use jde.log.

- Track the status of each delta process.
- Use preview functionality.

2.4.1 Understanding the Delta Process and Translation Tables

The delta process is a batch application. These tasks explain how to create the batch version for the delta process (which includes selecting translation tables), run that version, and then debug that version, if necessary.

This task explains how to select the translation tables that you want to include in the delta process. The delta process uses batch versions to group the translation tables. You initially define the batch version in the translation tools; this definition indicates the translation tables that you want to include. You also must add the version to the system using the Batch Versions application.

These translation tables are included in the delta process:

- F0004
- F0005
- F00165
- F0083
- RF7920
- F79750
- F79760
- F83100
- F83110
- F9000
- F9005
- F9006
- F9060
- F9061
- F9062
- F9063
- F91100
- F9202
- F9203
- F98306

2.4.2 Forms Used to Work with the Delta Process

| Form Name | Form ID | Navigation | Usage |
|----------------------------------|---------|---|---|
| Work with Delta Table Inclusions | W7902A | Delta Process Administration (GH792), Delta Inclusion | Add a translation table to the delta process. |

| Form Name | Form ID | Navigation | Usage |
|---|---------|--|---|
| Work with Delta Table Inclusions | W7902A | Delta Process Administration (GH792), Delta Inclusion | Select the delta table that you want to revise, and revise it. |
| Work With Batch Versions - Available Versions | W98305A | Delta Process Administration (GH792), Delta Process Batch Submission | Select the delta process that you want to run. Verify that the information in the processing option is accurate. Submit the batch to run. |
| Work with Delta Table Inclusions | W7902A | Delta Process Administration (GH792), Delta Inclusion | Select the delta process for which you want to view progress. Review the status description information. |
| Work With Batch Versions - Available Versions | W98305 | Delta Process Administration (GH792), Status Report | Track the status of each delta process. |
| Work with Delta Table Inclusions | W79028 | Delta Process Administration (GH792), Delta Inclusion | Preview the functionality. |

2.4.3 Adding Translation Tables to the Delta Process

Access the Work with Delta Table Inclusions form.

1. Click Add to create a new version, or click Select to edit an existing version.
2. On the Delta Table Inclusion form, edit the appropriate tables to be included as part of each version.
3. Complete these fields and then click OK:

- Version

Enter the name of a version (for example, **XJDE0001**).

Note: When you create this version using the Batch Versions application, you need to use this name.

- Delta Source Environment

Enter the name of the environment from which the delta process reads the source files.

- Delta Destination Environment

Enter the name of the environment from which the delta process writes or updates the destination files.

- Delta Include

Enter **1** to include the table or **0** (zero) to exclude the table when you run the delta process.

- Delta Table

Enter the name of a delta table.

4. On the Work with Delta Table Inclusions form, click Find to view the delta tables that you added.
5. Add the version using the Batch Versions application.

You must use the same version name in the Translation Tools and in the Batch Versions applications.

Note: All batch applications working with the delta process use the delta inclusion table information. Data selection for every delta batch application works with the version information that is defined in the delta inclusion application. Depending on the administrator requirements, you can enable or disable all tables. To add the version, see "Creating a Batch Version" in the *JD Edwards EnterpriseOne Tools Foundation Guide*

2.4.4 Revising Translation Tables Included in the Delta Process

Access the Work with Delta Table Inclusions form.

1. Click Find to view any versions for the delta process.
2. Select the delta table that you want to revise, and then click Select.
3. On the Delta Table Inclusion form, complete the Delta Include field to indicate whether you want to include the delta table the next time that you run the delta process.

If you exclude a delta table, the delta process does not run over the table. This exclusion does not delete the delta table from the delta process version; it merely disables it. Use the options of the Form menu for Yes and No to quickly change all tables.

4. When you finish including and excluding tables, click OK.
5. On the Work with Delta Table Inclusions form, click Find to view the revision that you made.
6. To delete a delta table, click a delta table row in the detail area, and then click Delete.

2.4.5 Running the Delta Process

This task explains how to verify the delta process processing options and run the delta process. You should verify the processing options first, and then run the version.

Note: You should always run the batch application locally. The Form Design Aid (FDA) and Report Design Aid (RDA) contain binary large objects (BLOB) that can be interpreted only on a Windows client computer.

2.4.5.1 Standard Procedures for Running the Delta Process

You should complete these procedures when you run the delta process:

1. Send an announcement message that includes the scheduled start date and time and the estimated end date and time.
2. Verify the OCM mapping of the source environment and target environment.
Incorrect mappings cause database corruption.
3. Verify that the delta administrator is signed into the target environment.
Translators use this same environment.
4. Use the Universal Table Browser to verify each data source and table.
Data source connection problems might corrupt the database.
5. Begin the delta process at the scheduled time.
A delta process might take as long as ten hours when the compare environment has multiple languages.
6. Make a backup copy of the compare environment.
The delta process does not affect any code page data. The delta process compares only source and destination tables, making appropriate source record changes and updating status records in the compare environment.

2.4.6 Running the Delta Process

Access the Work With Batch Versions - Available Versions form.

1. In the detail area, click the version that you want to run, and then select Processing Options from the Row menu.
2. On Processing Options, verify the information in these fields and then click OK:
 - Delta Source Environment
Enter the name of the environment to override where the delta process reads the source files.
 - Delta Destination Environment
Enter the name of the environment to override where the delta process writes or updates the destination files.
 - Maximum Cache Size
Enter the maximum size, in megabytes, for source and destination caches. If the maximum cache size is reached, the delta process stops.
 - Maximum Consecutive Errors
Enter the maximum number of consecutive errors that you want the delta process to allow before the process stops. For example, you can have the delta process stop automatically if it processes five errors in a row. However, if five or more errors occur during the process, but they are not consecutive, the delta process continues.
 - Compare Source and Destination records
If the delta source and destination records reside on different types of computers, enter 1 in this field to disable the caching capability of the delta process. For example, if the source records reside on an IBM i and the destination records reside on an HP9000, enter 1 in this field. If you do not disable the caching, the respective caches fill to their maximum cache size, and the delta process stops.

If the source and destination records reside on the same type of computer, such as IBM i, leave this field blank to enable caching, which results in faster performance of the delta process.

3. On the Work With Batch Versions - Available Versions form, in the detail area, select the version that you want to run, and then click Select.
4. On the Version Prompting form, click Submit.

If the Processing Options form prompts for editing, click OK; the system displays the Report Output Destination form.

5. On the Report Output Destination form, click one of these options, and then click OK:
 - On Screen
 - To Printer

The delta process runs, comparing the source and destination files and identifying any differences between them. The report lists these changes.

6. At the end of the delta process, the system runs a secondary synchronized batch process, the System Code Status Record Update program (R79803).

The System Code Status Record Update program updates product or system code information in the status records. The tables containing this information must be mapped to the correct source environment.

The system code tables include:

- F9001
- F9200
- F9860

Note: You can run the System Code Status Record Update program at any time. It is not a task menu item. To run it, the delta administrator must start the Batch Versions program by entering **BV** in the Fast Path, entering the batch application number (**R79803**), selecting a version, and launching it. The table selection works with the delta inclusion application information.

2.4.7 Viewing the Progress of the Delta Process

This task explains how to view the progress of the delta process, which includes the status of the process.

Access the Work with Delta Table Inclusions form.

1. Click Find to view any versions for the delta process.
2. Review the Status Description field for these status messages:
 - **Unknown Error**
Indicates that the delta process has stopped running.
 - **Fatal Error**
Indicates that the delta process has stopped running.
 - **Minor Error**

Indicates that the delta process has stopped running because the number of errors that occurred consecutively matches or exceeds the value that you entered in the processing option for the maximum number of consecutive errors.

– **Processing**

Indicates that the delta process is still running. This status message continually updates during the delta process.

– **Complete Success**

Indicates that the delta process completed successfully.

Note: With a successful backup copy, users can enter the compare environment to continue working. It is better to have no users in the system, and the translation tools application limits access to data based on the current status of the delta process. In the event of data corruption, the data should be restored from the backup copy.

2.4.8 Using jde.log

Use the jde.log file to follow the progress of the delta process and to identify errors that might have occurred. JD Edwards software automatically uses the jde.log file to track the progress and any errors of the delta process; no setup is required. While the delta process is running, you can access the jde.log file to view the progress.

When viewing the jde.log file, locate any delta process information by searching for the word *delta* or for the B7900022 business function.

The delta keeps a one-to-many relationship between the source records and status records. The language master defines the one-to-many relationship. Any time that a status record is missing, the delta attempts to insert all records. An insert failure might inadvertently result from keeping the one-to-many relationship.

2.4.8.1 Using jdedebug.log

Use the jdedebug.log file to identify process errors that might occur during the delta process. You need to set up jdedebug.log by using the jde.ini file if you want to use the log file for debugging the delta process.

2.4.9 Tracking the Status of Each Delta Process

This task explains how to report the changes for each delta process. The delta inclusion saves the last historical information by default. You can export this information from the detail area for reporting purposes.

If you need more historical information, you can run the Translation Compare Status report (R79810) for statistics. You should run this report at the completion of every delta process. The report displays the total changes over the compare environment. You can use the report to analyze delta problems and concerns that you might have after you run the Delta Purge and Rebuild Process program (R79801).

Access the Work With Batch Versions - Available Versions form.

1. In the detail area, select the version that matches the table selection for the delta inclusion version, and click Select.
2. On the Version Prompting form, click Submit.

3. On Processing Options, enter the language selection to limit the size of the report and click OK.

When the language selection is blank (the default value), all languages in the compare environment print on the report.

2.4.10 Using Preview Functionality

Many of the translation tools have a preview feature that is built into the application. The preview feature uses local specifications to retrieve current source and target text changes to preview the current delta changes.

You must download specifications to each client machine before processing the preview functionality. The delta process keeps the compare environment synchronized with the objects in a path code, but the delta does not update local machine specifications. Translation Tools has implemented the Advanced Get feature from Object Management Workbench (OMW) to perform previews.

If the items have changed, Translation Tools automatically retrieves the specifications based on untranslated status items.

Access the Work with Delta Table Inclusions form.

1. Select Constants from the Form menu to edit the necessary information for the preview feature.
2. On the Delta Constants form, complete these fields:
 - Path Code
OMW activity rules must be set up to access the objects in this path code.
 - Release
Enter the current release that matches your path code.
3. Select any of these options, and then click OK:
 - Forms Design Aid (FDA)
 - Report Design Aid (RDA)
 - Processing Options (PO)
 - Data Dictionary (DD)

Note: The options are disabled until you enter a path code and release.

2.5 Working with Delta Process Advanced Options

This section provides an overview of delta process advanced options, and discusses how to:

- Purge and rebuild delta tables.
- Fix status record problems.
- Use Content Builder batch applications.
- Create non-BLOB FDA specifications.
- Update FDA and RDA tables with translated text.

2.5.1 Understanding Delta Process Advanced Options

The environments and database contain a large set of data that could become corrupt. The delta process includes a suite of batch applications to help keep the compare and code page environments intact.

2.5.2 Forms Used to Work with Delta Process Advanced Options

| Form Name | Form ID | Navigation | Usage |
|---|---------|---|---|
| Work With Batch Versions - Available Versions | W98305A | Purge and Rebuild (GH7922) menu, Purge and Rebuild Batch Submission | Purge and rebuild delta tables. |
| Work With Batch Versions - Available Versions | W98305A | Purge and Rebuild menu (GH7922), Check Delete Status Batch Submission Language Mastering Administration menu (GH7933), FDA Blob Update | Check delete status with text records. |
| Work With Batch Versions - Available Versions | W98305A | Language Mastering Administration menu (GH7933), FDA Blob Update | Update FDA and RDA tables with translated text. |

2.5.3 Purging and Rebuilding Delta Tables

When the compare and code page environments are out of synchronization, use the Delta Purge and Rebuild Process (R79801) to identify and fix problems. You should rebuild at the beginning of the translation lifecycle, but purge before mastering the software.

The purge process deletes these types of records:

- Status and language records that are marked for deletion (status = 99).
- Language records that do not have a corresponding status record.
This means that the language record is extraneous because, without a corresponding status record, it does not match any of the English records. The translation record has become an orphan.
- All untranslated language records (status = 20).
This removes bad translations. Untranslated text is a better result than a bad translation.

The rebuild process performs these tasks:

- Checks certain status records for missing translation records or untranslated text.
- Compares all status records that are complete (status = 11) for matching language records.
- Changes the status of the corresponding status record to either untranslated (status = 20) or new item (status = 40) for each language record that meets these conditions:
 - Record does not exist.

- Record is blank.
- Record contains English (you need to set a processing option for this function).

Access the Work With Batch Versions - Available Versions form.

1. Select the Purge and Rebuild version in the detail area and then select Processing Options from the Row menu.
2. On the Processing Options form, complete these fields on the Process tab and click OK:
 - Language

Enter the language code, such as **W** for Swedish, for the language records that you want to purge and rebuild.
 - Translation Compare Environment

Enter the compare environment or leave this processing option blank to use the default compare environment. The wrong compare environment can cause corruption in the database.
 - Code Page Environment

Enter the language code page environment or leave this processing option blank to use the default code page environment. The wrong code page environment can cause corruption in the database.
 - Purge

Leave this processing option blank to run the purge process. Enter **1** in this processing option to prevent the purge process from running.
 - Rebuild

Leave this processing option blank to run the rebuild process. Enter **1** in this processing option to prevent the rebuild process from running.
 - Duplicate English

Enter **1** in this processing option to run a process that checks language records for any source English that also appears in the source English records. Any duplicate source English changes the corresponding status record to untranslated (status = 20). Generally, translation memory problems cause English text to appear in translated software, and this process can reset the status appropriately.
3. On the Work With Batch Versions - Available Versions form, in the detail area, select the version that you want to run, and then click Select.

The data selection is defined by the delta inclusion application.

If the Processing Options form prompts for editing, click OK; the system displays the Report Output Destination form.
4. Select one of these options, and then click OK:
 - On Screen
 - To Printer

The batch process runs.

Note: The purge and rebuild process also rebuilds information in the code page records. Tables such as F0005D, F7920, and F98306 contain information from the source records. This process fixes translation or mastering issues.

2.5.4 Fixing Status Record Problems

Sometimes, status records are not updated appropriately. These records are often missing the English source and have become orphaned. You can run the Check Status with Text Records program (R79802) to fix these problems. This process runs in the compare environment and works with all language status records that are missing a source record.

Access the Work With Batch Versions - Available Versions form.:

1. Select the version in the detail area and select Processing Options from the Row menu.
2. On the Processing Options form, complete these processing options and click OK:
 - Update Delete Status Records
The report displays the totals for the records that will be purged from the system.
 - Delete Status
3. On the Work With Batch Versions - Available Versions form, in the detail area select the version that you want to run, and then click Select.

The data selection is defined by the delta inclusion application.

If the Processing Options form prompts for editing, click OK; the system displays the Report Output Destination form.

4. Select one of these options and click OK:
 - On Screen
 - To Printer

The batch process runs.

2.5.5 Using Content Builder Batch Applications

Content Builder uses the delta process to track English source changes. The changes can then be edited by developers into a code page or workspace database. A tool in Content Builder enables developers to access the data dictionary to edit the delta glossary items. These edits eventually need to be synchronized with the pristine database for the purposes of translating and mastering the software.

From the Work With Delta menu (GH7941), select Delta Data Synch.

1. On the Processing Options form, complete these processing options and click OK:
 - Compare Data Source
This data source contains the status records and the compare source English.
 - Code Page Data Source
This data source contains the edits that the developers entered, and which need to be updated in the compare and destination data sources.

- Destination Data Source
This data source contains the current pristine set of data for the current release of the data dictionary.
 - Synch by Status
This option selects the status records to update, so that only edited items are replaced.
 - Update Compare Status
This option updates the status, so that the same records are not continually updated with this process.
2. On the Report Output Destination form, select one of these options and click OK:
- On Screen
 - To Printer
- The batch process runs.

When Content Builder is not using the delta process to track changes, a set of non-Binary Large Object Form Design Aid (non-BLOB FDA) data is required to use the token integration tool. The non-BLOB data can be generated from the BLOB specifications to enable edits when using token integration in Content Builder.

2.5.6 Creating Non-BLOB FDA specifications

Access the FDA Spec Conversion.

1. On the Processing Options form, complete these processing options and click OK:
- FDA Spec Source Environment
This environment contains the path code information of the current FDA BLOB specifications.
 - FDA Data Destination Environment
This environment contains the mapping to the compare environment.
 - Maximum Consecutive Errors
 - From Range - Interactive Application Name
To limit the size of the non-BLOB specification data, enter a starting application such as Business Unit Master (P0006).
 - Through Range - Interactive Application Name
To limit the size of the non-BLOB specification data, enter an ending application such as Purchase Order Entry (P4310).
2. On the Report Output Destination form, select one of these options and click OK:
- On Screen
 - To Printer
- The batch process runs and creates the data that is necessary to use the token integration tool for Content Builder.

2.5.7 Updating FDA and RDA Tables with Translated Text

This task explains how to update FDA and RDA tables with translated text. JD Edwards software stores FDA and RDA tables in the BLOB format. The delta process converts the FDA and RDA text into Unicode, ASCII, or Extended Binary Coded Decimal Interchange Code (EBCDIC), depending on your system. After translation is complete and before language mastering, the mastering administrator needs to run the batch processes to convert the translation text back into the BLOB format for use within JD Edwards software.

The UBE for FDA is R798750 and the UBE for RDA is R798760.

Access the Work With Batch Versions - Available Versions form.

1. Select the version in the detail area and then select Processing Options from the Row menu.
2. On the Processing Options form, complete these processing options and click OK:
 - Translation's Code Page Environment
 - Master's Code Page Environment
 - Language Selection

Enter the language code, such as **W** for Swedish, for the language records that you want to purge and rebuild.
3. On the Work With Batch Versions - Available Versions form, select the version in the detail area, and then click Select.
4. On the Version Prompting form, click Submit.

If the Processing Options form prompts for editing, click OK; the system displays the Report Output Destination form.
5. Select one of these options and click OK:
 - On Screen
 - To Printer

The batch process runs.
6. Return to the Language Mastering Administration menu, and select RDA Blob Update.

2.6 Code Page Character Sets

Translation text exists in many forms of character code pages. Some of these code pages include Unicode, ASCII, or EBCDIC, depending on your system. Unicode has different encoding sets, such as UTF-16, UTF-8, USB-2, and so on. Unicode character code pages are often converted to either ASCII or EBCDIC code pages for processing on different platforms.

This table displays the character sets for ASCII character code pages:

| Language | Description | ASCII ID | ASCII Code |
|----------|---------------------|-----------|------------|
| AR | Arabic | AR_CP1256 | 720 |
| C | Czech | EE_CP1250 | 852 |
| CS | Simplified Chinese | SC_GB | 936 |
| CT | Traditional Chinese | TC_BIG5 | 950 |

| Language | Description | ASCII ID | ASCII Code |
|-----------------|--------------------|-----------------|-------------------|
| DN | Danish | WE_ISO88591 | 437 |
| DU | Dutch | WE_ISO88591 | 437 |
| F | French | WE_ISO88591 | 437 |
| FN | Finnish | WE_ISO88591 | 437 |
| G | German | WE_ISO88591 | 437 |
| GR | Greek | GR_CP1253 | 737 |
| HU | Hungarian | EE_CP1250 | 852 |
| I | Italian | WE_ISO88591 | 437 |
| J | Japanese | JA_SJIS | 932 |
| KO | Korean | KO_KSC | 949 |
| NO | Norwegian | WE_ISO88591 | 437 |
| P | Portuguese | WE_ISO88591 | 437 |
| PO | Polish | EE_CP1250 | 852 |
| RU | Russian | RS_CP1251 | 866 |
| S | Spanish | WE_ISO88591 | 437 |
| TR | Turkish | TK_CP1254 | 857 |
| W | Swedish | WE_ISO88591 | 437 |

| Language | Description | EBCDIC ID | EBCDIC Code |
|-----------------|---------------------|------------------|--------------------|
| AR | Arabic | AR_EBCDIC | 420 |
| C | Czech | EE_EBCDIC | 870 |
| CS | Simplified Chinese | SC_EBCDIC | 935 |
| CT | Traditional Chinese | TC_EBCDIC | 937 |
| DN | Danish | US_EBCDIC | 37 |
| DU | Dutch | US_EBCDIC | 37 |
| F | French | US_EBCDIC | 37 |
| FN | Finnish | US_EBCDIC | 37 |
| G | German | US_EBCDIC | 37 |
| GR | Greek | GR_EBCDIC | 875 |
| HU | Hungarian | EE_EBCDIC | 870 |
| I | Italian | US_EBCDIC | 37 |
| J | Japanese | JA_EBCDIC | 939 |
| KO | Korean | KO_EBCDIC | 933 |
| NO | Norwegian | US_EBCDIC | 37 |
| P | Portuguese | US_EBCDIC | 37 |
| PO | Polish | EE_EBCDIC | 870 |
| RU | Russian | RS_EBCDIC | 1025 |

| Language | Description | EBCDIC ID | EBCDIC Code |
|-----------------|--------------------|------------------|--------------------|
| S | Spanish | US_EBCDIC | 37 |
| TR | Turkish | TK_EBCDIC | 1026 |
| W | Swedish | US_EBCDIC | 37 |

Index

B

backup, performing a successful backup, 2-15

C

character code pages, setting up a database instance for, 2-2

code page environment, understanding table types, 2-7

code pages

describing ASCII and EBCDIC code page character sets, 2-22

selecting environment, 2-9

compare environments

describing for Content Builder, 2-8

describing table types, 2-6

Content Builder

describing compare environments, 2-8

using the delta process to track English source changes, 2-20

Create and Compare and Code Page Environment form, 2-4

D

data dictionary tables, copying data from a prior release, 2-6

Data Source Revisions form, 2-3

data, copying from a prior release, 2-9

database instance

setting up, 2-3

understanding, 2-2

Delta Constants form, 2-17

delta process

adding EnterpriseOne translation tables to the delta process, 2-12

checking delete status with text records, 2-20

copying environments, 2-4

editing the language master, 2-10

modifying OCM mappings, 2-5

performing prerequisite tasks before running for the first time, 2-1

purging and rebuild delta tables, 2-19

revising EnterpriseOne translation tables included in the delta process, 2-13

running, 2-13

running for the first time, 2-10

running the Delta Process, 2-14

running the translation compare status report, 2-16

setting up for each release, 2-1

standard procedures for running the delta process, 2-13

tracking the status, 2-16

understanding, 2-1

understanding the delta process, 2-11

using preview, 2-17

viewing the progress of the delta process, 2-15

working with advanced options, 2-18

working with the translation tables, 2-11

Delta Table Inclusion form, 2-12, 2-13

E

EnterpriseOne Translation tables, overview, 2-1 environments

adding, 2-3

compare environments, 2-6

copying, 2-4

creating language environments, 2-4

defining in processing options, 2-9

delta source environment, 2-12

describing language groups, 2-2

selecting the language environment path code, 2-4

using EnterpriseOne Translation Tools to create, 2-4

verifying delta source and destination, 2-14

F

FDA Spec Conversion, 2-21

FDA tables, updating with translated text, 2-22

FDA, creating non-BLOB specifications, 2-21

Form Design Aid tables, updating with translated text, 2-22

J

jddebug.log, using to identify process errors, 2-16

jde.log, using to follow progress and identify

errors, 2-16

L

language master
 editing, 2-10
language records, purging and rebuilding, 2-18

M

Machine Search & Select form, 2-3

N

non-BLOB specifications, creating for FDA, 2-21

O

Object Configuration Manager table, mapping, 2-9
Object Mapping Revisions form, 2-3
OCM mappings
 modifying, 2-4, 2-5
 verifying source and target, 2-14

P

preview, using, 2-17
purge process, purging language records, 2-18

R

RDA tables, updating with translated text, 2-22
rebuild process
 process, 2-18
 rebuilding language records, 2-18
Report Design Aid tables, updating with translated text, 2-22
Report Output Destination form, 2-4

S

security, adding for users, 2-5
status record problems, fixing, 2-20
System Code Status Record Update, 2-15
system code tables, F9200 Data Dictionary Master and F9001 Task Relationships, 2-14

T

table conversions, copying tables from a prior release, 2-6
tables
 describing compare environments for Content Builder, 2-8
 describing types for code page environments, 2-7
 describing types for compare environments, 2-6
translation compare environment tables, 2-6
Translation Preferences form, 2-5
Translation Tools Language Master form, 2-10

U

Universal Table Browser, verifying data sources and tables, 2-14
User Profile Revisions form, 2-5
user profiles
 setting up, 2-5
 setting up a translators preference, 2-5
user security, adding, 2-5

V

Version Prompting form, 2-4

W

Work With Batch Versions - Available Versions form, 2-4, 2-9, 2-22
Work With Data Sources form, 2-3
Work with Delta Table Inclusions form, 2-12, 2-13, 2-17
Work With Environments form, 2-4
Work With Object Mappings form, 2-3
Work With User Security form, 2-5
Work With User/Role Profiles form, 2-5