



IBM Software Group

WebSphere® Process Server V6.1 WebSphere Enterprise Service Bus V6.1

SCA module administration and commands



@business on demand.

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This presentation focuses on the administrative interface and commands related to SCA modules in WebSphere Process Server V6.1 and the WebSphere Enterprise Service Bus V6.1.

Agenda

- **SCA module functions - overview**
- SCA module management using the console
- SCA module management using wsadmin commands
- Summary



The agenda for the presentation is listed on this page.

The first section covers an overview of the SCA module functions.

SCA modules as administered objects

- SCA modules are exposed as administered objects in WebSphere Enterprise Service Bus and WebSphere Process Server
- Following functions can be performed on the SCA modules
 - ▶ List the SCA modules and its import and exports
 - ▶ Show the attributes and interfaces of the SCA modules
 - ▶ Dynamically modify the import bindings to point to a different service endpoint.
- The functions can be performed using the administrative console or wsadmin commands



WebSphere Enterprise Service Bus and WebSphere Process Server expose SCA modules as administered objects within the system management framework of the server. Administrators can view SCA modules and attributes. In addition, the binding of an import can be modified to so that it uses a different endpoint for the service.

Allowing the system administrator to dynamically change the import binding gives you the capability to replace service endpoints without the need to make changes to the application in the WebSphere Integration Developer tool.

All the SCA module administrative functions can be performed using the administrative console or wsadmin commands. This presentation is an introduction to those functions.

Section

SCA module management using the administration console



This section covers the administrative functions exposed in the console.

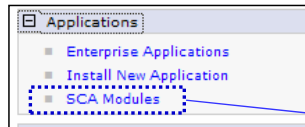
Administration of messaging bindings

- Binding administration in V6.0.1
 - ▶ SCA module administration introduced
 - ▶ Runtime administration of SCA default bindings provided
- Binding administration in V6.0.2
 - ▶ Runtime administration of Web services bindings added
- Binding administration in V6.1
 - ▶ Runtime administration added for these binding types
 - JMS
 - Generic JMS
 - MQ JMS
 - Native MQ
 - HTTP
 - ▶ Only import binding without runtime administration is the session bean binding

The ability to administer SCA bindings has been improving over the last few releases. In version 6.0.1 the SCA module administration capabilities were added and SCA default bindings were the only binding type that was modifiable at runtime. In version 6.0.2 the ability to administer Web services bindings at runtime was added. In version 6.1 the runtime binding administration capabilities were expanded to include most of the remaining binding types. All the messaging bindings, JMS, generic JMS, MQ JMS and native MQ are supported and so are HTTP bindings. The only binding type not supported for runtime administration is the session bean binding.

The details of all of these binding types is not provided in this presentation. Rather, a representative sample is used to illustrate the kind of things that can be done.

SCA management using administrative console



- List all SCA modules within the Cell
- Start/stop or look at SCA module details
- List import/export interfaces and bindings of SCA module

SCA Modules

Lists installed Service Component Architecture (SCA) modules and their associated applications. SCA modules encapsulate services, so you can make changes to services without impacting users of the service. To use the SCA module services you start the associated application.

Preferences

Start Stop

Select	Module	Application	Status
<input type="checkbox"/>	CustomerBackend	CustomerBackendApp	➔
<input type="checkbox"/>	CustomerRoutingMediation	CustomerRoutingMediationApp	➔
<input type="checkbox"/>	StockMediation	StockMediationApp	➔
<input type="checkbox"/>	StockQuoteManager	StockQuoteManagerApp	➔

Total 4

General Properties

Module: CustomerRoutingMediation

Application name: CustomerRoutingMediationApp

Description:

Module components

- Imports
 - CustomerServiceOld
 - Interfaces
 - CustomerService
 - Binding
 - CustomerBackend/CustomerServiceExport [SCA]
- Exports
 - CustomerServiceIn
 - Interfaces
 - CustomerService
 - Binding
 - There is no binding

SCA modules are exposed within the Application group. Clicking on the SCA module, you can start or stop the module, or look at the details of the module.

Example SCA module administrative panel

The screenshot displays the administrative panel for an SCA module named 'AdminExampleMedMod'. The left sidebar shows a navigation tree with 'SCA modules' selected. The main content area is titled 'SCA modules > AdminExampleMedMod' and includes a 'Configuration' section with 'General Properties' and 'Module components'.

General Properties:

- Module: AdminExampleMedMod
- Application name: AdminExampleModModApp
- Description: (empty text area)

Module components:

- Imports:
 - GenericJMSImport
 - JMSImport
 - Interfaces
 - Binding
 - JMS
 - MQJMSImport
 - MQNativeImport
- Exports:
 - GenericJMSExport
 - JMSExport
 - MQJMSExport
 - Interfaces
 - Binding
 - MQJMS
 - MQNativeExport

Below the configuration, a diagram illustrates the module's internal structure. It features a central 'Mediation1' component connected to several external components: JMSExport, GenericJMSExport, MQJMSExport, MQNativeExport, JMSImport, GenericJMSImport, MQJMSImport, and MQNativeImport.

At the bottom of the screenshot, the text 'SCA module administration and commands' and '© 2008 IBM Corporation' is visible, along with a page number '7'.

In the details of the module, the imports and exports can be seen. These views represent the bindings that were selected during the creation of an SCA module within WebSphere Integration Developer.

The screenshot displays the IBM Software Group SCA module administration interface. The main window is titled "Example binding panel" and shows the configuration for a JMS import binding. The breadcrumb navigation is "SCA modules > AdminExampleMedMod > JMSImport".

The main configuration panel is divided into several sections:

- Send Resources:** Contains a "Connection Factory JNDI Name" field with the value "AdminExampleMedMod/JMSImport_CF" and a "Browse..." button.
- Receive Resources:** Contains "Activation specification JNDI Name" and "Receive JMS Destination JNDI Name" fields, each with a "Browse" button.
- Advanced Resources:** Contains a "Callback JMS Destination JNDI Name" field.

Two smaller configuration windows are overlaid on the main panel:

- Top Right Window:** Titled "SCA modules > AdminExampleMedMod > JMSImport > Browse JNDI Names". It prompts the user to "Choose the JNDI name to use." and lists several options:
 - cca/resource/genjms/SCA.GENDMS/Callback_CF
 - AdminExampleMedMod/MQNativeImport_MQIMPORT_CF
 - AdminExampleMedMod/MQJMSExport_LIS_CF
 - AdminExampleMedMod/JMSExport_CF
 - AdminExampleMedMod/JMSImport_CF (selected)
- Bottom Right Window:** Titled "SCA modules > AdminExampleMedMod > JMSImport > AdminExampleMedMod.JMSImport_CF". It shows the configuration for the selected JMS import binding, including:
 - Administration:** Scopes (node=esbNode,Server=server1), Provider (Default messaging provider), Name (AdminExampleMedMod.JMSI), and JNDI name (AdminExampleMedMod/JMSI).
 - Additional Properties:** Connection pool properties.
 - Related Items:** JMS - J2C authentication data, Busca.

The interface includes a footer with "SCA module administration and commands" and "© 2008 IBM Corporation".

By clicking on the JMS imports from the previous panel, the configuration of the JMS provider can be modified. The browse button allows selection of the JNDI name to be used. The configuration button allows the selected JNDI provider to be viewed and modified.

Section

SCA module management using wsadmin commands



This section covers the wsadmin commands for administering SCA modules.

Administrative commands

- **\$AdminTask** commands
 - ▶ showSCAImportJMSBinding
 - ▶ showSCAExportJMSBinding
 - ▶ modifySCAImportJMSBinding
 - ▶ modifySCAExportJMSBinding
- **Commands do not verify validity of JNDI names**
 - ▶ Can be checked afterwards using: \$AdminConfig validate
- **Show commands return a Java Hashtable**
 - ▶ Keys define resource type, values contain JNDI names
- **WebSphere Process Server information center**
 - ▶ http://publib.boulder.ibm.com/infocenter/dmndhelp/v6r1mx/index.jsp?topic=/com.ibm.websphere.wps.610.doc/welcome_top_wps.htm



Here is a representative list of some of the \$AdminTask commands that are available for use with SCA modules using wsadmin for administration of messaging bindings. A list of all commands can be seen by using the \$AdminTask help –commands within wsadmin. Notice that there are specific commands for each binding type to show and modify the bindings. There are also other commands that allow listing of all imports, exports, or SCA modules. A complete list of these commands can be found in the WebSphere Process Server information center

Section

Summary



This section provides a summary of this presentation.

Summary

- SCA modules within a cell are exposed as administered objects through the Administrative console and wsadmin commands
- Dynamic modification of the import binding allow administrators to replace service endpoints without the need to change the application



SCA modules are exposed as administered objects. Another important function is the ability of the system administrator to dynamically change the import binding, allowing service endpoints to be replaced without the need to modify the application.

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