11

Reliable Messaging

Objectives

After completing this lesson, you should be able to:

- Describe reliable messaging
- Describe OSB Quality of Service configurable settings and default behaviors
- Describe the configuration options of using JMS transport for reliable communication

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Reliable Communication

Three aspects of reliable communication:

- Distributed Transactions (XA)
- Quality of Service (QoS)
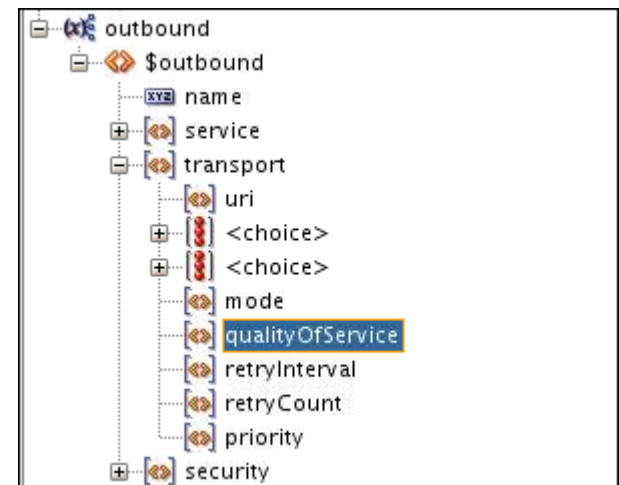- Persistence

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Quality of Service

- Quality of service (QoS) is set in the `qualityOfService` element in the `$inbound` and `$outbound` context variable.

```
$inbound/ctx:transport/ctx:qualityOfService

$outbound/ctx:transport/ctx:qualityOfService
```

- Service Bus provides:
  - Two QoS settings:
    - `Exactly-once`
    - `Best-effort`
  - Three delivery behaviors:
    - `Exactly-once`
    - `At-least-once`
    - `Best-effort`

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Default Value of `qualityOfService`

exactly-once	Best-effort
Proxy configured to be transactional	• Service callout action • Publish action
Route node with following inbound transport: • email • FTP • SFTP • File • JMS (transactional) • Tuxedo (transactional) • MQ (with Backout Threshold set to zero) • WS	Route node with following inbound transport: • HTTP • JMS (non-transactional) • Tuxedo (non-transactional) • MQ

Overriding the Default Value of QoS in Routing Options Action
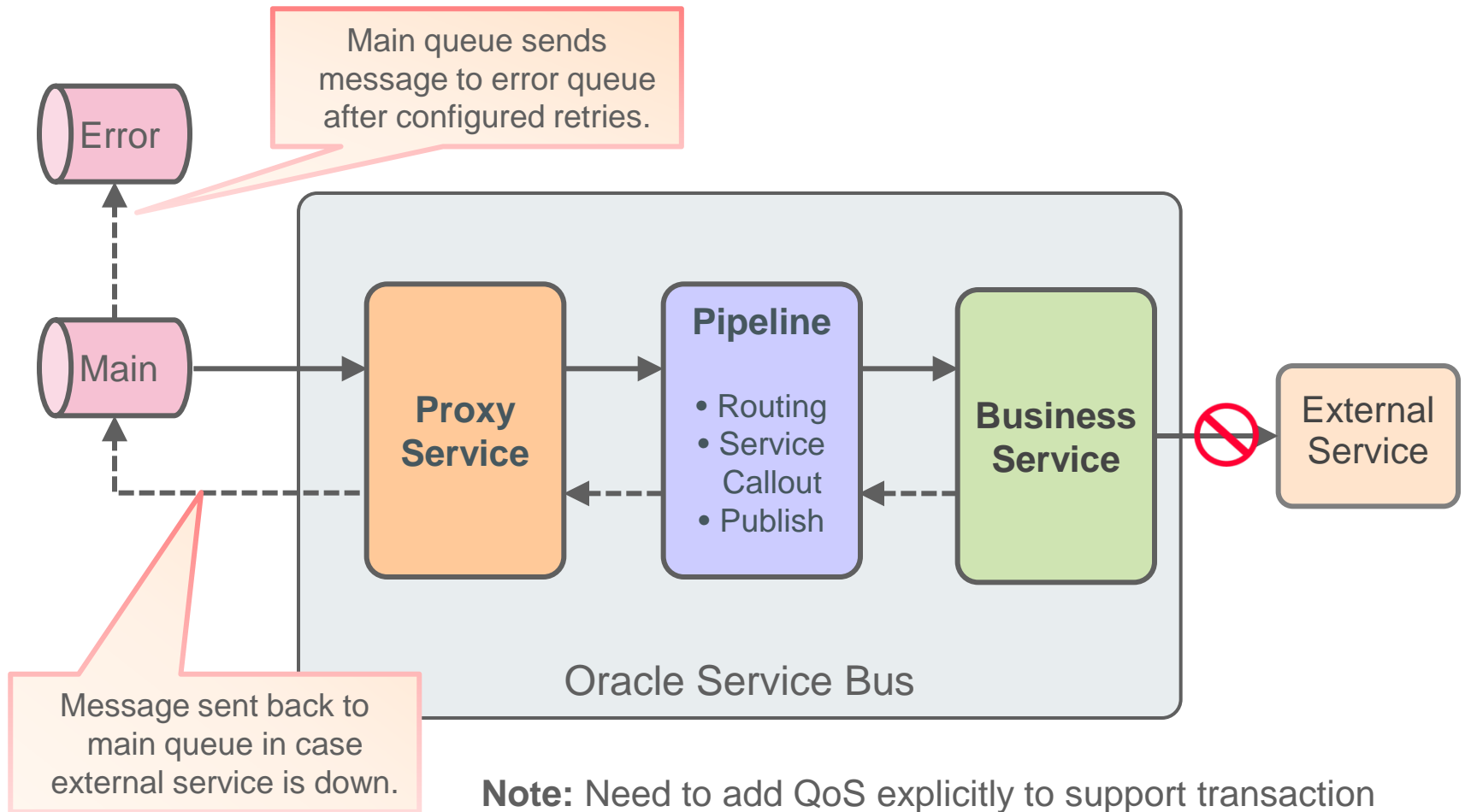
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Configurations for Reliable Communication

- Enabling JMS message persistence
- Configuring retry handling in JMS queue
- Using global transactions and quality of service

Configuring Retry Handling in JMS Queue

Note: Need to add QoS explicitly to support transaction for Service Callout and Publish activities.

High-Level Steps

1. Create a main queue and a corresponding error queue for the main queue.
2. Set the delivery failure option for the main queue.
3. Create a proxy service to consume the message from the main queue and enable the transaction parameters.
4. Create a business service to post the message to target queue.
5. Create a message flow to route the message to business service.

Configuring Delivery Failure Options

JMS Transport Configuration of the Proxy Service

General
Transport
Transport Details
Security

Transport Configuration
Use this page to configure the transport information for this service

Protocol: jms

Endpoint URI: jms://localhost:7101/jms.demo.OSBDemoConnFactory/jms.demo.OSBDemoQueue

Format: jms://((host:port)(,(host:port))*)|((host:port)?)/FactoryJndiName/QueueJndiName

Main queue

Headers: ⦿ Get All Headers
               ○ Get Specified Headers

Summary

In this lesson, you should have learned how to:

- Describe OSB's support for reliable messaging
- Describe OSB Quality of Service configurable settings and default behaviors
- Describe the configuration options of using JMS transport for reliable communication

Demonstration: Overview

- Configuring Retry Handling in JMS Queue

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