
WebSphere Message Broker Version 7

The SCA Nodes - Part 3



This is the third of four sessions describing the new SCA nodes in Message Broker version 7.

Overall agenda for SCA nodes

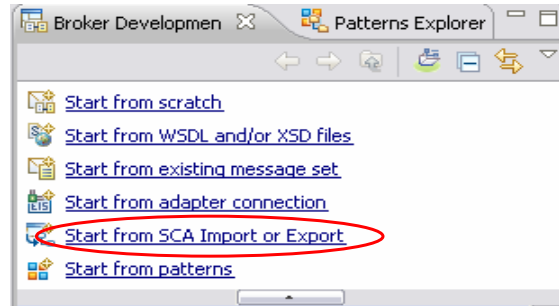
- Part 1: Introduction to SCA
 - Overview of SCA, WebSphere Process Server and WebSphere Integration Developer
- Part 2: What's new in WebSphere Message Broker V7.0
 - Scenarios
 - Broker SCA definition
 - SCA nodes
- Part 3: Toolkit wizards
 - SCA importer
 - Generate broker SCA definition wizard
 - SCA exporter
- Part 4: Runtime processing of SCA messages
 - Binding types
 - Message routing
 - Message Processing

Sessions 1 and 2 provided an introduction to the Service Component Architecture, and the new nodes in WebSphere Message Broker version 7.

This session will describe the SCA importer and exporter, and go into further detail about the SCA definitions that are created in the broker toolkit.

Importing SCA components into the Message Broker Toolkit (1)

- Import SCA import or SCA export components from WebSphere Integration Developer, by:
 - Select “New, Message Definition File” wizard in the Toolkit, or
 - Use the “Start from SCA Import or Export” quick start wizard



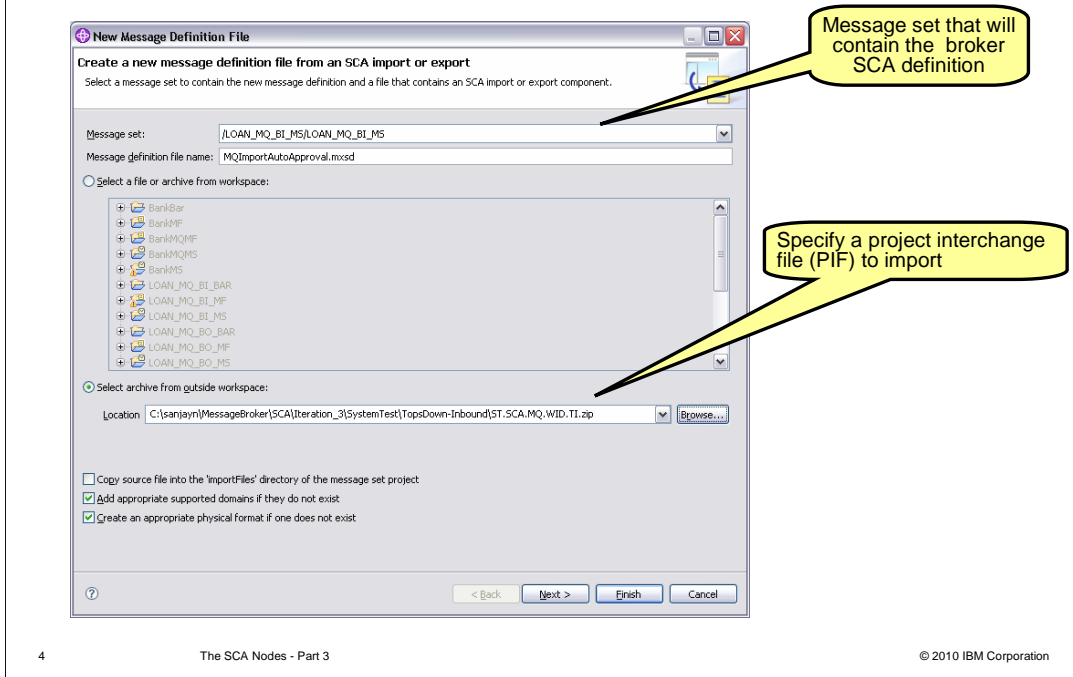
The SCA Importer is used to import an SCA Import or SCA Export from a WebSphere Integration Developer project interchange file.

There are two ways this can be imported into the message broker toolkit.

First, you can start the import by using the “New Message Definition File from SCA Import or Export” wizard.

Secondly, you can use the “Start from SCA Import or Export” quick start wizard.

Importing SCA components into the Message Broker Toolkit (2)

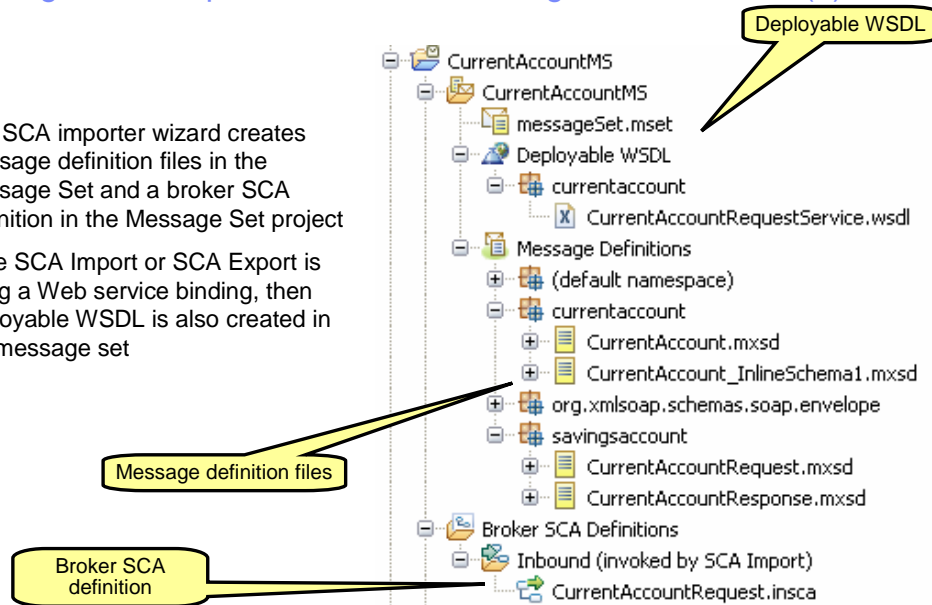


You can choose to either import an SCA Import or SCA Export. If you are using the “New Message Definition File” wizard, only one SCA Import or SCA Export can be imported at a time. If you are using the “Start from SCA Import or Export” wizard, multiple SCA Imports or Exports can be imported.

The importer checks if the SCA Import or SCA Export is valid after you have selected it. An error is raised if the SCA Import or Export does not meet certain constraints. For example, the SCA Import or SCA Export must contain a Web service or MQ binding, and it must contain an interface.

Importing SCA components into the Message Broker Toolkit (3)

- The SCA importer wizard creates message definition files in the Message Set and a broker SCA Definition in the Message Set project
- If the SCA Import or SCA Export is using a Web service binding, then deployable WSDL is also created in the message set



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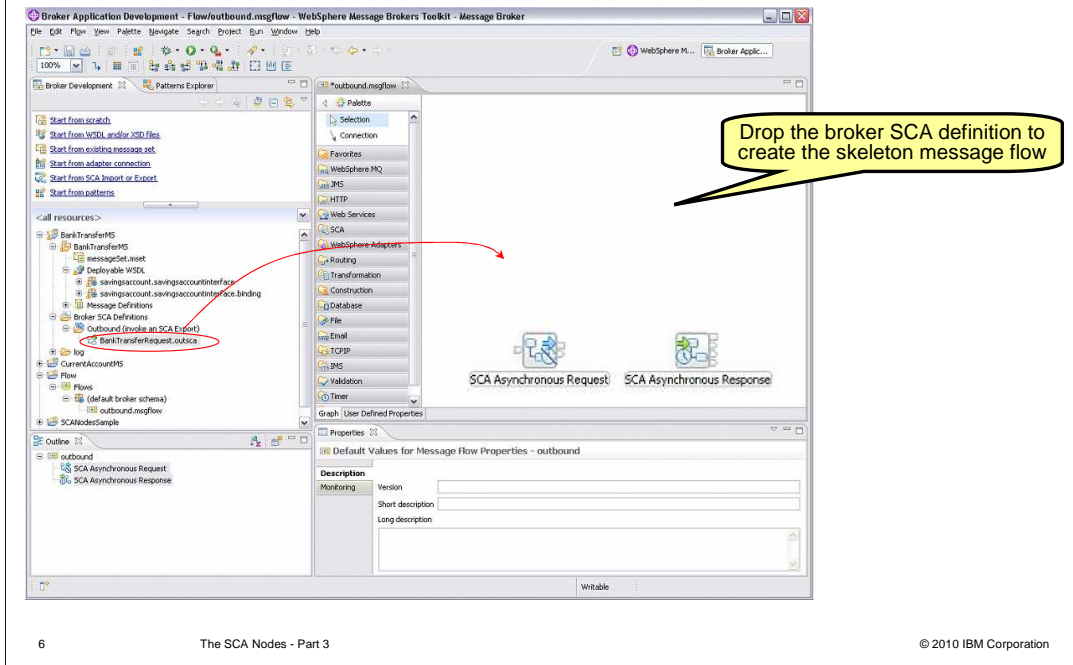
An import of an SCA Import or SCA Export creates corresponding message definitions (.mxsd) files from XML schema types. The schema definitions are those being used in the messages specified in the WSDL interface in the SCA Import and Export.

The message definitions are stored in their respective target namespaces.

If the SCA Import or SCA Export being imported uses a Web services binding, then the corresponding WSDL, with binding, is imported into the message set.

If the SCA Import or SCA Export being imported uses an MQ binding, then the WSDL is not imported into the message set.

Drag SCA definition onto flow editor to create SCA message flow



The Broker SCA definition can be dropped on the message flow editor to create a skeleton flow. The Broker SCA definition can also be selected within the node.

Dropping an .insca definition onto the message flow editor creates a pair of SCA Input and reply nodes.

Dropping an .outsca definition onto the message flow editor creates either an SCA request node or a pair of SCA asynchronous request and response nodes.

Broker SCA definition wizard (1)

- The “Generate Broker SCA Definition” wizard creates a Broker SCA definition from a message set

Message set that is used to create the broker SCA definition

Choose inbound or outbound broker SCA definition

Choose Web services or MQ binding

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The “Generate broker SCA definition” wizard creates a broker SCA definition using artifacts in the message set and values specified by the user.

The wizard creates a .outsca .or .insca broker SCA definition, which is stored in the SCA folder under the chosen message set project.

The .outsca or .insca broker SCA definition contains three items.

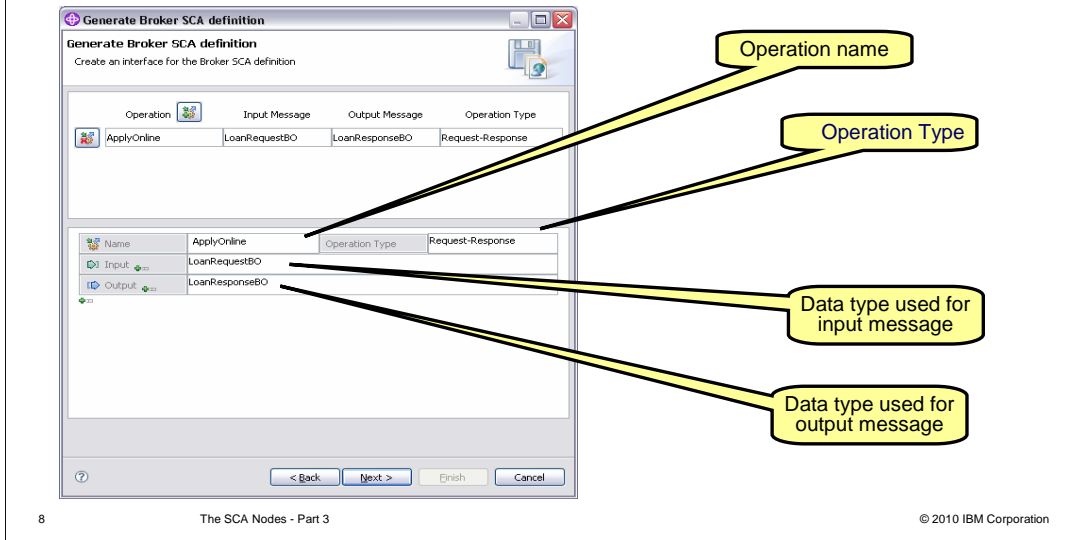
First, a single .import or .export SCA Import/Export.

Second, a WSDL containing one portType with one or more operations.

And third, the XSDs that correspond to the messages used in the operations defined in the portType.

Broker SCA definition wizard (2)

- Specify the interface for the broker SCA definition



You must specify several values in the “Generate Broker SCA definition” wizard:

First, a message set to create the .outsca or .insca broker SCA definition.

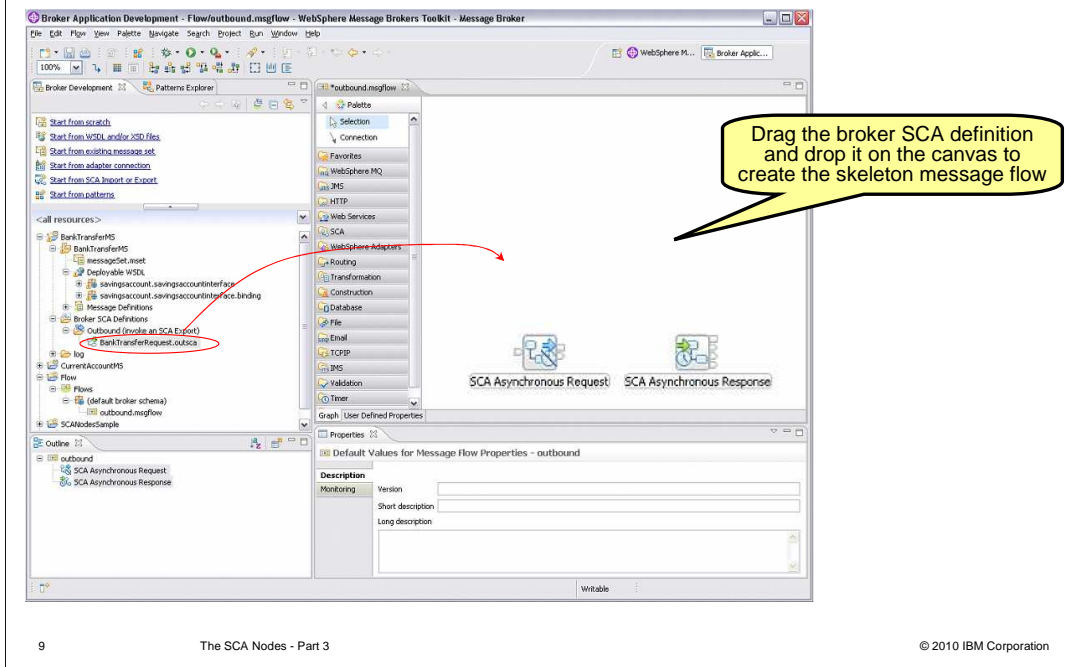
Second, an inbound or outbound broker SCA definition.

Third, a name for the created SCA Import/Export within the SCA Broker SCA definition.

And last, a specification of the interface used by the Broker SCA definition. This can be done by selecting either an existing deployable WSDL that defines a portType, or by creating a new set of operations to be contained in a generated portType.

For new operations, you must specify the operation name, operation type and data types used by the input and output message.

Broker SCA definition wizard (3)



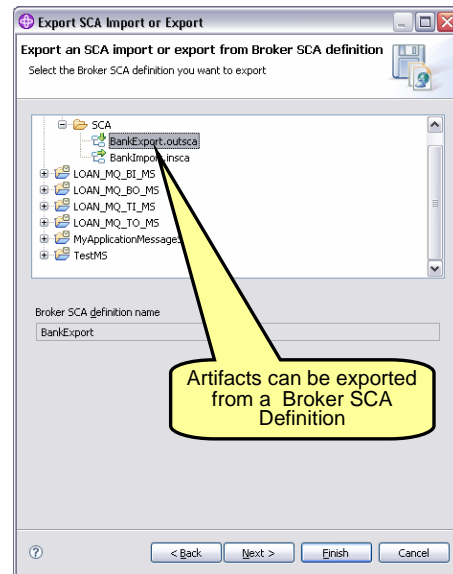
The Broker SCA Definition which was generated can be dropped onto the message flow editor to create a skeleton flow. The broker SCA definition can also be selected within the node.

Dropping a .insca onto the message flow editor creates a pair of SCA input and reply nodes.

Dropping a .outsca onto the message flow editor creates a pair of SCA asynchronous request and response nodes.

Exporting SCA components from the Message Broker Toolkit (1)

- The SCA Exporter wizard exports artifacts from the Broker SCA definition which WebSphere Integration Developer can consume
- Can export to an external directory or to a workspace directory
- Access the SCA Export wizard by selecting File->Export or by selecting the Broker SCA Definition and selecting Export in the pop-up menu



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The “*Generate Broker SCA definition*” wizard creates a broker SCA definition that Message Broker can consume. However, the broker SCA definition is not immediately compatible with WebSphere Integration Developer.

In order for the Integration Developer Toolkit to consume the broker SCA definition, you have to export the broker SCA definition.

Right-clicking an existing broker SCA definition and select “*Export...*”, or use the *File, Export...* menu item.

Select the *Export SCA Import or Export from Broker SCA Definition* wizard, and click Next.

The SCA import or export name field is automatically populated when a source Broker SCA definition is selected. The default for the name field is the name of the SCA Import/Export within the Broker SCA definition.

You can choose to export to an external directory or to a workspace directory.

Exporting SCA components from the Message Broker Toolkit (2)

- The following artifacts are exported from the toolkit by the SCA Exporter:
 - SCA Import or SCA Export
 - XSDs
 - WSDL
- After exporting from the toolkit, the artifacts can be imported into WebSphere Integration Developer



SCA Import is imported into
WebSphere Integration Developer

After the exported artifacts have been imported into WebSphere Integration Developer, they can be connected up to the business process.

You might have to take corrective action in the Integration Developer Toolkit if you are using an existing interface which you are going to replace with the interface that you have imported from Message Broker.



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