



**Your Best Choice for Integration and Business Solutions**

## **ESBMonitor**

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**Your Best Choice for Integration and Business Solutions**

## **Agenda**

- Overview
- Features & Benefits
  - JBI Management Monitoring
  - BPEL Monitoring
  - Alerts Management & Monitoring
  - External Locations Monitoring

# Overview

- One stop monitoring tool for OpenESB
- It is a web application which can be deployed on a separate glassfish instance than GlassFishESB.

JB1 Management & Monitoring

BPEL Monitoring

Alert Management & Monitoring

External Locations Management & Monitoring

# Features & Benefits

## JBI Monitoring

- Provides statistics on Inbound/Outbound Endpoints.
- For Inbound Endpoints
  - No. of Requests Received
  - No. of Replies Sent
  - No. of Errors Sent
  - No. of Faults Sent
- For Outbound Endpoints
  - No. of Requests Sent
  - No. of Replies Received
  - No. of Errors Received
  - No. of Faults Received

# Features & Benefits

## JBI Monitoring...continued

- Statistics data is persisted for measuring SLA compliance, future analysis & for performance measurement
- Allows to configure a data store to persist the statistics data
- Generate Graphs on the persisted data. For example:
  - Graph on requests received vs error/fault sent on a given day
  - Graph on the number of requests received on a given date time range (day/month/year). This will enable to judge the load on a day/month/year

# Features & Benefits

## JBI Monitoring...continued

### Screenshot of JBI Endpoint statistics

Statistics (6)

Endpoints	Type	Received Requests	Received Replies	Received Errors	Received Faults	Received Dones	Sent Requests	Sent Replies	Sent Errors	Sent Faults	Sent Dones
http://j2ee.netbeans.org/wsdl/DBInboundFiles,service,port	Provider	827	0	0	0	827	0	0	0	0	0
http://j2ee.netbeans.org/wsdl/DBFileTypeWS,service,port	Provider	827	0	0	0	827	0	0	0	0	0
http://j2ee.netbeans.org/wsdl/DBMaxIDInputFiles,service,port	Provider	827	0	0	0	827	0	0	0	0	0
http://j2ee.netbeans.org/wsdl/DBWorkoutSessions,service,port	Provider	7265	0	0	0	7265	0	0	0	0	0
http://j2ee.netbeans.org/wsdl/DBActiveMembers,service,port	Provider	7265	0	0	0	7265	0	0	0	0	0
Totals		17011	0	0	0	17011	0	0	0	0	0

# Features & Benefits

## JBIM Management

- Manage Service Assemblies (Deploy/ Undeploy/ Start / Stop)
- Manage Binding Components / Service Engines ( Deploy/ Undeploy / Start / Stop)
- Create / Modify Application Configurations & Application Variables for Binding Components / Service Engines
- Modify JBIM runtime configuration parameters

# Features & Benefits

## JBI Management...continued

### JBI Manage Service Assemblies screen

Manage Java Business Integration Service Assemblies..

File Location:  No file chosen [browse to the location of the service assembly file](#)

**Service Assemblies (5)**

Name	State	Description	Action
<input type="checkbox"/> BpelExampleCompApp	Started	Represents the Service Assembly of BpelExampleCompApp	Select Action: ▼
<input type="checkbox"/> DBExampleCompApp	Started	Represents the Service Assembly of DBExampleCompApp	Select Action: ▼
<input type="checkbox"/> FTPEExampleCompApp	Started	Represents the Service Assembly of FTPEExampleCompApp	Select Action: ▼
<input type="checkbox"/> ReceiverProjCA	Shutdown	Represents the Service Assembly of ReceiverProjCA	Select Action: ▼
<input type="checkbox"/> SenderProjectCA	Started	Represents the Service Assembly of SenderProjectCA	Select Action: ▼

# Features & Benefits

















## BPEL Monitoring

- Monitoring is based on the data persisted by BPEL process.
- Allows to monitor all the BPEL instances from a single UI
- Provides graphs for Measurements of SLA
- Provides visibility of performance of a BPEL process till Activity level

# Features & Benefits

## BPEL Monitoring...continued

Dashboard provides an overview of all the BPEL processes deployed

-  **BpelExample**  
 bpelExample.bpel
-  **JMSSampleProj**  
 JMSSampleProj.bpel
-  **JMSSampleProj**  
 JMSSampleProj.bpel
-  **DBExample**  
 DBExample.bpel
-  **FTPEExample**  
 FTPEExample.bpel
-  **ReceiverProj**  
 receiverProj.bpel
-  **SenderProject**  
 testProject.bpel
-  **SenderProject**  
 testProject.bpel

Dashboard

Process Monitor

Configuration

BPEL Instance Summary

Name	Running	Complete	Suspended	Faulted	Terminated	Last Updated
bpelExample	0	15	0	0	0	2010-07-09 16:12:31.0
DBExample	0	15	0	0	0	2010-07-09 16:03:04.0
FTPEExample	0	15	0	0	0	2010-07-09 16:03:04.0
JMSSampleProj	0	13	0	1	0	2010-06-18 18:04:37.0
receiverProj	0	1370	0	0	0	2010-08-30 17:59:25.0
testProject	0	995	0	559	0	2010-08-30 18:00:46.0

# Features & Benefits

## BPEL Monitoring...continued

Summary screen provides details about instances of the selected BPEL with graphical view of BPEL

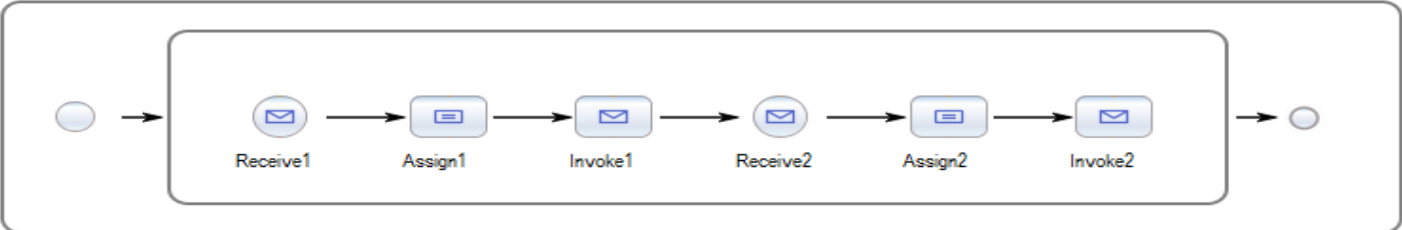
Summary	Instances
Instance Name :	bpelExample
Running Instances :	0
Completed Instances :	15
Suspended Instances :	0
Faulted Instances :	0
Terminated Instances :	0
Last Updated :	2010-07-09 16:12:31.0

Process	Statistics	Activities	Variables
---------	------------	------------	-----------

Zoom  %



```

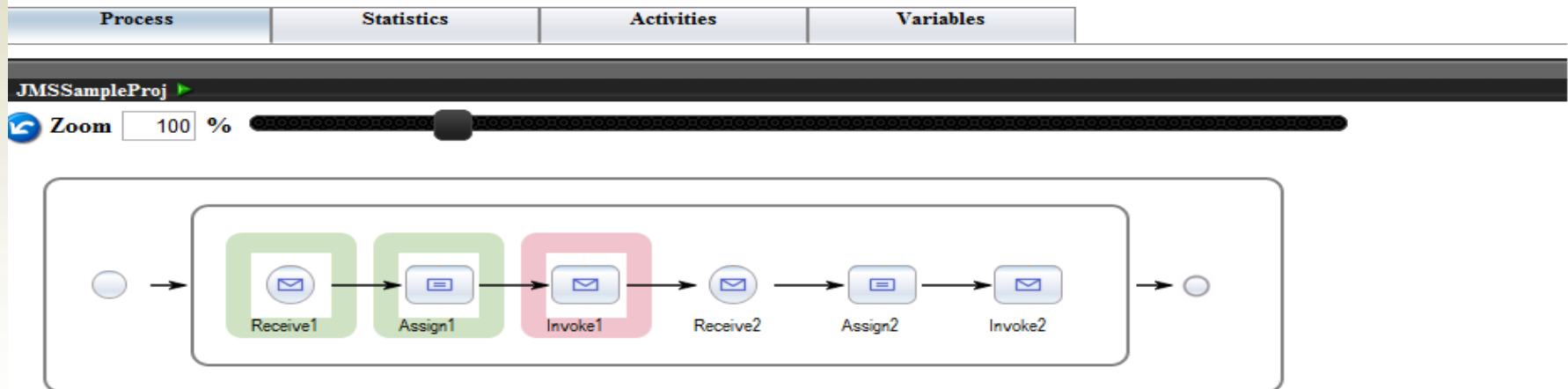
graph LR
    Start(( )) --> Receive1[Receive1]
    Receive1 --> Assign1[Assign1]
    Assign1 --> Invoke1[Invoke1]
    Invoke1 --> Receive2[Receive2]
    Receive2 --> Assign2[Assign2]
    Assign2 --> Invoke2[Invoke2]
    Invoke2 --> End(( ))
  
```

# Features & Benefits

## BPEL Monitoring...continued

If the BPEL is faulted, the faulted activity is highlighted in the graphical View and name of the fault is displayed in BPEL status

JMSSampleProj	Completed		2010-06-18 16:47:56.0	2010-06-18 16:47:57.0	2010-06-18 16:47:57.0	1.0
JMSSampleProj	Completed		2010-06-18 16:41:39.0	2010-06-18 16:41:39.0	2010-06-18 16:41:39.0	0.0
JMSSampleProj	Completed		2010-06-17 20:23:14.0	2010-06-17 20:23:22.0	2010-06-17 20:23:22.0	8.0
JMSSampleProj	Faulted	systemFault	2010-06-17 20:21:31.0	2010-06-17 20:21:32.0	2010-06-17 20:21:32.0	1.0
JMSSampleProj	Completed		2010-06-17 20:18:53.0	2010-06-17 20:18:55.0	2010-06-17 20:18:55.0	2.0
JMSSampleProj	Completed		2010-06-17 20:12:40.0	2010-06-17 20:12:44.0	2010-06-17 20:12:44.0	4.0



# Features & Benefits

## BPEL Monitoring...continued

Allows to drill down into a BPEL to list the Activities completed / Faulted

BPEL Instances						
Name	Status	Fault Name	Start Time	End Time	Update Time	Lasted
JMSSampleProj	Completed		2010-06-18 17:02:06.0	2010-06-18 17:02:07.0	2010-06-18 17:02:07.0	1.0
JMSSampleProj	Completed		2010-06-18 16:57:00.0	2010-06-18 16:57:01.0	2010-06-18 16:57:01.0	1.0
JMSSampleProj	Completed		2010-06-18 16:54:31.0	2010-06-18 16:54:31.0	2010-06-18 16:54:31.0	0.0
JMSSampleProj	Completed		2010-06-18 16:52:10.0	2010-06-18 16:52:11.0	2010-06-18 16:52:11.0	1.0
JMSSampleProj	Completed		2010-06-18 16:47:56.0	2010-06-18 16:47:57.0	2010-06-18 16:47:57.0	1.0
JMSSampleProj	Completed		2010-06-18 16:41:39.0	2010-06-18 16:41:39.0	2010-06-18 16:41:39.0	0.0
JMSSampleProj	Completed		2010-06-17 20:23:14.0	2010-06-17 20:23:22.0	2010-06-17 20:23:22.0	8.0
JMSSampleProj	Faulted	systemFault	2010-06-17 20:21:31.0	2010-06-17 20:21:32.0	2010-06-17 20:21:32.0	1.0
JMSSampleProj	Completed		2010-06-17 20:18:53.0	2010-06-17 20:18:55.0	2010-06-17 20:18:55.0	2.0
JMSSampleProj	Completed		2010-06-17 20:12:40.0	2010-06-17 20:12:44.0	2010-06-17 20:12:44.0	4.0

Process	Statistics	Activities	Variables
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JMSSampleProj Activities					
Name	Status	Fault Name	Start Time	End Time	Lasted
sequence	Faulted	systemFault	2010-06-17 20:21:31.0	2010-06-17 20:21:32.0	1.0
Receive1	Completed		2010-06-17 20:21:31.0	2010-06-17 20:21:31.0	0.0
Assign1	Completed		2010-06-17 20:21:31.0	2010-06-17 20:21:31.0	0.0
Invoke1	Faulted	systemFault	2010-06-17 20:21:31.0	2010-06-17 20:21:32.0	1.0

# Features & Benefits

## BPEL Monitoring...continued

Allows to peek into instance level variables

BPEL Instances						
Name	Status	Fault Name	Start Time	End Time	Update Time	Lasted
JMSSampleProj	Completed		2010-06-18 17:02:06.0	2010-06-18 17:02:07.0	2010-06-18 17:02:07.0	1.0
JMSSampleProj	Completed		2010-06-18 16:57:00.0	2010-06-18 16:57:01.0	2010-06-18 16:57:01.0	1.0
JMSSampleProj	Completed		2010-06-18 16:54:31.0	2010-06-18 16:54:31.0	2010-06-18 16:54:31.0	0.0
JMSSampleProj	Completed		2010-06-18 16:52:10.0	2010-06-18 16:52:11.0	2010-06-18 16:52:11.0	1.0
JMSSampleProj	Completed		2010-06-18 16:47:56.0	2010-06-18 16:47:57.0	2010-06-18 16:47:57.0	1.0
JMSSampleProj	Completed		2010-06-18 16:41:39.0	2010-06-18 16:41:39.0	2010-06-18 16:41:39.0	0.0
JMSSampleProj	Completed		2010-06-17 20:23:14.0	2010-06-17 20:23:22.0	2010-06-17 20:23:22.0	8.0
JMSSampleProj	Faulted	systemFault	2010-06-17 20:21:31.0	2010-06-17 20:21:32.0	2010-06-17 20:21:32.0	1.0
JMSSampleProj	Completed		2010-06-17 20:18:53.0	2010-06-17 20:18:55.0	2010-06-17 20:18:55.0	2.0
JMSSampleProj	Completed		2010-06-17 20:12:40.0	2010-06-17 20:12:44.0	2010-06-17 20:12:44.0	4.0

Process	Statistics	Activities	Variables
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JMSSampleProj Instance Variables	
Name	Value
JMSOutOperationIn	<?xml version="1.0" encoding="UTF-8"?><jbimessage xmlns:msgns="http://j2ee.netbeans.org/wsdl/JMSSampleProj/jmswrite" type="msgns:JMSInputMessage" version="1.0" xmlns:jbi="http://java.sun.com/xml/ns/jbi/wsdl-11-wrapper"><jbi:part xmlns:msgns="http://j2ee.netbeans.org/wsdl/JMSSampleProj/filereceive" xmlns:ns0="http://j2ee.netbeans.org/wsdl/JMSSampleProj/jmswrite">Testing JMS----</jbi:part></jbimessage>
PollIn	<?xml version="1.0" encoding="UTF-8"?><jbimessage xmlns:msgns="http://j2ee.netbeans.org/wsdl/JMSSampleProj/filereceive" type="msgns:PollInputMessage" version="1.0" xmlns:jbi="http://java.sun.com/xml/ns/jbi/wsdl-11-wrapper"><jbi:part>Testing JMS--</jbi:part></jbimessage>

# Features & Benefits

## Alert Management & Monitoring

- What are Alerts in OpenESB?
  - An Alert is a communication that is triggered when a specified condition occurs in a Project component.
  - It may be a reminder, notification, or an error condition.
  - Alerts are generated from various sources - BPEL, EJB or a POJO.

# Features & Benefits

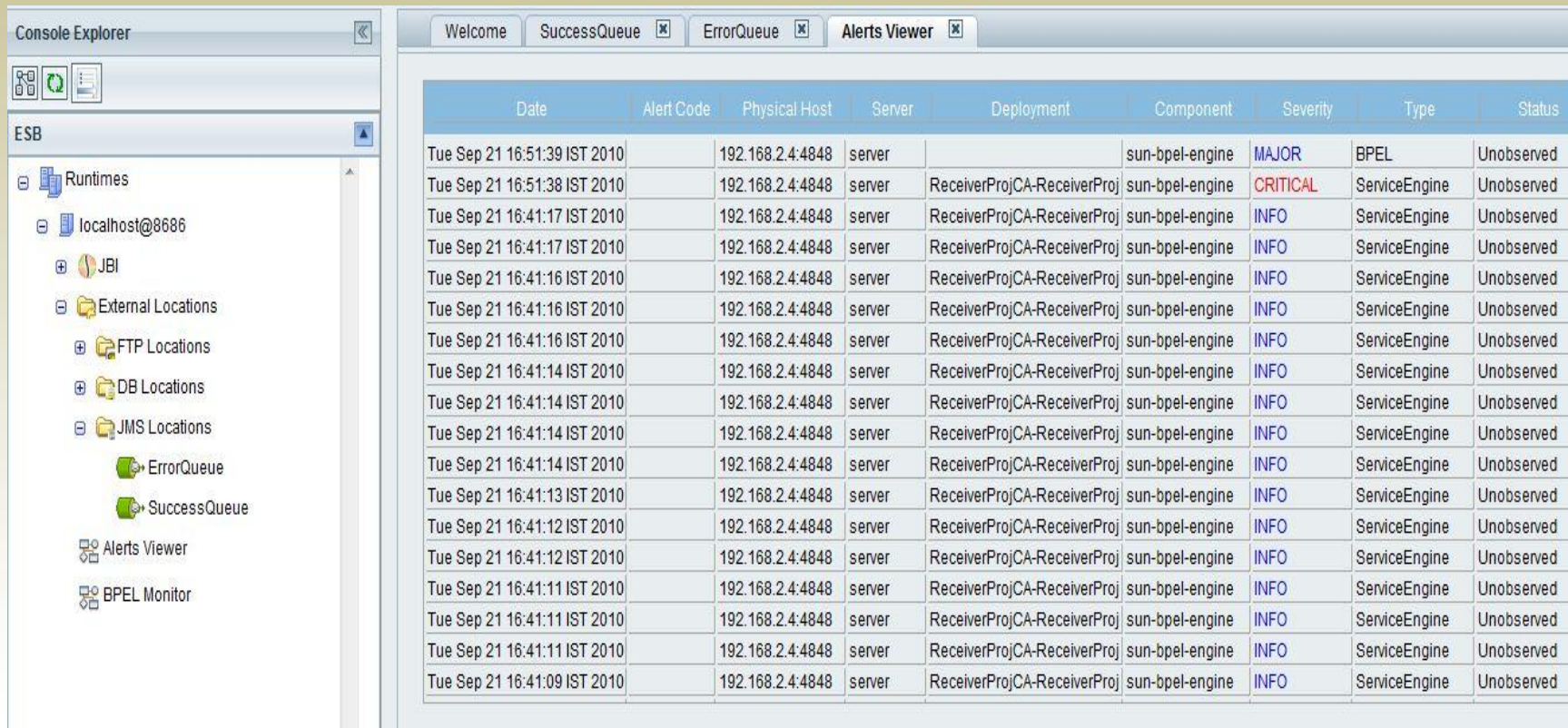
## Alert Management & Monitoring...continued

- The Console's alert monitor enables to configure and view alerts
- Filter the alerts based on Alert Code, Component Name, Project Name, Server Name, etc . For example enable alerts on for a particular project with severity level (WARNING or SEVERE)
- It can also be configured to send email notifications for specific alerts.
- For example, send email notification to admin when there is a SEVERE level alert from ServiceAssembly1.

# Features & Benefits

## Alert Management & Monitoring...continued

Alerts viewer displaying alerts



The screenshot shows a web-based interface for monitoring alerts. On the left is a 'Console Explorer' sidebar with a tree view of system components including 'ESB', 'Runtimes', 'localhost@8686', 'JBI', 'External Locations', 'FTP Locations', 'DB Locations', 'JMS Locations', 'ErrorQueue', 'SuccessQueue', 'Alerts Viewer', and 'BPEL Monitor'. The main area displays the 'Alerts Viewer' tab, which contains a table of alert records.

Date	Alert Code	Physical Host	Server	Deployment	Component	Severity	Type	Status
Tue Sep 21 16:51:39 IST 2010		192.168.2.4:4848	server		sun-bpel-engine	MAJOR	BPEL	Unobserved
Tue Sep 21 16:51:38 IST 2010		192.168.2.4:4848	server	ReceiverProjCA-ReceiverProj	sun-bpel-engine	CRITICAL	ServiceEngine	Unobserved
Tue Sep 21 16:41:17 IST 2010		192.168.2.4:4848	server	ReceiverProjCA-ReceiverProj	sun-bpel-engine	INFO	ServiceEngine	Unobserved
Tue Sep 21 16:41:17 IST 2010		192.168.2.4:4848	server	ReceiverProjCA-ReceiverProj	sun-bpel-engine	INFO	ServiceEngine	Unobserved
Tue Sep 21 16:41:16 IST 2010		192.168.2.4:4848	server	ReceiverProjCA-ReceiverProj	sun-bpel-engine	INFO	ServiceEngine	Unobserved
Tue Sep 21 16:41:16 IST 2010		192.168.2.4:4848	server	ReceiverProjCA-ReceiverProj	sun-bpel-engine	INFO	ServiceEngine	Unobserved
Tue Sep 21 16:41:16 IST 2010		192.168.2.4:4848	server	ReceiverProjCA-ReceiverProj	sun-bpel-engine	INFO	ServiceEngine	Unobserved
Tue Sep 21 16:41:14 IST 2010		192.168.2.4:4848	server	ReceiverProjCA-ReceiverProj	sun-bpel-engine	INFO	ServiceEngine	Unobserved
Tue Sep 21 16:41:14 IST 2010		192.168.2.4:4848	server	ReceiverProjCA-ReceiverProj	sun-bpel-engine	INFO	ServiceEngine	Unobserved
Tue Sep 21 16:41:14 IST 2010		192.168.2.4:4848	server	ReceiverProjCA-ReceiverProj	sun-bpel-engine	INFO	ServiceEngine	Unobserved
Tue Sep 21 16:41:14 IST 2010		192.168.2.4:4848	server	ReceiverProjCA-ReceiverProj	sun-bpel-engine	INFO	ServiceEngine	Unobserved
Tue Sep 21 16:41:13 IST 2010		192.168.2.4:4848	server	ReceiverProjCA-ReceiverProj	sun-bpel-engine	INFO	ServiceEngine	Unobserved
Tue Sep 21 16:41:12 IST 2010		192.168.2.4:4848	server	ReceiverProjCA-ReceiverProj	sun-bpel-engine	INFO	ServiceEngine	Unobserved
Tue Sep 21 16:41:12 IST 2010		192.168.2.4:4848	server	ReceiverProjCA-ReceiverProj	sun-bpel-engine	INFO	ServiceEngine	Unobserved
Tue Sep 21 16:41:11 IST 2010		192.168.2.4:4848	server	ReceiverProjCA-ReceiverProj	sun-bpel-engine	INFO	ServiceEngine	Unobserved
Tue Sep 21 16:41:11 IST 2010		192.168.2.4:4848	server	ReceiverProjCA-ReceiverProj	sun-bpel-engine	INFO	ServiceEngine	Unobserved
Tue Sep 21 16:41:11 IST 2010		192.168.2.4:4848	server	ReceiverProjCA-ReceiverProj	sun-bpel-engine	INFO	ServiceEngine	Unobserved
Tue Sep 21 16:41:09 IST 2010		192.168.2.4:4848	server	ReceiverProjCA-ReceiverProj	sun-bpel-engine	INFO	ServiceEngine	Unobserved

# Features & Benefits

## External Locations Monitoring

- Allows to monitor configured “External Locations”
- Currently the console allows to monitor FTP Folders, Database tables and JMS Queues
- FTP Folders
  - View the contents of FTP Folders
  - Download FTP files directly from UI
  - Useful where FTP Folders needs to be monitored for new files, files not processed etc.
- DB Tables:
  - Executes a SQL query and shows the results
  - Useful to monitor the rows in a database tables. For example, list all the rows which are pending for processing

# Features & Benefits

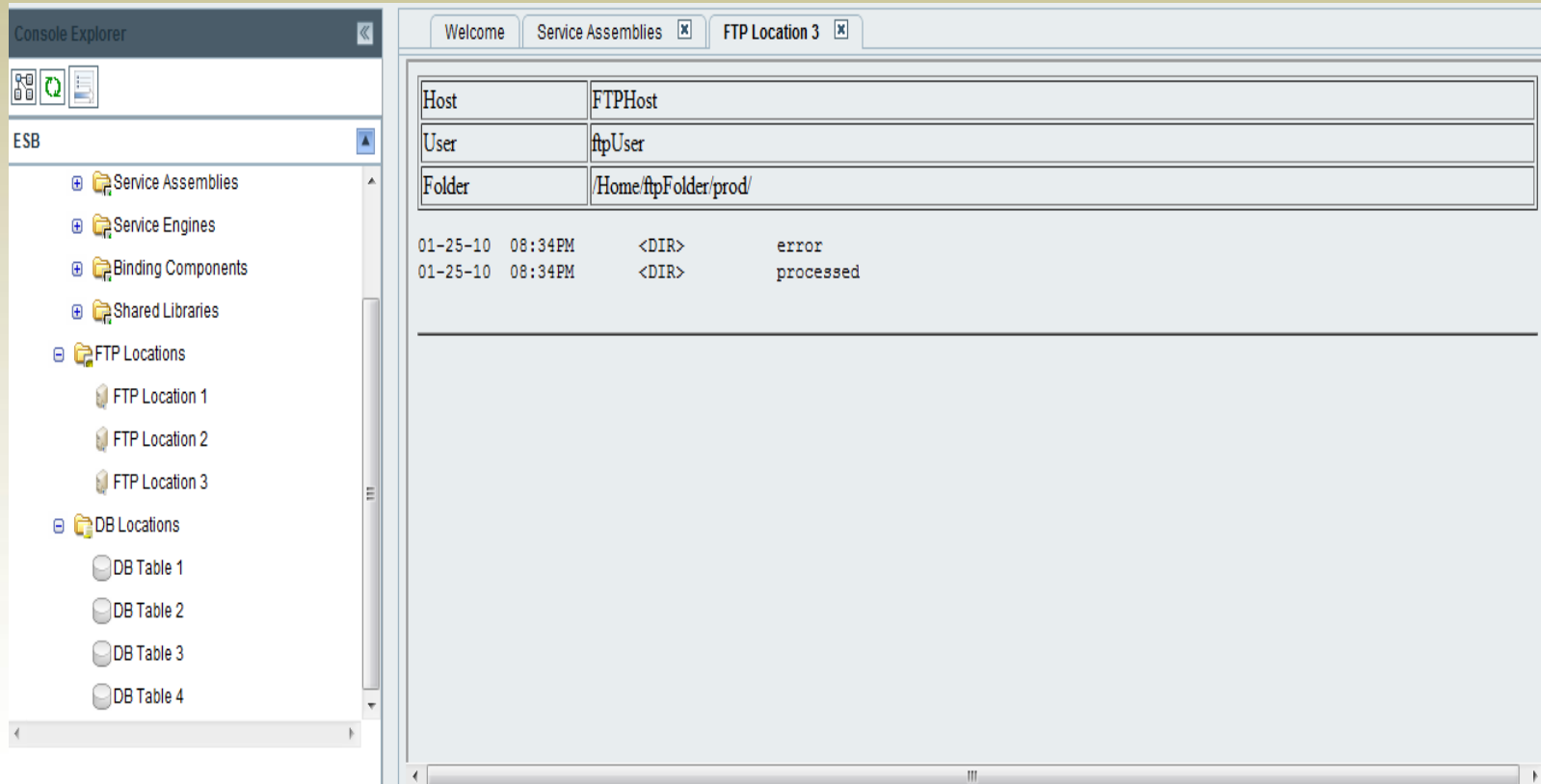
## External Locations Monitoring...continued

- JMS Queues
  - Lists the messages in a JMS Queue
  - Peek into a message in the Queue
- UI to configure the “External Locations”
  - Configure the above external locations through UI.
  - Enable/Disable monitoring of External locations
  - Add as many external locations as required

# Features & Benefits

## External Locations Monitoring...continued

### FTP Location displaying contents of FTP folder



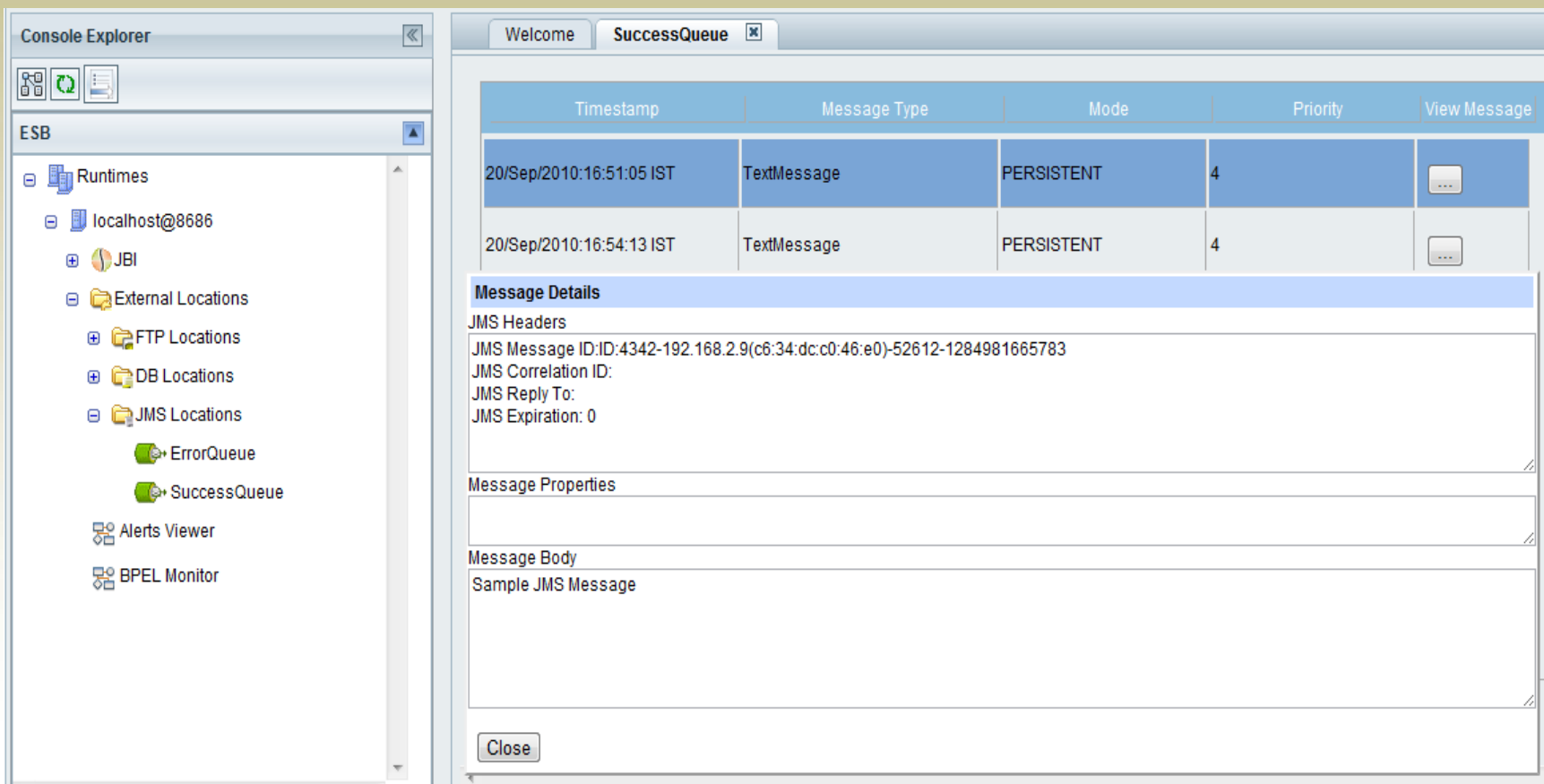
The screenshot shows a console application window with a tree view on the left and a main display area on the right. The tree view is titled 'Console Explorer' and shows a hierarchy of 'ESB' components: Service Assemblies, Service Engines, Binding Components, Shared Libraries, FTP Locations (expanded), and DB Locations. Under 'FTP Locations', three items are listed: 'FTP Location 1', 'FTP Location 2', and 'FTP Location 3'. The main display area has tabs for 'Welcome', 'Service Assemblies', and 'FTP Location 3'. It shows a table with the following data:

Host	FTPHost		
User	ftpUser		
Folder	/Home/ftpFolder/prod/		
01-25-10	08:34PM	<DIR>	error
01-25-10	08:34PM	<DIR>	processed

# Features & Benefits

## External Locations Monitoring...continued

### JMS Queue Browser displaying messages



The screenshot shows the JMS Queue Browser interface. On the left is the Console Explorer showing the tree structure of the ESB, with 'SuccessQueue' selected under 'External Locations'. The main window displays a table of messages in the 'SuccessQueue'.

Timestamp	Message Type	Mode	Priority	View Message
20/Sep/2010:16:51:05 IST	TextMessage	PERSISTENT	4	[...]
20/Sep/2010:16:54:13 IST	TextMessage	PERSISTENT	4	[...]

Below the table, the 'Message Details' section is expanded for the selected message:

**Message Details**

**JMS Headers**

JMS Message ID:ID:4342-192.168.2.9(c6:34:dc:c0:46:e0)-52612-1284981665783  
 JMS Correlation ID:  
 JMS Reply To:  
 JMS Expiration: 0

**Message Properties**

**Message Body**

Sample JMS Message

A 'Close' button is located at the bottom left of the message details pane.

# Features & Benefits

## External Locations Monitoring...continued

- Configure Email Notifications on External locations rules
- Examples:
  - Notify if any file not found to be processed in an FTP folder
  - Notify if there are records in a DB table with "item\_processed = 0"
  - Notify if there is a new message in Error Queue



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**Thank You for your Attention!**

**Questions?**

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