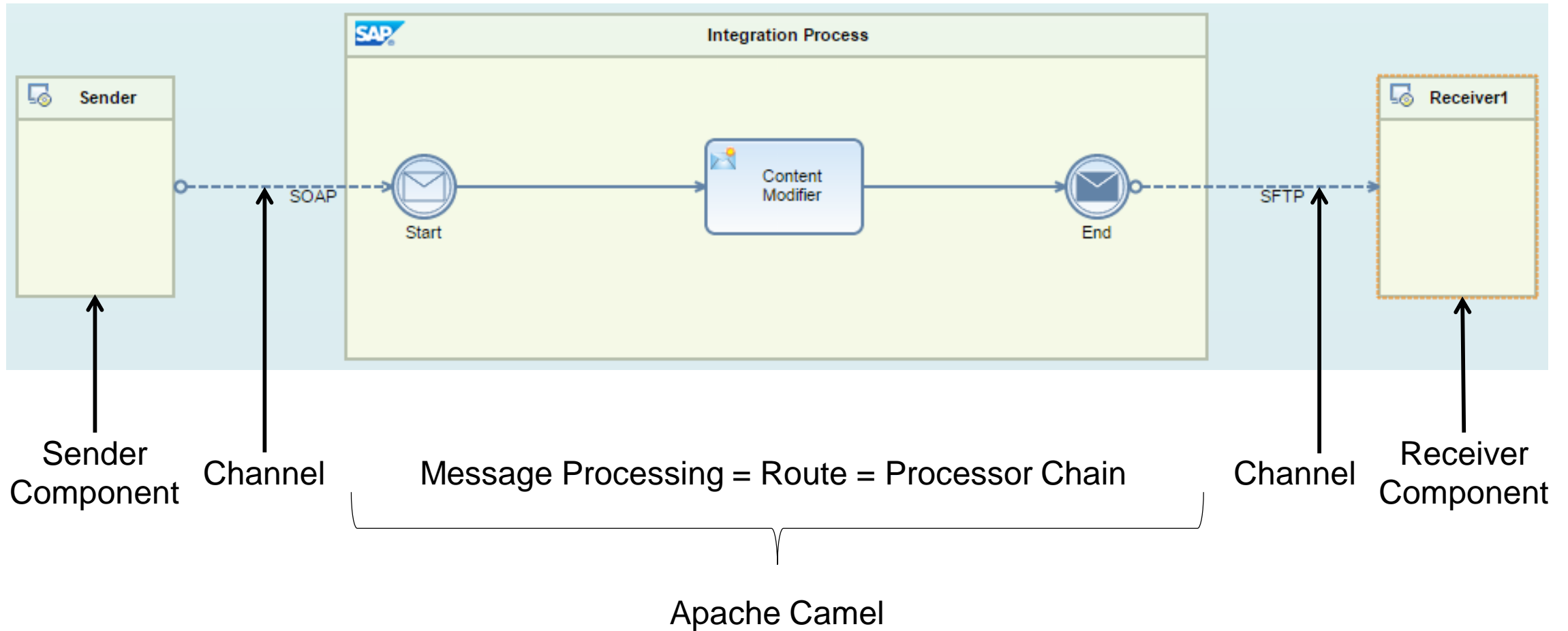


Week 1 Unit 4: Creating Integration Processes From Scratch

Creating Integration Processes From Scratch

A typical integration flow

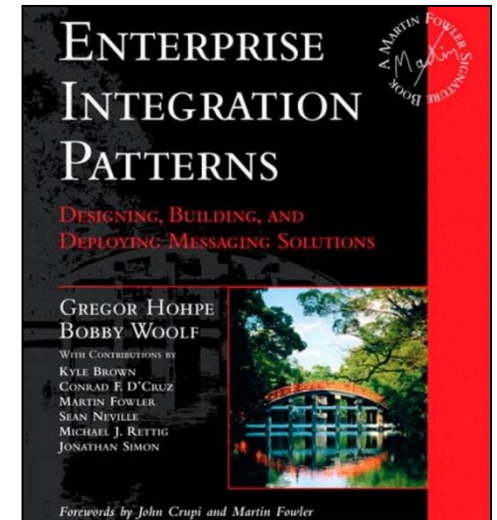
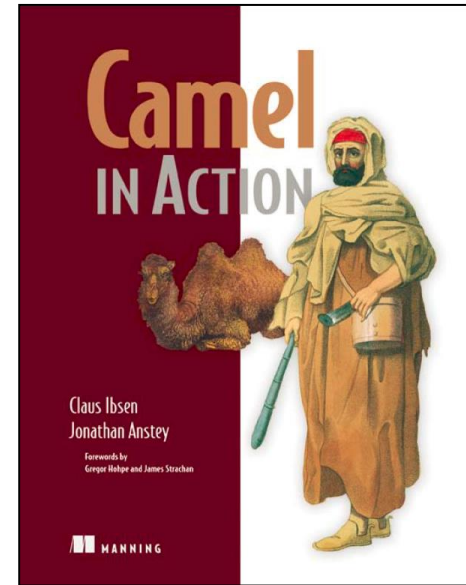


Creating Integration Processes From Scratch

Apache Camel

Camel is an integration framework (not an ESB)

- Routing and mediation engine
- Payload-agnostic router
- Flexible pipeline (“Route” or “Processor Chain” in Camel terms)
- Based on enterprise integration patterns (EIPs)
 - EIPs describe integration problems and solutions
 - EIPs provide a common vocabulary, for example
 - ⇒ Request/Response
 - ⇒ Content-Based Router
 - ⇒ Splitter/Gather



Recommended reading:

- Camel in Action (2011) by Claus Ibsen and Jonathan Anstey, Manning Publications Co., ISBN 978-1-935182-36-8
- Enterprise Integration Patterns (2003) by Gregor Hohpe and Bobby Woolf, Addison Wesley, ISBN 0-321-20068-3

Creating Integration Processes From Scratch

Copying files – Creating a new integration package

Goal: Implementing an integration flow that copies files between directories located on an SFTP server




Creating Integration Processes From Scratch

Copying files – Creating a new integration flow (1)

Goal: Implementing an integration flow that copies files between directories located on an SFTP server

New Integration Package (Edited)

 HCI_MOOC_Package

Version: 1.0 | Owned By: vs | Mode: Editable

Created By: D043571 | Creation Date: 12/23/15 10:31:58 AM

Description:

B *I* U ~~S~~ [List Icons] Font Family [Dropdown] Font Sizes [Dropdown] A [Dropdown] A [Dropdown]

[List Icons] [Link Icon] [Refresh Icon]

[Add Artifact Icon] [Add Integration Icon] [Add Value Mapping Icon]

Artifacts (0)

Data Integration
Process Integration
Value Mapping

Add Delete Actions

Name	Version	Type	Actions
No artifacts available			

Click

Creating Integration Processes From Scratch

Copying files – Creating a new integration flow (2)

Goal: Implementing an integration flow that copies files between directories located on an SFTP server

Add process integration artifact

☒ Create ☐ Import

*Name: HCI_Week_1_Unit_4

*ID: HCI_Week_1_Unit_4

Description: Copying files

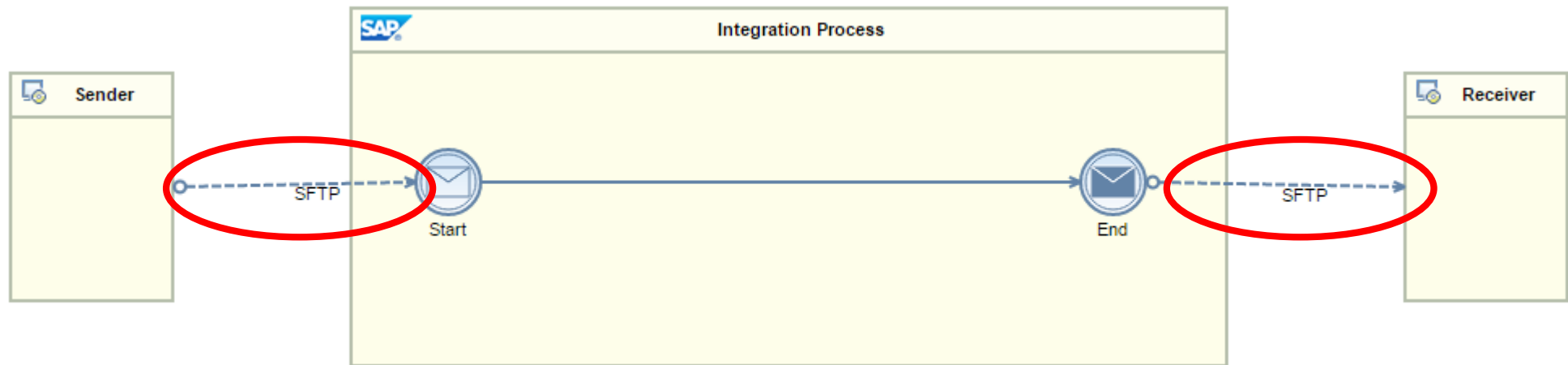
Sender: <Sender> Receiver: <Receiver>

Ok Cancel

Creating Integration Processes From Scratch

Copying files – Modeling integration flow

Goal: Implementing an integration flow that copies files between directories located on an SFTP server



Creating Integration Processes From Scratch

Copying files – Sender adapter configuration

Goal: Implementing an integration flow that copies files between directories located on an SFTP server

Channel

General Adapter Specific Scheduler

Source

Processing

Advanced

FILE ACCESS PARAMETERS

Directory: /hci_mooc/send

File Name: arbitrary_file.txt

CONNECTION PARAMETERS

Address: [\[Redacted\]](#)

User Name: TECHED

Timeout (in ms): 10000

Maximum Reconnect Attempts: 3

Reconnect Delay(in ms): 1000

☒ Automatically Disconnect

Channel

General Adapter Specific Scheduler

Source

Processing

Advanced

PROCESSING PARAMETERS

Read Lock Strategy: None

☒ Change Directories Stepwise ☐ Include Sub-Directories

Post-Processing: Move File

Archive Directory: /hci_mooc/send/archive

Retry Threshold for Alerting: 0

Creating Integration Processes From Scratch

Copying files – Receiver adapter configuration

Goal: Implementing an integration flow that copies files between directories located on an SFTP server

The screenshot shows the configuration interface for a Receiver Adapter in SAP Integration Suite. The 'Channel' header has two tabs: 'General' and 'Adapter Specific'. The 'Adapter Specific' tab is active. On the left, a vertical menu contains three options: 'Target' (highlighted with a red circle), 'Processing', and 'Advanced'. The main area is divided into two sections. The top section, 'FILE ACCESS PARAMETERS', includes fields for 'Directory:' (set to '/hci_mooc/receive') and 'File Name:' (set to 'received.txt'). There is a checked checkbox for 'Append Timestamp'. The bottom section, 'CONNECTION PARAMETERS', includes fields for 'Address:' (with a placeholder URL), 'User Name:' (set to 'TECHED'), 'Timeout (in ms):' (set to '10000'), 'Maximum Reconnect Attem...' (set to '3'), and 'Reconnect Delay(in ms):' (set to '1000'). A checked checkbox for 'Automatically Disconnect' is at the bottom.

Channel	
General Adapter Specific	
Target Processing Advanced	FILE ACCESS PARAMETERS
	Directory: /hci_mooc/receive
	File Name: received.txt
	<input checked="" type="checkbox"/> Append Timestamp
	CONNECTION PARAMETERS
	Address: https://integration.sap.com
	User Name: TECHED
	Timeout (in ms): 10000
	Maximum Reconnect Attem... 3
	Reconnect Delay(in ms): 1000
	<input checked="" type="checkbox"/> Automatically Disconnect

The screenshot shows the same configuration interface, but with the 'Processing' tab selected in the left-hand menu (highlighted with a red circle). The 'Channel' header remains the same. The main area now shows 'Handling for Existing Files:' with a dropdown menu set to 'Override'. Below this, there are two checked checkboxes: 'Change Directories Stepwise' and 'Create Directories'. The 'Advanced' tab is visible at the bottom of the left menu.

Channel	
General Adapter Specific	
Target Processing Advanced	Handling for Existing Files: Override
	<input checked="" type="checkbox"/> Change Directories Stepwise <input checked="" type="checkbox"/> Create Directories

Creating Integration Processes From Scratch

Copying files – Message monitoring

Goal: Implementing an integration flow that copies files between directories located on an SFTP server

The screenshot shows the SAP HANA Cloud Integration Message Monitor. The top bar includes the SAP logo, 'HANA Cloud Integration', and 'Data Services'. Below this is a 'Message Monitor' section with filters for Status, Time (Past 24 Hours), Integration Flow (All Integration Flows), and ID. A table lists two messages: 'HCI_Week_1_Unit_4' and 'SFSF Curriculum Catalog', both with a status of 'Completed'. To the right, a 'Message Processing Log' provides detailed information for the selected message, including context name, message GUID, node, overall status, start/stop times, and a list of children steps.

Message Processing Log:

```
ContextName      = HCI_Week_1_Unit_4
IntermediateError = false
MessageGuid      = AF26forupTnWj3vc44KdDRyfOFv
Node             = vsa626816.od.sap.biz
OverallStatus    = COMPLETED
StartTime        = Wed Dec 23 10:59:22 UTC 2015
StopTime         = Wed Dec 23 10:59:26 UTC 2015
Children [
  Entering Camel route route9449{
    StartTime      = Wed Dec 23 10:59:22 UTC 2015
    Children [
      Exchange ID-vsa626816-od-sap-biz-41584-1446282608810-2
      File          = /hci_mooc/send/arbitrary_file.
      StartTime     = Wed Dec 23 10:59:22 UTC 2015
      StopTime      = Wed Dec 23 10:59:26 UTC 2015
      Children [
        Processing exchange ID-vsa626816-od-sap-biz-41584-
        StartTime      = Wed Dec 23 10:59:22 UTC 20
        StepId         = removeHeaders2850
        StopTime       = Wed Dec 23 10:59:22 UTC 20
        Children [
          Processing exchange ID-vsa626816-od-sap-biz-41
          Sent To URI   = sap-util://preventPath/
          StartTime     = Wed Dec 23 10:59:22 UT
          StepId        = SequenceFlow 5
```

The screenshot shows a file explorer window for the 'archive' directory. The path '/home/TECHNED/hci_mooc/send/archive' is highlighted with a red circle. Below the path is a table listing files in the directory.

Name	Ext	Size	Changed	Rights	Owner
arbitrary_file.txt		58.474	23.12.2015 10:40:53	rw-r--r--	50049

The screenshot shows a file explorer window for the 'receive' directory. The path '/home/TECHNED/hci_mooc/receive' is highlighted with a red circle. Below the path is a table listing files in the directory.

Name	Ext	Size	Changed	Rights	Owner
received20151223105922.txt		58.474	23.12.2015 11:59:24	rw-r--r--	50049

Creating Integration Processes From Scratch

Demo

DEMO

Creating Integration
Processes From
Scratch



Creating Integration Processes From Scratch

What you've learned in this unit

- How to create a new integration package
- How to create a new integration flow
- How to configure sender and receiver adapters for copying files between directories on an SFTP server
- How to monitor the message transfer via the SAP HANA Cloud Integration server





Thank you

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