



IBM Software Group

WebSphere® Process Server v6.0.1 WebSphere® Enterprise Service Bus v6.0.1

SCA Modules: Administration and Commands



@business on demand.

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This presentation focuses on the new administrative interface and commands related to SCA modules in WebSphere Process Server v6.0.1 and the new WebSphere Enterprise Service Bus (ESB) v6.0.1.

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 V6.0.1 and WebSphere Process Server V6.0.1
- 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 SCA bindings to point to another modules Service provider within the cell with the same interface and SCA binding (in its export)
- The functions can be performed using the administration console or the new commands added in wsadmin



New in WebSphere ESB and Process Server v6.0.1 is the exposure of SCA modules as administered objects within the system management framework of the server. Administrators can view SCA modules and attributes, and in certain cases dynamically change the SCA binding of an import to point to another SCA module that is exposed with an SCA binding, and has the same interface.

Allowing the system administrator to dynamically change the SCA import binding gives them the capability to allow services to be replaced without the need to change the application in the tooling.

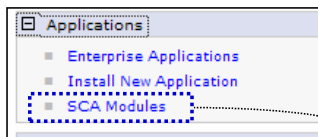
All the SCA module administrative functions can be performed using the Administrative Console or the new wsadmin commands.

Section

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

This section covers the administrative functions exposed in the Console.

SCA Management using Admin 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.

SCA Management using Admin Console (cont.)

- Allowing dynamic modification of import SCA binding allows administrator to switch service call w/o the need for going back and changing the application

Modify import SCA binding to point to another service provider within the cell

SCA Modules > CustomerRoutingMediation > CustomerServiceOld

The attributes of the selected SCA Import binding.

Configuration

General Properties

Module
CustomerRoutingMediation

Import
CustomerServiceOld

Import Interfaces
CustomerService

Target

Module
CustomerBackend

Export
CustomerServiceExport

Export Interfaces
CustomerService



In addition, for an SCA module that has an import with an SCA binding, you can dynamically change the target SCA component that has the same interface and an SCA export binding. This is quite a powerful function, which allows system administrators to change the service calls to other SCA components without the need to go back to the tooling and change the target module.

Agenda

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

This section covers the new wsadmin commands for administering SCA modules.

SCA Module Command Details: List

Command	Description
listSCAModules	Returns a list of all the SCA modules deployed to the cell Format: <i>listSCAModules</i> Return Format: <module name>:<application name>
	Example: wsadmin> \$AdminTask listSCAModules
listSCAExports	Return a list of the SCA exports of a given SCA module. This includes all exports, irrespective of their binding. Format: <i>listSCAExports</i> {-moduleName <moduleName>}
	Example: wsadmin> \$AdminTask listSCAExports {-moduleName StockAppModule}
listSCAImports	Return a list of the SCA imports of a given SCA module. This includes all exports, irrespective of their binding. Format: <i>listSCAImports</i> {-moduleName <moduleName>}
	Example: wsadmin> \$AdminTask listSCAImports {-moduleName StockAppModule}



The commands to list SCA modules and SCA exports and imports within a SCA module are shown here along with the description and command syntax.

SCA Module Command Details: Show

Command	Description
showSCAModule	Shows the attributes of an SCA module given the module name Format: <i>showSCAModule</i> {-moduleName <moduleName> [-applicationName <applicationName>]}
	Example: wsadmin> \$AdminTask showSCAModule {-moduleName StockAppModule}
showSCAExport	Shows the export attributes & interfaces for a named export of a given SCA module Format: <i>showSCAExport</i> {-moduleName <moduleName> -export <export> [-applicationName <applicationName>]}
	Example: wsadmin> \$AdminTask showSCAExport {-moduleName StockAppModule -export export1}
showSCAImport	Shows the import attributes & interfaces for a named import of a given SCA module Format: <i>showSCAImport</i> {-moduleName <moduleName> -import <import> [-applicationName <applicationName>]}
	Example: wsadmin> \$AdminTask showSCAImport {-moduleName StockAppModule -import import1}

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The commands to show the attributes of an SCA module and the attributes of an SCA export and import within a SCA module are shown here along with the description and the command syntax.

SCA Module Command Details: Show - Continued

Command	Description
showSCAExportBinding	Shows the current binding attributes of a named export of a given SCA module Format: <i>showSCAExportBinding</i> {-moduleName <moduleName> -export <export> [-applicationName <applicationName>] }
	Example: wsadmin> \$AdminTask showSCAExportBinding {-moduleName StockAppModule -export export1}
showSCAImportBinding	Shows the current binding attributes of a named import of a given SCA module Format: <i>showSCAImportBinding</i> {-moduleName <moduleName> -import <import> [-applicationName <applicationName>] }
	Example: wsadmin> \$AdminTask showSCAImportBinding {-moduleName StockAppModule -import import1}

The commands to show the attributes of an SCA export binding and import binding are shown here along with the description and the command syntax.

SCA Module Command Details: Modify Import

Command	Description
modifySCAImportBinding	<p>Modify the current SCA binding of a named import of a given SCA module</p> <p>Only Imports that have SCA bindings can be modified to point to another SCA export binding of the same interface</p> <p>Format: <i>modifySCAImportBinding</i> { <i>-moduleName</i> <moduleName> <i>-import</i> <import> <i>-targetModule</i> <targetSCAModule> <i>-targetExport</i> <targetExport> [<i>-applicationName</i> <applicationName>] }</p> <p>Example: wsadmin> \$AdminTask modifySCAImportBinding { -i -moduleName StockAppModule -import import1 -i -targetModule StockMediationModule -targetExport export1}</p>

The commands to dynamically modify the SCA binding of an import is show here. The import binding must be of type SCA, and the binding of the target export must be another SCA binding and have the same interface.

Agenda

- SCA module functions - overview
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- SCA module management using wsadmin commands
- **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 command line wsadmin
- Dynamic modification of the SCA import binding allows Administrator to replace services being invoked from the ESB, without the need to change the application



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

SCA Module Administration Commands - Summary

Command Category	Command	Description
List	listSCAModules	Returns a list of all the SCA modules deployed to the cell
	listSCAExports	Return a list of the SCA exports of a given SCA module
	listSCAImports	Return a list of the SCA imports of a given SCA module
Show	showSCAModule	Show the attributes for a given SCA module
	showSCAExport	Show the export attributes (including supported interfaces) for a named export of a given SCA module
	showSCAImport	Show the import attributes (including supported interfaces) for a named import of a given SCA module
	showSCAImportBinding	Show the current binding attributes of a named import of a given SCA module
	showSCAExportBinding	Show the current binding attributes of a named export of a given SCA module
Modify	modifySCAImportSCABinding	Modify the current binding of a named import of a given SCA module, providing the import has an SCA binding



In summary, new wsadmin AdminTasks commands are added to list and show SCA modules and attributes and to modify the import SCA bindings of an SCA module to target another SCA export binding

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