Message Sessions & Correlation

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Active Solution

youtube.com/user/CloudCasts

Overview

Correlation & Message Sessions
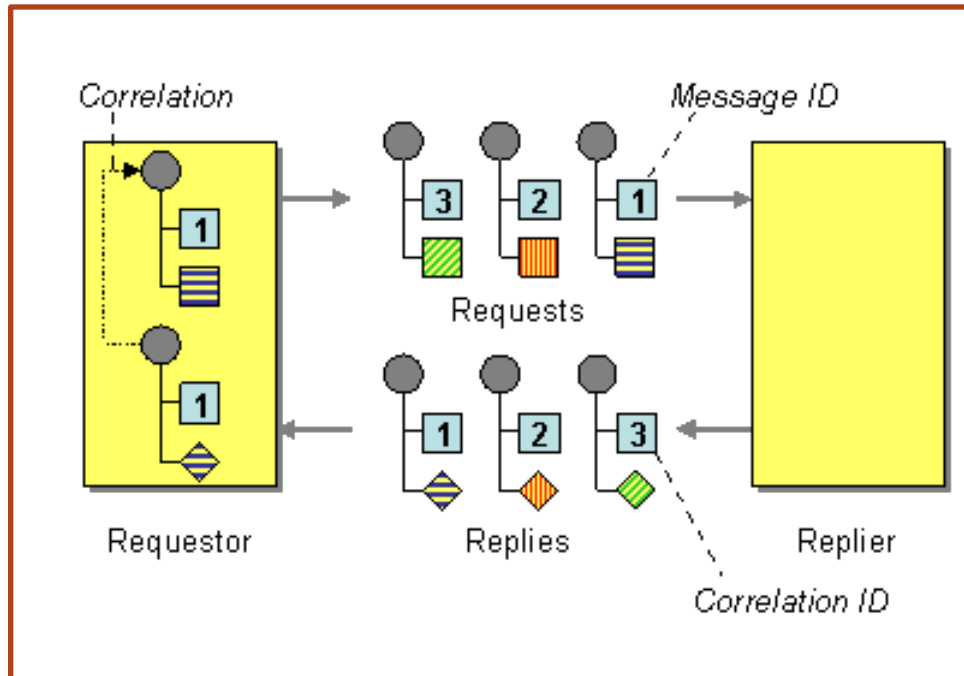
Demo: Correlation & Message Sessions

Request-Response Messaging

Demo: Request-Response Messaging

Correlation & Message Sessions

Message Correlation

Enterprise Integration Patterns
    – Gregor Hohpe

www.enterpriseintegrationpatterns.com

Messages have correlation identifier

- Often in message header

Group related messages together

- Sequence of messages
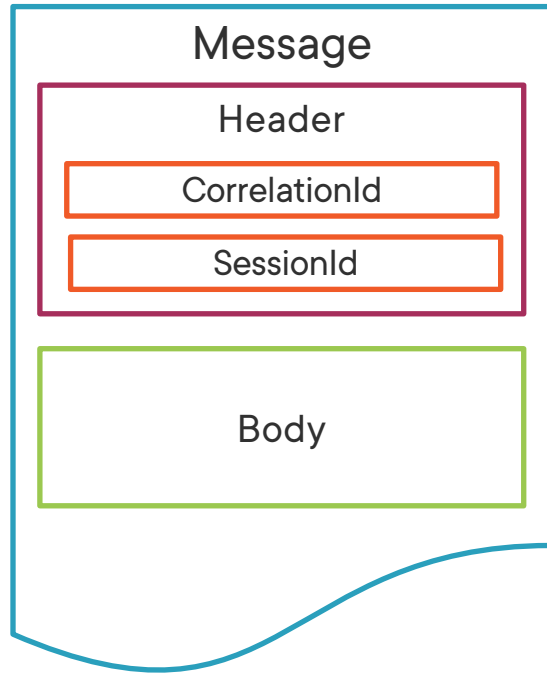
Request-reply message pattern

- Correlate reply with request

Correlation in Brokered Messaging
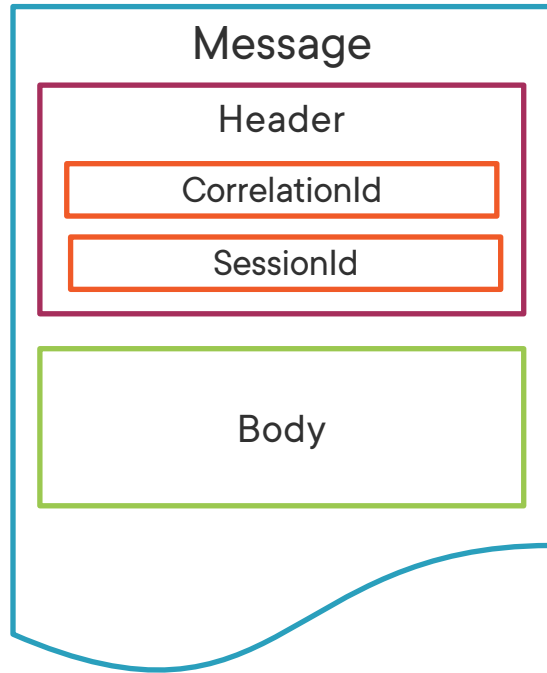
Correlation in Brokered Messaging

CorrelationId
- Used for more efficient routing between topics and subscriptions

SessionId
- Used to correlate messages in receiving applications

Enabling Correlation - Sending

Sessions are required on messaging entities

```csharp
// Create a description for the queue.
var rfidCheckoutQueueOptions =
    new CreateQueueOptions(AccountDetails.QueueName)
    {
        RequiresSession = true
    };


// Create a queue based on the queue description.
await administrationClient.CreateQueueAsync(rfidCheckoutQueueOptions);
```

Session ID set before sending message

```csharp
// Create a new  message from the order item RFID tag.
var tagReadMessage = new ServiceBusMessage(orderJson);

tagReadMessage.SessionId = sessionId;
```

Enabling Correlation - Receiving

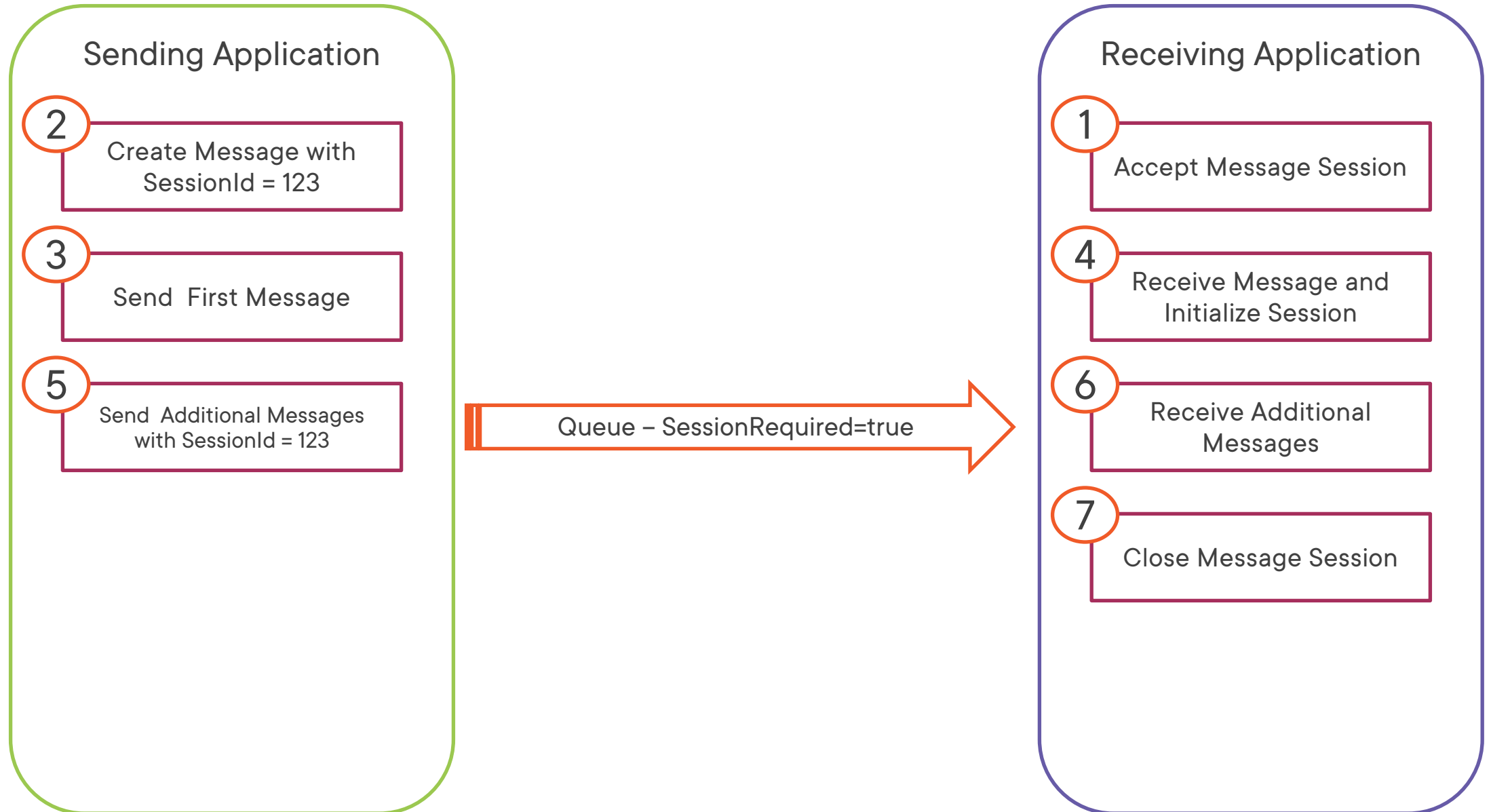## Accept a Message Session using a ServiceBusSessionReceiver

```
// Create a session receiver for the next session on a queue
var sessionReceiver = await serviceBusClient.AcceptNextSessionAsync(QueueName);
```

```
// Create a session receiver for a specified session ID
var sessionReceiver = await serviceBusClient.AcceptSessionAsync(QueueName, sessionId);
```

Receive a Message from the Message Session

```
// Receive a message
var message = await sessionReceiver.ReceiveMessageAsync();

// Process the message

// Complete the message
await messageSession.CompleteMessageAsync(message);
```

Using Message Sessions

Sending Application

2 — Create Message with SessionId = 123

3 — Send First Message

5 — Send Additional Messages with SessionId = 123

Queue – SessionRequired=true

Receiving Application

1 — Accept Message Session

4 — Receive Message and Initialize Session

6 — Receive Additional Messages

7 — Close Message Session

Using Message Sessions Demo Scenario
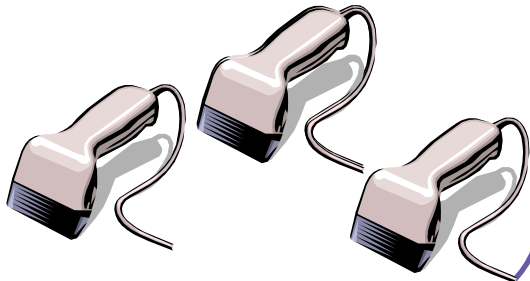
Request-Response Messaging

Request-Response Messaging

Sales Application

1. Create Request Message ReplyToSessionID="1234"

2. Send Request Message

3. Accept Message Session SessionID "1234"

7. Receive Response Message

Request Message
- ReplyToSessionId="1234"
- ProductId = 706

Request Queue – RequiresSession=false

Response Message
- SessionId="1234"
- Product Information

Response Queue – RequiresSession=true

Product Catalog Application

4. Receive Request Message

5. Process and Create Response Message SessionId = "1234"

6. Send Response Message

Demo

Request-Response Messaging

- Asynchronous request response messaging
- Correlation using message sessions

Summary

Sessions can be used to correlate messages in a receiving application

Sessions must be enabled on the queue or topic

SessionID property must be set on messages

Sessions can also be used for correlation in request-response messaging