9

Processing Messages with Concurrent Calls

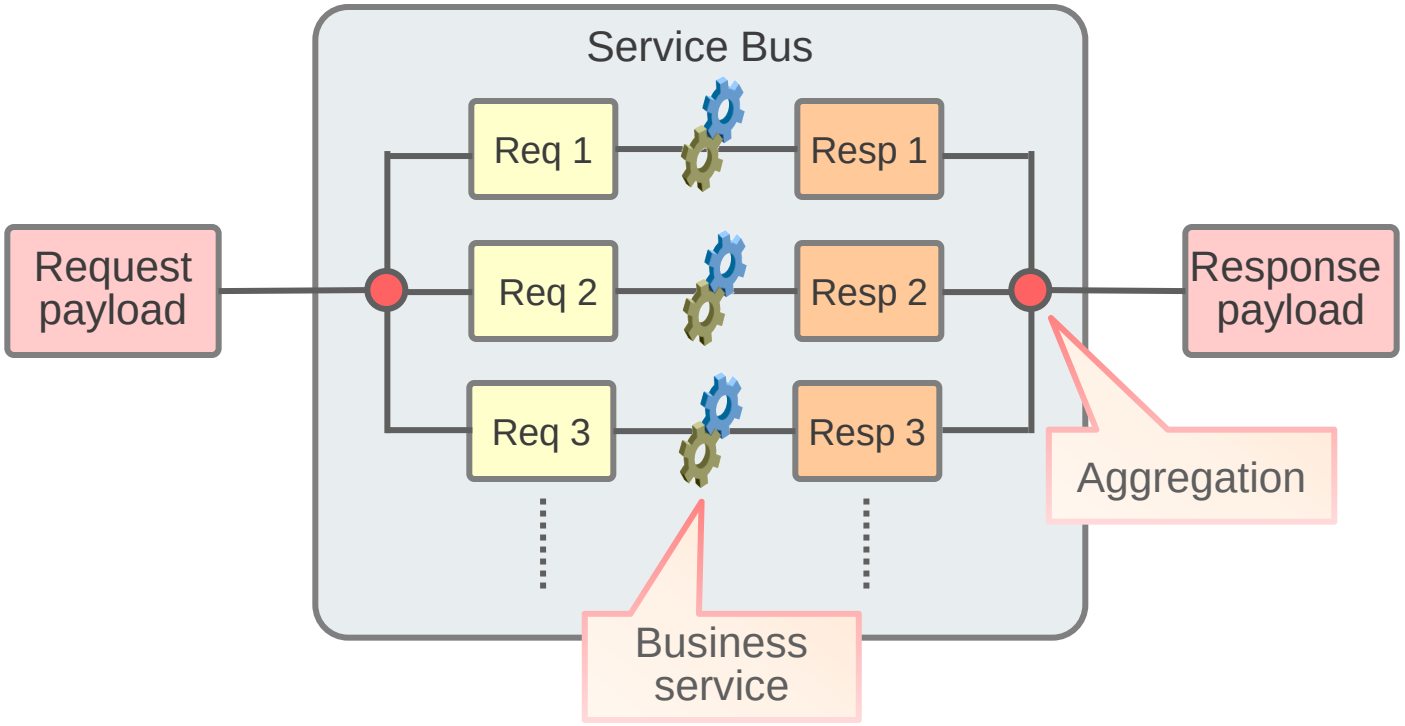
Objectives

After completing this lesson, you should be able to:

- Describe how Split-Join is used to split and aggregate messages
- Explain the differences between static Split-Join and dynamic Split-Join
- Process messages by using Split-Join

Split-Join

- Incoming message is split into multiple service invocation and handled in parallel.
- Multiple service responses are aggregated into single payload.

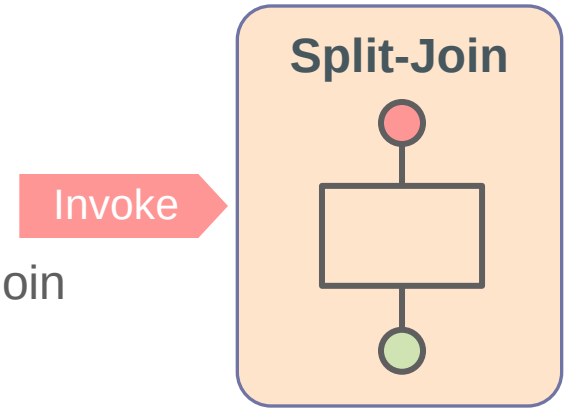


Split-Join Patterns

- Static Split-Join: Fixed number of parallel branches that are determined at design level
  - Example: Cable package includes Internet service, TV service, and telephone service.
- Dynamic Split-Join: Handles a variable number of requests
  - Example: The retailer places a batch order containing a variable number of individual purchase orders.

Split-Join Invocation

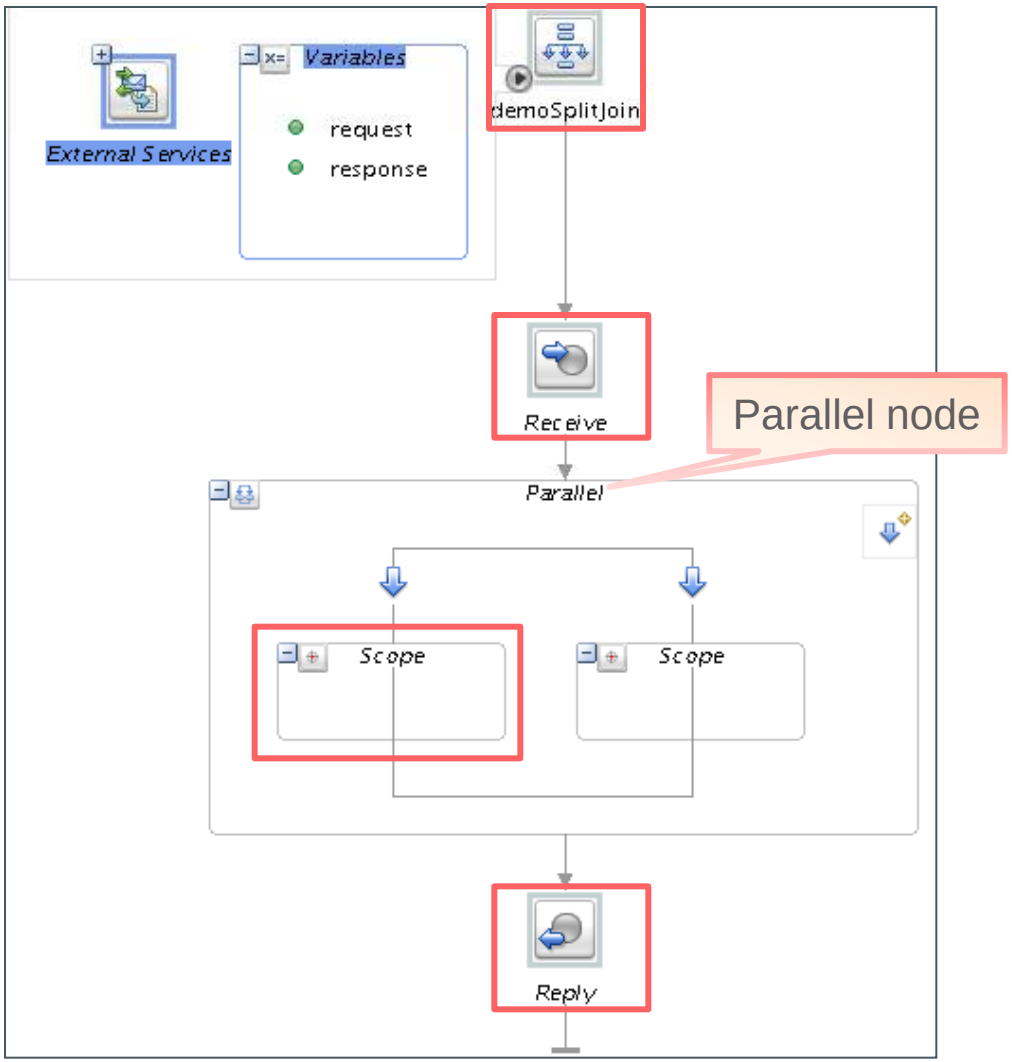
- Proxy service
- Pipeline
- Another split-join



- Proxy service
- Business service
- Pipeline
- Another split-join

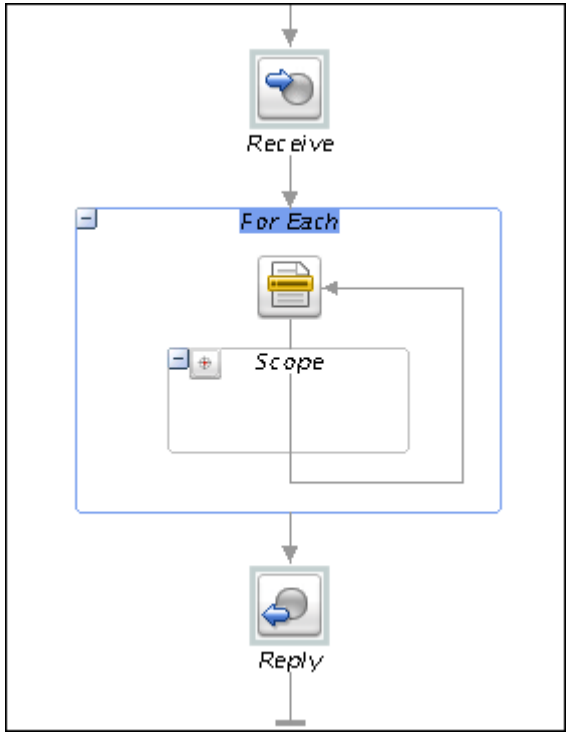
Split-Join Construction: Static Split-Join

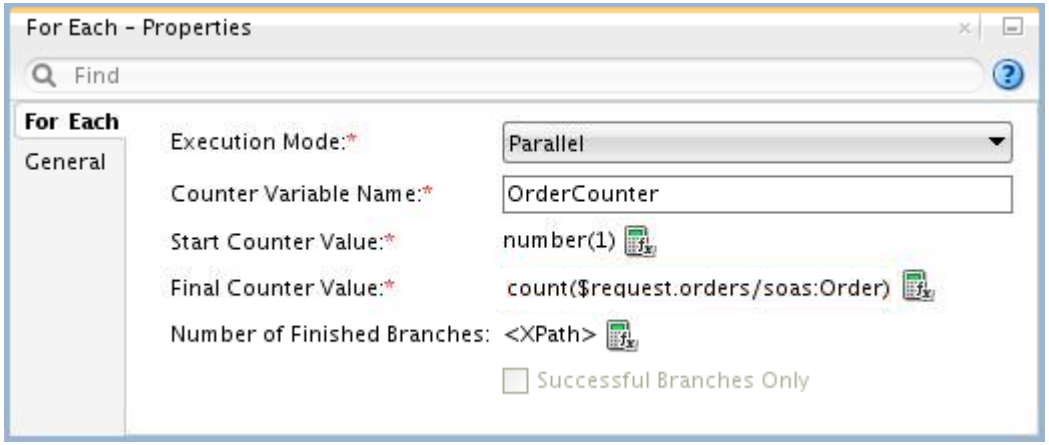
- WSDL based
- JDeveloper only



Split-Join Construction: Dynamic Split-Join

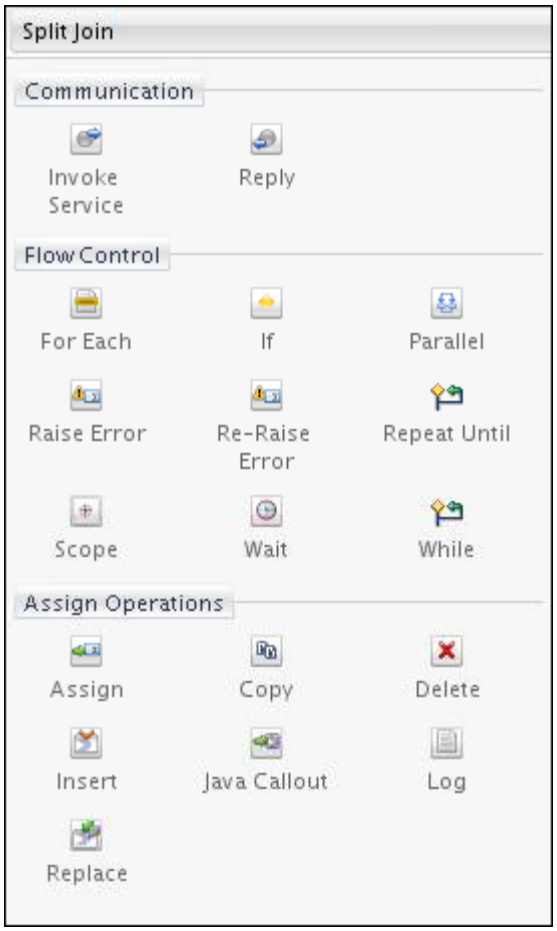
A dynamic split-join uses conditional logic to determine the number of branches to create.



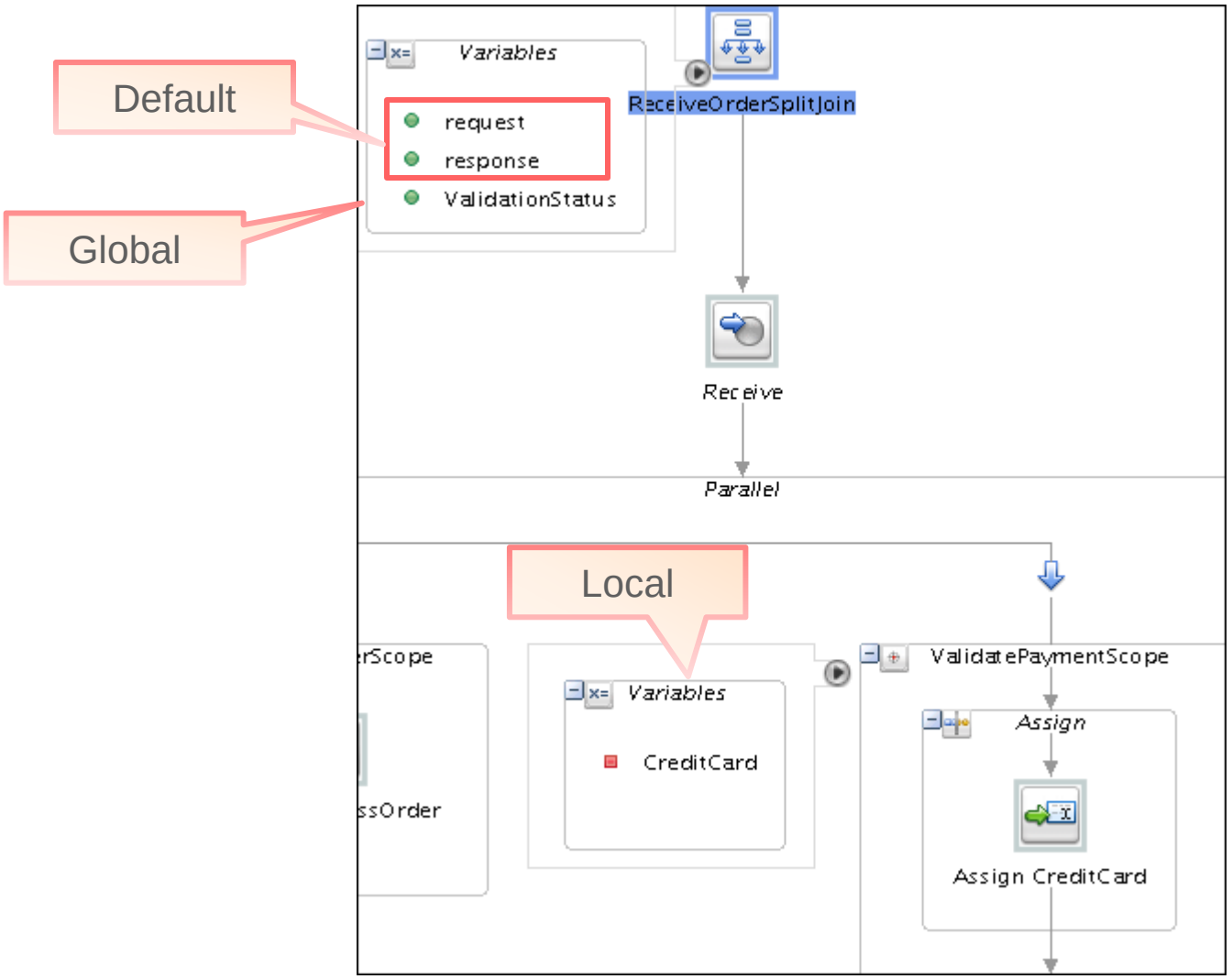


Split-Join Operations

- Communication operations define how the split-join interacts with external services.
- Flow control operations define how incoming messages flow through the split-join.
- Assign operations let you manipulate the data in the message you process, including initializing and updating a variable.

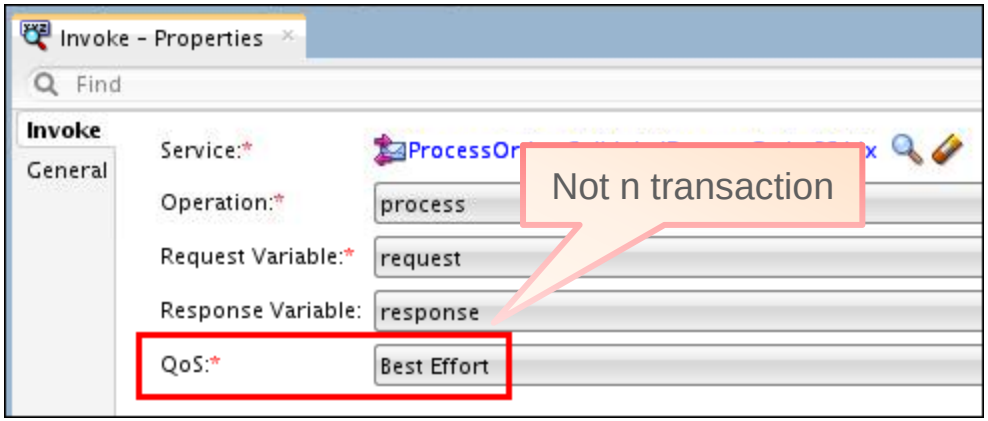


Global and Local Variables



Transaction Support

- Split-join operations provide an option for setting specific quality of service (QoS) values that control transaction support:
  - Invoke Service
  - Assign
  - Delete
  - Insert
  - Java Callout
  - Replace



- Operations set with a QoS of:
  - *Exactly Once* are executed in the transaction.
  - *Best Effort* do not execute in the context of a transaction.
- Split-joins do not handle transaction rollback for exceptions.

Summary

In this lesson, you should have learned how to:

- Describe how Split-Join is used to split and aggregate messages
- Explain the differences between static Split-Join and dynamic Split-Join
- Process messages by using Split-Join

Practice 9: Overview

9-1: Processing Messages with Static Split-Join