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Oracle Application Server Integration Adapter for J.D. Edwards OneWorld XE User's Guide, 10g (9.0.4)

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Preface

This guide explains how to use Oracle Application Server ProcessConnect and the Oracle Application Server Integration Adapter for J.D. Edwards OneWorld XE to access J.D. Edwards OneWorld XE Business Functions. In this guide you will learn how to define a delivery channel for J.D. Edwards OneWorld XE and add an interaction to generate native events, which are XML instances defined by XSD (XML payload defined by an XML Schema Definition instance). In this guide you will also find a chapter describing the datatype mapping between J.D. Edwards OneWorld XE and XSD.

See Also: *Oracle Application Server ProcessConnect User's Guide*

This preface contains these topics:

- [Intended Audience](#)
- [Organization](#)
- [Related Documentation](#)
- [Conventions](#)
- [Documentation Accessibility](#)

Intended Audience

Oracle Application Server Integration Adapter for J.D. Edwards OneWorld XE User's Guide is intended for those who perform the following tasks:

- Create delivery channels and interactions with a J.D. Edwards OneWorld XE system
- Maintain applications

To use this document, you need some knowledge of J.D. Edwards OneWorld XE.

Organization

This document contains:

Chapter 1, "Introduction to OracleAS Integration Adapter for J.D. Edwards OneWorld XE"

This chapter describes the Oracle Application Server Integration Adapter for J.D. Edwards OneWorld XE and the hardware and software requirements.

This chapter also provides instructions for adding a custom component on to a J.D. Edwards OneWorld XE machine.

Chapter 2, "Defining a Delivery Channel"

This chapter provides instructions for using Oracle Application Server ProcessConnect to define a delivery channel for a J.D. Edwards OneWorld XE system.

Chapter 3, "Defining an Interaction"

This chapter provides instructions for using Oracle Application Server ProcessConnect to add a J.D. Edwards OneWorld XE interaction.

Chapter 4, "Using J.D. Edwards OneWorld XE Datatypes"

This chapter provides information on J.D. Edwards OneWorld XE datatypes.

Chapter 5, "Limitations"

This chapter provides information on the limitations of the Oracle Application Server Integration Adapter for J.D. Edwards OneWorld XE.

Related Documentation

For more information, see these Oracle resources:

- *Oracle Application Server ProcessConnect User's Guide* in the Oracle Application Server Documentation Library
- *Oracle Application Server Installation Guide*

Printed documentation is available for sale in the Oracle Store at

<http://oraclestore.oracle.com>

To download free release notes, installation documentation, white papers, or other collateral, please visit the Oracle Technology Network (OTN). You must register online before using OTN; registration is free and can be done at

<http://otn.oracle.com/membership>

If you already have a user name and password for OTN, then you can go directly to the documentation section of the OTN Web site at

<http://otn.oracle.com/docs>

Conventions

This section describes the conventions used in the text and code examples of this documentation set. It describes:

- [Conventions in Text](#)
- [Conventions in Code Examples](#)
- [Conventions for Windows Operating Systems](#)

Conventions in Text

We use various conventions in text to help you more quickly identify special terms. The following table describes those conventions and provides examples of their use.

Convention	Meaning	Example
Bold	Bold typeface indicates terms that are defined in the text or terms that appear in a glossary, or both.	When you specify this clause, you create an index-organized table .

Convention	Meaning	Example
<i>Italics</i>	Italic typeface indicates book titles or emphasis.	<i>Oracle9i Database Concepts</i> Ensure that the recovery catalog and target database do <i>not</i> reside on the same disk.
UPPERCASE monospace (fixed-width) font	Uppercase monospace typeface indicates elements supplied by the system. Such elements include parameters, privileges, datatypes, RMAN keywords, SQL keywords, SQL*Plus or utility commands, packages and methods, as well as system-supplied column names, database objects and structures, usernames, and roles.	You can specify this clause only for a NUMBER column. You can back up the database by using the BACKUP command. Query the TABLE_NAME column in the USER_TABLES data dictionary view. Use the DBMS_STATS.GENERATE_STATS procedure.
lowercase monospace (fixed-width) font	Lowercase monospace typeface indicates executables, filenames, directory names, and sample user-supplied elements. Such elements include computer and database names, net service names, and connect identifiers, as well as user-supplied database objects and structures, column names, packages and classes, usernames and roles, program units, and parameter values. Note: Some programmatic elements use a mixture of UPPERCASE and lowercase. Enter these elements as shown.	Enter sqlplus to open SQL*Plus. The password is specified in the orapwd file. Back up the datafiles and control files in the /disk1/oracle/dbs directory. The department_id, department_name, and location_id columns are in the hr.departments table. Set the QUERY_REWRITE_ENABLED initialization parameter to true. Connect as oe user. The JRepUtil class implements these methods.
<i>lowercase italic monospace (fixed-width) font</i>	Lowercase italic monospace font represents placeholders or variables.	You can specify the <i>parallel_clause</i> . Run <i>Uold_release</i> .SQL where <i>old_release</i> refers to the release you installed prior to upgrading.

Conventions in Code Examples

Code examples illustrate SQL, PL/SQL, SQL*Plus, or other command-line statements. They are displayed in a monospace (fixed-width) font and separated from normal text as shown in this example:

```
SELECT username FROM dba_users WHERE username = 'MIGRATE';
```

The following table describes typographic conventions used in code examples and provides examples of their use.

Convention	Meaning	Example
[]	Brackets enclose one or more optional items. Do not enter the brackets.	DECIMAL (<i>digits</i> [, <i>precision</i>])
{ }	Braces enclose two or more items, one of which is required. Do not enter the braces.	{ENABLE DISABLE}
	A vertical bar represents a choice of two or more options within brackets or braces. Enter one of the options. Do not enter the vertical bar.	{ENABLE DISABLE} [COMPRESS NOCOMPRESS]
...	Horizontal ellipsis points indicate either: <ul style="list-style-type: none"> That we have omitted parts of the code that are not directly related to the example That you can repeat a portion of the code 	CREATE TABLE ... AS <i>subquery</i> ; SELECT <i>col1</i> , <i>col2</i> , ... , <i>coln</i> FROM <i>employees</i> ;
.	Vertical ellipsis points indicate that we have omitted several lines of code not directly related to the example.	SQL> SELECT NAME FROM V\$DATAFILE; NAME ----- /fsl/dbs/tbs_01.dbf /fsl/dbs/tbs_02.dbf . . . /fsl/dbs/tbs_09.dbf 9 rows selected.
Other notation	You must enter symbols other than brackets, braces, vertical bars, and ellipsis points as shown.	acctbal NUMBER(11,2); acct CONSTANT NUMBER(4) := 3;
<i>Italics</i>	Italicized text indicates placeholders or variables for which you must supply particular values.	CONNECT SYSTEM/ <i>system_password</i> DB_NAME = <i>database_name</i>
UPPERCASE	Uppercase typeface indicates elements supplied by the system. We show these terms in uppercase in order to distinguish them from terms you define. Unless terms appear in brackets, enter them in the order and with the spelling shown. However, because these terms are not case sensitive, you can enter them in lowercase.	SELECT last_name, employee_id FROM <i>employees</i> ; SELECT * FROM USER_TABLES; DROP TABLE hr.employees;

Convention	Meaning	Example
lowercase	<p>Lowercase typeface indicates programmatic elements that you supply. For example, lowercase indicates names of tables, columns, or files.</p> <p>Note: Some programmatic elements use a mixture of UPPERCASE and lowercase. Enter these elements as shown.</p>	<pre>SELECT last_name, employee_id FROM employees; sqlplus hr/hr CREATE USER mjones IDENTIFIED BY ty3MU9;</pre>

Conventions for Windows Operating Systems

The following table describes conventions for Windows operating systems and provides examples of their use.

Convention	Meaning	Example
Choose Start >	How to start a program.	To start the Database Configuration Assistant, choose Start > Programs > Oracle - HOME_NAME > Configuration and Migration Tools > Database Configuration Assistant.
File and directory names	File and directory names are not case sensitive. The following special characters are not allowed: left angle bracket (<), right angle bracket (>), colon (:), double quotation marks ("), slash (/), pipe (), and dash (-). The special character backslash (\) is treated as an element separator, even when it appears in quotes. If the file name begins with \\, then Windows assumes it uses the Universal Naming Convention.	c:\winnt\"\"system32 is the same as C:\WINNT\SYSTEM32
C: \>	Represents the Windows command prompt of the current hard disk drive. The escape character in a command prompt is the caret (^). Your prompt reflects the subdirectory in which you are working. Referred to as the <i>command prompt</i> in this manual.	C:\oracle\oradata>

Convention	Meaning	Example
Special characters	The backslash (\) special character is sometimes required as an escape character for the double quotation mark (") special character at the Windows command prompt. Parentheses and the single quotation mark (') do not require an escape character. Refer to your Windows operating system documentation for more information on escape and special characters.	<pre>C:\>exp scott/tiger TABLES=emp QUERY=\"WHERE job='SALESMAN' and sal<1600\" C:\>imp SYSTEM/password FROMUSER=scott TABLES=(emp, dept)</pre>
<i>HOME_NAME</i>	Represents the Oracle home name. The home name can be up to 16 alphanumeric characters. The only special character allowed in the home name is the underscore.	<pre>C:\> net start OracleHOME_NAME\TNSListener</pre>
<i>ORACLE_HOME</i> and <i>ORACLE_</i> <i>BASE</i>	<p>In releases prior to Oracle8i release 8.1.3, when you installed Oracle components, all subdirectories were located under a top level <i>ORACLE_HOME</i> directory. For Windows NT, the default location was <code>C:\orant</code>.</p> <p>This release complies with Optimal Flexible Architecture (OFA) guidelines. All subdirectories are not under a top level <i>ORACLE_HOME</i> directory. There is a top level directory called <i>ORACLE_BASE</i> that by default is <code>C:\oracle</code>. If you install the latest Oracle release on a computer with no other Oracle software installed, then the default setting for the first Oracle home directory is <code>C:\oracle\orann</code>, where <i>nn</i> is the latest release number. The Oracle home directory is located directly under <i>ORACLE_BASE</i>.</p> <p>All directory path examples in this guide follow OFA conventions.</p> <p>Refer to <i>Oracle9i Database Getting Started for Windows</i> for additional information about OFA compliances and for information about installing Oracle products in non-OFA compliant directories.</p>	Go to the <i>ORACLE_BASE\ORACLE_HOME\rdbms\admin</i> directory.

Documentation Accessibility

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<http://www.oracle.com/accessibility/>

Accessibility of Code Examples in Documentation JAWS, a Windows screen reader, may not always correctly read the code examples in this document. The conventions for writing code require that closing braces should appear on an otherwise empty line; however, JAWS may not always read a line of text that consists solely of a bracket or brace.

Introduction to OracleAS Integration Adapter for J.D. Edwards OneWorld XE

Oracle Application Server ProcessConnect connects to a J.D. Edwards OneWorld XE system through the Oracle Application Server Integration Adapter for J.D. Edwards OneWorld XE. The Oracle Application Server Integration Adapter for J.D. Edwards OneWorld XE provides connectivity and executes interactions on a J.D. Edwards OneWorld XE system.

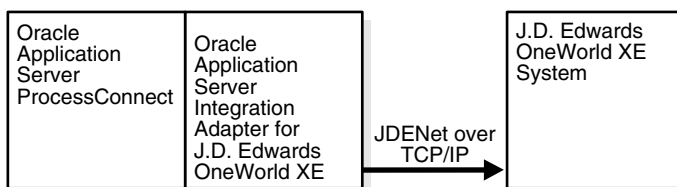
This chapter discusses the following topics:

- [Architecture: OracleAS Integration Adapter for J.D. Edwards OneWorld XE](#)
- [Software Requirements](#)
- [Supported Platforms](#)
- [Postinstallation](#)

Architecture: OracleAS Integration Adapter for J.D. Edwards OneWorld XE

The Oracle Application Server Integration Adapter for J.D. Edwards OneWorld XE is a JCA-based component that plugs in to Oracle Application Server ProcessConnect. Using Oracle Application Server ProcessConnect, you can access J.D. Edwards OneWorld XE Business Functions. As shown in [Figure 1–1](#), the Oracle Application Server Integration Adapter for J.D. Edwards OneWorld XE runs on the machine running Oracle Application Server ProcessConnect and uses the JDENet protocol to download metadata from and send calls to the J.D. Edwards OneWorld XE system. JDENet is a proprietary messaging protocol implemented by the J.D. Edwards OneWorld XE connector classes found in the jar files, `Connector.jar` and `Kernel.jar`. The communication is implemented using TCP/IP as a transport with a default port of 6009.

Figure 1–1 Architecture



The Oracle Application Server Integration Adapter for J.D. Edwards OneWorld XE supports outbound interactions. The interactions have both request and reply records. Each record has one record element associated with it. The following naming convention is used for the records:

- Request records

`AEProtocolName_interactionGroupName_interactionName_Request`

- Reply records

`AEProtocolName_interactionGroupName_interactionName_Reply`

See Also: [Chapter 3, "Defining an Interaction"](#)

Software Requirements

The Oracle Application Server Integration Adapter for J.D. Edwards OneWorld XE connects to J.D. Edwards OneWorld XE, Version B73.3.3. To avoid the issues with Windows 2000 servers and remote control software, you need service pack 16 or greater on XE. You must also have access to a J.D. Edwards OneWorld XE Enterprise server.

The following J.D. Edwards OneWorld XE .jar files must be accessible:

- `Connector.jar`
- `Kernel.jar`

The J.D. Edwards OneWorld XE ACBREL1 custom package is required to use the Oracle Application Server Integration Adapter for J.D. Edwards OneWorld XE.

See Also: ["Defining a Custom Package"](#) on page 1-4

Supported Platforms

The Oracle Application Server Integration Adapter for J.D. Edwards OneWorld XE is supported on:

- Solaris 8 (2.8)
- HP-UX 11.0

Postinstallation

Verify you are using J.D. Edwards OneWorld XE, Version B73.3.3 with Service Pack 16 or greater.

Copy the following jar files from your J.D. Edwards OneWorld XE installation and place them in `ORACLE_install/ip/adapters/lib`:

- `Connector.jar`
- `Kernel.jar`

Using the steps in ["Defining a Custom Package"](#), install the ACBREL1 custom package on the J.D. Edwards OneWorld XE machine.

See Also: ["Defining a Custom Package"](#) on page 1-4

Defining a Custom Package

ACBREL1 is a custom package, also known as an automated software update (ASU) in J.D. Edwards OneWorld XE terminology. On installation, the ACBREL1 custom package updates selected modules within the J.D. Edwards OneWorld XE environment by adding Business Functions to extract metadata and custom functions to test the datatypes.

See Also: ["List of Modules in ACBREL1"](#) on page 1-7

Installing the Custom Package ACBREL1

To install the custom package ACBREL1 into your J.D. Edwards system, the following J.D. Edwards tools are required:

- Deployment server installation—The custom package works on a Windows platform only and is used with the Deployment server. The custom package must be built on the deployment server then deployed to the enterprise server.

The enterprise server is usually a production server and can be on a Windows or UNIX platform.

- Installation Workbench

Note: When applying the ASU into the J.D. Edward's deployment server, verify that you are in Update mode. The Proof mode verifies that there are no bugs in the ASU. The Update mode is when you apply the ASU.

The following steps provide instructions for the installation process:

1. Log on as user JDE on the deployment server.
2. Create a new folder called ACBREL1 on the deployment server `..(root)/B7` folder.
3. Copy ACBREL1.EXE and ACBREL1.CAB from the ORACLE_HOME/ip/adapters/config/JDE/ASU folder to the newly created ACBREL1 folder.
4. Run ACBREL1.EXE from the new `/B7/ACBREL1` folder.

The J.D. Edwards Installation Manager automatically starts after the executable file expands.

5. Click **Next** then click **Finish** in the OneWorld deployment server Setup Type dialog.
6. Log on to the JDEPLAN environment as user JDE on the deployment server.

Note: If the planner update Electronic Software Update (ESU) that includes SAR #4533357 has not been installed on your system, select Software Updates from the **System Installation Tools** menu (GH9612). Input 02 for option 1 in the **Processing Options** panel.

If the planner update ESU that includes SAR #4533357 has been installed on your system, select **Application Software Update** from the **System Installation Tools** menu (GH9612).

7. Double-click the ACBREL1 update on the Work with Application Update screen and click **Next**.
8. Double-click the environments where you want the update installed and click **Next**.

Check **Unattended Workbench** if you want the software update to run in unattended mode.

Check **Backup** if you want to back up the specifications (so that the original specifications can be restored).

9. Select the plan for the update you are installing on the **Work with Installation Plan** screen and click **Select**.
10. Check all the automatically generated PDFs for errors after the installation is complete.

If errors occur, consult the *J.D. Edwards Software Update Guide* for troubleshooting tips, or contact J.D. Edwards directly.

11. Manually register the Business Function library using the steps included in "[Manually Registering the Business Function Library](#)" on page 1-5.

Manually Registering the Business Function Library

Due to a limitation of the J.D. Edwards product packaging process, the custom Business Function library (the DLL) for Oracle Application Server Integration Adapter for J.D. Edwards OneWorld XE must be manually registered with J.D. Edwards OneWorld XE.

- [Creating the Custom Business Function Library Through OMW](#)
- [Rebuilding Libraries from the Deployment Server](#)
- [Copying the Custom DLL](#)
- [Building a Full Package](#)

Creating the Custom Business Function Library Through OMW

Create the Custom Business Function Library through Object Management Workbench (OMW). The following steps must be performed on initial setup, and apply to all platforms.

1. Launch Object Management Workbench (Fast Path: "OMW", or Menu: GH902 Object: P98220).
2. Click **Add** and select the option for **Business Function Library**.
3. Fill in the name, description, and system code for the **New Business Function Library Object**:
Name: ACBLIB
Description: Actional DLL
Product Code: 55
Product System Code: 55
4. Click **OK**.

Rebuilding Libraries from the Deployment Server

The following steps must be performed on initial setup for each platform:

1. Launch the BusBuild program in a standalone mode.
2. Select **Start > Run > busbuild.exe**.
3. Log on to J.D. Edwards OneWorld XE, into the pathcode (PY7333, PD7333, or DV7333).
The following instructions use DV7333 as the pathcode.
4. Select the option under the pull down menu, **Build for Rebuild Libraries**.

Copying the Custom DLL

Copy the custom DLL from the pathcode directory to the parent package directories respectively on the deployment server as well as the enterprise server as follows:

On the Deployment Server

1. Copy ACBLIB.dll from DV7333\bin32 to DV7333\Packages\DV7333FA\bin32.
2. Copy ACBLIB.def, ACBLIB.dmp, and ACBLIB.mak from the DV7333\obj folder to the DV7333\Packages\DV7333FA\obj folder.
3. Copy ACBLIB.exp, ACBLIB.lib, and sACBLIB.lib from the DV7333\lib32 folder to the DV7333\Packages\DV7333FA\lib32 folder.

On the Enterprise Server

After each action verify the file and directory authorization.

1. Create a directory ACBLIB under DV7333FA\obj\.
2. Create a directory ACBLIB under DV7333FA\source.
3. FTP b5500900.c from the deployment server DV7333\source directory to the DV7333FA\source\ACBLIB directory.
4. FTP b5500900.h from the deployment server DV7333\include directory to the DV7333FA\include directory.

Building a Full Package

Due to a limitation of the J.D. Edwards package build process (at the time of writing this guide) you must build a full package build for the environments to which you applied the ACBREL1 ASU. If you do not build a full package build, the update package build will not work properly. Consult J.D. Edwards documentation on how to build a full package build.

Note: When you apply J.D. Edwards OneWorld XE ASU/ESU, the ASU/ESU do not normally create new library and Business Functions. However, the Oracle Application Server ProcessConnect custom package creates a new library; therefore, you *must* perform extra steps such as manually creating a directory and running a full package build.

List of Modules in ACBREL1

The custom package ACBREL1 creates the following objects in J.D. Edwards. If you do not have all the modules, there is a problem in the J.D. Edwards OneWorld XE update. Verify that a *full package* build was performed—not an *update package* build.

- ACBCHAR01 - TEST CHAR TYPE 01
- ACBCUST - ACB CUSTOMER ID
- ACBDATE01 - TEST DATE TYPE 01
- ACBDEF - ACB FUNCTION TYPE DEFINITION
- ACBFCNT - ACB FUNCTION NAME LIST COUNT
- ACBFUNC - ACB FUNCTION NAME LIST
- ACBFUNCN - ACB FUNCTION NAME
- ACBINT01 - TEST INTEGER TYPE 01
- ACBLIB - LIBRARY
- ACBMATH01 - TEST MATH TYPE 01
- ACBNEWS - ACB NEW STATUS
- ACBORDER - ACB ORDER NUMBER
- ACBPRC - ACB ITEM PRICE
- ACBPROD - ACB PRODUCT ID
- ACBQTY - ACB ITEM QUANTITY
- ACBRES - ACB RESULT INDICATOR
- ACBSTAT - ACB STATUS
- ACBSTR01 - TEST STRING TYPE 01
- ACBTEST - ACB TEST SCREEN
- ACBTEST2 - ACB TEST SCREEN 2
- ACBTEST3 - ACB TEST SCREEN 3
- B5500900 - SUPPORT MODULE
- D5500900 - DATA STRUCTURE
- D5500900A - DATA STRUCTURE
- D5500900B - FETCH PRICE DATA STRUCTURE
- D5500900C - GET CUSTOMER STATUS DATA STRUCTURE
- D5500900D - SET CUSTOMER STATUS DATA STRUCTURE
- D5500900E - UPDATE SALES ORDER STATUS DATA STRUCTURE

- D5500900F - TEST INTEGER
- D5500900G - TEST STRING
- D5500900H - TEST DATE
- D5500900I - TEST CHAR
- D5500900J - TEST MATH NUMERIC
- D5500900K - TEST DATE 2

Defining a Delivery Channel

This chapter describes how to use Oracle Application Server ProcessConnect to define a delivery channel to connect to a J.D. Edwards OneWorld XE system.

This chapter discusses the following topics:

- [Adding and Configuring a Delivery Channel](#)
- [Troubleshooting J.D. Edwards Settings](#)
- [Customizing the jdeinterop.ini File](#)

Adding and Configuring a Delivery Channel

Part of the application definition includes adding a delivery channel for the adapter. Setting up the delivery channel in Oracle Application Server ProcessConnect requires information which is specific to the adapter.

See Also: *Oracle Application Server ProcessConnect User's Guide* for details about adding an application delivery channel in Oracle Application Server ProcessConnect

1. Select the **Profiles > Applications** tabs.
2. Click **Create**.

Oracle Application Server
ProcessConnect

Home Help Logout

Modeling Profiles Deployment Reports Administration

Host Trading Partners Applications Agreements

Logged in as ip

Create Application

Cancel Apply

Please enter the application parameter(s) and choose Apply.
* Indicates required field

* Name

Description

Application Type

Cancel Apply

[Modeling](#) | [Profiles](#) | [Deployment](#) | [Reports](#) | [Administration](#) | [Home](#) | [Help](#) | [Logout](#)

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3. Type an application name in the **Name** field.
4. Select the **JDE** application type from the **Application Type** box and click **Apply**.
5. Click **Add** in the **Adapter Types** section to add the J.D. Edwards OneWorld XE adapter.

The Add Adapter Type page appears.



6. Select **JDE Adapter** in the **Type** selection box in the Add Adapter Type page and click **Apply**.

The Adapter Type Details: J.D. Edwards Adapter page is displayed.



7. Click **Create** in the **Delivery Channels** section in the Adapter Type Details page.

The Create Delivery Channel page is displayed.

8. Add the following information to create a delivery channel.

In [Table 2–1](#) an asterisk (*) indicates a required field.

Table 2–1 J.D. Edwards OneWorld XE Specific Parameters

Field	Description
Name*	Enter a name for the delivery channel.
Server Host*	Enter the name of the host server (<code>machine_Name</code>), for example, <code>actsvr1</code> , or the IP Address of the machine, for example, <code>192.168.0.120</code> .
Server Port Number*	Enter the port number that exchanges data, for example, <code>6009</code> .
Full Path to <code>jdeinterop.ini</code> File*	Enter the full path to the <code>jdeinterop.ini</code> file, for example, <code>oracle_install/ip/adapters/config/JDE/jdeinterop.ini</code> . For information on the ini file, refer to " Customizing the jdeinterop.ini File " on page 2-6.
J.D. Edwards Environment Name*	Enter the name of an environment in J.D. Edwards OneWorld XE, for example, <code>DV7333</code> . <code>DV7333</code> is a common name for the development environment; <code>PY7333</code> is common for the prototype environment; and <code>PD7333</code> is common for the production environment.
User Name*	Enter a J.D.Edward XE user name to login to the J.D. Edwards OneWorld XE system.
Password*	Enter the password of the specified user.

The screenshot shows the Oracle Application Server ProcessConnect Administration console. The main navigation bar includes 'Host', 'Trading Partners', 'Applications', and 'Agreements'. The 'Applications' tab is selected. The breadcrumb trail shows 'Modeling' > 'Profiles' > 'Deployment' > 'Reports' > 'Administration'. The user is logged in as 'ip'. The page title is 'Create Delivery Channel'. The application is set to 'myJDEdwardsTest'. The form contains the following fields:

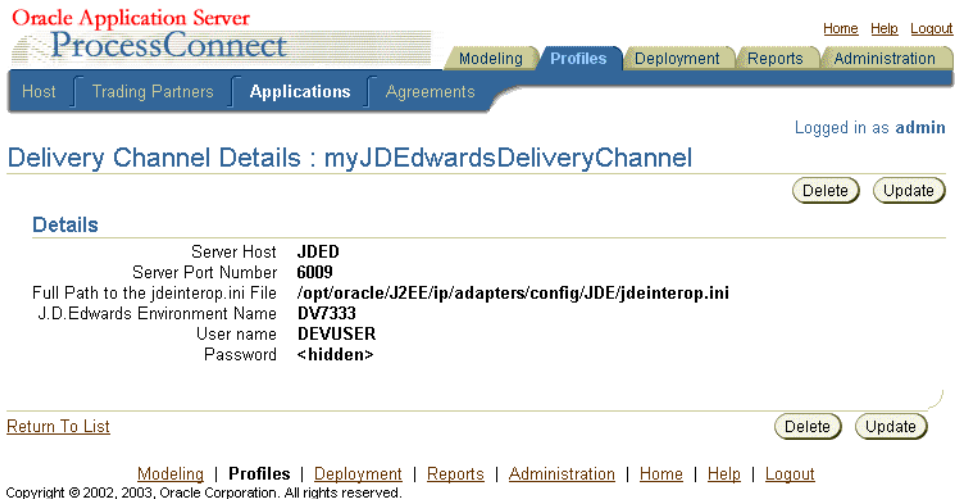
- * Name: (empty)
- Server Host: JDED
- Server Port Number: 6009
- Full Path to the jdeinterop.ini File: (empty)
- J.D.Edwards Environment Name: (empty)
- User name: (empty)
- Password: (empty)

Buttons for 'Cancel' and 'Apply' are present at the top right and bottom right of the form area. The footer contains the copyright information: 'Copyright © 2002, 2003, Oracle Corporation. All rights reserved.'

See Also: "[Troubleshooting J.D. Edwards Settings](#)" on page 2-8 for connection error information

9. Click **Apply** after entering your parameters to connect to a J.D. Edwards OneWorld XE system.

The delivery channel Confirmation screen is displayed. You can modify any parameters and click **Update** in the confirmation page to change your parameters or click **Delete** to remove the channel.



10. Click the **Return to List** link to return to the Adapter Details page.

The delivery channel is added for the adapter and you can now add interactions.

See Also: [Chapter 3, "Defining an Interaction"](#)

Customizing the jdeinterop.ini File

The J.D. Edwards OneWorld XE connector classes in `Connector.jar` and `Kernel.jar` require the use of a configuration file usually called `jdeinterop.ini`. This file is defined by the J.D. Edwards OneWorld XE software and uses their terminology. For more information on this file's purpose and terminology, refer to the *J.D. Edwards Interoperability Guide Release OneWorld XE*.

You must edit `jdeinterop.ini` to match the parameter values in the delivery channel you defined. Multiple delivery channels can share the same `jdeinterop.ini` file if their parameters are compatible. In general, if two delivery channels point to two different J.D. Edwards OneWorld XE machines, they require two different copies of `jdeinterop.ini`. There is a sample `jdeinterop.ini` file in `ORACLE_HOME/ip/adapters/config/JDE/jdeinterop.ini`.

You must copy `jdeinterop.ini` manually when importing an Oracle Application Server ProcessConnect J.D. Edwards OneWorld XE business process to another machine.

The J.D. Edwards OneWorld XE adapter provides its own logging. The logging in `jdeinterop.ini` should be kept turned off and the parameters for the various log files can be ignored.

The information is organized by section; for example, `[JDENET]` and the sections are listed in the order they are found in the J.D. Edwards OneWorld XE software.

[JDENET]

`EnterpriseServerTimeout` – The time out value for a request to the enterprise server in milliseconds. The default is 120000.

`maxPoolSize` – The JDENET socket connection pool size. The default is 30.

[SERVER]

`glossaryTextServer` – The enterprise server and port that provide glossary text information. This is the server that returns text descriptions for errors. This is often the same host and port as the J.D. Edwards OneWorld XE application server. There may be more than one glossary server for different supported language encodings. The default is `actsvr1:6009`.

`codePage` – The encoding scheme. The default is 1252.

- 1252 English and Western European
- 932 Japanese
- 950 Traditional Chinese
- 936 Simplified Chinese
- 949 Korean

[LOGS]

`log` – Location of the log file. This parameter can be ignored.

`debuglog` – Location of debug log file. This parameter can be ignored.

`Debug` - Determines if JDENET debugging is on. The default is `FALSE`.

[DEBUG]

`JobFile` – Location of error file. This parameter can be ignored.

`DebugFile` – Location of debug file. This parameter can be ignored.

`log` – Location of log file. This parameter can be ignored.

`debugLevel` – Debug level. This parameter can be ignored.

`NetTraceLevel` - Trace level. This parameter can be ignored.

[INTEROP]

`enterpriseServer` – This value is the name of the host server. Make sure this value is the same value you enter in the [Server Host*](#) field on page 2-4 when configuring a Delivery channel. The default is `JDED`.

`port` – This value is the port number that is used to exchange data. Make sure this value is the same value you enter in the [Server Port Number*](#) field on page 2-4 when configuring a Delivery channel. The default is `6009`.

`inactive_timeout` – The time out value in milliseconds for a transaction in auto commit mode. If the user is inactive for this amount of time (in milliseconds), the interop server logs off the user. You can change this value to a shorter period of time. The default is `1200000`.

`manual_timeout` – The time out value in milliseconds for a transaction in manual commit mode. The default is `120000`.

`Repository` – Points to the location of the directory containing `Connector.jar` and `Kernel.jar`. On UNIX, this is a full path.

Troubleshooting J.D. Edwards Settings

Error ID	Possible Cause / Error Description	Possible Correction
E-JDE0002	JDE jar files missing. Failed to instantiate class object for JDE Java Data Bean.	Verify path for repository. Refer to " Full Path to jdeinterop.ini File* " on page 2-4.
E-JDE0027	JDE jar files missing. Unable to acquire J.D. Edwards connection object.	Verify your CLASSPATH environment variable. Refer to " Software Requirements " on page 1-3. Verify your credentials. Refer to " User Name* " and " Password* " on page 2-4.

Error ID	Possible Cause / Error Description	Possible Correction
	<p>JDE jar files missing. Wrong path for repository.</p>	<p>Verify location of <code>jdeinterop.ini</code>. Verify path for repository set in the <code>jdeinterop.ini</code> file.</p> <p>Refer to "Customizing the jdeinterop.ini File" on page 2-6.</p> <p>You must copy <code>jdeinterop.ini</code> manually when importing an Oracle Application Server ProcessConnect J.D. Edwards OneWorld XE business process to another machine.</p>
	<p>Unable to acquire J.D. Edwards connection object.</p>	<p>Verify your CLASSPATH settings and logon credentials.</p> <p>Refer to "User Name*" and "Password*" on page 2-4.</p>
I-JDE0043	<p>Wrong App Server, Port, Environment, Path for Configuration File, User, Password. Login failed.</p>	<p>Verify your login credentials.</p> <p>Refer to "User Name*" and "Password*" on page 2-4.</p>

Defining an Interaction

This chapter describes how to configure Oracle Application Server ProcessConnect to access Business Functions in a J.D. Edwards OneWorld XE system.

When using J.D. Edwards OneWorld XE PurchaseOrder or SalesOrder, you must create three Oracle Application Server ProcessConnect interactions to accomplish one business function completion in J.D. Edwards OneWorld XE.

See Also: ["Creating a PurchaseOrder or SalesOrder Interaction"](#) on page 5-2 for information on using J.D. Edwards OneWorld XE and Oracle Application Server ProcessConnect interactions

This chapter discusses the following topic:

- [Adding an Interaction](#)

Adding an Interaction

After defining a delivery channel for a J.D. Edwards OneWorld XE system you can add interactions. Follow these instructions to add a J.D. Edwards OneWorld XE business function as an interaction in Oracle Application Server ProcessConnect.

See Also: *Oracle Application Server ProcessConnect User's Guide* for details about interactions in Oracle Application Server ProcessConnect

1. Select **Modeling > Interactions**.

Oracle Application Server
ProcessConnect

Home Help Logout

Modeling Profile: Deployment Reports Administration

Business Processes Roles Event Types Datatypes Transformations **Interactions** Condition Expressions

Interactions Logged in as ip

This shows the interactions defined in the system. Please choose Add to add an interaction.

Expand All | Collapse All

⊕ Adapter Providers

Focus Item	Delete
▼ Adapter Providers	
⊕ ▶ Oracle	
⊕ ▶ Oracle IP Development team	

Add

Shortcuts

- [Create Native Event Type](#)
- [Native Event Types](#)
- [Application Event Types](#)

Modeling | Profiles | Deployment | Reports | Administration | Home | Help | Logout

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2. Click **Add** to add an interaction.
3. Expand **Oracle**.

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ProcessConnect

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Modeling Profiles Deployment Reports Administration

Business Processes Roles Event Types Datatypes Transformations **Interactions** Condition Expressions

Logged in as ip

Add Interaction: Select Adapter Type

Please select an adapter type.

[Expand All](#) | [Collapse All](#)

⊕ Adapter Providers

Focus Item

▼ Adapter Providers
⊕ ▼ Oracle
AQ Adapter
Oracle DB Adapter
JMS Adapter
File/FTP Adapter
HTTP Adapter
Email Adapter
Webservice Adapter
JDE Adapter
SAP R/3 Adapter
Siebel2000 Adapter
⊕ ▶ Oracle IP Development team

Modeling | [Profiles](#) | [Deployment](#) | [Reports](#) | [Administration](#) | [Home](#) | [Help](#) | [Logout](#)

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4. Select **JDE Adapter**.
5. Select a delivery channel.

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Modeling Profiles Deployment Reports Administration

Business Processes Roles Event Types Datatypes Transformations **Interactions** Condition Expressions

Logged in as ip

Add Interaction: Select Delivery Channel

Please select the delivery channel for the adapter type selected. This delivery channel will be used to browse the application's interactions.

[Expand All](#) | [Collapse All](#)

⊕ Applications

Focus Item

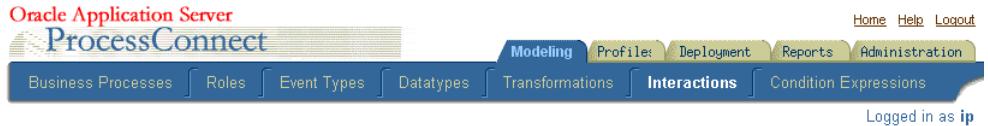
▼ Applications
⊕ ▶ JDEApp1
⊕ ▼ myJDEwardsTest
myJDEwardsDeliveryChannel

Modeling | [Profiles](#) | [Deployment](#) | [Reports](#) | [Administration](#) | [Home](#) | [Help](#) | [Logout](#)

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6. Expand **Outbound**.

The Add Interaction: Select Interaction page displays the J.D. Edwards OneWorld XE adapter exchange protocols that you can access.



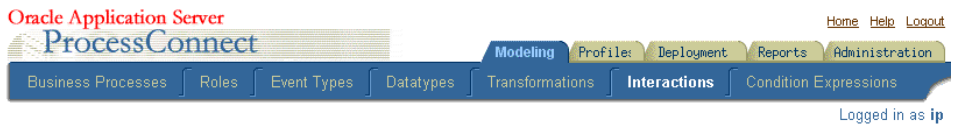
Add Interaction: Select Interaction

Please select the interaction to add.

[Expand All](#) | [Collapse All](#)

⊕ Adapter Exchange Protocols	
Focus Item	
▼	Adapter Exchange Protocols
⊕	▶ Inbound
⊕	▼ Outbound
⊕	▶ B00
⊕	▶ B01
⊕	▶ B02
⊕	▶ B03

J.D. Edwards OneWorld XE has too many modules to show in one long list. The modules are group together according to the first three characters of their name. The first level of the hierarchy is the list of all 3-character prefix for the module names. The second level lists all the modules that share the same 3-character prefix. The last level lists the business functions belonging to a module.



Add Interaction: Select Interaction

Please select the interaction to add.

[Expand All](#) | [Collapse All](#)

⊕ Adapter Exchange Protocols	
Focus Item	
▼	Adapter Exchange Protocols
⊕	▶ Inbound
⊕	▼ Outbound
⊕	▼ B00
⊕	▼ B0000002
	ValidateLedgerTypeOptions(B00_B0000002_ValidateLedgerTypeOptions_Request_B00_B0000002_ValidateLedgerTypeOptions)
⊕	▶ B0000003
⊕	▶ B0000004

Visibility of Business Functions - If you create a new (or change a) J.D. Edwards OneWorld XE Business Object it should not be necessary to re-deploy the object in J.D. Edwards OneWorld XE in order to view it in Oracle Application Server ProcessConnect. However, it is possible that, in some scenarios with high security, this step is required. For example:

- Create business function in the J.D. Edwards OneWorld XE system with no data structure - The business function is visible from Oracle Application Server ProcessConnect
- Add a data structure to the business function - The business function is visible, although data structure is not
- Check-in business function to the J.D. Edwards OneWorld XE system - The business function is visible, although data structure is not

In most cases, stopping and restarting Oracle Application Server ProcessConnect process forces a refresh of the definitions being used. This causes the new definitions to re-load the next time you view the system in the Select Interaction screen.

There may be cases where you must deploy the business object in J.D. Edwards OneWorld XE in order to see the changes to the data structure through Oracle Application Server ProcessConnect.

7. Select a group and choose an interaction. For this discussion, expand **B00 > B0000002** and select the **ValidateLedgerTypeOptions** interaction.

Add Interaction: Review

Please verify the interaction you are about to add. Choose Apply to add the interaction. Please note that you will be asked to specify native formats and extractors after adding the interaction.

Create Native Event Type

After adding the interaction and specifying the native formats and extractors, you will be able to create the native event and event body elements.

Interaction

Name **ValidateLedgerTypeOptions**
Is Inbound **False**

In Record Type

Name **B00_B0000002_ValidateLedgerTypeOptions_Request**

Out Record Type

Name **B00_B0000002_ValidateLedgerTypeOptions_Reply**

Cancel

Apply

The Add Interaction: Review page displays the details. For an Outbound selection there is an InRecord Type and an OutRecord Type.

8. Click **Apply.**

The Confirmation screen appears, allowing you to specify the Native Format of the request.

Confirmation
Interaction ValidateLedgerTypeOptions(B00_B0000002_ValidateLedgerTypeOptions_Request, B00_B0000002_ValidateLedgerTypeOptions_Reply) successfully added.

Specify Native Format Apply

Please specify a native format and extractor for each record type element and choose Apply. Since a value is set by default, please verify that the correct native format and extractor are specified.

Record Type Element	Native Format	Extractor
B00_B0000002_ValidateLedgerTypeOptions_Request	XSD	XSD

Apply

9. Verify that the selection for the Native Format and the Extractor for the request is **XSD and click **Apply**.**

The Confirmation screen appears, allowing you to specify the Native Format of the reply.

Confirmation
Successfully specified native formats and extractors.

Specify Native Format Apply

Please specify a native format and extractor for each record type element and choose Apply. Since a value is set by default, please verify that the correct native format and extractor are specified.

Record Type Element	Native Format	Extractor
B00_B0000002_ValidateLedgerTypeOptions_Reply	XSD	XSD

Apply

10. Verify that the selection for the Native Format and the Extractor for the reply is **XSD and click **Apply**.**

- The interaction continues into the Create Native Event Type wizard. You can continue using the instructions in the *Oracle Application Server ProcessConnect User's Guide* for this wizard.

On completion, the new interaction appears in the Interactions list.

Interactions

This shows the interactions defined in the system. Please choose Add to add an interaction.

Expand All | Collapse All

Adapter Providers

Focus Item

Adapter Providers	Delete
Oracle	
JDE Adapter	
B55	
B00	
B0000002	
ValidateLedgerTypeOptions(B00_B0000002_ValidateLedgerTypeOptions_Request, B00_B0000002_ValidateLedgerTypeOptions_Reply)	

Add

Str
Crs
Na
Ap

You can click the interaction link for a complete view of the interaction details.

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ProcessConnect

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Modeling Profiles Deployment Reports Administration

Business Processes Roles Event Types Datatypes Transformations **Interactions** Condition Expressions

Logged in as ip

Interaction Details : ValidateLedgerTypeOptions

Delete

Details

Name ValidateLedgerTypeOptions
 Adapter Exchange Protocol B00
 Group Name B0000002
 Is Inbound False
 In Record Type [B00_B0000002_ValidateLedgerTypeOptions_Request](#)
 Out Record Type [B00_B0000002_ValidateLedgerTypeOptions_Reply](#)

Interaction Parameters

Parameter	Value
InteractionVerb	1
AdapterExchangeProtocol	B00
ID	ValidateLedgerTypeOptions@JDE://B00/B0000002

Return To List

Delete

Using J.D. Edwards OneWorld XE Datatypes

This chapter provides information on J.D. Edward One World XE datatypes. This chapter discusses the following topics:

- [Business Functions](#)
- [Handling String Values](#)
- [Using the MATH_NUMERIC Type](#)

Business Functions

The Oracle Application Server Integration Adapter for J.D. Edwards OneWorld XE provides access to J.D. Edwards OneWorld XE Business Functions. Metadata about Business Functions is read using a Business Function interface to find a list of Business Functions and associated data structures. Metadata is strongly typed in all cases for all Business Function methods.

Table 4–1 describes the list of basic types in J.D. Edwards and how they map to XML Schema types in Oracle Application Server ProcessConnect. The `xsd` prefix stands for the namespace `http://www.w3.org/2001/XMLSchema`.

Table 4–1 Business Function Datatypes

J.D. Edwards	Oracle Application Server ProcessConnect	Description
char	xsd:string of 1	Character string
int	xsd:short	A short integer
long	xsd:short	A long integer
MATH_NUMERIC	xsd:string of 32	J.D. Edwards special implementation of floating point numbers, including currency values
JDEDATE	xsd:date	J.D. Edwards special implementation of dates
BYTE	xsd:string of 1	A single unsigned character
BOOL	xsd:boolean	A boolean value
ID	xsd:string	An unsigned long integer
HWND	Not supported.	Not supported

Handling String Values

The following describes how to configure certain string arguments as right-justified (and left-padded). Oracle Application Server Integration Adapter for J.D. Edwards OneWorld XE exposes two kinds of string values through its interoperability layer:

- char—A single character.
- maximum length string—A null terminated string with a maximum length.

J.D. Edwards OneWorld XE uses Hungarian notation to name the arguments of these types in the Business Functions. For example, arguments of these types begin with:

- C
- SZ

For nearly all arguments of the sz type, maximum length string or char array, J.D. Edwards OneWorld XE expects a left-justified value. For a street address line, which is of max length 40, J.D. Edwards OneWorld XE expects:

```
"701 North Shoreline Blvd"
```

padded to length 40 with blanks. It is not necessary for you to enter the padding, because the Oracle Application Server Integration Adapter for J.D. Edwards OneWorld XE provides this for you. You only need to enter "701 North Shoreline Blvd" in your client code.

For some subset of values for this type, the dialog expects values that are right justified with padding on the left. For example, for Business Functions in the B4200310 source module, the argument `szBusinessUnit` is of length 12. This argument represents a plant, such as a production facility. For a plant number of 30, J.D. Edwards OneWorld XE expects a value of:

```
"          30"
```

The following values are not valid:

```
"30 "  
"30 "
```

To make it easier for you to submit these values, you can take advantage of an Oracle Application Server Integration Adapter for J.D. Edwards OneWorld XE feature. It is possible for you to enter a list of parameters so that they are automatically right-justified and padded on the left with blanks. In this way, the following value would be valid for the `szBusinessUnit` value:

```
"30 "
```

This value is automatically formatted correctly if you take advantage of this feature. You must create a text file with entries describing these parameters. This file, if created, is called `ORACLE_HOME/ip/adapters/config/JDE/jdearglist.txt`.

If this file does not exist, or is empty, an informational message appears in the Oracle Application Server Integration Adapter for J.D. Edwards OneWorld XE log when you first load the adapter.

The following is an example of the format for entries in the `jdearglist.txt` file:

```
SourceModule.BusinessFunction.Argument
```

For example:

```
B4200310.F4211FSBeginDoc.szBusinessUnit
```

For a set of Business Functions belonging to the same business module, like-named arguments (of the same type) are shared across some or all of the Business Functions. You can use the asterisk (*) wildcard character instead of the Business Function name. For example:

```
B4200310.*.szBusinessUnit
```

You must copy `jdearglist.txt` manually when importing an Oracle Application Server ProcessConnect J.D. Edwards OneWorld XE business process to another machine.

Using the MATH_NUMERIC Type

The following describes the MATH_NUMERIC type and details:

- How exponents are handled
- The maximum number of digits
- The maximum number of decimal digits

The MATH_NUMERIC type is a numeric string type. To use it, enter parameter values of the following format:

```
OptionalSign IntegerAndFractionalPart OptionalExponentPart
```

Where

- `OptionalSign` can be + or -. + is the default.
- `IntegerAndFractionalPart` is a maximum of 32 significant digits, not counting the decimal symbol. The decimal symbol is locale-specific to the J.D. Edwards OneWorld XE installation—typically a period (.) or a comma (,). The digits may be all integer, all fraction, or part integer and part fraction, but cannot exceed 32.

- `OptionalExponentPart` is in turn made up of:

```
'e' OptionalSign ExponentDigits
```

where:

- * `OptionalSign` can be + (plus) or - (minus). + (plus) is the default.

5

Limitations

This chapter explains the limitations and workarounds when connecting to J.D. Edwards OneWorld XE. The following topics are discussed:

- [Creating a PurchaseOrder or SalesOrder Interaction](#)
- [Querying and Retrieving Lists of Records](#)

Creating a PurchaseOrder or SalesOrder Interaction

When using J.D. Edwards OneWorld XE PurchaseOrder or SalesOrder, you must create three Oracle Application Server ProcessConnect interactions to accomplish one business function completion in J.D. Edwards OneWorld XE. BeginDoc, EditDoc, and EndDoc are three Business Functions related to PurchaseOrder or SalesOrder.

The Business Functions related to Purchase Order are:

- F4311FSBeginDoc
- F4311ClearWorkFiles
- F4311EditDoc
- F4311EditLine
- F4311EndDoc
- F4311InitializeCaching
- F4311TerminateCaching

Not all J.D. Edwards OneWorld XE transactions require BeginDoc, EditDoc and EndDoc, for example, in the case of Address.

F4311FSBeginDoc

This function is a part of Edit Object (API) for Purchase Order creation. When a new order is being created this is the first business function to run/call.

F4311EditLine

The purpose of this business function is to edit Purchase Order Detail lines and to optionally update a Purchase Order, with records. This function needs to be called for each order entry item that needs to be added to the purchase order.

F4311EndDoc

This function is a part of Edit Object (API) for Purchase Order Creation and Modification. This function uses edited transactions from the Purchase Order header and detail work files and creates or updates Purchase Orders. All the related files are updated with the Purchase Order information when the Purchase Order line is created.

Querying and Retrieving Lists of Records

The J.D. Edwards communication architecture is a single-message, single-reply architecture. You cannot return a list of messages or an array. The underlying code is C++, which calls with a pointer to a single structure, makes changes in the structure, and exits.

See Also: ["Controlling Iteration"](#) on page 5-3

You cannot query and retrieve lists of records based on search criteria using the Oracle Application Server Integration Adapter for J.D. Edwards OneWorld XE due to a limitation with the J.D. Edwards Business Function architecture.

In J.D. Edwards OneWorld XE, database connectivity is provided by using a set of proprietary (and complex) internal function calls. These calls mask the underlying database version by requiring very explicit and low-level calls to create lists of columns to retrieve or update, and create specialized structures for sorting or selection. The sets of APIs are not exposed through the Java (or any other) connectivity method; therefore, record sets cannot be handled through Business Functions.

The J.D. Edwards database access APIs are not usable through the Java connector; therefore, managing lists of items (such as customers) can be challenging. It is relatively easy to create Business Functions in J.D. Edwards OneWorld XE that handle a single record, or operate on a group of records, if all of the work is performed within the bounds of the J.D. Edwards OneWorld XE toolset. However, accessing lists of items outside the J.D. Edwards OneWorld XE tools is more difficult.

To work around this limitation, you can create a custom Business Function in J.D. Edwards OneWorld XE that returns a list of record keys based on a query. You must segment the lists because JDENET (J.D. Edwards OneWorld XE' internal proprietary messaging API) has a limitation on the message buffer size for managing large or effectively unbounded result sets. The client code must iterate (loop) through successive calls to the Business Function, until an indicator is returned stating that the list is complete.

Controlling Iteration

All calls to J.D. Edwards OneWorld XE Business Functions are stateless; therefore, the Business Function cannot maintain an open cursor and return more rows on request. Positioning information must be passed to the J.D. Edwards OneWorld XE Business Function on each call.

The following is a list of techniques for controlling iteration:

- On the J.D. Edwards OneWorld XE side, write the result set to a temporary storage area, such as a file, which returns an ID (such as a file name, or job number) that can be given on successive calls, along with the record number to position the cursor. Successive call positions within the list are based on the passed-in record number.

Note: Calls through the Oracle Application Server Integration Adapter for J.D. Edwards OneWorld XE can be load-balanced; however, they are eventually served by a single application server based on the credentials and Business Function being called. Therefore, if a temporary file was created on a server by one call, additional calls are served by the same server. For more information refer to *Object Configuration Mapping* in the *JDE CNC Guides*.

- Position information (such as a primary key value) that can be passed back on the second and subsequent calls. Reissue the query based on the key as an additional parameter.

Note: Of the first two techniques, the preferred method is to use primary key values and reissue the query. It requires the smallest amount of code, and places the optimization and caching burden on the database.

- A list of primary keys (such as a cross-reference) can be stored by the calling application. For example, if a customer record is created by a customer relationship management (CRM) system, then added to J.D. Edwards OneWorld XE using a Business Function call, the Business Function that adds a customer record sets the value for the AN8 field (short address number) and is visible in the return buffer. This number can then be written to a reference field on the original customer record, or stored into a custom cross-reference table.
- Most master records in J.D. Edwards have the concept of a lookup, or alternate key. This key can be used to store the key information from the calling system and Business Functions exist, or can be created to perform the lookup on the J.D. Edwards side. When parameters are passed to the Business Function to create a customer record, the long key value is set.

See Also: The *Interoperability* topic in the J.D. Edwards OneWorld XE help system

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