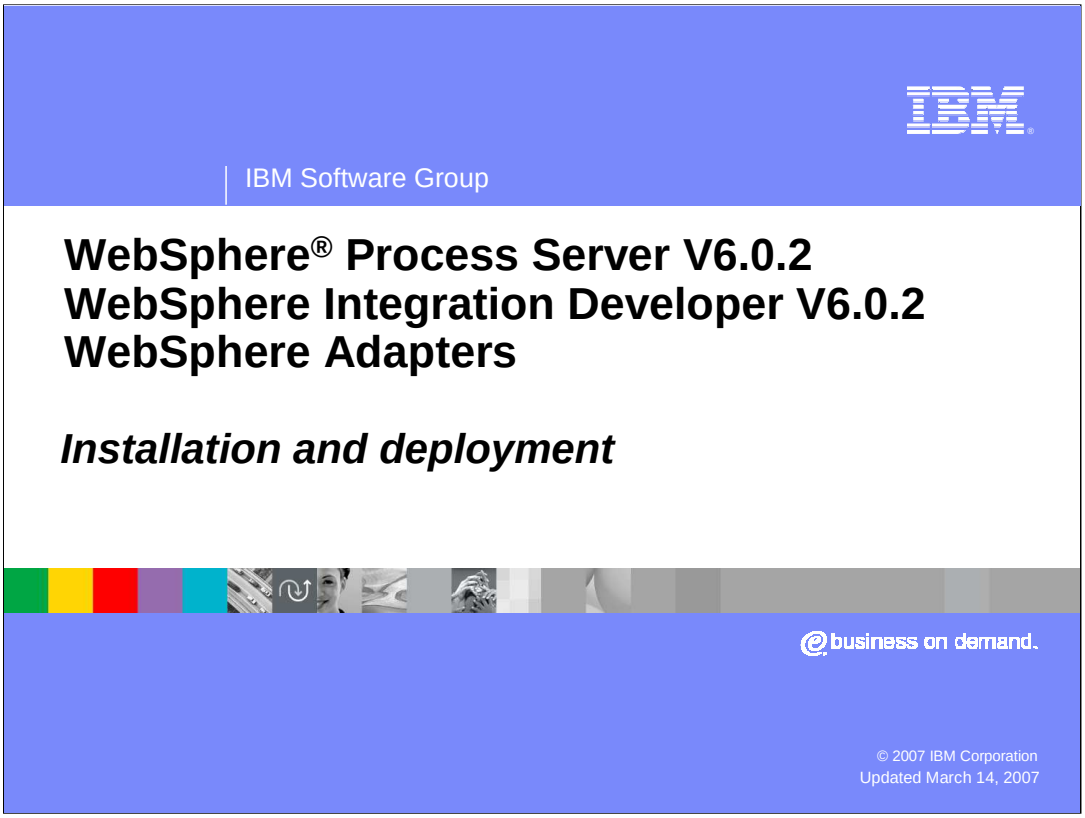

This presentation covers the Installation and Deployment of all the WebSphere Adapters V6.0.2.

Agenda

- Brief Overview of pre-req setup in EIS
- Adapter Installation and Deployment

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

Section

Pre-requisite set-up for the adapters

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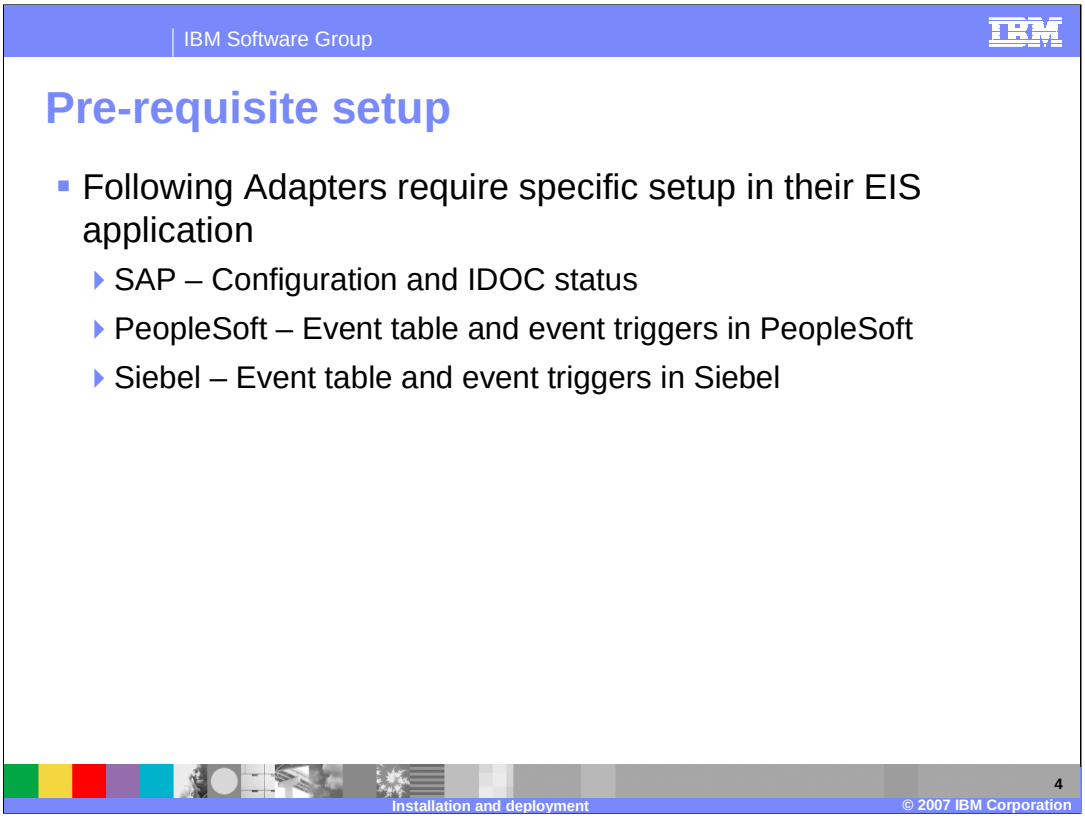
This section covers the pre-requisite setup for the adapters.



The three application adapters, for SAP, PeopleSoft and Siebel, require some setup on the back end. All other adapters do not require any setup on the back end.

At a 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 adapters require 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, and the user guide of the adapter goes into more detail on the specifics of the configuration.

Prerequisite: 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

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The setup in SAP EIS requires configuration for inbound and outbound events, and configuration to update IDOC status for inbound requests. This configuration requires that you are familiar with SAP systems.

Prerequisite: 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, et cetera)
  - 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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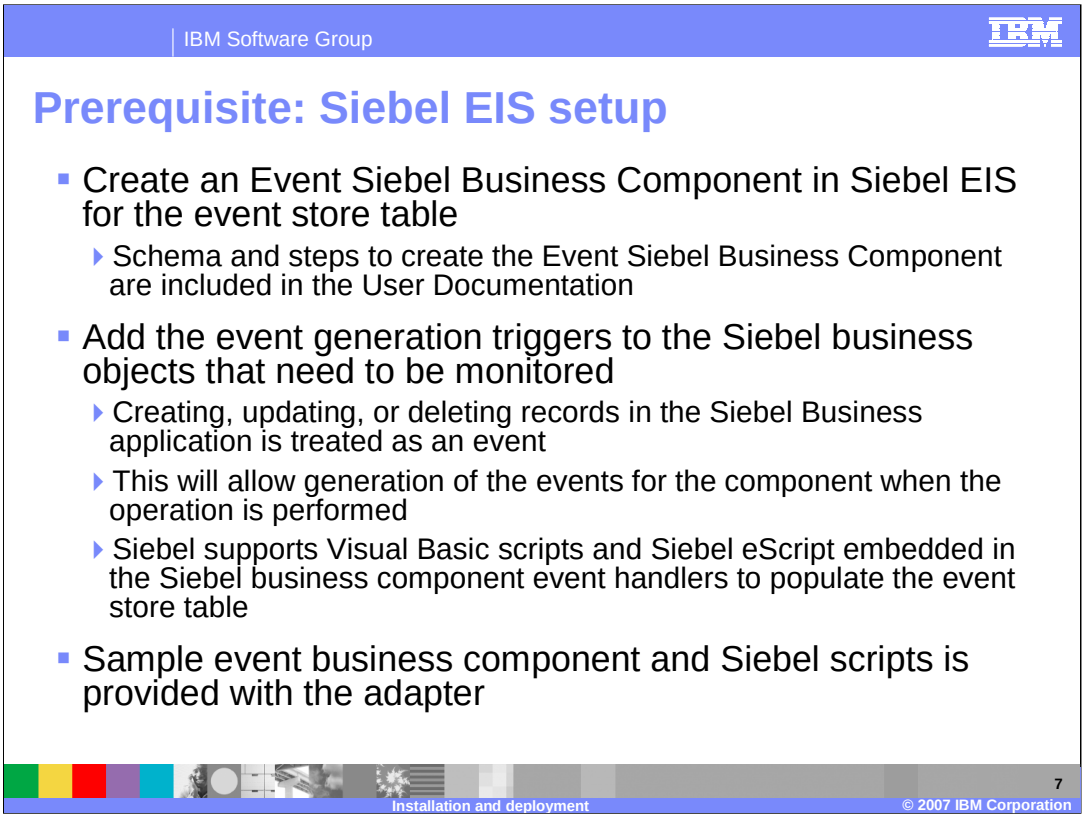
The setup in PeopleSoft EIS involves setting up the Custom event project needed to store the events within PeopleSoft and consists of three primary tasks.

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 for 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 and is one of the dependencies used by the Adapter. You can have multiple PeopleSoft component APIs in a single Component Interface JAR file.

Creating the Event table and generating the component Interface JAR file in PeopleSoft requires familiarity with PeopleSoft tools.



Configuration of Siebel EIS consists of 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, and include 2 primary 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) Next, 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 and sample triggers are provided by the Adapter.

Creating the Event table in Siebel requires familiarity with Siebel tools.

Section

Adapter installation and deployment

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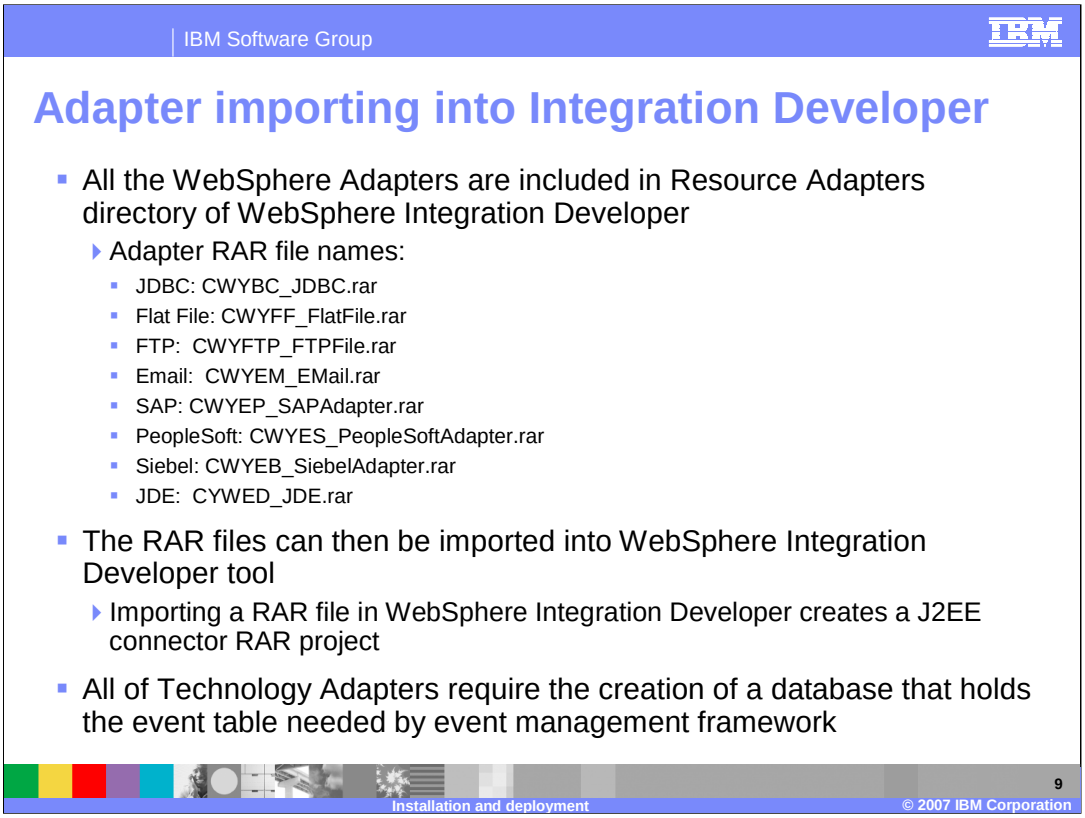
This section covers Adapter installation and deployment.



All WebSphere Adapters are now included in Resource Adapters directory of WebSphere Integration Developer and these RAR files can be imported in the WebSphere Integration Developer tool, and when you do so, a J2EE Connector project is created in the WebSphere Integration Developer workspace.

The various 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 use the first five characters of the adapter name. For example, the message logs for Flat file adapter will start with “CWYFF”.

All of the Technology Adapters require the creation of a database to hold the event table needed by the event management framework

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 WebSphere Integration Developer: Java Build Path of the adapter For WebSphere Process Server: *WPS* classpath
FlatFile	None	N/A
FTP	None	N/A
Email	None	N/A

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This table displays the various 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 where the dependent files must be placed.

All Java JAR files for WebSphere Integration Developer must be added to the Adapter project Java build path. The Java JAR files for WebSphere Process Server have different locations based on the adapter.

External dependencies for the adapter (cont.)

- Add EIS external dependencies for the adapter as follows:

Adapter	Dependency Files	Location
SAP	JAR file: sapco.jar	For WebSphere Integration Developer: Java Build Path of the adapter For WebSphere Process Server: <*WPS_INSTALL*>\lib directory
	Native libraries: ▪librfc2.dll (or .so) ▪MSVCP71.dll (or .so) ▪Msvcr71.dll (or .so) ▪sapjcorfc.dll (or .so)	For WebSphere Integration Developer: <*WID_INSTALL*>\eclipse\jre\bin For WebSphere Process Server : <*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 WebSphere Integration Developer: Java Build Path of the adapter For WebSphere Process Server: <*WPS_INSTALL*>\lib directory

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For SAP and Siebel, the Jar files should be placed in the “lib” directory of the Server installation directory. For PeopleSoft, they should be bundled within the RAR file by importing the JAR file and adding it to the Adapter project.

Only SAP requires native libraries and they should be added to the Java native library class path. For WebSphere Integration Developer, it is the eclipse jre/bin directory, whereas for WebSphere Process Server, it is the install/bin directory.

External dependencies for the adapter (cont.)

- Add EIS external dependencies for JDE adapter as follows:

8.9 (SP1,SP2), 8.93	*8.94*	*8.95*	
kernel.jar	kernel.jar	Connector.jar	BizLogicContainerClient_JAR.jar
Connector.jar	Connector.jar	JDBjBase_JAR.jar	ApplicationAPIs_JAR.jar
database.jar	database.jar	JdbjInterfaces_JAR.jar	ApplicationLogic_JAR.jar
log4j.jar	log4j.jar	JdeNet_JAR.jar	jdeinterop.ini
xerces.jar	xerces.jar	Spec_JAR.jar	jde.ini
xalan.jar	xalan.jar	System_JAR.jar	jdelog.properties
jdeinterop.ini	jdeutil.jar	Base_JAR.jar	JDBC driver
jdeLog.properties	jdbj.ini	log4j.jar	
JDBC driver	jdeinterop.ini	xerces.jar	
	jdelog.properties	xalan.jar	
	JDBC driver	PMApi_JAR.jar	
		BizLogicContainer_JAR.jar	

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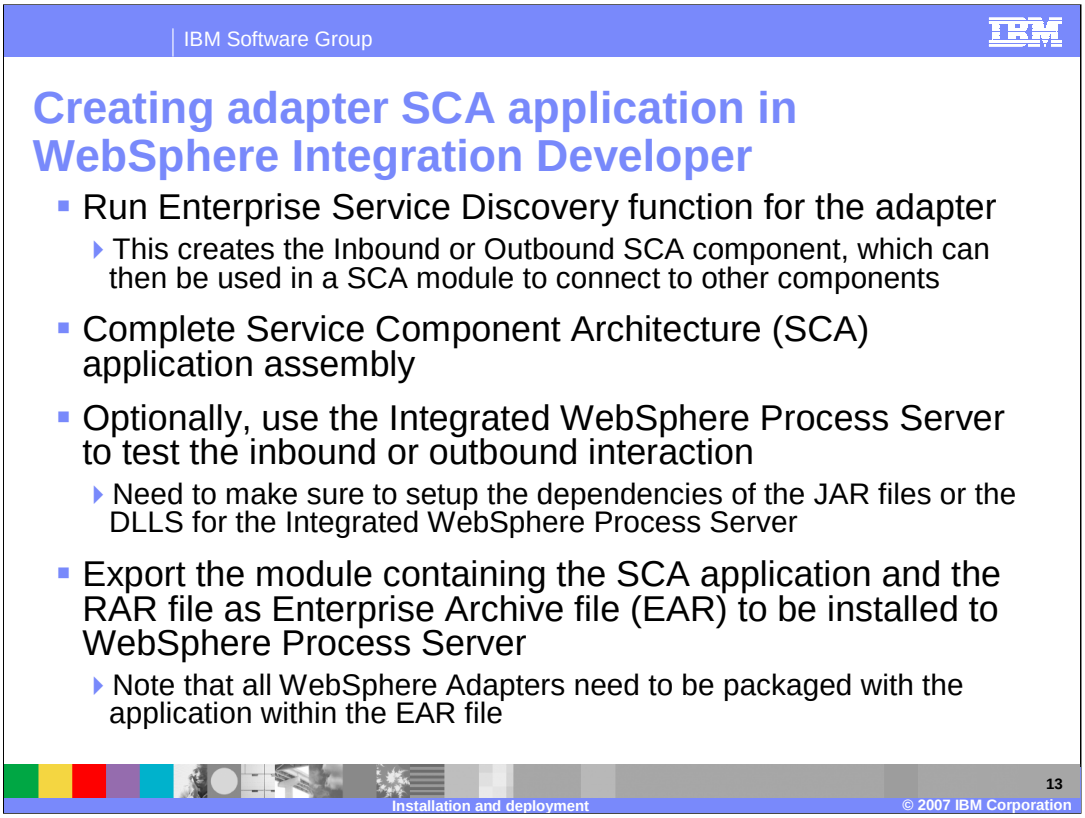
For the JDE adapter, depending on the version of JDE software you are using, each version requires different Jar files and properties files.



The steps required to create the Adapter SCA components in WebSphere Business Integration are shown here from a high level.

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 in WebSphere Integration Developer using the integrated WebSphere Process Server and The Adapter SCA components can be tested in isolation using the Test Component functions in WebSphere Integration Developer. Once satisfied with the unit test, the business process application can be exported as an EAR file and deployed to a WebSphere Process Server.

Section

Enterprise Service Discovery

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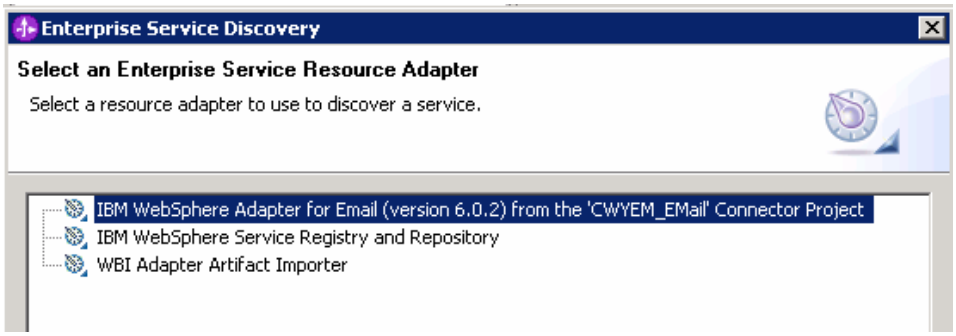
This section outlines the high level flow of the Enterprise Service Discovery process for technology adapters. You will see the typical flow of Enterprise Service Discovery for the Email Adapter. The service discovery process of other adapters follows the same flow except for some adapter specific screens.

Enterprise service discovery

- File > New > Enterprise Service Discovery
- Select the Adapter



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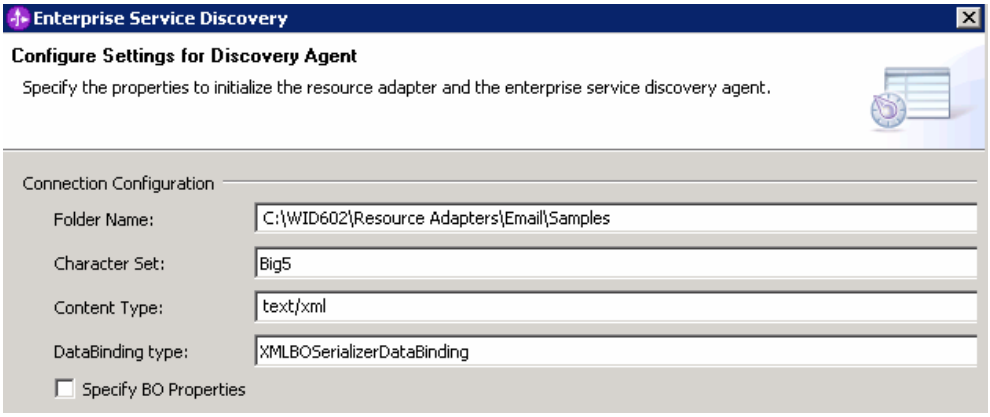
From WebSphere Integration Developer, begin the enterprise service discovery wizard and select the previously imported adapter.

Enterprise service discovery

- Configure Settings for Discovery Agent
  - Specify the Business Object location
  - Select character set, content type, dataBinding type



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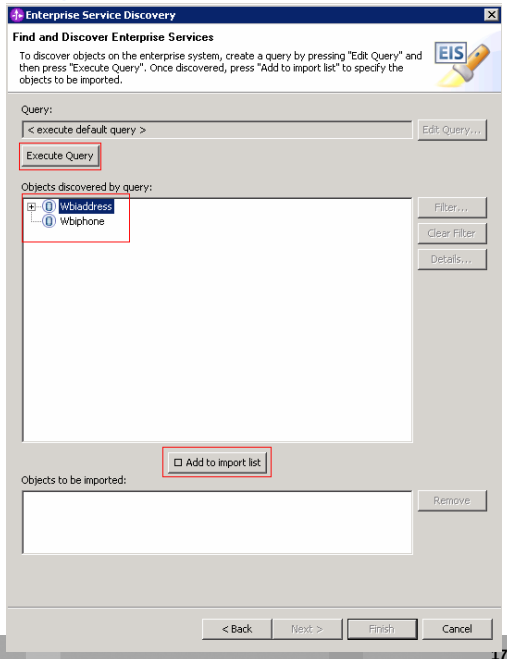
Configure the settings for the discovery agent by specifying the location of the business objects to be imported, then specify the character set and content type. Selecting the content type will specify the default databinding type associated with the content type.

Enterprise service discovery

- Find and Discover Enterprise Services
  - Specify the query to introspect the EIS system
  - Retrieve the Business Object from the location specified
  - Add the retrieved business objects to your workspace by using “Add to import list”



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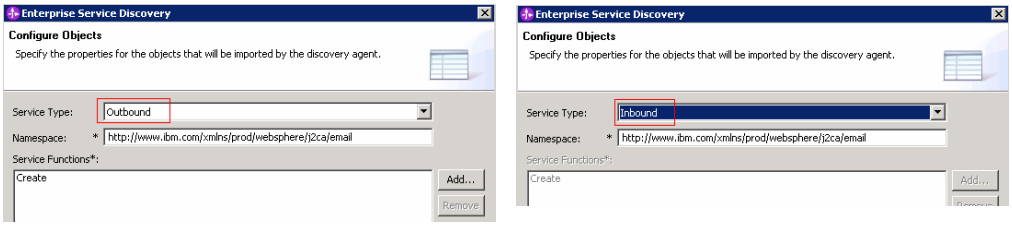
The Find and Discover Enterprise Services screen allows you specify the query to introspect the EIS system for the metadata and also to retrieve the business objects. The Email EIS exposes to any services so all the business objects retrieved and listed in the above screen capture are from the XSDs you defined previously. The Enterprise Service Discovery tool makes use of the business object folder location you specified in the “Configure Settings for Discovery Agent” screen to retrieve and list the business objects. Listed business objects can then be selectively added to your workspace utilizing the “Add to Import list” function.

Enterprise service discovery

- Outbound Service Type
- Inbound Service Type



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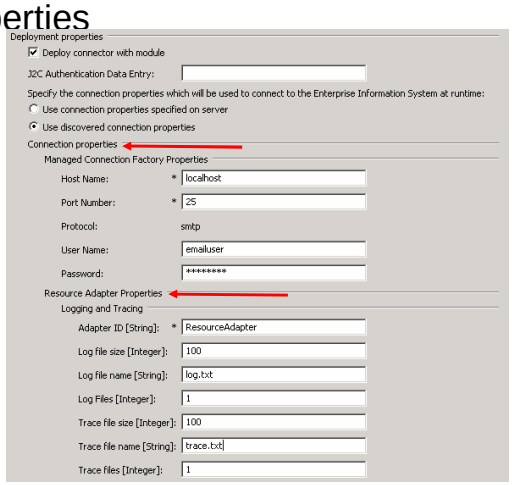
After running a query on the Find and Discover Enterprise Services panel, the discovered objects can be selected and added to the import list. The next panel allows selection of the object service type, whether Inbound or Outbound. Create is the only operation supported for an Outbound service type and there are no operations exposed for Inbound service type. Details of Inbound and Outbound service types are discussed in detail later in this presentation.

Enterprise service discovery

- Outbound Service Type Properties
  - Managed Connection Factory
  - Resource Adapter



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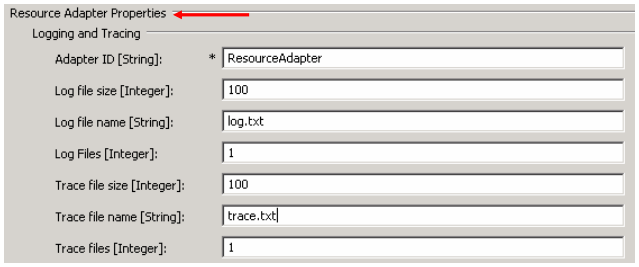
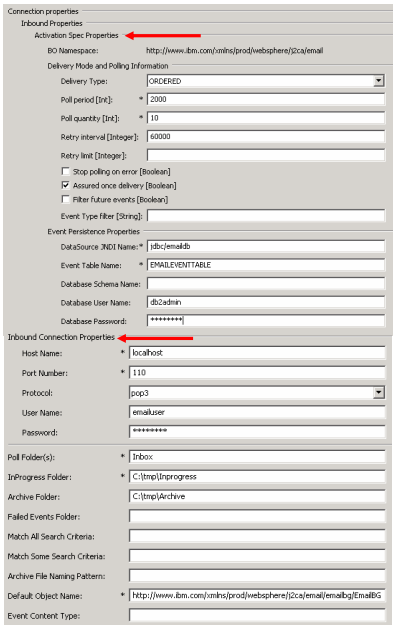
If the service type is outbound, you are asked to provide the Managed Connection Factory Properties, such as host name, port, username, and password, which are used to create a connection to the EIS system. Resource Adapter properties are common to both inbound and outbound service types, and include Adapter ID, and log and trace file configuration properties.

Enterprise service discovery

- Inbound Service Type Properties
  - Activation Specification
  - Inbound Connection
  - Resource Adapter





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If the service type is inbound, you are asked to provide the Activation Specification Properties, such as host name, port, username, password, and protocol (whether pop3 or IMAP). Resource Adapter properties are common to both inbound and outbound service types and include Adapter ID, and log and trace file configuration properties. Once all the properties for the Inbound or Outbound Service type are specified, the Enterprise Service Discovery System will create the necessary artifacts in your workspace. Those artifacts can be EIS Export or Import components, WSDL files, or business objects. These SCA components are used in the business process application by wiring them to other components using the Application Assembly editor to create your application.

This section describes, at a high level, deploying a business process application built in WebSphere Integration Developer to a WebSphere Process Server.

The adapter's external dependencies must be satisfied and the J2C authentication alias for the outbound request must be specified.

Deployment in WebSphere Process Server

- 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

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Continuing with application deployment in WebSphere Process Server, the business process application containing the adapter and the adapter SCA components must be installed in WebSphere Process Server. Either the administrative console or the wsadmin command line tool can be used for application installation. Once installed, the administrator can modify the adapter properties. The last task is to start the application, either in the console or through wsadmin.

Summary and references

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

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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

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The Information Center and the User Guide for the adapters provide details of the installation process.

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