



IBM Software Group

IBM® WebSphere® Application Server V6

Service Integration Technologies

Mediations



@business on demand.

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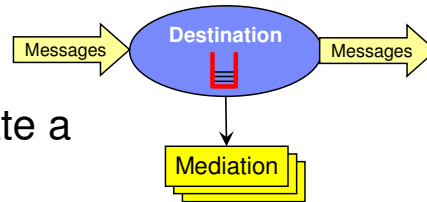
Goals

- Provide details on mediations in WebSphere Application Server V6

Section

Mediation Details

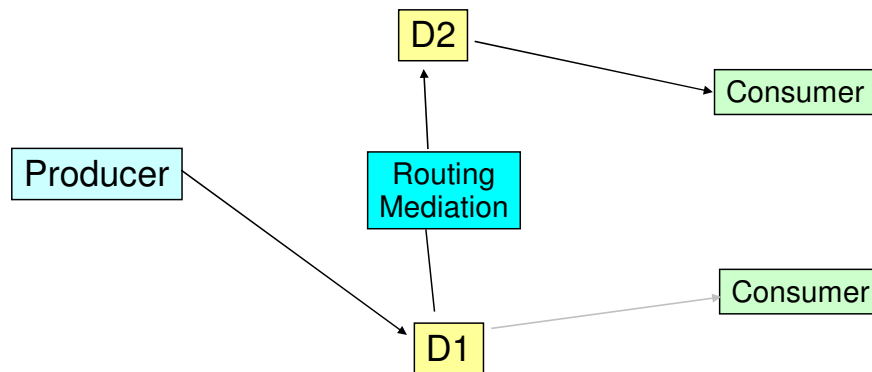
Mediation Overview



- Provides the ability to manipulate a message at a destination
 - ▶ Transform the message
 - ▶ Reroute the message to a different (one or more) destination
 - ▶ Allow interaction with non-messaging resource managers (e.g. Databases)
- A Java™ program that encapsulates primitive mediation operations
- Attached administratively to a Destination

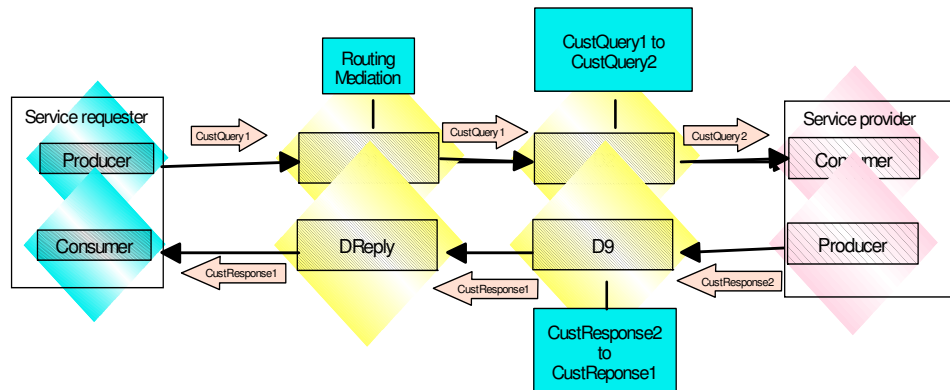
Usage Scenario: Rerouting

- Mediation can be used to direct a message to a different consumer than that originally intended



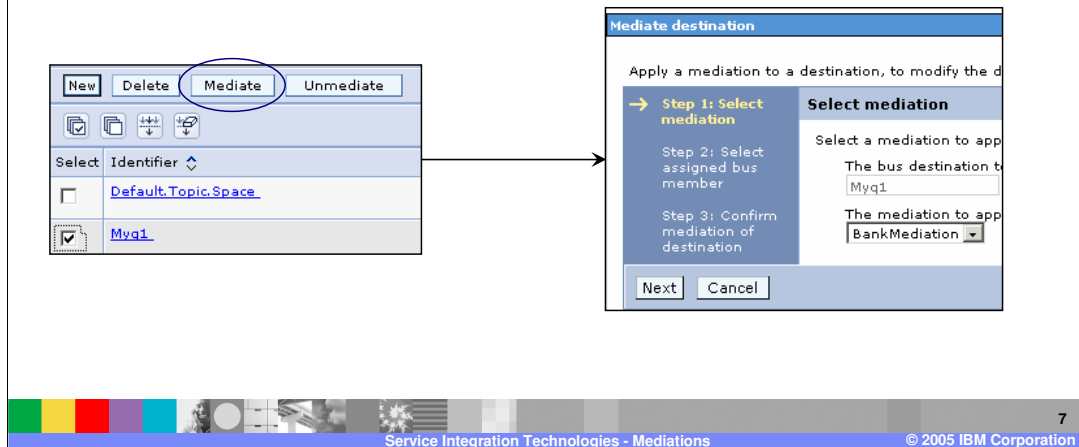
Usage Scenario : Transformation

- Additional mediations can be selected to transform to/from a required message structure



Associating a Mediation to a Destination

- After the mediation handler is deployed, the mediation is associated with the destination
 - ▶ Only one mediation handler list can be applied to a destination



After a mediation is deployed to the service integration bus, it is associated with a destination.

A mediation is invoked at a mediation point when it receives a message from the runtime. The mediation operates on an instance of the message, for example transforming it, or forwarding it to other destinations.

Section

Developing Mediation Handlers

Mediation Handlers

- It is a Java program that performs mediation function and implements:
 - ▶ `com.ibm.websphere.sib.mediation.handler.MediationHandler`
- Mediation handler can have properties that control its behavior
- Mediation handler is packaged for deployment with a supplied EJB into an EAR file



Each mediation handler does processing on some specific message at run-time

Deploying a Mediation Handler

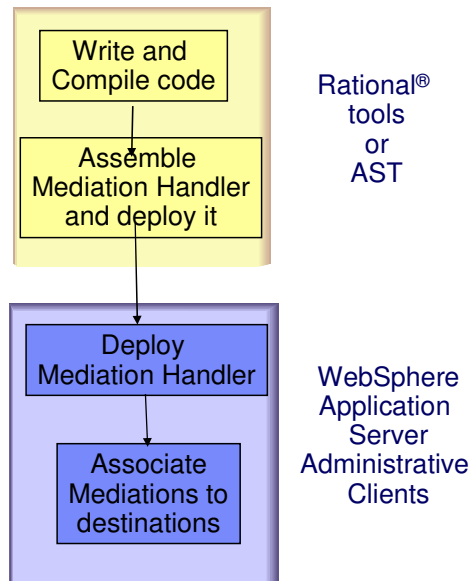
- Mediation Handler is the deployment unit for a mediation
 - ▶ Can be created using the tools
- Deploy mediation handler using wizard provided in tools
 - ▶ Creates EAR file that can be installed into WebSphere Application Server
- Install the EAR file using an administrative client
- It is added to a Mediation Handler List
 - ▶ Mediation handler list is a collection of mediation handlers that are invoked in sequence
 - ▶ Mediation handler list are associated with one or more selected destinations – the mediation handlers in the list are then invoked

At runtime, a handler list is associated with one or more specific destinations. This makes the handler list eligible to receive messages when they arrive at the destination. The handler list can be configured to either run inside a single global transaction, or to run as a local transaction.

A mediation handler is deployed either as a simple JavaBean, or as stateless session Enterprise JavaBean (EJB). The behavior of a mediation may be influenced by modifying its properties at deployment. A mediation handler is deployed using the Deploy wizard available in the Assembly Toolkit, and is installed into WebSphere Application Server as an EAR file.

Mediation Tools and Roles

- Write and Compile Mediation Handler
 - ▶ Developer
- Assemble Mediation Handler and deploy it
 - ▶ Assembler
- Install the Mediation Handler
 - ▶ Deployer
- Associate Mediation handler to a Handler list
 - ▶ Administrator



The developer's tasks should focus on developing code, but there are many other responsibilities that are the result of the current J2EE deployment model. For example, packaging code for distribution should be a simple step, aided by tools - but in reality, it is just one more skill that the developer must maintain, one more set of files that needs to be updated.

Summary

- Mediation is the manipulation of in-flight messages between the production of a message by one application, and the consumption of a message by another application
- This is the foundation the Enterprise Service Bus Web Services Enablement in V6

A mediation is the handling of in-flight messages between the production of a message by one application, and the consumption of a message by another application

Section

Appendix

Mediation Format Capabilities in V6

- JMS Data Mediators
 - ▶ Bytes
 - ▶ Maps (including name/value pairs)
 - ▶ Objects
 - ▶ Streams (including lists)
 - ▶ Text (including XML)
- SOAP Data Mediator
 - ▶ Mediates between a DataGraph and a SOAP Message which may be described using WSDL
 - ▶ Also able to handle MIME attachments
- Bean Collection Data Mediator
 - ▶ Mediates between a DataGraph and a Java Collection of Objects which conform to the JavaBeans convention

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