JD Edwards World

Service Enablement Guide

Release A9.3

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JD Edwards World Service Enablement Guide, Release A9.3

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Contents

Preface

Welcome to the JD Edwards World Service Enablement Guide.

Audience

This guide is intended for implementers and end users of JD Edwards World Service Enablement.

Documentation Accessibility

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Related Documents

You can access related documents from the JD Edwards World Release Documentation Overview pages on My Oracle Support. Access the main documentation overview page by searching for the document ID, which is 1362397.1, or by using this link:

- https://support.oracle.com/CSP/main/article?cmd=show&type=NOT&id=1362397.1

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

1

Introduction

This chapter contains the topic:

- Section 1.1, "Overview of JD Edwards World Service Enablement."

1.1 Overview of JD Edwards World Service Enablement

The purpose of the JD Edwards World Service Enablement product is to expose JD Edwards World business processes to the outside world.

JD Edwards created a Java API layer, which is exposed to outside applications through Web services. To communicate with JD Edwards World applications, the Java API layer uses one of several options.

The first option is to utilize a new JD Edwards World Z-File Process; wherein the Java API layer writes to Z-Tables using the JD Edwards World JDBC database connector, then the Java program calls DREAM Writer to access the JD Edwards World interactive applications in a batch mode.

Another option is having the API layer make RPG program calls from the Java code using the JT400 toolset.

A third communication option used is to perform SQL calls from the Java code to the JD Edwards World database tables. The JD Edwards World JDBC database connector is used to process the SQL, as it allows for data conversion from the JD Edwards World database. Finally, RPG programs might call the internal Java API layer. The communication option used depends on the type of business process and could include more than one of the choices described here.

Data objects were created for each business processes. The data objects are exposed to outside applications by utilizing Web services (that use a WSDL interface) for each business process. The Web services are bundled inside an Enterprise Archive file, or .ear file, which can be deployed to a Java application server. The Web services are J2EE compliant and can be used, or consumed, by other Java programs. The WSDL interface also allows for the Web services to be consumed by third-party integration applications, such as Oracle's BPEL Process Manager or IBM's WebSphere Business Integrator.

The following diagram displays a graphical view of the JD Edwards World Service Enablement architecture.

Figure 1–1 World A9.2 Service Enablement Architecture
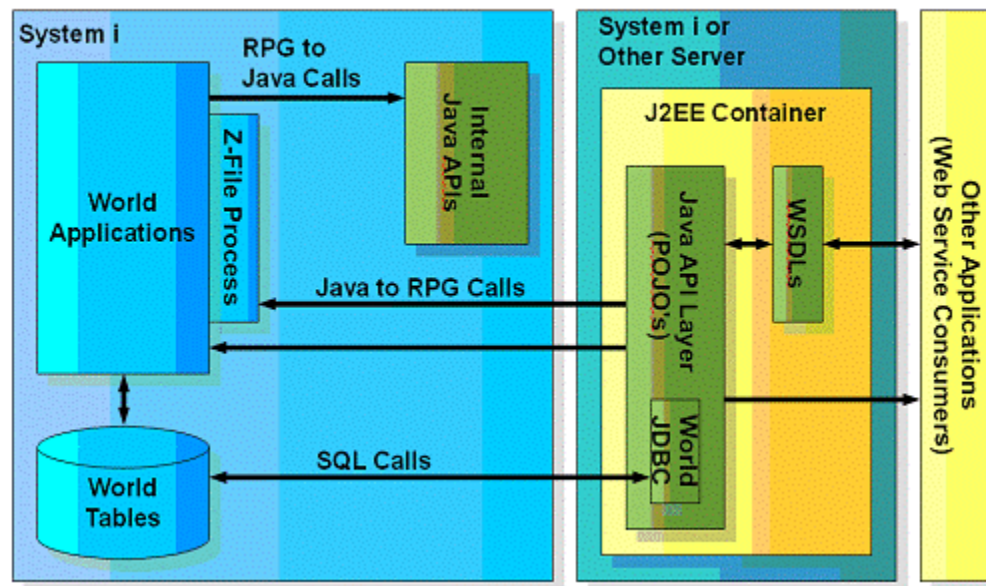
The different colors in the diagram represent different components of Service Enablement:

- Light blue - JD Edwards World RPG, DB2/400 components
- Light green - JD Edwards World Java, J2EE components
- Yellow - non-JD Edwards World applications

Following is a brief explanation of the terms used in the diagram:

- Z-File Process - new JD Edwards World process for accessing interactive applications using a batch Z-File mode
- API - Application Programming Interface
- J2EE - Java 2 Platform, Enterprise Edition
- J2EE Container - J2EE application server (environment)
- Java - programming language designed for distributed environments
- World JDBC - Oracle custom JDBC database connector, includes JD Edwards World data scrubbing
- RPG - programming language in which JD Edwards World is written
- SQL - Structured Query Language
- WSDLs - Web Service Definition Language (web service document)

2

Installation Components

This chapter contains these topics:

2.1 Components of JD Edwards World Service Enablement

The following components are installed when you install JD Edwards World Service Enablement:

- JD Edwards World A9.2 / A9.2.1 Service Enablement Java application .ear file for either the Oracle WebLogic Application Server (WLS) or the IBM WebSphere Application Server (WAS).

    - For WLS, the file is WebServices_v4_WLS.ear

    - For WAS, the file is WebServices_v4_WAS.ear

    This file contains the Java API .jar file, the Web services files, and all the supporting files. If needed, the file deploys to the application servers and then you can run the Web services.

- Source code for the services is in the WebServices_v4_SourceFiles.zip. Source code is stored in the .zip files for use in any Java IDE.

- Javadoc is included to help further explain the Web Services and the underlying source code. The Javadoc is included in the WebServices_v4_Javadoc.zip file.

- Converged Application Repository files are located in the WorldCARV1.zip. These files are to be used with Oracle Enterprise Repository.

2.2 Application Areas with Installed Web Services

The following lists the JD Edwards World application areas that have Web services installed with World Service Enablement:

- Address Book

- Customer Master

- Supplier Master

- Item Master Information

- G/L Account

- Journal Entry

- Fixed Asset Master Information

- Fixed Asset Cost Summary

- Purchase Order

- Sales Order

- Item Master Information

2.3 Oracle Enterprise Repository (OER)

OER serves as the core element to the Oracle SOA Governance solution. An industry-leading metadata repository, OER provides a solid foundation for delivering governance throughout the service-oriented architecture (SOA) lifecycle by acting as the single source of truth for information surrounding SOA assets and their dependencies. OER provides a common communication channel for the automated exchange of metadata and service information between service consumers, providers, policy decision points, and additional governance tooling. It provides the visibility, feedback, controls, and analytics to keep your SOA on track to deliver business value. The intense focus on automation helps to overcome barriers to SOA adoption and streamline governance throughout the lifecycle.

To make it easier to get started with OER, Oracle's Application Integration Architecture (AIA) team has developed an easier way to load services metadata into OER. Called the Converged Application Repository (CAR) project, this is an XML-based front-end to OER.

If you want to have an OER instance on site, you can purchase OER. This allows for loading JD Edwards World Web services metadata using the WorldCARV1.zip after installing JD Edwards World Service Enablement.

> **Note:** (Release A9.3 Update) To access the Web services for World applications, you must encrypt the SOAP Header password. For more information, see Section 4.2, "Encrypting SOA Password".

3

Components of a World Web Service

This chapter contains these topics:

3.1 Java Layer

The Java API layer used for JD Edwards World Service Enablement has several different parts. The parts include the data objects that represent the data in JD Edwards World, implementation classes, connection classes and other supporting classes. The source code for the Java API layer is included with the install. Both an Oracle JDeveloper project and an IBM WebSphere workspace have been provided.

When creating a Web Service, all of the above components need to be in place. Direct calls to JD Edwards World RPG programs and database queries are necessary to collect the data. In these cases, the IBM JT400 API and the JD Edwards World JDBC database connector process the calls to the program and the database queries.

The implementation classes use the data objects as inputs and outputs. The implementation classes are used to create the Web services. The Web services are created using the internal Integrated Development Environment (IDE) tools. By doing this, the WSDL and all the other necessary parts of the web service are created. Refer to your selected IDE documentation for further instructions on creating Web services.

3.2 Retrofitting Web Services

In some cases, retrofitting the Web Services to a prior JD Edwards World release might be required. Though this is considered a customization of the software, the following are some suggestions on how to approach the task.

- Create a copy of the Java source delivered so that when updates are issued changes are not overridden.

- When creating classes to handle prior release processing, identify them differently from the base classes delivered

4

SOA Password Encryption (Release A9.3 Update)

This chapter contains these topics:

4.1 SOA Password Encryption Overview

JD Edwards World Service Enablement provides password encryption to provide enhanced security while accessing the JD Edwards World web services through the WSDL interface.

You can use the SOA Password Encryption program to encrypt the SOAP Header password that you use to access the web services for World applications. This program provides the ability to encrypt the login password that a user enters based on the name of the system.

4.2 Encrypting SOA Password

Navigation

From Service Enablement (G98S), choose SOA Password Encryption

You can encrypt the SOA password that you use to access the web services for JD Edwards World applications.

4.2.1 Before You Begin

- Create a directory, World_SOA, in the IFS root folder where the AESSOA.jar file is stored.
- From the G944/19 menu, access the Configuration Master file (F00CFG) and inquire for the EDD_CP key.
  - If the EDD_CP key is found, add this classpath: ":/WORLD_SOA:/WORLD_SOA/AESSOA.jar"
  - If the EDD_CP key is not found, add the EDD_CP key with this classpath: ":/WORLD_SOA:/WORLD_SOA/AESSOA.jar"
- Ensure that the EDD_JH property is set to JDK 7.

To encrypt an SOA Password

On SOA Password Encryption

Figure 4–1   SOA Password Encryption

1. In the Password field, enter the password that you want to encrypt and press Enter.

   (Optional) Press F2 to show the password as you enter it.

   The system displays the encrypted password.

Figure 4–2   Encrypted Password

```
98S001                              SOA Password Encryption


           Enter the SOA Password that has to be Encrypted:



           Password . . . . . . . . :   _




           Encrypted Password . . :  !#$baKEvzNvFYnRe7GxnqYK+Q==







                    F2=Show Password   F3=Exit   F24=More
```

> **Note:**   You cannot leave the Password field blank.

2.   Copy the encrypted password.

3.   Access the SOAP Request Header.

4.   Paste the encrypted password that you had copied.

> **Note:**   If you enter a password in plain text, the system displays an error when you run the service.

5.   Run the service.

A

Processing Options

This appendix contains the topic:

- Section A.1, "Processing Options."

A.1 Processing Options

The following table lists the applications and DREAM Writer versions used by Service Enablement. If the processing options are changed for any of these versions, it might cause the processing of the Web services to fail. Proceed with caution if you choose to change any of these versions.

Description	Form ID	Version No
Item Master Information - Revisions	P4101	ZJDES001
Address Book Information	P01051	ZJDES001
A/R Information	P01053	ZJDES001
Accounts Payable Information	P01054	ZJDES001
Address Revisions	P0116	ZJDES001
Asset Master Information	P1201	ZJDES001
Item Cost Summary	P122101	ZJDES001
Text Messages Review	P4016	ZJDES001
Text Messages Review	P4016	ZJDES002
Non-Stock Item Master Information - Revisions	P4101N	ZJDES001
Item Master Information - Manufacturing Data	P41013	ZJDES001
Item Branch Information - Revisions	P41026	ZJDES001
Item Branch Information - Manufacturing Data	P41027	ZJDES001
Item Cost Revisions	P4105	ZJDES001
Item Availability Summary	P41202	ZJDES001
Process Batch Journal Entries	P09110Z	XJDES001
Batch Order Edit and Creation - Sales	P40211Z	XJDES001

Description	Form ID	Version No
Batch Order Edit and Creation - Sales	P40211Z	XJDES002
EDI Purchase Order Change Edit/Create	P471311	XJDES001
EDI Purchase Order Change Edit/Create	P471311	XJDES002
Purchase Order Batch Entry Edit Object	P471411	XJDES001
Purchase Order Batch Entry Edit Object	P471411	XJDES002
Accounts by Business Unit	P0901	ZJDES001

B

List of Web Services

This appendix contains the topic:

- Section B.1, "List of Web Services."

B.1 List of Web Services

The following are the individual Web services provided with JD Edwards World A9.2 / A9.2.1 Service Enablement. For a more in depth description of the services, please refer to the JavaDoc provided with the install.

> **Note:** You can use most services with A9.2 and A9.2.1. The following services require A9.2.1:

ECOHeaderImplService

ECOPartsListImplService

ECORelatedItemImplService

EngineeringChangeOrderManagerService

IntegrationTimeStampManagerService

WorkOrderCategoryCodesImplService

Item	Description
Accounts Payable	SupplierImpl_v4Service
Accounts Receivable	CustomerImpl_v4Service
Address Book	AddressBookImpl_v4Service
BankAccountImpl_v4Service	
ContactAddressesImpl_v4Service	
ContactPhonesImpl_v4Service	
ContactImpl_v4Service	
EmailAddressImpl_v4Service	
RelatedAddressImpl_v4Service	
SocioEconomicImpl_v4Service	
Distribution	CustomerServiceInquiryImplService

Item	Description
PurchaseOrderImplService	
SalesHistoryInquiryImplService	
SalesOrderImplService	
SummaryOfAvailabilityImplService	
Financials	EquipmentCostDetailImpl_v4Service
FAMasterInformationImpl_v4Service	
AccountRevisionsImpl_v4Service	
JournalEntryImpl_v4Service	
PaymentTermsImpl_v4Service	
Inventory	BasePriceImplService
BasicItemMasterImplService	
ItemLocationImplService	
ItemMasterImplService	
IMBranchPlantBulkItemInfoImplService	
IMBranchPlantClassCodesImplService	
IMBranchPlantLotImplService	
IMBranchPlantLotMasterRevisionsImplServic e	
IMBranchPlantManufDataImplService	
IMBranchPlantQuantitiesImplService	
IMBranchPlantRevisionsImplService	
IMBulkProductInfoImplService	
ItemMasterClassCodes	
IMCostRevisionsImplService	
IMDefaultUnitsOfMeasureImplService	
IMLotSNSetupImplService	
IMManufacturingDataImplService	
IMUCCImplService	
UMBulkConversionImplService	
UMConversionImplService	
UMItemConversionImplService	
ECO	ECOHeaderImplService (requires A9.2.1)
ECOPartsListImplService (requires A9.2.1)	
ECORelatedItemImplService (requires A9.2.1)	
EngineeringChangeOrderManagerService (requires A9.2.1)	
Utilities	AccountValidationImpl_v4Service
BatchCtrlImplService	
BusinessUnitMasterImplService	

Item	Description
CurrencyConversionImplService	
ConvertDatesImpl_v4Service	
EmployeeMasterImplService	
FormatDataImplService	
GLDateImplService	
IntegrationTimeStampManagerService (requires A9.2.1)	
ManufDistAAIImplService	
NextNumberImplService	
RetrieveAddressNumberImplService	
SubledgerEditImplService	
UserDefinedCodesImplService	
WorkOrderCategoryCodesImplService (requires A9.2.1)	
WorkOrder	