WebSphere® Process Server V6.0
WebSphere® Integration Developer V6.0
WebSphere® Adapters

Installation and Deployment

This presentation covers the Installation and Deployment of all the WebSphere Adapters V6.0.

Agenda

- Brief Overview of pre-req setup in EIS

- Adapter Installation and Deployment

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The agenda covers the pre-requisite setup required for the adapters and then the adapter installation and deployment.

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Pre-requisite Set-up for the Adapters

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This section covers the pre-requisite setup for the different adapters.

Pre-requisite Setup

- Following Adapters require specific setup in their EIS application
    - ▸ SAP – Configuration and IDOC status
    - ▸ PeopleSoft – Event table and event triggers in PeopleSoft
    - ▸ Siebel – Event table and event triggers in Siebel

The three application adapters, namely, SAP, PeopleSoft and Siebel require some setup on their side. The JDBC and Flat file adapter do not require any setup on the back end.

At the high level, the SAP adapter requires some basic configuration and configuration for IDOC status send by the adapter for inbound events. The PeopleSoft and Siebel adapter requires the creation of the custom event project to store the events within their systems, and insertion of event triggers within their components.

Subsequent pages cover more detail on the setup. The user guides of the adapter goes into more details on the specifics of the configuration.

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Pre-req: SAP EIS Set-up - ALE interface

- Check the configuration of your SAP system (for inbound and outbound)
  - Check that the logical systems are defined and assigned for the SAP system and external system (transaction code SALE)
  - Check that the distribution model has been maintained, and that the required message types have been added to the model (transaction code BD64)
  - Check that there are partner profiles for the logical system or distribution model (transaction code

- Configure SAP to update the IDoc status (for inbound only)
  - Set AleUpdateStatus configuration property to true
  - Set values for the AleSuccessCode and AleFailureCode properties
  - Configure the inbound parameters of the partner profile of the logical system to receive the ALEAUD message type. Set the following properties :

SAP Property	Value
Basic Type	ALEAUD01
Logical Message Type	ALEAUD
Function Module	IDOC_INPUT_ALEAUD
Process Code	AUD1

The setup in SAP EIS is configuration for inbound and outbound events, and configuration to update IDOC status for inbound requests. Configuration requires that one is familiar with SAP systems.

Pre-req: PeopleSoft EIS Set-up

- Create Custom Event project in PeopleSoft, add the fields, records and the event generation script
  ▸ Sample event project is provided with the adapter under .\adapter\PeopleSoft\samples folder

- Add the event generation script to the component operations (like create, update, etc.)
  ▸ This will allow generation of the events for the component when the operation is performed

- Generate PeopleSoft Component Interface Jar file

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The setup in PeopleSoft EIS involves setting up the Custom event project needed to store the events within PeopleSoft. There are 3 main tasks.

1. First, the Custom Event project must be created in PeopleSoft. This is where the generated events will be stored within PeopleSoft. The adapter looks at this event project for new events or changing the status of existing events. A sample event project is provided in the samples directory. The schema of the custom event project must be the one provided in the user guide. The name of the custom event project can be changed, but the schema must be the one expected by the adapter.

2. Next, the event generated triggers must be inserted in the components whose events can be monitored by the adapter. Sample triggers are provided by the Adapter

3. Next, the PeopleSoft Component Interface JAR file must be created. This will be one of the dependencies used by the Adapter. You can have multiple PeopleSoft component APIs in a single Component Interface JAR file.

To Create the Event table and generate the component Interface JAR file in PeopleSoft , you must be familiar with PeopleSoft tools.

Pre-req: Siebel EIS Setup

- Create an Event Siebel Business Component in Siebel EIS for the event store table
  - ▶ Schema and steps to create the Event Siebel Business Component are included in the user documentation
- Add the event generation triggers to the Siebel business objects that need to be monitored
  - ▶ Creating, updating, or deleting records in the Siebel Business application is treated as an event
  - ▶ This will allow generation of the events for the component when the operation is performed
  - ▶ Siebel supports Visual Basic scripts and Siebel eScript embedded in the Siebel business component event handlers to populate the event store table
- Sample event business component and Siebel scripts is provided with the adapter

The setup in Siebel EIS is setting up the Custom event project needed to store the events within Siebel. The tasks are similar to the tasks explained in the previous page for Siebel Adapter. There are 2 main tasks.

1. First, the Custom Event project must be created in Siebel . This is where the generated events will be stored within Siebel . The adapter looks at this event project for new events or changing the status of existing events. Sample event project is provided in the samples directory. The schema of the custom event project must be the one provided in the user guide. The name of the custom event project can be changed, but the schema must be the one expected by the adapter.

2. The event generated triggers must be inserted in the components whose events can be monitored by the adapter. Siebel supports Visual Basic scripts of Siebel eScripts. Sample triggers are provided by the Adapter.

To Create the Event table in Siebel, you must be familiar with Siebel tools.

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Adapter Installation and Deployment

This section discusses the Adapter installation and deployment.

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Adapter Installation and Importing into WID

- All the WebSphere Adapters have similar install process
  - ▶ The install process extracts the Resource Adapter file
  - ▶ Adapter RAR file Names:
    - JDBC: CWYBC_JDBC.rar
    - Flat File: CWYFF_FlatFile.rar
    - SAP: CWYEP_SAPAdapter.rar
    - PeopleSoft: CWYES_PeopleSoftAdapter.rar
    - Siebel: CWYEB_SiebelAdapter.rar
- The extracted RAR file can then be imported into WebSphere Integration Developer (WID) tool
  - ▶ Importing a RAR file in WID creates a J2EE™ connector RAR project

All WebSphere Adapters have a similar installer and are started using the launch pad provided by the installer. The install process extracts the Adapter RAR file, which can then be imported in the WebSphere Integration Developer (WID) tool. On importing the RAR file into WID, a J2EE Connector project is created in the WID workspace.

The different RAR file names for the available WebSphere Adapters are shown. In the WebSphere Process Server System log files, the log messages associated with the adapter uses the first five characters of the adapter name. For example, the message logs for Flat file adapter will start with "CWYFF".

External Dependencies for the Adapter

- Add EIS external dependencies for the adapter as follows:

Adapter	Dependency Files	Location
JDBC	JDBC 2.0 Database Driver	For WID: Java Build Path of the adapter For WPS: *WPS* classpath
FlatFile	None	N/A
SAP	JAR file: sapco.jar	For WID: Java Build Path of the adapter For WPS: *<WPS_INSTALL>*\lib directory
SAP	Native libraries: ▪librfc2.dll (or .so) ▪MSVCP71.dll (or .so) ▪Msvcr71.dll (or .so) ▪sapjcorfc.dll (or .so)	For WID: *<WID_INSTALL>*\eclipse\jre\bin For WPS: *<WPS_INSTALL>*\bin directory
PeopleSoft	PeopleSoft Component Interface JAR that provides APIs for 1 or more PeopleSoft components	Bundle within the RAR file
Siebel	For Siebel 7.7.x: Siebel.jar and SiebelJI_enu.jar For Siebel 7.5.x: SiebelJI_Common.jar, SiebelJI_enu.jar and SiebelJI.jar	For WID: Java Build Path of the adapter For WPS: *<WPS_INSTALL>*\lib directory

This table displays the different dependencies of the external JAR files or the native libraries required for the adapter to work in WebSphere Integration Developer and WebSphere Process Server.

It also shows the location of where the dependent files need to be placed.

All Java Jar files for WID must be added to the Adapter project Java build path. All Java JAR files for WPS have different locations based on the adapter. For SAP and Siebel, they are to be placed in the "lib" directory of the Server install directory. For PeopleSoft, they should be bundled within the RAR file by importing the JAR file and adding to the Adapter project.

Only SAP requires native libraries and they should be added to the Java native library class path. For WID, it is the eclipse jre bin directory, whereas for WPS, it is the install "bin" directory.

Creating Adapter SCA application in WID

- Run Enterprise Service Discovery function for the adapter
  - ▸ This creates the Inbound or Outbound SCA component, which can then be used in a SCA module to connect to other components
- Complete Service Component Architecture (SCA) application assembly
- Optionally, use the Integrated WebSphere Process Server to test the inbound or outbound interaction
  - ▸ Need to make sure to setup the dependencies of the JAR files or the DLLS for the Integrated WebSphere Process Server
- Export the module containing the SCA application and the RAR file as Enterprise Archive file (EAR) to be installed to WebSphere Process Server
  - ▸ Note that all WebSphere Adapters need to be packaged with the application within the EAR file

The high level steps required to create the Adapter SCA components in WebSphere Business Integration tool is shown here.

Once the adapter is imported and the external dependencies satisfied, run the Enterprise Service Discovery tool. Based on the selection in the wizard of the discovery tool, either the inbound or outbound SCA components will be created. These SCA components are used in the business process application by wiring them to other components using the Application Assembly editor.

The application can be tested within WID using the integrated WebSphere Process Server. The Adapter SCA components can be tested in isolation using the Test Component functions within WID.

Once satisfied with the unit test, the business process application can be exported as an EAR file and deployed to a WebSphere Process Server.

Deployment in WebSphere Process Server

This page outlines the high level flow of deploying the business process application built in WID to a WebSphere Process Server.

Adapter's external dependencies must be satisfied.

The J2C authentication alias for the outbound request must be specified.

The Event distribution or staging table must be created for adapters that require them. SAP Adapter requires it, whereas for the other adapter, the table is optional. If event distribution table is not specified for the adapter where it is optional, an in-memory table is used for event management. The in-memory table does not provide fail over protection.

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Deployment in WebSphere Process Server (cont.)

- Install Application EAR file in the WebSphere Process Server using the Administrative Console or command line tool "wsadmin"
  - ▸ For most install steps, defaults are fine

- If needed, modify any Adapter related properties (from Your application -> Connector Modules -> <Adapter.rar>)
  - ▸ Custom RAR properties
  - ▸ Managed Connection Factory for outbound connection to EIS
  - ▸ Activation Spec for inbound event from EIS

- Start the Enterprise application using Administrative console or wsadmin

Continuing on the application deployment in WebSphere Process Server, the business process application containing the adapter and the adapter SCA components must be installed in WPS. Either the administrative console or command line tool, wsadmin, can be used for application install. Once installed, the administrator can modify the adapter properties.

Last task is to start the application, either in the console or through wsadmin.

Summary and References

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This section will provide a summary and references.

Summary and References

- Summary
  - Common Install and Deployment for all WebSphere Adapters
  - Need to perform some setup for some EIS

In summary, all the WebSphere adapters have a common installation strategy and similar steps for development and deployment of applications involving adapters.

References

- References
  - ▸ Information Center
  - ▸ User Guide
  - ▸ Support platforms
    - WebSphere Process Server:
      http://www.ibm.com/software/integration/wps/sysreqs/
    - WebSphere Integration Developer:
      http://www.ibm.com/software/integration/wid/sysreqs/
  - ▸ IBM Education Assistant

The Information Center and the user guide for the adapters show the details of the installation process.

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