Impact2011 IBM Software Accelerated Value Program



# IBM WebSphere Process Server V7 Problem Determination

http://www-01.ibm.com/software/support/acceleratedvalue/

# Exercise - Troubleshooting an SCA application with runtime errors

## At the end of the exercise, you should be able to:

- Load a log file onto the Server Logs viewer in WebSphere Integration Developer in order to analyze error messages
- Deploy SCA applications onto WebSphere Process Server
- Monitor the health of deployed applications through the Health Monitor Wizard in Business Space
- Utilize cross-component trace to follow the call sequences between SCA applications
- Query failed events through the Failed Event Manager and resubmit the events after the problem is resolved

## **Overview:**

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In the first part of the exercise, you are going to import the given SOA solution. After examining the end-to-end solution, sample data gets sent through a JSP application. The test will fail, and your task is to troubleshoot this runtime error. In this section the cross-component trace feature in the WebSphere Integration Developer is explored. The exercise demonstrates how to trace back to the point of failure in the assembly diagram.

In the second part of the exercise, you are going to explore some of the runtime applications: Failed Event Manager, service integration bus browser, Business Process Choreographer Explorer, as well as Business Space. After the problem is resolved, the failed event must be resubmitted using the Failed Event Manager.

# **Exercise instructions**

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## Part 1: Set up the environment

- \_\_\_\_1. Open a new workspace: C:\WID\workspace
  - \_\_\_\_a. Start WebSphere Integration Developer if it is not already started.
  - \_\_\_\_b. Select the workspace to be C:\WID\workspace and click OK.

*Note*: If WebSphere Integration Developer is already opened, select File > Switch Workspace..., enter C:\WID\workspace in the Workspace field, and then click OK.

() Workspace	Launcher	×
Select a w	orkspace	
IBM WebSpl Choose a we	nere Integration Developer 7.0 stores your projects in a folder called a workspace. Orkspace folder to use for this session.	
<u>W</u> orkspace:	C:\WID\workspace	<u>B</u> rowse
Use this a	s the default and do not ask again	Cancel

\_\_\_\_ c. Close the Getting Started pane.

- 2. Import C:\WID\SCA-PD-2011.zip into your workspace.
  - \_\_\_\_a. Select File > Import....
  - \_\_\_\_b. Select Project Interchange under the **Other** folder as the import source type. Click Next.
  - \_\_\_\_ c. Click Browse... button for From zip file field.
  - \_\_\_\_d. Navigate to C:\WID\SCA-PD-2011.zip.



- \_\_\_\_e. Click Open.
- \_\_\_\_f. Click Select All.

mport Projects			
Import Projects from	a zip file.		
From zip file:	C:\WID\SCA-PD-2011.zip	✓ Browse.	
Project location root:	C:\WID\workspace	Browse.	
AccountOper	ningUI		
🔽 🗁 AccountOper	ningUIEAR		
CWYBC_JDBC			
CWYFF_FlatFi	le		
CreditCheck	<b>MediationService</b>		
🛛 🗹 CustomerMe	diationService		
V 🔁 FoundationLibrary			
V = FoundationModule			
FoundationServices      FoundationServices			
	iationService		
RouterMediat	ionService		
Select All Deselect	t All Select Referenced		

\_\_\_\_g. Click Finish.

## End-to-end scenario overview

This end-to-end scenario demonstrates a fictional retail company's SOA implementation to centralize a customer account creation process.



There are three mediation modules that mediate the incoming events and execute some data manipulation logics.

There is a service module named FoundationModule, which contains the main business logic, AccountVerification BPEL, to process the account creation logic.

The FoundationServices module contains services to help the FoundationModule to complete customer account verification tasks.

Since human interaction becomes necessary to approve customer requests, the HumanTaskServices module contains the human task components.

First, a sales person enters customer information through a Web application, which triggers an instance of the AccountVerification business process to be created.



+ HOME	Business Cases	s > New > CreateApplication
> Business Case	Enter the values for the in	put data and/or provide additional information
- New		
> My ToDo's	<ul> <li>Input Data</li> </ul>	
- Open	accountNumber.	ACM001
- Claimed	applicationDate:	Jan 23, 2008
> User: admin	applicationDecision:	<b>A</b>
- Logout	comments:	None
	companyName:	ACME
	contactFirstName:	Yeko
	contactLastName:	Hyakuna
	contactPhoneNumber.	415-123-4567
YET	creditRating:	A+
	creditReportNeeded:	E

This is defined in the FoundationModule.

rojects	<u>New</u>	현 Mediation Flow 오 Process 답답 Rule Group 영 State Machine					
AccountOpeningUI AccountOpeningUIEAR CreditCheckMediationService CutomerMediationService CUV9E_JOBC CUV9E_FlatFile FoundationLibrary EcundationModule Comparison Data Types Data Types Data Types Data Types Data Service FoundationServices HumanTaskServices HumanTaskServices		<ul> <li>Import</li> <li>Export</li> <li>References</li> <li>Interface Map (D</li> <li>Selector</li> <li>Outbound Imports</li> <li>Inbound Exports</li> <li>Outbound Adapt</li> <li>Inbound Adapters</li> </ul>	🚺 🐮 AccountVerificatio	InExport	CreateApplication	) 🗴 AccountVerificatio	1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1
Provide RouterMediationService		Task Flows 🗟 Build	l Activities 🔲 Properties 🔝 Pro	oblems 📳 Server Log	gs 👭 Servers 🛛		
		Server	~	State	Status		
		🔀 WebSphere Proc	ess Server v7.0 at localhost	🖶 Stopped			

Open the AccountVerification interface by right-clicking and selecting Open. You will see that CustomerApplication is the data type that gets passed to the process.



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AccountVerification	3	
Interface		
Configuration		
-Operations		
Operations and their pa	rameters	
	Name	Туре
🔻 👹 InputCriterion		
DI Inputs	Input	CustomerApplication
COutputs	Output	Message

In the Business Integration view, expand FoundationLibrary > Data Type > creditserviceitems to locate the CustomerApplication business object. Double-click CustomerApplication to view its definition.

At run time, customer's application eligibility gets evaluated.

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🖩 Business Integration 🛛	- 6	CustomerApplication
🖅   🖶 🔁   🗞   🗉	- <b>€</b> ~	Business object
Integration Solutions	New	Configuration
<u>New</u> integration solution		
		e accountNumber string
		e applicationDate string
Projects 1	New E	e applicationDecision boolean
▷ ♦ CWYBC_JDBC		e comments string
B CWYFF_FlatFile		companyName string
FoundationLibrary		e contactFirstName string
Dependencies		contactLastName string
Integration Logic		contactPhoneNumber string
businessitems		creditRating string
⊿ 🗁 creditserviceitems		creditReportNeeded boolean
CustomerApplication		e creditRisk string
IntegrityConstraintFault		e creditScore int
MissingDataFault		e customerCity string
MultipleMatchingRecordsFa	ult	customerCountry string
ObjectNotFoundFault		e eligibleApplication boolean
PrimaryKeyPairType	=	e ineligibleReason string
RecordNotFoundFault		e pricingCode int
WBIFault		e pricingScore string
Interfaces		e productName string
Transformations Veb Service Ports		e requestAccountAmount int

The flow of AccountVerification business process is that the data gets routed to the Map to Ineligible invoke activity if the eligibleApplication parameter value is set to false. Otherwise, the business event flows to the Initial Review activity.

Double-Click on AccountVerification in the FoundationModule Assembly Diagram to take a closer look.



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AccountVerification	R	- [
FoundationModule >	Account/Verification	E
👌 😳 Palette		AccountVerific
k 🔍 🔍 🔍 🕪		🚡 Interface Partners  💠
送 Basic Actions	· · · · · · · · · · · · · · · · · · ·	AccountVerification
📌 Invoke	AccountVerification_Flow	Reference Partners 🖶
🚍 Assign		Determine Applicatio
🔁 Receive	😢 Account Verification Receive	InitialReviewPartner
Receive Choice		CreditCheckServicel
Reply	A Determine Application Eligibility	Manta Cradit Charle
U Wait		MaptocreditChecki
Empty Action	♦	MapCreditChecking     CreditPielsAssessme
(F Structures		CreditRiskAssessme
Scone	¢	Final Application Paul
Parallel Activities		GenerateDeclinePar
Sequence	ar initial review ar wap to mengione	RecordDoclinedAnn
Choice	•	Record Declined App     Record Declined App
While Loop		MantoInoligibleDart
🔊 Repeat Until Loop		RecordIneligibleApr
🎳 For Each		• KecordineligibleApp
😕 Faults	P Map to Credit Check P Record Ineligible Application	
🙆 Human Workflow		CustomerApplicati
🚨 Human Task	structure for the service of the ser	MessageVariable
Collaboration Sc		Customer∆nnlicati ▼
🖁 Task Flows 🚳 Buil	ld Activities 🔲 Properties 🙁 🖹 Problems 🎁 Server Logs) 🦇 Servers	⊽ ⊐ [
S→ Link - link2		
Description Expres	ssion Language: Same as Process (Java)	
Details Expre	ssion Type @ Visual @ Java	
	<pre>etrms (!(CustomerApplicationVariable_getRoolean("eligibleInplication")) != (true))) &amp;&amp; (!((CustomerApplication")) != (true))) </pre>	icationVariable.ge
		ioaoion.aiiabic.ge -

If the eligibleApplication parameter value is set to false, the request for an account creation gets rejected. The customer information gets archived in a local directory, as well as in a database.

**Note**: In the workshop we will not be exercising the "Map to Ineligible" path of the business process.

## Part 2: Test the imported SOA solution

In this section, you are going to test the given SOA solution.

- \_\_\_\_1. If the server is not running already, start the server.
  - \_\_\_\_a. In the Servers tab, right-click WebSphere Process Server v7 at localhost and select Start from the context menu.
  - b. Wait until the server status changes to Started. This may take up to 5 minutes. (Note: You may see an error in the logs related to the TAI, this is expected and we are not using this functionality)
- \_\_\_ 2. Deploy the imported applications.
  - \_\_\_\_a. In the Servers tab, right-click WebSphere Process Server v7 at localhost and

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select Add and Remove Projects... from the context menu.

b. In the Add and Remove Projects, click Add All.

Add and Remove Projects		
Add and Remove Projects Modify the projects that are con	figured on the server	
Move projects to the right to con	figure them on the server	
<u>Available projects:</u>		Configured projects:
	A <u>d</u> d >	AccountOpeningUIEAR     CreditCheckMediationServiceApp     CustomerMediationServiceApp     FoundationMediationServiceApp
	< <u>R</u> emove	<ul> <li>FoundationModuleApp</li> <li>FoundationServicesApp</li> <li>HumanTaskServicesApp</li> <li>IneligibleMediationServiceApp</li> <li>RouterMediationServiceApp</li> </ul>
	Add All >>	
	<< Remove All	4
☑ If server is started, publish cha	nges <u>i</u> mmediately	
0	< <u>B</u> ack <u>N</u> e	xt > Finish Cancel

\_\_\_\_c. Click Finish. Wait until it completes.

🔀 Task Flows 🙆 Build Activities 🔲 Properties 🔝 Pro	oblems 👔 Server Logs 👭 Servers	×
Server	State	Status
WebSphere Process Server v7.0 at localhost	🖡 Started	Synchronized
AccountOpeningUIEAR	🖡 Started	Synchronized
CreditCheckMediationServiceApp	🖡 Started	Synchronized
CustomerMediationServiceApp	🖡 Started	Synchronized
FoundationModuleApp	🖡 Started	Synchronized
FoundationServicesApp	🖡 Started	Synchronized
HumanTaskServicesApp	🖡 Started	Synchronized
IneligibleMediationServiceApp	🖡 Started	Synchronized
RouterMediationServiceApp	🖡 Started	Synchronized

\_ 3. Clear the Server Logs view before executing a test.

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\_\_\_\_\_a. In the menu bar in the Server Logs view, click the Clear Server Console icon which can be found towards the right of the task bar.

**Note**: This is an optional task. You do not have to perform this task; however, this makes it easier for you to find certain output messages during the test.

\_4. Create a new account opening request to test the CreateApplication task user interface JSP.

\_\_\_\_a. Open a Web browser, and type the following address in the address field:

https://localhost:9443/AccountOpeningUI.

This opens the login page for your account creation user interface. Depending on which browser is used you will need to handle the certificates by either selecting OK or yes when prompted. You may also need to, when the **Certificate Error** window appears, select the **Continue to this website (not recommended)** link to proceed to the authentication page.

b. At the Login window, enter **admin** in the **Name** as well as **Password** fields.

🗢 Back - 🌩 Forward - 💿 🚱 🏠 https://localhost:	9443/AccountOpeningUI/Login.jsp
	Louis to Rusinger User Client
	Login to Business Oser Client
	Enter user name and password, then click Login.
	Name: admin
	Password:
	Login

\_\_\_\_ c. Click Login.

\_\_\_\_ d. Click New on the main page.



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IIV.	
+ HOME	Business User Client
Business Case	
→ New	<ul> <li>Business Case</li> </ul>
My ToDo's	C New
→ Open	Select this to view a list of all the tasks that you can use to create a business case. For search
→ Claimed	criteria, you can provide additional information.
User: admin	✓ My ToDo's
→ Logout	<ul> <li>→ Open Select this to claim a task from a list of those that have been started.</li> <li>→ Claimed Select this to see a list of the tasks that have already been started and claimed. You can then complete a task by choosing it and inserting the necessary output data.</li> </ul>

\_\_\_\_e. CreateApplication is the only available task. Click the link.

<ul> <li>→ HOME</li> <li>Business Case</li> <li>→ New</li> <li>My ToDo's</li> <li>→ Open</li> </ul>	Business Cases > New Select a process or task for which you want to create a business case. Task CreateApplication
<ul> <li>→ Claimed</li> <li>User: admin</li> <li>→ Logout</li> </ul>	

\_\_\_\_\_f. On the CreateApplication screen, fill in the data fields. In order to demonstrate the data flow, use the **companyName of IBM** 

You may leave rest of the fields blank.

*Note*: The contents of these fields get populated by the **DetermineApplicantEligibility** service for IBM so that you do not need to enter values for all fields.

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→ HOME Business Case → New	Business Cases > New > CreateApplication Enter the values for the input data and optionally provide additional information to create your task.
My ToDo's	Input Data
→ Open → Claimed	accountNumber
User: admin	applicationDecision
→ Logout	comments
	companymame IBM contactFirstName
	contactLastName

\_\_\_\_g. Click Create. The Web browser will return to the **Business Cases** > **New** page.

The **AccountVerification** business process template defines the application review process, as follows: If the value entered for **eligibleApplication** is true, then the **CustomerApplication** data goes to the **InitialReview** activity. Otherwise, the data would flow through the **MaptoIneligible** activity.

In this test case, **eligibleApplication** is set to **true**. Therefore, the **InitialReview** activity gets invoked. This service is provided by **InitialReviewPartner**, which is the **InitialReview** business process in the **FoundationModule**.

The InitialReview business process invokes the **Initial Application Review** to-do (participating) task.

- \_\_\_ 5. Examine the output messages.
  - \_\_\_\_a. Click the **Server Logs** tab.
  - \_\_\_\_b. In order to see the entire logged messages, click the Select Records to Display icon, and then select All Record Types (Hierarchical) > with All Contents.

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<b>D</b> E	lusiness Integration - IBM WebSphere In	ntegration Developer 7.0 - C:\WID\workspace								×
File	Edit Navigate Search Project V	Window Help								
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	😤 Task Flows 🚳 Build Activities 🔳	Properties 🚼 Problems 🞁 Server Logs 🖄	6% Server	s	10 <b>-</b>   3	\$ ▼   12   ⊞ 🖂   🔂 🤤	\$ <b>-</b>			
10	Welcome WebSphere Process Ser	rver v7.0 at localhost 🛛		with only S	erver State and Error Contents	All Record Types (Hierarchical)	+			-1
G:	Console: WebSphere Proces	s Server v7.0 at localhost		with only S	erver State, Error and Warning Contents	All Record Types (Flattened)				2
	Show All Record Types (Hierarchical) > with All Contents (Page 18 of 18)		with All Contents		Invocation Types	•				
	Туре	Time Thread ID Contents Invocation End Type	Invocation End Types			-				
	🗐 🗐 Log message	Mar 9, 2011 20:08:46.817 EST	000	000000ae com.ibm.ws.webcontainer.servlet.ServletW Invocation Failure Typer	Invocation Failure Types		[			
	🔄 🗐 Log message	Mar 9, 2011 20:09:47.801 EST	000	000ae	com.ibm.ws.webcontainer.servlet.ServletW	Exception Types		[		
	📰 🗐 Log message	Mar 9, 2011 20:09:48.171 EST	000	000ae	com.ibm.ws.webcontainer.servlet.ServletW			[		
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	📃 🖃 Log message	Mar 9, 2011 20:11:26.750 EST	000	000c7	[Java] Determine Applicant Eligibilty - ends					
	🔄 💷 Log message	Mar 9, 2011 20:11:29.639 EST	000	000c7	CWTKE0044I: Originator becomes administra	tor of task InitialApplicationReview. U	Isually th	ni	-	
	📄 💷 Log message	Mar 9, 2011 20:15:27.388 EST	000	000a6	com.ibm.ws.webcontainer.servlet.ServletWra	apper init SRVE0242I: [AccountOpenin	gUIEAR]	[	+	
	Refresh rate: 5 seconds	🕞 Server started			Cross-component trace disabled					
1	¢									

c. You should see messages from the human task container, "CWTKE0044I: Originator becomes administrator of task InitialApplicationReview."

	usiness Integration - IBM WebSphere I	Integration Developer 7.0 - C:\WID\workspace				×
<u>F</u> ile	<u>E</u> dit <u>N</u> avigate Se <u>a</u> rch <u>P</u> roject	<u>W</u> indow <u>H</u> elp				
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	📰 📑 Log message	Mar 9, 2011 20:09:47.801 EST	000000ae	com.ibm.ws.webcontainer.servlet.ServletWrapper init SRVE0242I: [AccountOpeningUIEAR] [		
	📰 🗐 Log message	Mar 9, 2011 20:09:48.171 EST	000000ae	com.ibm.ws.webcontainer.servlet.ServletWrapper init SRVE0242I: [AccountOpeningUIEAR] [		
	📰 📑 Log message	Mar 9, 2011 20:11:17.495 EST	000000a6	CWTKE0044I: Originator becomes administrator of task CreateApplication. Usually this happ		
	🗐 📑 Log message	Mar 9, 2011 20:11:18.087 EST	000000c7	CWTKE0044I: Originator becomes administrator of task AccountVerification. Usually this ha		
	📄 📑 Log message	Mar 9, 2011 20:11:26.749 EST	00000c7	[Java] Determine Applicant Eligibility - begins		
	🗐 🗐 Log message	Mar 9, 2011 20:11:26.750 EST	000000c7	[Java] Determine Applicant Eligibility - ends		
	📃 💷 Log message	Mar 9, 2011 20:11:29.639 EST	00000c7	CWTKE0044I: Originator becomes administrator of task InitialApplicationReview. Usually thi		
	📄 💷 Log message	Mar 9, 2011 20:15:27.388 EST	000000a6	com.ibm.ws.webcontainer.servlet.ServletWrapper init SRVE0242I: [AccountOpeningUIEAR] [	-	
	Refresh rate: 5 seconds	🔓 Server started		Cross-component trace disabled		-
10	•					

*Note*: Log messages with the CWTK prefix indicate human task-related messages. The "I" indicates that it is an informational message. Here is the definition of CWTKE0044I: CWTKE0044I: Originator becomes administrator of task {0}. Usually this happens, because no people assignment criteria is defined for the administrators of the task, or because its usage returns an empty set of users.

Explanation: Because administrator could not be found, the task's originator will

also be the task's administrator. This can occur when either the task's people

assignment criteria (staff verb) for administrator return an empty set of users, or

when this people assignment criteria are not defined.

**User Action**: If this is not what you want, check the people assignment criteria (staff verb): Maybe the people assignment criteria need to be changed, or you need to define a people assignment for the administrators of the task.

\_ 6. Complete the InitialApplicationReview work item.

\_\_\_\_a. In the Web application, click Open under My ToDo's. There should be a work item, InitialApplicationReview, ready for completion.

IIN.				
+ HOME	My ToDo's > Open			
Business Case	Select a task to see more details and	finally claim the task.		
→ New				
My ToDo's	Task Name 💠	Description 🗘	First Activated 🗘	Originator 🗘
Open	→ InitialApplicationReview		3/9/2011 8:11:29 PM EST	admin
→ Claimed	Items found: 1 Rege 1 of	of 1 ltems per page:	20 🔻	
User: admin → Logout	Refresh			

\_\_\_\_ b. Select the link, and click Claim.

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\_\_\_\_ c. There is no need to change the Output Data; therefore, click the Complete button without making any modifications.

contactFirstName	Landon
contactLastName	Donovan
contactPhoneNumber	547-312-3172
creditRating	
creditReportNeeded	
creditRisk	
creditScore	0
customerCity	Boston
customerCountry	USA
eligibleApplication	
ineligibleReason	
pricingCode	34
pricingScore	
productName	Pens
requestAccountAmount	30000
Complete Save Rel	ease

d. Examine the output in the Server Logs view.

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88 Task Flows 🗞 Build Activities	s 🔲 Properties 🖹 Problems 🔞 Server Logs 🛛	4% Servers	🏮 -   🏇 -   12  🖽 🖽   순 - 🖉 🖉 🥔 - 🖉 🐼 -	~ - 8	p)
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Туре	▲ Time	Thread ID	Contents		1
	Mar 9, 2011 20:22:23.478 EST	000000c8	CHFW0019I: The Transport Channel Service has started chain HttpOutboundChain:localhost		
E Log message		000000-8	com.ibm.ws.ffdc.impl.FfdcProvider logIncident FFDC1003I: FFDC Incident emitted on C:\Pr		
FFDC	Mar 9, 2011 20:22:23.725 EST	00000000			
FFDC	Mar 9, 2011 20:22:23.725 EST Mar 9, 2011 20:22:23.732 EST	000000c8	com.ibm.ws.ffdc.impl.FfdcProvider logIncident FFDC1003E FFDC Incident emitted on C:\Pr		- 10
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FFDC FFDC FFDC FFDC FFDC FFDC	Mar 9, 2011 20:22:23.725 EST Mar 9, 2011 20:22:23.732 EST Mar 9, 2011 20:22:23.754 EST Mar 9, 2011 20:22:23.761 EST	000000c8 000000c8 000000c8	com.ibm.ws.ffdc.impl.FfdcProvider logIncident FFDC1003E FFDC Incident emitted on CAPr com.ibm.ws.ffdc.impl.FfdcProvider logIncident FFDC1003E FFDC Incident emitted on CAPr com.ibm.ws.ffdc.impl.FfdcProvider logIncident FFDC103E FFDC Incident emitted on CAPr		
FFDC FFDC FFDC FFDC FFDC FFDC FFDC FFDC	Mar 9, 2011 20:22:23.725 EST Mar 9, 2011 20:22:23.732 EST Mar 9, 2011 20:22:23.754 EST Mar 9, 2011 20:22:23.761 EST Mar 9, 2011 20:22:24.177 EST	000000c8 000000c8 000000c8 000000c8	com.ibm.ws.ffdc.impl.FfdcProvider logIncident FFDC10031; FFDC Incident emitted on C:\Pr com.ibm.ws.ffdc.impl.FfdcProvider logIncident FFDC10031; FFDC Incident emitted on C:\Pr com.ibm.ws.ffdc.impl.FfdcProvider logIncident FFDC10031; FFDC Incident emitted on C:\Pr com.ibm.ws.ffdc.impl.FfdcProvider logIncident FFDC10031; FFDC Incident emitted on C:\Pr		
Cug message Cug message Cug FFDC Cug Sup FF	Mar 9, 2011 20:22:23,725 EST Mar 9, 2011 20:22:23,724 EST Mar 9, 2011 20:22:23,754 EST Mar 9, 2011 20:22:23,761 EST Mar 9, 2011 20:22:24,177 EST Mar 9, 2011 20:22:24,542 EST	000000c8 000000c8 000000c8 000000c8 000000c8	com.ibm.ws.ffd.cimpl.Ffd.cProvider logIncident FFDC1003F FFDC Incident emitted on C:\Pr com.ibm.ws.ffd.cimpl.Ffd.cProvider logIncident FFDC1031; FFDC Incident emitted on C:\Pr com.ibm.ws.ffd.cimpl.Ffd.cimpl.Ffd.cProvider logIncident FFDC1031; FFDC10dent emitted on C:\Pr com.ibm.ws.ffd.cimpl.Ffd.cimpl.Ffd.cProvider logIncident FFFDC1031; FFDC10dent emitted on C:\Pr CWWBE0003E: A runtime fault was returned by the implementation of activity 'CreditCheck		

You should see the exceptions being thrown in the Server Logs view. Now, your task is to troubleshoot this runtime error.

## Part 3: Troubleshoot the AccountVerification service failure

For the lab purpose, the problem introduced here is a very simple one to troubleshoot. The main purpose of this section is to demonstrate different tools that are available for you to troubleshoot runtime problems.

- \_\_\_\_1. Rerun the test with cross-component trace enabled.
  - \_\_\_\_a. Select the Server Logs tab.

\_ b. Access cross-component trace settings by clicking the View Menu arrow at the far right upper corner of the Server Logs toolbar.

e <u>E</u> dit <u>N</u> avigate Se <u>a</u> rch <u>P</u> roject	<u>W</u> indow <u>H</u> elp			
3•8618188	8 🖋 • 🗍 😓 • 👄 •			😸 Business Inte
88 Task Flows 🔕 Build Activities	🗇 Properties 🔝 Problems 🔠 Server Logs 😣	4% Servers	🔓 🕶 🕀 🖓 🕀 🚭 🖉 🗸 📾	
Welcome WebSphere Process	Server v7.0 at localhost 🗵		Disabled	Cross-Compone
Console: WebSphere Proc	cess Server v7.0 at localhost	Enabled	Find	
Show All Record Types (Hierarchical) > with All Contents (Page 1 of 1)			Enabled with Data Snapshot	Sort Column By
Туре	▲ Time	Thread ID	Contents	Show Welcome
Type	<ul> <li>Time Mar 9, 2011 20:23:33.504 EST</li> </ul>	Thread ID 00000058	Contents I com.ibm.ws.monitoring.policy.interaction.ObserversManagerImpl register(observerFactor	Show Welcome
Type	<ul> <li>Time</li> <li>Mar 9, 2011 20:23:33.504 EST</li> <li>Mar 9, 2011 20:23:33.504 EST</li> </ul>	Thread ID 00000058 00000058	Contents I com.ibm.ws.monitoring.policy.interaction.ObserversManagerImpl register(observerFactor.: I com.ibm.ws.monitoring.policy.bootstrap.ObserversBootStrap isObserverEnabled) CWLBS	Show Welcome
Type Log message Log message Log message	<ul> <li>Time</li> <li>Mar 9, 2011 20:23:33.504 EST</li> <li>Mar 9, 2011 20:23:33.504 EST</li> <li>Mar 9, 2011 20:23:33.509 EST</li> </ul>	Thread ID 00000058 00000058 00000058	Contents I com Jbm.ws.monitoring.policy.interaction.ObserversManagerImpl register(observerFactor I com Jbm.ws.monitoring.policy.bootstrap.ObserversBootStrap isObserverEnabled() CWLBs I com Jbm.ws.monitoring.policy.interaction.ObserversManagerImpl register(observerFactor	Show Welcome
Type Log message Log message Log message Log message	<ul> <li>Time</li> <li>Mar 9, 2011 20:23:33.504 EST</li> <li>Mar 9, 2011 20:23:33.504 EST</li> <li>Mar 9, 2011 20:23:33.509 EST</li> <li>Mar 9, 2011 20:23:33.509 EST</li> </ul>	Thread ID 00000058 00000058 00000058 00000058	Contents I com.ibm.ws.monitoring.policy.interaction.ObserversManagerImpl register(observerFactor I com.ibm.ws.monitoring.policy.interaction.ObserversManagerImpl register(observerFactor I com.ibm.ws.monitoring.policy.interaction.ObserversManagerImpl register(observerFactor I com.ibm.ws.monitoring.policy.bootstrap.ObserversBootStap registerSCAD_CVUBS0025E T	Show Welcome
Type      Source Log message	<ul> <li>Time</li> <li>Mar 9, 2011 20:23:33 504 EST</li> <li>Mar 9, 2011 20:23:33 504 EST</li> <li>Mar 9, 2011 20:23:33 509 EST</li> <li>Mar 9, 2011 20:23:33 509 EST</li> <li>Mar 9, 2011 20:23:33 509 EST</li> </ul>	Thread ID 00000058 00000058 00000058 00000058 00000058	Contents I com Jbm. ws.monitoring.policy.interaction.Observers?Manager/mpl register(observerFactoria: I com Jbm. ws.monitoring.policy.bootstrap.Observers?BootStrap.icObserverEnabled) CWLBS I com Jbm. ws.monitoring.policy.interaction.Observers?Manager/mpl register(observerFactor I com Jbm. ws.monitoring.policy.bootstap.Observers?Manager/mpl register(observers?Manager/mpl register(observers?Manager/mpl register)) I com Jbm. ws.monitoring.policy.bootstap.Observers?Manager/mpl register(observers?Manager/mpl register)) I com Jbm. ws.monitoring.policy.bootstap.Observers?Manager/mpl register)	Show Welcome
Type  Constant of the stage  Constant of the	<ul> <li>Time</li> <li>Mar 9, 2011 20:23:33.504 EST</li> <li>Mar 9, 2011 20:23:33.504 EST</li> <li>Mar 9, 2011 20:23:33.509 EST</li> </ul>	Thread ID 00000058 00000058 00000058 00000058 00000058 00000058	Contents I com Jbm.ws.monitoring.policy.interaction.ObserversManagerImpl register(observerFactoria I com Jbm.ws.monitoring.policy.bootstrap.ObserversBootStrap isObserverEnabled() CWLBS I com Jbm.ws.monitoring.policy.interaction.ObserversManagerImpl register(observerFactoria I com Jbm.ws.monitoring.policy.bootstrap.ObserversBootStrap isOBmiEnabled() CWLBS00281 I com Jbm.ws.monitoring.policy.bootstrap.ObserversBootStrap isMmEnabled() CWLBS00281 I com Jbm.ws.monitoring.policy.bootstrap.ObserversBootStrap isMmEnabled	Show Welcome
Type Solog message Constraints of the stage Constraints of the stag	Time     Mar 9, 2011 20:23:33.504 EST     Mar 9, 2011 20:23:33.504 EST     Mar 9, 2011 20:23:33.509 EST     Mar 9, 2011 20:23:33.519 EST     Mar 9, 2011 20:23:33.519 EST	Thread ID 00000058 00000058 00000058 00000058 00000058 00000058	Contents I com Jihm xx:monitoring.policy.interaction.ObserversManagerImpl register(observerFactor= I com Jihm xx:monitoring.policy.interaction.ObserversBootStrap isObserverFabled) CVLBS I com Jihm xx:monitoring.policy.interaction.ObserversBootStrap registerSCA() CVLBS0025F T. I com Jihm xx:monitoring.policy.bootstrap.ObserversBootStrap isOmIfabled() CVLBS0025F. I com Jihm xx:monitoring.policy.bootstrap.ObserversBootStrap isOmIfabled() CVLBS0025F. I com Jihm xx:monitoring.policy.bootstrap.ObserversBootStrap isOmIfabled() CVLBS0025F. I com Jihm xx:monitoring.policy.bootstrap.ObserversBootStrap isImfabled() CVLBS0025F. I RA90018F. The trace state has changed. The new trace state is 'arinfo.	Show Welcome

\_\_\_\_ c. Enable cross-component trace by selecting Cross-Component Trace State > Enabled with Data Snapshot from the view menu.

*Note*: You may want to clear the Server Logs view again before sending another event.



d. From the JSP page, send the test data for company, IBM again, by creating a new entry. Now that you enabled the cross-component trace, you can see the event flow.

 e. In the Server Logs view, the focus should be on the End component (InitialApplicationReview:InputCriterion). Right-click the entry and select Show Component in Assembly Diagram from its context menu.

Туре	▲ Time	Thread ID C	Contents
🖂 🖾 Log message	Mar 9, 2011 20:23:33:509 EST	00000058 1	com.ibm.ws.monitoring.policy.bootstrap.ObserversBootStrap.registerSCA() CWLBS00258 T.
D Log message	Mar 9, 2011 20:23:33.509 EST	00000058 1	com.ibm.ws.monitoring.policy.bootstrap.ObserversBootStrap isPmiEnabled() CWLBS00288.
🔄 🖻 Log message	Mar 9, 2011 20:23:33:509 EST	00000058 1	com.ibm.ws.monitoring.policy.bootstrap.ObserversBootStrap isArmEnabled() CWLBS00291.
🔄 📴 Log message	Mar 9, 2011 20:23:33.519 EST	00000058 T	RAS0018I: The trace state has changed. The new trace state is "=info.
📰 😼 Log message	Mar 9, 2011 20:23:56.843 EST	00000058 T	RA90018I: The trace state has changed. The new trace state is *= info.
a 🔄 🐾 Invocation sequence (CreateApplication:null)	Mar 9, 2011 20:50:59.008 EST	000000ae	
a 📄 \varTheta Start invoke (CreateApplication:null)	Mar 9, 2011 20:50:59.008 EST	000000ae 5	tart of the invocation of operation CreateApplication:null in module FoundationModule.
a 🔲 🤤 Start component (CreateApplication:null)	Mar 9, 2011 20:50:59.024 EST	000000ee 5	tart of the component processing of operation CreateApplication:null in module Foundati
Image: Start invoke (AccountVerification:InputCriterion)	Mar 9, 2011 20:50:59.052 EST	000000ae S	tart of the asynchronous invocation of operation AccountVerificationdnputCriterion in mo.
Start component (AccountVerification(InputCriterion)	Mar 9, 2011 20:50:59.225 EST	000000d4 S	tart of the component processing of operation AccountVerification/InputCriterion in modu
📰 🔛 Log message	Mar 9, 2011 20:50:59.232 EST	000000d4 C	WTKE00441: Originator becomes administrator of task AccountVerification. Usually this ha.
🔄 😔 In business process	Mar 9, 2011 20:50:59.278 EST	000000d4 0	7e8a3dd-ddab-4640-be64-54345fc78d94 STATE fcc5115f-f67b-4880-9499-554510137551 d9
E e Start business process (AccountVerification)	Mar 9, 2011 20:50:59.612 EST	000000c8 S	tart of processing for business process AccountVerification:_PIS003012e.9d75b09b.a5fe573.
End business process (AccountVerification)	Mar 9, 2011 20:50:59.828 EST	000000c8 E	nd of processing for business process AccountVerification:_PI:9003012e.9d75b09b.a5fe573f.
Start business process (AccountVerification)	Mar 9, 2011 20:51:00.333 EST	000000c8 S	tart of processing for business process AccountVerification:_PI5003012e.9d75b09b.a5fe573.
End business process (AccountVerification)	Mar 9, 2011 20:51:00.335 EST	000000c8 E	nd of processing for business process AccountVerification:_PE9003012e.9d75b09b.a5fe573f.
Image: A market and A market	Mar 9, 2011 20:51:00.495 EST	000000c8 S	tart of processing for business process AccountVerification:_PE9003012e.9d75b09b.a5fe573.
Image: Start invoke (InitialApplicationReviewInputCriterion)	Mar 9, 2011 20:51:00.526 EST	000000c8 S	tart of the asynchronous invocation of operation InitialApplicationReview.InputCriterion in.
a = O Start import (InitialApplicationReview:InputCriterion)	Mar 9, 2011 20:51:00.579 EST	000000c8 S	tart of the import processing of operation InitialApplicationReviewInputCriterion in modul.
a 📰 😑 Start component (InitialApplicationReviewsInputCri	i Mar 9, 2011 20:51:00.778 EST	00000044 5	tart of the component processing of operation InitialApplicationReviewdhputCriterion in
🔄 📴 Log message	Mar 9, 2011 20:51:00.833 EST	000000d4 C	WTKE0044E Originator becomes administrator of task InitialApplicationReview. Usually thi.
End component (InitialApplicationReviewInputCrit	t Marg	61 C	of the component processing of operation InitialApplicationReview.InputCriterion in m.
End import (InitialApplicationReviewInputCriterion)	Mar9 Copy selected kecords	CBI+C	of the import processing of operation InitialApplicationReviewUnputCriterion in modul.
End invoke (InitialApplicationReviewInputCriterion)	Mar S Copy All Records	Ctrl+Shift+C	of the asynchronous invocation of operation InitialApplicationReviewInputCriterion in .
End business process (AccountVerification)	Mar 9 Show Component in Assembl	Disgram	of processing for business process AccountVerification:_P19003012e.9d75b09b.a5fe573f.
End component (AccountVerificationInputCriterion)	Mar 9	y orogram	of the component processing of operation AccountVerificationInputCriterion in modul.
End invoke (AccountVerification:InputCriterion)	Mar 9 Properties		of the asynchronous invocation of operation AccountVerification:InputCriterion in mod
End component (CreateApplication:null)	Mar 9, 2011 20100390103 EST	00000020 E	nd of the component processing of operation CreateApplication:null in module Foundatio.
End invoke (CreateApplication:null)	Mar 9, 2011 20:50:59.115 EST	000000ae E	nd of the invocation of operation CreateApplication.null in module FoundationModule.

f. The HumanTaskServices assembly diagram should be opened with the InitialApplicationReview human task component highlighted.



The InitialApplicationReview work item is now ready for you to claim and complete.

- 2. Claim and complete the InitialApplicationReview work item.
  - \_\_\_\_a. In the JSP application, click Open under My ToDo's. There should be a work item, InitialApplicationReview, ready for completion.



→ HOME Business Case → New	My ToDo's > Open Select a task to see more details and finally claim the task.
My ToDo's → Open → Claimed	Task Name        Description        First Activated          → InitialApplicationReview       3/9/2011 8:51:01 PM EST         Items found: 1       Page 1 of 1       Items per page: 20 →
User: admin → Logout	Refresh

- \_\_\_\_b. Select the link, and click Claim.
- \_\_\_\_ c. Click the Complete button without making any modification.
- \_\_\_\_d. Examine the output in the Server Logs view.
- \_\_\_\_e. In the menu bar in the Server Logs view, click the Expand icon.



\_\_\_\_\_f. Locate the very first Exception message, and double-click the entry to view its contents. The exception will be found in a Log message with the error code CWWBE0057I

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Properties	
📑 🕹 Log m	essage
Time:	Mar 11, 2011 18:34:07.174 EST
Thread ID:	000009ь
Contents:	
	CWWBE0057I: Activity 'CreditCheckService' of processes '_PI:9003012e.a744bf4d.a5fe573f.92c60100' has been stopped because of an unhandled failure. com.ibm.bpe.api.RuntimeFaultException: CWWBE0003E: A runtime fault was returned by the implementation of activity 'CreditCheckService'. javax.xml.ws.WebServiceException: java.net.ConnectException: HTTP (404 ) Not Found address : https://localhost:9443/CreditCheckServiceWeb/sca/CreditCheckServiceExport
0	ОК

This message indicates that the target service was not found.

\_\_\_\_g. Right-click the Start import(CreditCheckService:InputCriterion) right above the first Fail Invoke, and select Show Component in Assembly Diagram.

Туре		+ Time	Thread ID	Contents	
	A III I Start import (InitialApplicationReviewInputCriterion)	Mar 9, 2011 20:51:00.579 EST	000000-8	Start of the import processing of on	eration InitialApplicationReviewInputCriterion in modul.
	A I G Start component (InitialApplicationReview:InputCri	Mar 9, 2011 20:51:00.778 EST	00000044	Start of the component processing	of operation InitialApplicationReview.InputCriterion in
	E Dog message	Mar 9, 2011 20:51:00.833 EST	000000d4	CWTKE0044I: Originator becomes a	dministrator of task InitialApplicationReview. Usually thi.
	End component (InitialApplicationReview:InputCrit	Mar 9, 2011 20:51:01.201 EST	00000044	End of the component processing of	of operation InitialApplicationReviewInputCriterion in m.
	Content in the second sec	Mar 9, 2011 20:51:00.633 EST	00000078	End of the import processing of op-	eration InitialApplicationReview:InputCriterion in modul
	End invoke (InitialApplicationReview:InputCriterion)	Mar 9, 2011 20:51:00.678 EST	000000c8	End of the asynchronous invocation	of operation InitialApplicationReviewInputCriterion in .
	End business process (Account/Verification)	Mar 9, 2011 20:51-00.681 EST	000000c8	End of processing for business proc	ess AccountVerification: P19003012e.9d75b09b.a5fe573f.
	Start business process (Account/Verification)	Mar 9, 2011 20:58:49.076 EST	000000-8	Start of processing for business pro-	cess AccountVerification: PI/9003012e.9d75b09b.a5fe573.
	A I G Start invoke (MaptoCreditCheck:InputCriterion)	Mar 9, 2011 20:58:49:147 EST	000000c8	Start of the asynchronous invocatio	n of operation MaptoCreditCheckInputCriterion in mod.
	The Start import (MaptoCreditCheckInputCriterion)	Mar 9, 2011 20:58:49:203 EST	00000078	Start of the import processing of on	eration MantoCreditCheckInputCriterion in module Fo.
	End import (MaptoCreditCheckInputCriterion)	Mar 9, 2011 20:58:49:253 EST	000000-8	End of the import processing of op-	eration MaptoCreditCheckInputCriterion in module Fou-
	End invoke (MaptoCreditCheck:InputCriterion)	Mar 9, 2011 20:58:49 298 EST	8500000	End of the asynchronous invocation	of operation MaptoCreditCheckInputCriterion in mod.
	End business process (AccountVerification)	Mar 9, 2011 20:58:49 323 EST	000000-8	End of processing for business proc	ess AccountVerification: PI:9003012e.9d75b09b.a5fe573f.
	A T Start business process (Account/Verification)	Mar 9, 2011 20:58:49.847 EST	00000078	Start of processing for business pro	cess AccountVerification: PI9003012e.9d75b09b.a5fe573.
	A C Start invoke (CreditCheckServiceImportInputCriterion)	Mar 9, 2011 20:58:49.872 EST	00000078	Start of the invocation of operation	CreditCheckServiceImport/InputCriterion in module Fou-
	A T A Start import (CreditCheckServiceImportInputCriterion)	Mar 9, 2011 20:58:49.883 EST	000000-8	Start of the import processing of on	eration CreditCheckServiceImportInputCriterion in mod
	E Dog message	Mar 9, 2011 20:58:49.890 EST	8-000000	CHEW00191: The Transport Channel	Service has started chain HttpOutboundChain localhost
	E FEDC	Mar 9, 2011 20:58:49,938 EST	00000078	com.ibm.ws.ffdc.impl.FfdcProvider	Includent EEDC1003I: EEDC Incident emitted on C:\Pr-
	III BE FEDC	Mar 9, 2011 20-58-40 042 EST	000000/8	com ibm ws fide impl EfdeProvider	Includent FEDC1003I: FEDC Incident emitted on CAPr.
	Fail import (CreditCheckServiceImport:InputCriterion)	Mar 9, 2011 20:58:49.944 EST	0000024	A follow accurated during the imper	<ul> <li>processing of operation CreditCheckServiceImportIng.</li> </ul>
	Eail invoke (CreditCheckSenviceImport:InputCriterion)	Mar 9, 2011 20:58:49 946 EST	Copy Selected Records	Ctrl+C	tion of operation CreditCheckServiceImport/InputCriteri
	End business process (Account/enfication)	Mar 9 2011 20-58-49 947 EST	Conv All Records	Ctrl+Shift+C	ss Account/enfication: PI-9003012e 9d75b09b a5fe573f
	A T O Start human process (Account/Varification)	Mar 9, 2011 20-58-50 117 EST	copy ranneed as	current c	are Account/arification: PI-9003017a 9-075h09b a5fa573
	B Lon message	Mar 0, 2011 20-58-50 261 EST	Show Component in Ass	embly Diagram	turned by the implementation of activity 'CreditCheck
	End husiness process (AccountVerification)	Mar 9, 2011 20-58-50 279 EST			es AccountVerification: 010003012e 0475b00h a5fe573f
			Properties		and a second a second s

h. The FoundationModule assembly diagram should open, and the CreditCheckService import component with Web service binding should be highlighted.





				- 🛈 📴 DetermineApplicantEligibility 🔪
				0 🗟 InitialApplicationReview
				🕲 🕼
				🚺 🗟 MaptoCreditCheck
				MapCreditCheckingResult
			1.1	🕕 😰 CreditRiskAssessmentImport
AccountVerificationExport	CreateApplication 1.1	🕕 文 AccountVerification	1.1 1.1 1.1	0 🗟 RequestMoreDocumentation

\_ i. Right-click the CreditCheckService import component and select Show in Properties. This displays the properties of the import component.

\_\_\_\_j. Select the Binding tab.

😤 Import: CreditCheckServiceImport (Web Service Binding)								
Description	Transport:	SOAP1.1/HTTP						
Details	Address	https://localhoct/0/13/CreditCheckSenviceWah/sca/CreditCheckSenviceEvport	1					
Binding	Address	preps//iocamosos+rs/encarces/encerces/scarces/ence						
Policy Sets	Port:	CreditCheckServiceExport1 CreditCheckServiceHttpPort	Browse					
JAX-WS Handlers			browsen					
Propagation	Service:	CreditCheckServiceExport1_CreditCheckServiceHttpService						
All Qualifiers	Namespace:	http://FoundationLibrary/creditcheckservice/CreditCheckService	]					
	Advanced pro	Advanced properties						

\_\_\_\_k. The exception indicated that the

https://localhost:9443/CreditCheckServiceWeb/sca/CreditCheckServiceExport is not running.

- \_\_\_\_3. Launch the administration console to see if the CreditReportService exists.
  - \_\_\_\_a. Launch Internet Explorer and enter the following address to open the administrative console:

### https://localhost:9043/ibm/console

- \_\_\_\_b. Select OK or Yes on any prompts to proceed to the login page.
- \_\_\_\_ c. Enter **admin** in the **User ID** and **Password** fields and click Log in.
- \_\_\_\_d. Expand **Applications** and select Enterprise Applications from the left pane.



Notice that CreditCheckService application cannot be found on the server.

Guided Activities	Enterprise Applications							
Servers	Use this	page to manage installed applications. A single application can be deploy	red onto multiple servers.					
Applications	E Prefe	erences						
New Application     Application Types     WebSphere enterprise applications     Descent applications	Start     Stop     Install     Update     Rollout Update     Remove File     Export     Export DDL     Export File            ि         14         42         1         2           1         44         42           1           Export File							
Assets	Select	Name 🗘	Application Status 🙆					
SCA modules	You ca	n administer the following resources:						
		AccountOpeningUIEAR	<b>₽</b>					
Resources		AppScheduler	•					
		BPCECollector anode server1	€					
Environment		BPCExplorer gnode server1	\$					
Integration Applications		RDEContainer anode server1	4					
System administration								
Users and Groups		BPMAdministrationWidgets gnode server1	\$					
Monitoring and Tuning		BSpaceEAR gnode server1						
Troubleshooting		BSpaceWebformsEnabler_gnode_server1	<b>∌</b>					
Envice integration     Service integration		BusinessRulesManager	•					
1 UDDI		BusinessRules gnode server1	<b>₽</b>					
		BusinessSpaceHelpEAR_gnode_server1	•					

- \_4. Check the entries in the Failed Event Manager.
  - \_\_\_\_\_a. In the Server Logs view, there was an entry indicating a failure incident occurred. Let'okays now look at the "failed event manager"

\_\_\_\_b. In the administration console, expand Integration Applications and select Failed Event Manager in the left pane.

\_ c. Select Get all failed events under the Failed events on this server section.



\_\_\_\_\_d. You should see at least two failed events, since you sent events twice.



Refresh         Get all         New search         Resubmit         Resubmit with trace         Delete         Delete expired events         Clear all									
Select	Event ID 🛟 _	Event type 💲	Module 🗘	Component 🗘	Operation 🗘	Failure time 💲	Event status 🔅		
	_PI:9003012e.9d5	BPC	FoundationModule	AccountVerificat		2011-03-09 20:22	failed		
	_PI:9003012e.9d7	BPC	FoundationModule	AccountVerificat		2011-03-09 20:58	failed		

5. Use the Business Space to check the system health.

Business Space is a common interface for application users to create, manage, and integrate Web interfaces across the WebSphere Business Process Management portfolio. This tool is mostly for business users.

\_ a. In the Servers view, right-click WebSphere Process Server v7 and select Launch > Business Space.

		<ul> <li>View and Publish Changes to Server</li> <li>Manage Server Profiles</li> <li>Server configuration</li> <li>Universal test client</li> <li>Administration</li> </ul>	•	
		Launch	,	Failed Event Manager
🖀 Task Flows 🔞 Build Activities 🖾 Properties 🕼	Problems 😰 Server Lo	Add and Remove Integration Solution Projects WebSphere Business Monitor Event Recording	*	Relationship Manager Common Base Event Browser
Server	State	Properties	Alt+Enter	Business Space
WebSphere Process Server v7.0 at localhost	Started 4			Business Process Choreographer Explorer
AccountOpeningUIEAR	Started	Synchronized		Business Rules Manaper
TreditCheckMediationServiceApp	Started	Synchronized		Consultan Collina
CustomerMediationServiceApp	Started	Synchronized		samples Gallery
FoundationModuleApp	Started	Synchronized		Component Test Explorer
FoundationServicesApp	Started	Synchronized		
Human Task Canadam	B. Countral	Complementaria		

\_\_\_\_b. When the Security Alert dialog box appears, click Yes to continue.

\_\_\_\_ c. At the login window, enter admin for both user ID and password.

\_\_\_\_d. At the Welcome panel, click the **Manage Spaces** link in the menu.

Changing the Way Business and IT Leaders Work

Impact<sub>2</sub>

Business Space - Getting Started - Mozilla Firefox: IBM Edition	1				
Eile Edit View Higtory Bookmarks Tools Help					
🔇 🖸 C 🗙 🏠 🚰 📑 localhost https://lo	ocalhost:9443/mum/enabler#pid	= C0A8015A9A658ED66AF355A130FB42000003&	습🖬 - 😫	▼ Google	ب 🗶 🧟
🔒 Google 🔜 IBM 🔜 Misc 🍶 eCommerce 副 Android 🔜 I	IBM				
IBM CareerSmart - search 🛛 🛛 🔤 IBM Service Request - C	Op 🛛 🧀 IBM Redbooks   W	'ebSphe 🗴 📝 IBM Redbooks   WebSphe 🗴 📄 My open ToDo's 👘 🔅	Integrated Solutions C	.ons × 📴 Business Space - Ge	ettin × + -
Home 🗄 Go to Spaces 🗄 Manage Spaces 🗄 Actions 👻				admin	Help   Logout 📤
🏠 Welcome to Business Space					
Getting Started 🖃 💠					Edit Page ≫
Spac	ce Manager		×		
	All Spaces	Create Space Import Space Filter Spaces		See the features of Business Space	
F 100 100 100 100 100 100 100 100 100 10	Favorite Spaces	Problem Determination	Actions		
		A business space from which you can view health information about modul		The Andrew Named and	
Welcome to Business Sp where you can model, simulate, execute, rapidly cha		Module Health Use Module Problem Determination to view health information ab	Actions		
		System Health The System Health provides a snapshot of your overall system he	Actions	Watch	
Learn >>>		Service Administration Owned by admin Service Administration is a business space from which you can monitor, ad	Actions	An De Barrier and Annual Annua	
BRIDE ACCOUNTS OF		Solution Administration     Owned by admin     For managing and administering your business applications and solutions	Actions		
		Welcome to Business Space     Owned by admin     Welcome to Business Space	Actions		
			Done		
Dope				A 69 S 1	-

\_\_\_\_e. Now select **System Health** from under the **Problem Determination** section.

\_\_\_\_f. Click the Applications tab to see which services have been started on the server.

odule Health Syst	tem Health 🖃 🕂				
System Health				$\sim$	
Topology		System Applications		Applications	
Applications			Showing 10 of 10	10 started 0 stopped	
Status	Application Name	De	ployment Target	Module	
	AccountOpeningUIEAR	no	de=qnode,server=server1	module	
	CreditCheckMediationServiceApp	no	de=qnode,server=server1	CreditChec	kMediationService
	CustomerMediationServiceApp	no	de=qnode,server=server1	CustomerM	ediationService
	FoundationModuleApp	no	de=qnode,server=server1	Foundation	Module
	FoundationServicesApp	no	de=qnode,server=server1	Foundation	Services
	HumanTaskServicesApp	no	de=qnode,server=server1	HumanTas	kServices
	IBMUTC	no	de=qnode,server=server1		
	IneligibleMediationServiceApp	no	de=qnode,server=server1	IneligibleMe	diationService
	RouterMediationServiceApp	no	de=qnode,server=server1	RouterMedi	ationService
	TestController70	no	de=qnode,server=server1		
				1-10 10	
Failed Events			1 failed events		
Module Name	Module Version	Cell Identifier	Total Failures	SCA Failur	es BPC Failures
FoundationModul	le		3	0	3

*Note*: Notice that the number of Total Failures in the Failed Events pane is the same as what the Failed Event Manager displayed.



When you are done exploring the Business Space, close it.

- 6. The AccountVerification service was implemented as a long-running business process. Launch the Business Process Choreographer Explorer to see current running process instances.
  - \_\_\_\_a. Launch Internet Explorer and enter the following address to open the administrative console:

#### http://localhost:9080/bpc/

\_\_\_\_b. At the login page, enter admin in the User ID and Password fields and click Login.

Welcome to Business F	Process Choreographer Explorer.
The page you requested is onl	y available to registered users. Enter your
username and	password and click Login.
User Name:	admin
Password:	•••••

### \_ c. Click Started By Me under Process Instances.



You should see two running instances which have not been completed due to the failed events.



\_\_\_\_\_d. Select one of the running instances to view detailed information.

e. Click the Activities tab, and notice that the CreditCheckService activity is in stopped state. In other words, this process instance has failed, and the process cannot continue due to failure to invoke the external Web service.

R	estart Force Complete F	teschedule \	/iew Process State	Refresh				
	Activity Name 💲	State 🗘	Skip requested 🗘	Kind 🗘	Owner 🗘	Activated 🗇	Process Instance Name 🗇	Process Template Name
	RecordIneligibleApplication	Skipped	no	Invoke			_PI:9003012e.a744bf4d.a5fe573f.92c60100	AccountVerification
	ProvidePricingandApproval	Inactive	no	Invoke			_PI:9003012e.a744bf4d.a5fe573f.92c60100	AccountVerification
	MaptoIneligible	Skipped	no	Invoke			_PI:9003012e.a744bf4d.a5fe573f.92c60100	AccountVerification
	FinalApplicationReview	Inactive	no	Invoke			_PI:9003012e.a744bf4d.a5fe573f.92c60100	AccountVerification
	Exitmsg	Inactive	no	Script			_PI:9003012e.a744bf4d.a5fe573f.92c60100	AccountVerification
	CreditCheckService	Stopped	no	Invoke		3/11/2011 6:34:07 PM EST	_PI:9003012e.a744bf4d.a5fe573f.92c60100	AccountVerification
	MaptoCreditCheck	Finished	no	Invoke		3/11/2011 6:34:06 PM EST	_PI:9003012e.a744bf4d.a5fe573f.92c60100	AccountVerification
	InitialReview	Finished	no	Invoke		3/11/2011 6:33:44 PM EST	_PI:9003012e.a744bf4d.a5fe573f.92c60100	AccountVerification
	DetermineApplicationEligibilit	y Finished	no	Invoke		3/11/2011 6:33:44 PM EST	_PI:9003012e.a744bf4d.a5fe573f.92c60100	AccountVerification
	AccountVerificationReceive	Finished	no	Receive		3/11/2011 6:33:43 PM EST	_PI:9003012e.a744bf4d.a5fe573f.92c60100	AccountVerification
Item	s found: 10 Items selected:	0		Page 1 of 1	Ite	ms per page: 20 👻		

- 7. The missing service is provided in the C:\WID\CreditCheck.zip file. Import the Web service and deploy it onto the server.
  - \_\_\_\_a. Select File > Import....
- \_\_\_\_b. Select Project Interchange under the Other folder as the import source type. Click Next.
- \_\_\_\_ c. Click the Browse... button for the From zip file field.
- \_\_\_\_d. Navigate to C:\WID\CreditCheck.zip.
- \_\_\_\_e. Click Open.

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- \_\_\_\_f. Click Select All (there is only one project).
- \_\_\_\_g. Click Finish.
- \_\_\_\_h. In the Servers tab, right-click WebSphere Process Server v7 at localhost and select Add and Remove Projects... from the context menu.
- \_\_\_\_i. In Add and Remove Projects, select CreditCheckServiceApp, and click Add >.
- \_\_\_\_j. Click Finish.

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Server	State	Status
WebSphere Process Server v7.0 at localhost	🖆 Started	Synchronized
AccountOpeningUIEAR	🖡 Started	Synchronized
CreditCheckMediationServiceApp	🖡 Started	Synchronized
Field CreditCheckServiceApp	🖡 Started	Synchronized
CustomerMediationServiceApp	🖡 Started	Synchronized
FoundationModuleApp	🖡 Started	Synchronized
FoundationServicesApp	🖡 Started	Synchronized
HumanTaskServicesApp	🖡 Started	Synchronized
IneligibleMediationServiceApp	🖡 Started	Synchronized
RouterMediationServiceApp	🖡 Started	Synchronized

Wait until CreditReportServiceApp is started.

\_\_\_\_8. Resubmit the failed events through Failed Event Manager to complete the process.

\_\_\_\_a. In the administration console, expand Integration Applications and select Failed Event Manager in the left pane.

b. Select Get all failed events under the Failed events on this server section.

#### Failed Event Manager > Search results

The failed events result set shows the failed events found from the most recent query.

```
Use the buttons below to manage the failed events in the current result set and to query or delete all failed events.
```

#### Preferences

Refresh Get all New search Resubmit Resubmit with trace Delete Delete expired events Clear all								
Select	Event ID 💠	Event type 💲	Module 🗘	Component 🗘	Operation 🛟	Failure time 💲	Event status 💲	
	_PI:9003012e.9d5	BPC	FoundationModule	AccountVerificat		2011-03-09 20:22	failed	
	PI:9003012e.9d7	BPC	FoundationModule	AccountVerificat		2011-03-09 20:58	failed	

\_\_\_\_ c. Click one of the Event IDs to see its details.

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#### Failed Event Manager > Search results > PI:9003012e.9d515aeb.a5fe573f.2f950085

Use this page to view details about the failed event.

ed event details	
View business	data Resubmit Delete
Open calling proce	ess in Business Process Choreographer Explorer
Failed event o	common properties
Failed event o	common properties
Event ID	ad515aeb.a5fe573f.2f950085
Failed event of Event ID PI:9003012e.9 Event type	ommon properties
Failed event of Event ID PI:9003012e.s Event type BPC	ad515aeb.a5fe573f.2f950085
Failed event of Event ID PI:9003012e.9 Event type BPC Event status	ad515aeb.a5fe573f.2f950085

\_\_\_\_\_d. Clicking **View business data** enables you to make a modification to the event message.

\_\_\_\_e. Clicking the request link will display the content of this CreditCheckDetail business object instance.

Failed Event Manager						
Failed Event Manager > Search results >PI:9003012e.9d515aeb.a5fe573f.2f950085 > Business data editor Use this page to view and edit business data parameters.						
Resubmit						
Parameter name 🗘	Parameter value 🗘	Parameter type 💲				
Input		CustomerApplication				
Total 1						

\_\_\_\_ f. In this case, there is no need to edit the message. Therefore, click Resubmit without making any changes.

\_\_\_\_g. A message should indicate that the event resubmission was successful.

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Failed Event Manager		
🖻 Messages		
🗓 Failed e	vent [_PI:9003012e.9d515aeb.a5fe573f.2f950085] was resubmitted successfully.	
Failed Event Manager > Search r	esults >PI:9003012e.9d515aeb.a5fe573f.2f950085 > Business data editor	
Use this page to view and edit bu	isiness data parameters.	
Resubmit		
None		
Total 20		

h. Return to the list of failed events.

\_ i. Select the check box next to the failed event.

#### Failed Event Manager > Search results

The failed events result set shows the failed events found from the most recent query.

Use the buttons below to manage the failed events in the current result set and to query or delete all failed events. Preferences

Refr	Refresh Get all New search Resubmit Resubmit with trace Delete Delete expired events Clear all						
Select	Event ID 🛟	Event type 💲	Module 🗘	Component 🗘	Operation 🛟	Failure time $\diamondsuit$	Event stat
	_PI:9003012e.9d7	BPC	FoundationModule	AccountVerificat		2011-03-09 20:58	failed
Total 1							

\_\_\_\_j. Click Resubmit to submit the rest of the failed events.

\_\_\_\_k. A message should indicate that the event resubmission was successful.

- \_\_\_\_I. In the Server Logs view, the cross-component trace continues with the hanged process to complete them. You should be able to find the logs indicating that the failed events were resubmitted successfully.
- \_\_\_9. Examine the cross-component trace logs.

\_\_\_\_a. View the Server Logs view.

Since the cross-component trace was enabled with data snapshot, you can view the data.

*Note*: Once you enable the cross-component trace, the server logs can grow quickly. If you need to go back to the previous page of the log, click the Go to Page icon.

Enter the page number you wish to go to.

http://www-01.ibm.com/software/support/acceleratedvalue/



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#### Console: WebSphere Process Server v7.0 at localhost

Show All Record Types (Hierarchical) > with All Conte	ents (Page 5 of 5)				
Туре	▲ Time	▲ Time			
Invocation sequence (Account/Verification)	Mar 9, 201	1 21:50:18.196 EST	000000c8		
A Start invoke (AccountVerification:null)		Mar 9, 201	11 21:50:18.196 EST	000000c8	
A C Start component (AccountVerificat	ion:null)	Mar 9, 201	1 21-50-18 211 EST	00000068	
A Construction of the start business process (null)	lonindiiy	Mar 9, 201	11 21-50-18 213 EST	000000c8	
A C A Start invoke (Initial Application	on Review Input Criterion)	Mar 0, 201	Mar 0, 2011 21:50:18 250 EST		
Start invoke (InitialApplication	antion Review Input Criterion)	Mar 0, 201	1 21.50.10.200 EST	0000000-9	
	cationReview:inputCriterion)	Iviar 9, 201	11 21:30:10:330 E31	0000000	
Start component (Ini	tialApplicationReview:InputCr	terion) Mar 9, 201	L1 21:50:18.540 EST	00000d4	
End component (Init	alApplicationReview:InputCri	terion) Mar 9, 201	11 21:50:18.747 EST	000000d4	
🔄 💛 End import (InitialApplic	ationReview:InputCriterion)	Mar 9, 201	11 21:50:18.388 EST	000000c8	
📃 🍚 End invoke (InitialApplicatio	nReview:InputCriterion)	Mar 9, 201	L1 21:50:18.432 EST	000000c8	
🔲 😡 End business process (null)		Mar 9, 201	1 21:50:18.435 EST	000000c8	
🔲 \ominus End component (AccountVerificati	on:null)	Mar 9, 201	L1 21:50:18.449 EST	00000c8	
🔄 🔵 End invoke (AccountVerification:null)		Mar 9, 201	11 21:50:18.463 EST	00000c8	
35 Task Hows [\circ] Build Activities [\local Properties [\local Properties [\local Properties [\local Properties ]\circ] Server Logs 2       Welcome     WebSphere Process Server v7.0 at localhost [\local Process Server v7.0 at localhost [\local Server Logs 2]       Show All Record Types (Hierarchical) > with All Contents (Page 5 of 5)	3 476 Servers		™  × ‡   ™	pe text to filter the contents>	
Туре	▲ Time	Thread ID	Contents		
Invocation sequence (AccountVerification:null)	Mar 9, 2011 21:50:18.196 EST	000000c8			
🔲 🥥 Start invoke (AccountVerification:null)	Mar 9, 2011 21:50:18.196 EST	000000c8	Start of the invocation of operation Account	/erification:null in module Fou	
Start component (AccountVerification:null)	Mar 9, 2011 21:50:18.211 EST	000000c8	Start of the component processing of operat	on AccountVerification:null in	
Start business process (null)	Mar 9, 2011 21:50:18:213 EST	000000c8	Start of processing for business process null:	1ull. ation Initial Application Previous	
Start import (InitialApplicationReview.InputCriterion)		0000000	Nimport processing of operation Ir	itialApplicationReview:InputC	
Start component (InitialApplicationReview:InputC	Go to Page	and the second sec	component processing of operat	on InitialApplicationReview:In	
End component (InitialApplicationReview:InputCri	Enter page number (1, 5)		omponent processing of operation	on InitialApplicationReview:Inp	
End import (InitialApplicationReview:InputCriterion)	al al		mport processing of operation In	tialApplicationReview:InputCr	
End invoke (InitialApplicationKeview:InputUnterion)	1		synchronous invocation of opera	tion InitialApplicationReview:I	
End component (Account/Verification:null)			omponent processing of operation	on AccountVerification:null in	
End invoke (AccountVerification:null)			nvocation of operation AccountV	erification:null in module Four	
🔄 🗐 Log message			I: Originator becomes administra	tor of task AccountVerification	
🔲 💷 Log message		ОК	Cancel piserver.management.FailedEven	ManagerMBean resubmitFaile	
🔲 🛬 Invocation sequence (AccountVerification:null)					
Invocation sequence (AccountVerification:null)	Mar 9, 2011 21:51:02.799 EST	000000c8			
Invocation sequence (AccountVerification:null)	Mar 9, 2011 21:51:02.857 EST	000000c8			
🔄 🔄 Log message	Mar 9, 2011 21:53:02.092 EST	00000111	CW I KE00441: Originator becomes administra	tor of task AccountVerification	

Click OK to view the log entry in a different page.

**Note**: The Credit Check Service returns a random number between 1 and 11 which defines the Credit Score. If the Credit Score is less than 4 is a high Credit Risk. In this case "More documentation is requested". However, if the risk is Medium only a "Final Review" is needed. People with "low risk" are automatically approved for the loan.

b. Go back to Application web and review "My ToDo's" for next step in the process. Remember you might end up with a different result depending upon your credit risk. Study the logs to understand what happened in your case.

IBM.				
→ HOME Business Case → New	My ToDo's > Open Select a task to see more details and finally claim the I	task.		
My ToDo's → Open	Task Name     ≎ → RequestMoreDocumentation	Description 💲	First Activated 3/11/2011 6:54:44 PM EST	Originator 😂 admin
→ Claimed		ns per page: 20 👻	3/11/2011 6:54:44 PM EST	admin
User: admin → Logout	Refresh			

*Note*: If you cannot locate the some entry in the Server Logs view, you simply need to click the Expand icon to collapse the process tree.

\_\_\_\_ c. Double-click Start submit callback (CreditRiskAssessment:InputCriterion) to view its content.

\_\_\_\_d. If the creditRisk value is HIGH, follow the next steps. If the creditRisk is MEDIUM then go to step (i). If the creditRisk is LOW then go to step 10.

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Properties		
😑 End su	bmit callback (CreditRiskAssessment:InputCriterion)	<del>}</del>
Time:	Mar 9, 2011 22:01:28.398 EST	
hread ID:	00000145	
Contents:	◎ Translated ─ Raw	
	07e8a3dd-ddab-4640-be64-54345fc78d94 END 7297ab04-99c1-48d0-823b-b9c8817b76c4 cc970812-591f-41cc-ae22-d5c3e445cf3a SCA(Cal postSubmitCallback FoundationServices %7Bhttp%3A%2F%2Fwww.ibm.com%2Fxmlns%2Fprod%2Fwebsphere%2Fscdl %2F6.0.0%7DCreditRiskAssessment %2FCreditRiskAssessment.InputCriterion Attachment(XCT%5Cserver1%5C2011-3-9-22%5Cout.68e0d31 3d5c-44b8-aac8-c795703c3c29.xml))	lback 4
lata:	<pre><?xml version= "1.0" encoding= "UTF-8"?> <te:output xmlns:te="http://tempuri.org" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsitype="cr:CustomerApplication"></te:output></pre>	
2		ОК

\_\_\_\_e. In the Web application, click Open under My ToDo's. There should be a work item, RequestMoreDocumentation, ready for completion.



→ HOME My ToDo's > Open **Business Case** Select a task to see more details and finally claim the task. → New Task Name 🛛 🗘 Description 🗘 My ToDo's → RequestMoreDocumentation → Open Items found: 1 Rege 1 of 1 Items per page: 20 👻 → Claimed User: admin Refresh → Logout

\_\_\_\_\_f. Select the link, and click Claim.

\_\_\_\_g. Change the text in the comments field from None to Approved.

applicationDate	Mar 9, 2011
applicationDecision	
comments	Approved
companyName	IBM
contactFirstName	Landon
contactLastName	Donovan
contactPhoneNumber	547-312-3172
creditRating	
creditReportNeeded	
creditRisk	HIGH
creditScore	0
customerCity	Boston
customerCountry	USA

\_\_\_h. Click Complete.

\_\_\_\_i. In the Web application, click Open under My ToDo's. There should be a work item, FinalApplicationReview, ready for completion.



→ HOME My ToDo's > Open **Business Case** Select a task to see more details and finally claim the task. → New Task Name 🛛 🗘 Description 🗘 My ToDo's → FinalApplicationReview → Open Items found: 1 Read Page 1 of 1 Read Items per page: 20 👻 → Claimed User: admin Refresh → Logout \_\_\_\_j. Select the link, and click Claim.

- k. Click Complete.
- \_ 10. Return to the Business Process Choreographer Explorer to verify that there are no more running process instances.
  - \_\_\_\_a. Click Started By Me under Process Instances.

elcome admin   Logout   M	ly Subs	titutes   Define Substitutes   Manage View	s   Customize   Help   About	
Views Reports		Process Instances Started By	Ме	-
<ul> <li>Process Templates</li> <li>Currently Valid</li> <li>All Versions</li> </ul>	Ê	Use this page to view information about pr View Process State Related Processe	Activities Tasks Refresh	
Process Instances     Started By Me     Administered By Me     Critical Processes     Terminated Processes     Failed Compensations	Ê	Process Instance Name Items found: 0 Items selected: 0	Process Template Name 🗘	Valid From ≎ Items per page: 20 ↓
<ul> <li>Activity Instances</li> <li>Stopped Activities</li> </ul>	Ê			

Note: You might want to test with multiple "Create Application" scenarios in order to get a different Credit Risk generated and thus a different result.

## Part 4: Clean up the environment

- \_\_\_\_1. Remove all of the deployed projects from the server.
  - \_\_\_\_a. In Servers view, right-click WebSphere Process Server v7, and select Add and Remove Projects from its context menu.



\_\_\_\_b. Click the << Remove All button.

Add and Remove Projects		
Add and Remove Projects Modify the projects that are configur	red on the server	
Move projects to the right to configu	re them on the server	
<u>Available projects:</u>		<u>C</u> onfigured projects:
	A <u>d</u> d >	AccountOpeningUIEAR     AccountOpeningUIEAR     CreditCheckMediationServiceApp     CreditCheckServiceApp     CustomerMediationServiceApp
	< <u>R</u> emove	FoundationModuleApp     FoundationServiceApp     FoundationServicesApp     HumanTaskServicesApp     IneligibleMediationServiceApp
	Add A <u>l</u> l >>	RouterMediationServiceApp
	<< Remove All	
☑ If server is started, publish changes	s immediately	4
0	< <u>B</u> ack Ne	xt > <u>Finish</u> Cancel

\_\_\_ c. Click Finish.

## End of exercise

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## Exercise review and wrap-up

In this exercise, you learned how to utilize the cross-component trace to find the service component where the failure first occurred. In case of a long-running business process, the service invocation is always asynchronous. Therefore, the failure gets captured by the Failed Event Manager. Once the problem was fixed, the failed events could be resubmitted for completion. You also saw that the business process instances can be monitored using the Business Process Choreographer Explorer. The problem presented in this exercise was very simple to detect. However, the techniques in which you learned to use cross-component trace can be applied to every SCA application.