



IBM Software Group

# WebSphere Business Integration

## *WebSphere Adapter for Oracle E-Business Suite V6.1*



@business on demand.

© 2008 IBM Corporation  
Updated June 22, 2015

This presentation covers WebSphere® Adapter for Oracle E-Business Suite V6.1

## Agenda

- Overview
- Installation
- Samples
- Summary and references



This presentation covers in detail the IBM WebSphere Adapter for Oracle E-Business Suite. It starts with the overview of Oracle adapter and then provides preparation steps in installation. The last session recaps with existing samples and introduces new samples for V6.1.

## Section

# *Overview*



This section provides an overview and new enhancements in deployment of the WebSphere Adapter for Oracle E-Business Suite.

## Overview

New  
V6.1

- WebSphere Adapter for Oracle E-Business Suite
  - ▶ Bi-directional integration with Oracle E-Business Suite using WebSphere Adapter for JDBC™
  - ▶ Samples are provided
  - ▶ Samples provide a basic understanding of how to use the IBM WebSphere Adapter for JDBC to interface with Oracle E-Business Suite data
    - Applicable to interfacing with data in other modules
  - ▶ Supports Oracle E-Business Suite V1.2



The WebSphere Adapter for Oracle E-Business Suite (EBS) allows bi-directional connectivity, both inbound and outbound, with Oracle E-Business Suite applications using a JDBC adapter.

The adapter includes samples with Oracle e-business suite. These samples provide a basic understanding on how to use the IBM WebSphere Adapter for JDBC to interface with Oracle E-Business Suite data. Details on these samples are described in the samples session of this presentation.

## Overview

- Samples assume all scripts run as the APPS user for the Oracle database. Required permissions:
  - ▶ Modify and create content in the APPS schema
  - ▶ Add and remove from tables and run required executable files in APPS schema
    - Check with your Oracle administrator
      - Determine which account is used to run the sample content
      - Ensure APPS user has necessary rights to necessary database artifacts
- For the Oracle E-Business Suite, you need an account with permissions to:
  - ▶ Workflow administrator Web applications
  - ▶ System administrator
  - ▶ Receivables manager

For those samples that are shipped with the adapters, these security requirements must be met in order to run through these samples and scripts. You need permission to modify and create content, to add and remove tables, and to run required executable files in the APPS schema. You might need to check with your Oracle administrator to determine which account to use to run the sample and to ensure that you have the necessary permission to access database artifacts. For the Oracle E-Business Suite, you need an account with workflow administrator Web applications, system administrator, and receivables manager permissions.

## Section

# *Installation*

This section provides preparation steps in installation of the WebSphere Adapter for Oracle E-Business Suite.

## Installation preparation steps

- Unzip oracleEBSSamples.zip in the samples folder

<i>File Name</i>	<i>Description</i>
ibm_websphere_event_table_create.sql	Event table creation script
ibm_websphere_events_s.sql	Event Id Sequence creation script
ibm_customer_event_pkg.pls	Package creation script for the procedures used in customer object creation sample scenarios
ibm_customer_event_key_s.sql	Event Key Sequence create script
ibm_submit_request.sql	SQL script to insert SP to be called after event entries have been made to the Interface tables to move the data to the Base tables
raise_inbound_event.sql	SQL script to raise customer inbound event
ibm_create_synonyms.sql	Creates the synonym names that is used in creating business objects for the samples
WrapperSP.sql	SQL scripts to create Wrapper Stored Procedure

The adapter is now included in the resource adapters directory of WebSphere Integration Developer. Inside the Oracle directory, there is a sample folder with a file called oracleEBSSamples.zip. Shown here is a list of scripts and packages that will help you to create the necessary tables and stored procedures. These scripts are needed in order to go through six scenarios that are provided.

## Installation preparation steps

- WebSphere Adapter for Oracle E-Business Suite is included in resource adapter directory of WebSphere integration developer
- WebSphere Adapter for JDBC is included in resource adapter directory of WebSphere integration developer
- JDBC 2.0 driver dependent jar file for database
- Event store table
  - ▶ Require for inbound event processing
  - ▶ Sample script provided for Oracle
  - ▶ Use its own event system to look for changes to Oracle data
    - Populate necessary key values to the adapter's event table

The JCA adapters are packaged as resource adapter archive (RAR) files. The adapter for Oracle EBS and the adapter for JDBC are now packaged in WebSphere Integration Developer. The RAR files are located in resource adapter directory.

Any JDBC 2.0 driver specific to the database that you are integrating with must be added to the class path. Other information necessary in preparation for use of the adapter are the databases and tables used by the adapter.

The sample script is provided for the Oracle event table for inbound processing. The WebSphere Adapter for Oracle E-Business Suite uses its own event system to look for change to Oracle data by populating necessary key values to the adapter's event table.



## Section

# *Samples*

This section provides a summary of the WebSphere Adapter for JDBC V6.1

## Samples

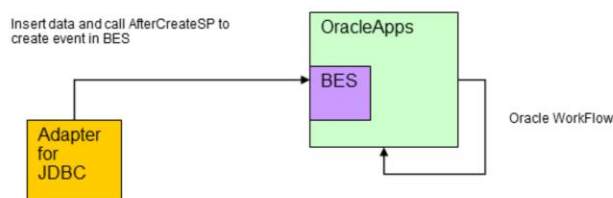
- Scenario 1 – Outbound
  - ▶ Involves using the WebSphere Adapter for JDBC to create a Customer in the Oracle EBS Financials database and then retrieve Customer information back.
- Scenario 2 – Inbound
  - ▶ Involves using Oracle's built in event system to populate entries in an event table when Customers are created inside Oracle. Adapter polls for event and retrieves Customer data.
- Scenario 3 – Outbound to Oracle E-Business Suite Database API
  - ▶ Involves using the Adapter to call database APIs in Oracle EBS if they contain simple data type parameters.
  - ▶ Example is calling the APPS.FND\_PROGRAM.EXECUTABLE() which is used to create a concurrent program in Oracle EBS.

Here is the description of each scenario provided in the samples. The outbound scenario one involves using the JDBC adapter to create a customer in the Oracle EBS financials database and then retrieve customer information back. The inbound scenario two involves using Oracle's built in event system to populate entries in an event table when customers are created inside Oracle. Another outbound scenario demonstrates how to call Oracle EBS database APIs. One example provided here is to call the executable API to create a concurrent program.

## Samples: Scenario 4


 New  
V6.1

- Outbound - importing object into Oracle apps using workflow and business event system
  - ▶ Demonstrates using a BES event to push data into the Oracle applications system
  - ▶ Requires creating tables and a custom event
  - ▶ JDBC adapter is used to insert data into a custom table in Oracle apps
  - ▶ Follows by invocation of the AfterCreateSP that creates a BES event (custom event) in Oracle apps
  - ▶ This event triggers a workflow in Oracle apps



11

WebSphere Adapter for Oracle E-Business Suite V6.1

© 2008 IBM Corporation

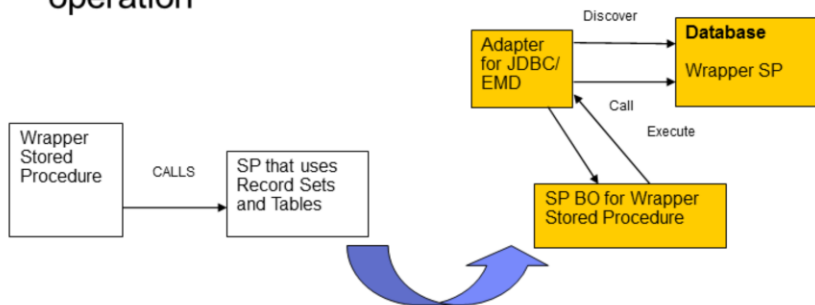
In addition to those three samples from the previous slide, WebSphere Adapter for Oracle E-Business Suite provides three more samples for V6.1. This scenario four demonstrates using a BES event to push data into the Oracle applications system. By doing this, it requires creating tables and a custom event (custom event is an event created by business event system). The JDBC adapter is used as an outbound adapter. It is used to insert data into a custom table in Oracle apps, followed by invocation of the AfterCreateSP that creates a BES event (custom event) in Oracle apps. This event triggers a workflow in Oracle apps. The figure below describes the flow.

The adapter for JDBC uses an outbound create operation to insert new customer data into the custom event table. A subscription to this event is built into Oracle EBS' business event system. Once BES receives this event it triggers a workflow that creates this customer in Oracle EBS. The workflow is also built as part of this scenario and handles errors during customer creation as well.

## Samples: Scenario 5


 New  
V6.1

- Using a wrapper stored procedure to call a stored procedure that returns tables and recordsets
  - ▶ Uses structs and arrays to call stored procedure and converts the data types appropriately
  - ▶ Supports through JDBC adapter using outbound execute operation



12

WebSphere Adapter for Oracle E-Business Suite V6.1

© 2008 IBM Corporation

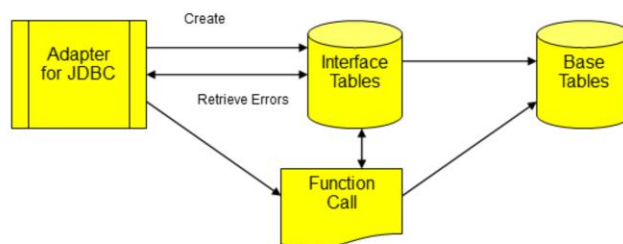
Here is the description for scenario five. The Oracle JDBC driver does not support discovery of stored procedures that return tables and recordsets. However, it is possible to write a wrapper stored procedure that uses structs and arrays to call the original stored procedure and converts the data types appropriately. The stored procedure that uses structs and arrays is supported through the JDBC adapter using the outbound execute operation.

The stored procedure is in the Order Entry component and its name is `oe_order_pub.process_order`. This stored procedure has record sets and tables as parameters and users cannot use this SP using JDBC technology directly because of the inability of the JDBC driver to discover metadata for this stored procedure. The sample includes a wrapper stored procedure that will call this SP directly and is discoverable through the EMD.

## Samples: Scenario 6

New  
V6.1

- Error Handling support for Oracle Interface Tables
  - ▶ Interfaces tables are populated with required data
  - ▶ Stored procedure is invoked to transfer data to base tables
  - ▶ Interfaces table is stored with error codes resulting from stored procedure call.
  - ▶ Retrieve these data using a RetrieveAll operation



13

WebSphere Adapter for Oracle E-Business Suite V6.1

© 2008 IBM Corporation

Here is the description for scenario six. Oracle does not allow you to manually modify data in the base tables. So interface tables are populated with the required data and then a stored procedure is invoked to transfer the data **from** these tables to the base tables after validation. Any errors that result from the stored procedure call leaves the data in the interface table with error codes. These can be retrieved using a RetrieveAll operation and a custom query on the interface tables.

The scenario has used the Customer scenario described in Scenario one to demonstrate the error recovery during creation of new customers that result in errors.

## Section

# ***Summary and references***

This section provides a summary of the WebSphere Adapter for JDBC V6.1

## Summary

- This presentation covered an overview of the new and enhanced IBM WebSphere Adapters for Oracle E-Business Suite V6.1
  - ▶ Inbound and outbound support
  - ▶ Provided preparation steps in installing WebSphere Adapter for Oracle E-Business Suite
  - ▶ Introduced additional scenarios



To summarize this presentation, WebSphere Adapter for Oracle E-Business Suite allows to bi-directional connectivity, both inbound and outbound, with Oracle E-Business Suite applications using JDBC adapter. The adapter supports both inbound and outbound interaction and installation preparation steps in installing WebSphere Adapter for Oracle E-Business Suite. Also, Oracle adapter included three additional integration scenarios for V6.1.

## Reference information

- WebSphere Adapter for JDBC user guide
- Java Connector Architecture  
<http://java.sun.com/j2ee/connector/index.jsp>
- Enterprise Metadata Discovery  
<http://www.ibm.com/developerworks/java/library/j-emd/>
- WebSphere Adapter information center  
<http://www.ibm.com/software/integration/wbiadapters/library/infocenter/>
- WebSphere process integration information center  
[http://publib.boulder.ibm.com/infocenter/dmndhelp/v6r1mx/topic/com.ibm.WebSphere.wps\\_610.doc/welcome\\_top\\_wps.htm](http://publib.boulder.ibm.com/infocenter/dmndhelp/v6r1mx/topic/com.ibm.WebSphere.wps_610.doc/welcome_top_wps.htm)

Additional reference information can be found at these URLs.



## Trademarks, copyrights, and disclaimers

The following terms are trademarks or registered trademarks of International Business Machines Corporation in the United States, other countries, or both:

IBM                      WebSphere

Java, JDBC, and all Java-based trademarks are trademarks of Sun Microsystems, Inc. in the United States, other countries, or both.

Product data has been reviewed for accuracy as of the date of initial publication. Product data is subject to change without notice. This document could include technical inaccuracies or typographical errors. IBM may make improvements or changes in the products or programs described herein at any time without notice. Any statements regarding IBM's future direction and intent are subject to change or withdrawal without notice, and represent goals and objectives only. References in this document to IBM products, programs, or services does not imply that IBM intends to make such products, programs or services available in all countries in which IBM operates or does business. Any reference to an IBM Program Product in this document is not intended to state or imply that only that program product may be used. Any functionally equivalent program, that does not infringe IBM's intellectual property rights, may be used instead.

Information is provided "AS IS" without warranty of any kind. THE INFORMATION PROVIDED IN THIS DOCUMENT IS DISTRIBUTED "AS IS" WITHOUT ANY WARRANTY, EITHER EXPRESS OR IMPLIED. IBM EXPRESSLY DISCLAIMS ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT. IBM shall have no responsibility to update this information. IBM products are warranted, if at all, according to the terms and conditions of the agreements (for example, IBM Customer Agreement, Statement of Limited Warranty, International Program License Agreement, etc.) under which they are provided. Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products in connection with this publication and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products.

IBM makes no representations or warranties, express or implied, regarding non-IBM products and services.

The provision of the information contained herein is not intended to, and does not, grant any right or license under any IBM patents or copyrights. Inquiries regarding patent or copyright licenses should be made, in writing, to:

IBM Director of Licensing  
IBM Corporation  
North Castle Drive  
Armonk, NY 10504-1785  
U.S.A.

Performance is based on measurements and projections using standard IBM benchmarks in a controlled environment. All customer examples described are presented as illustrations of how those customers have used IBM products and the results they may have achieved. The actual throughput or performance that any user will experience will vary depending upon considerations such as the amount of multiprogramming in the user's job stream, the I/O configuration, the storage configuration, and the workload processed. Therefore, no assurance can be given that an individual user will achieve throughput or performance improvements equivalent to the ratios stated here.

© Copyright International Business Machines Corporation 2008. All rights reserved.

Note to U.S. Government Users - Documentation related to restricted rights-Use, duplication or disclosure is subject to restrictions set forth in GSA ADP Schedule Contract and IBM Corp.