

# WebSphere Business Monitor V7.0

## Configuring a remote CEI server

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## What this exercise is about

The objective of this lab is to provide instructions for installing WebSphere Business Monitor V7.0 as a stand-alone server, then configuring it to use a remote CEI server which is installed on a second machine. If the CEI server is in a different cell than the WebSphere Business Monitor server, these tasks guide you through the configuration to enable the remote system to send events to WebSphere Business Monitor.

## Lab requirements

List of system and software required for the student to complete the lab:

- WebSphere Business Monitor V7.0 which includes
  - WebSphere Application Server
  - Alphablox
- WebSphere Process Server V7.0
- You should have a supported version of DB2 installed. In this lab it is installed on machine 1 and machine 2.
- You should have two machines, or you can use just one machine if it has sufficient memory to allow starting two stand-alone servers simultaneously.

## What you should be able to do

At the end of this lab you should be able to do the following:

- Install WebSphere Business Monitor on machine 1.
- Install WebSphere Process Server on machine 2.
- Configure single sign-on and SSL on both machines.
- Run the queue bypass script on the remote server and test the JDBC connection.
- Deploy a monitor model to the monitor server.
- Submit events on the remote server.
- Verify that monitoring context instances are created.

## Introduction

To enable the WebSphere® Business Monitor server to manage a remote CEI event server, if the CEI server is in a different cell than the WebSphere Business Monitor server, then you must change the configuration to enable the remote system to send events to WebSphere Business Monitor. The remote server can be WebSphere Process Server or WebSphere Application Server.

For WebSphere Business Monitor there are two options for receiving events, "Queued" and "Queue Bypass". Queue bypass is a method for the consumption of events from the CEI server into the server Moderator for a monitoring model. Event flow skips the monitoring model's JMS queue and instead places all events directly into the monitoring model's event database table. This will increase server through-put.

This lab will show you how to install a stand-alone monitor server onto machine 1. Then you will install a stand-alone process server on machine 2. Then you will configure the queue bypass connection.

You will not need an LDAP server since you will use the built-in VMM file based repositories.

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## Part 1: Install Monitor server on machine 1

Install a stand-alone Monitor server on machine 1.

- \_\_\_ 1. Unzip the binary image to your disk, to a folder such as \MonitorImage.
- \_\_\_ 2. Run Launchpad.exe in \MonitorImage.
- \_\_\_ 3. On the left navigation pane of the WebSphere Business Monitor Common Launchpad, click the **WebSphere Business Monitor → New Installation** link
- \_\_\_ 4. Specify a new folder name for the **Installation Location** for WebSphere Application Server Network Deployment
- \_\_\_ 5. Now, click the **Install WebSphere Application Server** link. This action silently installs IBM Installation Manager V1.3.3, WebSphere Application Server V7.0.0.7 and then imports the WebSphere Application Server repository to the Installation Manager
- \_\_\_ 6. Once the WebSphere Application Server installation is complete, you should see a pop-up stating that the WebSphere Application Server installation is successful and imported into the Installation Manager. Click **OK**
- \_\_\_ 7. Back to the WebSphere Business Monitor Common Launchpad, click the **Install WebSphere Business Monitor** link
- \_\_\_ 8. The Installation Manager is launched. In the **Install Packages** panel, select the check boxes for:
  - \_\_\_ a. IBM WebSphere Business Monitor
  - \_\_\_ b. IBM WebSphere Application Server V7 Feature Pack for XML
- \_\_\_ 9. Click **Next**
- \_\_\_ 10. In the next panel, read the license agreements. If you agree to the terms, select the radio button next to **I accept the terms in the license agreements** and Click **Next**
- \_\_\_ 11. In the next panel, select the radio button for **Use the existing package group** and then select **IBM WebSphere Application Server – ND** as the Package Group Name
- \_\_\_ 12. Click **Next**
- \_\_\_ 13. In the next panel, click the **Expand All** button to see all the features. Now, select the following WebSphere Business Monitor features:
  - \_\_\_ a. IBM WebSphere Business Monitor Server 7.0.0.0
    - 1) Do not select any of the profile options, since you will use the profile management tool to create the profile later.
  - \_\_\_ b. Alphablox
  - \_\_\_ c. IBM WebSphere Application Server V7 Feature Pack for XML 1.0.0.0
- \_\_\_ 14. Click **Next**
- \_\_\_ 15. In the next panel, verify the WebSphere Business Monitor installation summary

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- \_\_\_\_ 16. Click **Install** to continue with the installation. The **WebSphere Business Monitor V7.0** installation progresses
- \_\_\_\_ 17. Select the radio button for **Profile Management Tool** and click **Finish** when the installation is complete

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## Part 2: Create WebSphere Business Monitor stand-alone profile

In this part of the lab, you will create a WebSphere Business Monitor stand-alone profile.

- \_\_\_ 1. Launch the Profile Management Tool
  - \_\_\_ a. From the start menu, select **IBM WebSphere → Business Monitor 7.0 → Profile Management Tool**
- \_\_\_ 2. Select the **Profile Management Tool** button
- \_\_\_ 3. Click the **Create** button. The **Environment Selection** panel is launched
- \_\_\_ 4. In the **Environment Selection** panel, expand **WebSphere Business Monitor** and select **Stand-alone monitor server**
- \_\_\_ 5. Click **Next**
- \_\_\_ 6. In the **Profile Creation Options** panel, select the radio button for **Advanced profile creation**
- \_\_\_ 7. Click **Next**
- \_\_\_ 8. In the **Optional Application Deployment** panel, select the applications to deploy:
  - \_\_\_ a. (Optional) **Deploy the Sample applications**
  - \_\_\_ b. **Deploy the administrative console (recommended)**
  - \_\_\_ c. (Optional) **Deploy the default application**
- \_\_\_ 9. Click **Next**
- \_\_\_ 10. In the **Profile Name and Location** panel, specify the profile name, directory path to the profile being created
  - \_\_\_ a. Profile name : **WBMon01**
  - \_\_\_ b. Profile Directory : **C:\IBM\WebSphere\MonServer\profiles\WBMon01**
  - \_\_\_ c. (Optional) Select the check box for **Create the server for using the development template**
- \_\_\_ 11. Click **Next**
- \_\_\_ 12. In the **Node and Host Names** panel, you should be able to take the defaults. Here is an example:
  - \_\_\_ a. Node name : **wbmNode01**
  - \_\_\_ b. Server name : **server1**
  - \_\_\_ c. Host name : **wbserver.austin.ibm.com**
  - \_\_\_ d. Cell Name : **wbmNode01Cell**
- \_\_\_ 13. Click **Next**
- \_\_\_ 14. In the **Administrative Security** panel, select the check box for **Enable administrative security** and then enter the administrative username and password:

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- \_\_\_ a. User name : **admin**
- \_\_\_ b. Password : **admin**
- \_\_\_ c. Confirm Password : **admin**
  
- \_\_\_ 15. Click **Next**
- \_\_\_ 16. In the **Security Certificate (Part 1)** panel, accept the defaults
- \_\_\_ 17. Click **Next**
- \_\_\_ 18. In the **Security Certificate (Part 2)** panel, accept the defaults
- \_\_\_ 19. Click **Next**
- \_\_\_ 20. In the **Port Values Assignment** panel, review the ports assigned. You can change them to the desired values, but ensure that the port numbers do not conflict with other services running on this machine
- \_\_\_ 21. Click **Next**
- \_\_\_ 22. In the **Windows Service Definition** panel, clear the check box for **Run the business monitor process as a Windows service**
- \_\_\_ 23. Click **Next**
- \_\_\_ 24. In the Web Server Definition panel, clear the check box for Create a Web server definition
- \_\_\_ 25. Click **Next**
- \_\_\_ 26. In the **Common Event Infrastructure Configuration** panel, choose a database type and enter the information based on that type:
  - \_\_\_ a. Database Product: DB2 Universal Database
  - \_\_\_ b. Common Database name : event
  - \_\_\_ c. Optionally select the check box for Delay execution of database scripts (must if using a remote database)
  - \_\_\_ d. Click Next
  - \_\_\_ e. In the DB2 Common Event Infrastructure Configuration (Part 2) panel, enter the additional database configuration information:
    - \_\_\_ f. User name to authenticate with the database: db2admin
    - \_\_\_ g. Password for database authentication: yourPassword
    - \_\_\_ h. Confirm password: yourPassword
    - \_\_\_ i. Location (directory) of JDBC driver class path files: <WBM\_HOME>\universalDriver.wbm\lib
    - \_\_\_ j. Database server host name: Ex: dbserver.austin.ibm.com
    - \_\_\_ k. Server Port: 50000 (default)

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\_\_\_ I. Click Next.

- \_\_\_ 27. In the **WebSphere Process Server Monitor Models** panel, optionally select the check box for **Deploy WebSphere Process Server monitor models** and enter the WebSphere Process Server host name and RMI port number

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**Note:** The **Deploy WebSphere Process Server monitor models** action requires a WebSphere Process Server V7.0 in the environment.

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\_\_\_ 28. Click **Next**

- \_\_\_ 29. In the **Business Space Configuration** panel, select the check box for **Configure Business Space**

\_\_\_ 30. Click **Next**

- \_\_\_ 31. In the **Database Configuration** panel, enter the information below:

\_\_\_ a. Database product: DB2 Universal Database

\_\_\_ b. Common database name : MONITOR

\_\_\_ c. Schema name : MONITOR

\_\_\_ d. Optionally select the check box for Delay execution of database scripts (if using a remote database)

\_\_\_ e. Click Next

\_\_\_ f. In the Database Configuration (Part 2) panel, enter the additional database configuration information:

\_\_\_ g. User name to authenticate with the database: db2admin

\_\_\_ h. Password for database authentication: yourPassword

\_\_\_ i. Confirm password: yourPassword

\_\_\_ j. Location (directory) of JDBC driver class path files: <WBM\_HOME>\ universalDriver.wbm/lib

\_\_\_ k. JDBC driver type: 4

\_\_\_ l. Database server host name: Ex: dbserver.austin.ibm.com

\_\_\_ m. Server Port: 50000 (default)

\_\_\_ n. Click Next.

- \_\_\_ 32. In the **Message Store Type Selection** panel, select the radio button for **Data store**

\_\_\_ 33. Click **Next**

- \_\_\_ 34. In the **Profile Creation Summary** panel, verify the profile creation summary

\_\_\_ 35. Click **Create**

- \_\_\_ 36. Start the monitor server.

\_\_\_ a. Programs > IBM WebSphere > Business Monitor 7.0 > Profiles > WBMon01 > Start the server.

## Part 3: Install process server on machine 2

Install a stand-alone process server on machine 2. You will not need DB2 for this installation since Derby will be used.

- \_\_\_ 1. Unzip the binary image to your disk, to a folder such as \WPSImage.
- \_\_\_ 2. Run Launchpad.exe in \WPSImage.
- \_\_\_ 3. On the left navigation pane of the launchpad, click the **WebSphere Process Server → New Installation** link
- \_\_\_ 4. Specify a new folder name for the **Installation Location** for WebSphere Application Server Network Deployment
- \_\_\_ 5. Now, click the **Install WebSphere Application Server** link. This action silently installs IBM Installation Manager V1.3.3, WebSphere Application Server V7.0.0.7 and then imports the WebSphere Application Server repository to the Installation Manager
- \_\_\_ 6. Once the WebSphere Application Server installation is complete, you should see a pop-up stating that the WebSphere Application Server installation is successful and imported into the Installation Manager. Click **OK**
- \_\_\_ 7. Back to the launchpad, click the **Install WebSphere Process Server** link
- \_\_\_ 8. The Installation Manager is launched. In the **Install Packages** panel, select the check boxes for:
  - \_\_\_ a. IBM WebSphere Process Server
  - \_\_\_ b. IBM WebSphere Application Server V7 Feature Pack for Service Component Architecture
  - \_\_\_ c. IBM WebSphere Application Server V7 Feature Pack for XML
- \_\_\_ 9. Click **Next**
- \_\_\_ 10. In the next panel, read the license agreements. If you agree to the terms, select the radio button next to **I accept the terms in the license agreements** and Click **Next**
- \_\_\_ 11. In the next panel, select the radio button for **Use the existing package group** and then select **IBM WebSphere Application Server – ND** as the Package Group Name
- \_\_\_ 12. Click **Next**
- \_\_\_ 13. In the next panel, click the **Expand All** button to see all the features. Now, select the following features:
  - \_\_\_ a. WebSphere Process Server - Client
  - \_\_\_ b. WebSphere Process Server
    - 1) Do not select any of the profile options, since you will use the profile management tool to create the profile later.
  - \_\_\_ c. IBM WebSphere Application Server V7 Feature Pack for Service Component Architecture (SCA) 1.0.1.0

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1) Service Data Objects

\_\_\_ d. IBM WebSphere Application Server V7 Feature Pack for XML 1.0.0.0

- \_\_\_ 14. Click **Next**
- \_\_\_ 15. In the next panel, verify the default credentials, then click Next
- \_\_\_ 16. In the next panel, verify the installation summary
- \_\_\_ 17. Click **Install** to continue with the installation. The installation progresses
- \_\_\_ 18. Select the radio button for **Profile Management Tool** and click **Finish** when the installation is complete

## Part 4: Create WebSphere Process Server stand-alone profile

In this part of the lab, you will create a WebSphere Process Server stand-alone profile.

- \_\_\_ 1. Launch the Profile Management Tool
  - \_\_\_ a. From the start menu, select **IBM WebSphere → Process Server 7.0 → Profile Management Tool**
- \_\_\_ 2. Select the **Profile Management Tool** button
- \_\_\_ 3. Click the **Create** button. The **Environment Selection** panel is launched
- \_\_\_ 4. In the **Environment Selection** panel, expand **WebSphere Process Server** and select **Stand-alone process server**
- \_\_\_ 5. Click **Next**
- \_\_\_ 6. In the **Profile Creation Options** panel, select the radio button for **Advanced profile creation**
- \_\_\_ 7. Click **Next**
- \_\_\_ 8. In the **Optional Application Deployment** panel, select the applications to deploy:
  - \_\_\_ a. (Optional) **Deploy the Sample applications**
  - \_\_\_ b. **Deploy the administrative console (recommended)**
  - \_\_\_ c. (Optional) **Deploy the default application**
- \_\_\_ 9. Click **Next**
- \_\_\_ 10. In the **Profile Name and Location** panel, specify the profile name, directory path to the profile being created
  - \_\_\_ a. Profile name : **ProcSrv01**
  - \_\_\_ b. Profile Directory : **C:\IBM\WebSphere\MonServer\profiles\ProcSrv01**
  - \_\_\_ c. (Optional) Select the check box for **Create the server for using the development template**
- \_\_\_ 11. Click **Next**
- \_\_\_ 12. In the **Node and Host Names** panel, you should be able to take the defaults. Here is an example:
  - \_\_\_ a. Node name : **wbmNode01**
  - \_\_\_ b. Server name : **server1**
  - \_\_\_ c. Host name : **wbserver.austin.ibm.com**
  - \_\_\_ d. Cell Name : **wbmNode01Cell**
- \_\_\_ 13. Click **Next**
- \_\_\_ 14. In the **Administrative Security** panel, select the check box for **Enable administrative security** and then enter the administrative username and password:

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- \_\_\_ a. User name : **admin**
- \_\_\_ b. Password : **admin**
- \_\_\_ c. Confirm Password : **admin**
  
- \_\_\_ 15. Click **Next**
- \_\_\_ 16. In the **Security Certificate (Part 1)** panel, accept the defaults
- \_\_\_ 17. Click **Next**
- \_\_\_ 18. In the **Security Certificate (Part 2)** panel, accept the defaults
- \_\_\_ 19. Click **Next**
- \_\_\_ 20. In the **Port Values Assignment** panel, review the ports assigned. You can change them to the desired values, but ensure that the port numbers do not conflict with other services running on this machine
- \_\_\_ 21. Click **Next**
- \_\_\_ 22. In the **Windows Service Definition** panel, clear the check box for **Run the business monitor process as a Windows service**
- \_\_\_ 23. Click **Next**
- \_\_\_ 24. In the Web Server Definition panel, clear the check box for Create a Web server definition
- \_\_\_ 25. Click **Next**
- \_\_\_ 26. For Business Process Choreographer configuration, select the check box to configure a sample.
- \_\_\_ 27. Click **Next**
- \_\_\_ 28. In the **Business Space Configuration** panel, select the check box for **Configure Business Space**
- \_\_\_ 29. Click **Next**
- \_\_\_ 30. In the **Business Rules Manager Configuration** panel, leave the option unchecked.
- \_\_\_ 31. Click **Next**
- \_\_\_ 32. In the **Database Design** panel, leave the option unchecked.
- \_\_\_ 33. Click **Next**
- \_\_\_ 34. In the **Database Configuration** panel, enter the information below:
  - \_\_\_ a. Database product: DB2 Universal
  - \_\_\_ b. Common database name : WPRCSDB
  - \_\_\_ c. Common event infrastructure database name : EVENT
  - \_\_\_ d. Click Next
  - \_\_\_ e. In the Database Configuration (Part 2) panel, enter the additional database configuration information:

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- \_\_\_ f. User name to authenticate with the database: db2admin
  - \_\_\_ g. Password for database authentication: yourPassword
  - \_\_\_ h. Confirm password: yourPassword
  - \_\_\_ i. Location (directory) of JDBC driver class path files: <WBM\_HOME>\universalDriver.wbm/lib
  - \_\_\_ j. JDBC driver type: 4
  - \_\_\_ k. Database server host name: Ex: dbserver.austin.ibm.com
  - \_\_\_ l. Server Port: 50000 (default)
  - \_\_\_ m. Schema name: WPRCSDB
  - \_\_\_ n. Click Next.
- \_\_\_ 35. In the **Profile Creation Summary** panel, verify the profile creation summary
- \_\_\_ 36. Click **Create**
- \_\_\_ 37. Start the process server.
- \_\_\_ a. Programs > IBM WebSphere > Process Server 7.0 > Profiles > qwps > Start the server.

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## Part 5: Configure single sign-on and SSL on monitor server on machine 1

- \_\_\_ 1. Configure 'Single Sign-on' on monitor server on machine 1.
  - \_\_\_ a. In the administrative console, navigate to Security > Global security > Authentication section > Web and SIP security > click the 'Single sign-on (SSO)' link
  - \_\_\_ b. In the 'Single sign-on (SSO)' panel, do the following:
    - 1) Select the check box for 'Enabled'
    - 2) Ensure the check box for 'Requires SSL' is NOT selected
    - 3) Enter your domain name, for example, ibm.com
    - 4) Select the check box for 'Interoperability Mode'
    - 5) Clear the check box for 'Web bound security attribute propagation'
    - 6) Click OK.
  - \_\_\_ c. Click to save the configuration.
  - \_\_\_ d. On the Global security page, find the Authentication section, then click the link LTPA
    - 1) Enter a password such as 'monitor' and the same for the confirm password
    - 2) Enter the key file name such as 'C:\monitor.key'
    - 3) Click the 'Export Keys' button. This action exports a key file to the specified location.
    - 4) Click Ok
  - \_\_\_ e. Click to save the configuration.
- \_\_\_ 2. Setup SSL on monitor server on machine 1.
  - \_\_\_ a. In the administrative console, navigate to Security > SSL certificate & key management > Key stores & certificates
  - \_\_\_ b. Click NodeDefaultTrustStore > Signer certificates > Retrieve from port
  - \_\_\_ c. For the host name, enter the remote CEI server machine name. For example, aimcp096.austin.ibm.com.
  - \_\_\_ d. Enter the remote server port. For example, 8880
    - 1) You can verify the remote port by logging into the remote server administrative console and navigating to Servers > Server Types > WebSphere Application Servers > Server1 > Ports.
  - \_\_\_ e. Enter the alias as wps70

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\_\_\_ f. Click to retrieve signer information.

**Retrieved signer information**

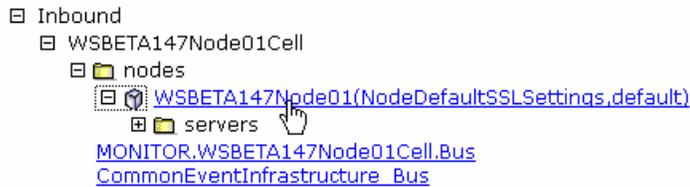
Serial number	81543256427842
Issued to	CN=aimcp096.austin.ibm.com, O=IBM, C=US
Issued by	CN=aimcp096.austin.ibm.com, O=IBM, C=US
Fingerprint (SHA digest)	CE:28:52:AB:38:45:04:1A:4B:EB:A3:C5:A5:72:4A:5A:7A:47:91:6A
Validity period	November 14, 2023

\_\_\_ g. Click Ok.

\_\_\_ h. Click to save the configuration.

\_\_\_ i. In the administrative console, navigate to Security > SSL certificate & key management > Manage endpoint security configuration.

\_\_\_ j. For the inbound event node, navigate to Inbound > <yourCell> > nodes > then click the node link



\_\_\_ k. Make sure you have the default SSL configuration and the default alias:

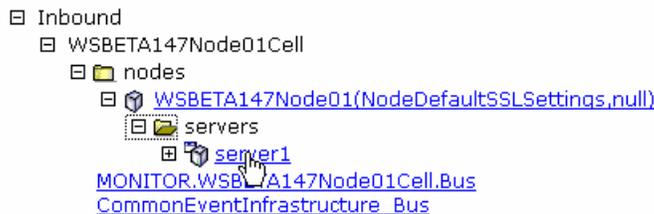
**Specific SSL configuration for this endpoint**

SSL configuration:

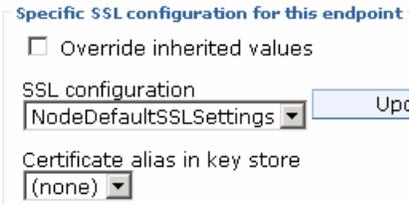
Certificate alias in key store:

\_\_\_ l. Click OK.

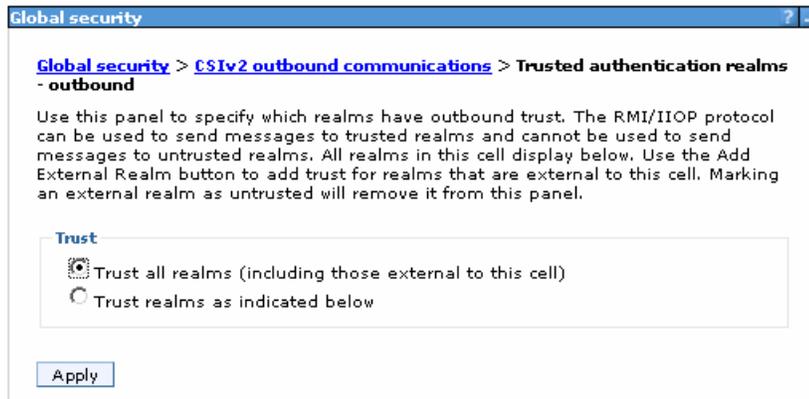
\_\_\_ m. For the inbound event node server, navigate to Inbound > <yourCell> > nodes > <yourNode> > servers > then click the server1 link



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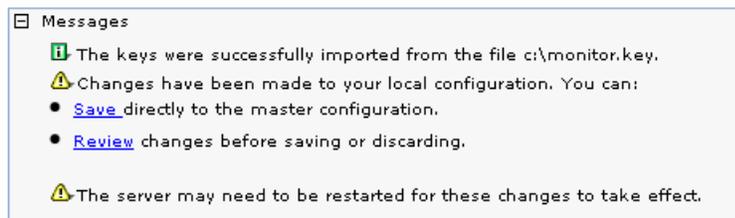
- \_\_ n. Make sure that override is unchecked:
- \_\_ o. Click OK.
- \_\_ p. Perform the same checks and updates for the outbound event node and server.
- \_\_ q. Save the configuration.
- \_\_ r. Navigate to Security > Global security > Authentication section > RMI/IIOP security > CSiv2 outbound communications
- \_\_ s. Click the link 'Trusted authentication realms – outbound'
- \_\_ t. Select 'Trust all realms (including those external to this cell)'



- \_\_ u. Click Apply
- \_\_ v. Save the configuration.
- \_\_ w. Restart the server.
- \_\_ x. Check SystemOut.log for errors.

## Part 6: Configure single sign-on and SSL on process server on machine 2

- \_\_\_ 1. Copy the monitor.key file from machine 1 to machine 2. In this example it is copied to machine 2 at location C:\monitor.key.
- \_\_\_ 2. Configure 'Single Sign-on' on process server on machine 2.
- \_\_\_ a. In the administrative console, navigate to Security > Global security > Authentication section > Web and SIP security > click the 'Single sign-on (SSO)' link
- \_\_\_ b. In the 'Single sign-on (SSO)' panel, do the following:
- 1) Select the check box for 'Enabled'
  - 2) Ensure the check box for 'Requires SSL' is NOT selected
  - 3) Enter your domain name, for example, ibm.com
  - 4) Select the check box for 'Interoperability Mode'
  - 5) Clear the check box for 'Web bound security attribute propagation'
  - 6) Click OK.
- \_\_\_ c. Click to save the configuration.
- \_\_\_ d. On the Global security page, find the Authentication section, then click the link LTPA
- 1) Enter a password such as 'monitor' and the same for the confirm password
  - 2) Enter the key file name such as 'C:\monitor.key'
  - 3) Click the 'Import Keys' button.



- 4) Click Ok
  - \_\_\_ e. Click to save the configuration.
- \_\_\_ 3. Setup SSL on process server on machine 2.
- \_\_\_ a. In the administrative console, navigate to Security > SSL certificate & key management > Key stores & certificates
- \_\_\_ b. Click NodeDefaultTrustStore > Signer certificates > Retrieve from port
- \_\_\_ c. For the host name, enter the monitor server machine name. For example, wsbeta147.austin.ibm.com.
- \_\_\_ d. Enter the remote server port. For example, 8880

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1) You can verify the monitor server port by logging into the monitor server administrative console and navigating to Servers > Server Types > WebSphere Application Servers > Server1 > Ports.

- \_\_\_ e. Enter the alias as mon70
- \_\_\_ f. Click to retrieve signer information.

**Retrieved signer information**

Serial number	68251877823840
Issued to	CN=WSBETA147.austin.ibm.com, O=IBM, C=US
Issued by	CN=WSBETA147.austin.ibm.com, O=IBM, C=US
Fingerprint (SHA digest)	FC:30:8E:06:18:AE:9E:33:F9:1F:79:D1:F8:7D:56:EC:CC:27:AC:EF
Validity period	November 14, 2023

- \_\_\_ g. Click Ok.
- \_\_\_ h. Click to save the configuration.
- \_\_\_ i. In the administrative console, navigate to Security > SSL certificate & key management > Manage endpoint security configuration.
- \_\_\_ j. For the inbound event node, navigate to Inbound > <yourCell> > nodes > then click the node link
- \_\_\_ k. Make sure you have the default SSL configuration and the default alias:

**Specific SSL configuration for this endpoint**

SSL configuration  
NodeDefaultSSLSettings

Certificate alias in key store  
default

- \_\_\_ l. For the inbound event node server, navigate to Inbound > <yourCell> > nodes > <yourNode> > servers > then click the server1 link

**Specific SSL configuration for this endpoint**

Override inherited values

SSL configuration  
NodeDefaultSSLSettings

Certificate alias in key store  
(none)

- \_\_\_ m. Make sure that override is unchecked:
- \_\_\_ n. Perform the same checks and updates for the outbound event node and server.
- \_\_\_ o. Save the configuration.
- \_\_\_ p. Restart the server.
- \_\_\_ q. Check SystemOut.log for errors.

## Part 7: Run the queue bypass script on the remote server on machine 2

1. From the <wps\_root>\bin folder of the remote CEI server, run `wbmConfigureQueueBypassDatasource`. Here is a sample. You will need to substitute the correct cell name of your monitor server, and you need to substitute the correct server name. Note that if you try to copy and paste from here to the command line on your server, the dashes may not copy properly, so you may need to overtype them.

To run the script interactively:

```
wsadmin -lang jython
AdminTask.wbmConfigureQueueBypassDatasource('[-interactive]')
AdminConfig.save()
```

To run the script with parameters, here is an example:

```
wsadmin -lang jython
AdminTask.wbmConfigureQueueBypassDatasource('[-monitorCell
WSBETA147Node04Cell -databaseType db2 -jdbcProvider "DB2 Universal
JDBC Driver Provider (XA)" -driverType 4 -databaseName MONDB -
databaseServerName dbsrv3 -databaseServerPort 50000 -user db2admin -
password yourpw]')
AdminConfig.save()
```

```
WASX7278I: Generated command line: AdminTask.wbmConfigureQueueBypassDatasource('
[-monitorCell WSBETA147Node04Cell -databaseType db2 -jdbcProvider "DB2 Universal
JDBC Driver Provider (XA)" -driverType 4 -databaseName MON7CC -databaseServerName
wsbeta147.austin.ibm.com -databaseServerPort 50000 -user db2admin -password *
****]')
"CWMTC0530I: The data source named 'Monitor_WSBETA147Node04Cell_Routing_Database'
was created."
wsadmin>AdminConfig.save()
```

2. Check that the data source was created.
- a. On the remote server's administrative console, navigate to Resources > JDBC > Data sources. You should see the routing database entry in the list.

Monitor_WSBETA147Node01Cell_Routing_Database	jdbc/wbm/WSBETA147Node01Cell/MonitorDatabase	Cell=aimcp096Node02Cell
--	--	-------------------------

3. Restart the process server.
4. Test the JDBC connection.
- a. On the remote server's administrative console, navigate to Resources > JDBC > Data sources.
- b. Click the 'Monitor <yourCell> Routing Database' in the list.
- c. Click the button 'Test connection'.

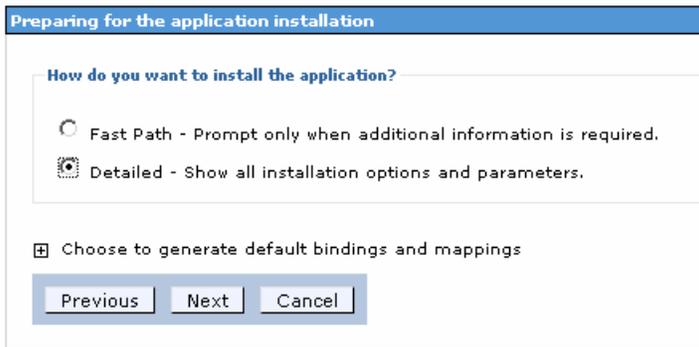
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☐ Messages

 The test connection operation for data source Monitor\_WSBETA147Node01Cell\_Routing\_Database on server server1 at node aimcp096Node03 was successful.

## Part 8: Install the Clips And Tacks BAM monitor model on the monitor server on machine 1

- \_\_\_ 1. On monitor server's administrative console, install the Clips And Tacks model EAR, and specify the remote CEI server configuration.
  - \_\_\_ a. Navigate to Applications > New application > New enterprise application
  - \_\_\_ b. Browse to the ear file, C:\Labfiles70\RemoteCEIServer\ClipsAndTacksApplication.ear
  - \_\_\_ c. Click Next.
  - \_\_\_ d. Make sure that you select 'Detailed'.

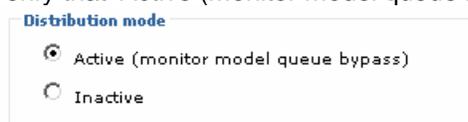


- \_\_\_ e. Click Next. Click Continue.
- \_\_\_ f. In step 13 (Select monitor model CEI options) specify the remote CEI server.
  - 1) Click location remote, and enter your remote CEI server name and port. For example, aimcp096.austin.ibm.com, 2809.
    - a) You can verify the remote CEI server port by logging into the remote server administrative console and navigating to Servers > Server Types > WebSphere application servers > Server1 > Ports.
  - 2) Click security enabled, and enter the user and password for the server
  - 3) Click the button 'refresh list' on the page, and you should see that the events group profile list is updated with the remote cell:

Event group profile list name

Select	Event group profile list name	Scope
<input checked="" type="checkbox"/>	Event groups list	cell=aimcp096Node02Cell, node=aimcp096Node03, server=server1

- 4) Verify that 'Active (monitor model queue bypass)' is selected on this page:



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\_\_\_ g. Finish the installation and verify that it completes successfully:

SECJ0400I: Successfully updated the application ClipsAndTacksApplication with the appContextIDForSecurity information.

ADMA5011I: The cleanup of the temp directory for application ClipsAndTacksApplication is complete.

ADMA5013I: Application ClipsAndTacksApplication installed successfully.

Application ClipsAndTacksApplication installed successfully.

To start the application, first save changes to the master configuration.

Changes have been made to your local configuration. You can:

- [Save](#) directly to the master configuration.
- [Review](#) changes before saving or discarding.

\_\_\_ h. Save the configuration.

\_\_\_ i. Check SystemOut.log for errors. Here is a sample of messages for a successful installation:

1) ApplicationMg A WSVR0221I: Application started: ClipsAndTacksApplication

2) [12/3/08 10:52:53:937 CST] 00000044 LifecycleServ I  
com.ibm.wbimonitor.lifecycle.LifecycleServices start( String, long ) CWMLC0126I: Model  
[ClipsAndTacks] version [2007-09-11T12:07:30] start completed.

3) [12/3/08 10:52:53:984 CST] 00000044 MMIntegration I  
com.ibm.wbimonitor.lifecycle.MMIntegration\_General bindJMS\_BATCH CWMLC0804I:  
\*\*\*\*\* 'GENERAL' integration sequence is COMPLETE. modelID: 'ClipsAndTacks'

4) [12/3/08 10:52:55:968 CST] 00000010 ConsumerDaemo I  
com.ibm.wbimonitor.mm.ClipsAndTacks.20070911120730.moderator.ConsumerDaemonH  
andlerImpl startDaemon() CWMRT3005I: The Monitor Model "ClipsAndTacks  
20070911120730" is starting consumption on this server or cluster member in SERIAL\_MT  
mode with reordering=false from NORMAL\_QUEUE\_BYPASS.

- \_\_\_ 2. The application will start automatically after installation, so stop it. In the administrative console, navigate to Applications > Application Types > WebSphere enterprise applications > ClipsAndTacksApplication. Select it and click Stop. Leave the application in stopped status so that the model will leave the events in the inbound event table, so then you can easily check that the remote event configuration is working.

## Part 9: Run events on the remote CEI server on machine 2

The supplied program is 'BatchCBEWriter61' and it will submit the events to the Common Event Infrastructure. Look for the program in \Labfiles70\ClipsAndTacks\BatchCBEWriter. This program reads XML files which represent the common base events for the model.

You should run this program on the process server not the monitor server in order to test that the remote CEI configuration is working properly.

- \_\_\_ 1. Update BatchCBEWriter61.bat to point WAS\_HOME to the CEI server home, for example 'set WAS\_HOME=C:\ProcServer70'.
- \_\_\_ 2. Update config.properties, setting the serverName and portNumber. You can find the port number by browsing the server log and finding 'bootstrap port'. For example, check for the log at C:\ProcServer70\profiles\ProcSrv01\logs\server1\SystemOut.log . Here is an example of the config.properties settings:
  - \_\_\_ a. connect.serverName = localhost
  - \_\_\_ b. connect.portNumber = 2809
- \_\_\_ 3. Open a command window, then change directory to the folder containing BatchCBEWriter61, for example, type this command
  - \_\_\_ a. cd \Labfiles70\BatchCBEWriter
- \_\_\_ 4. Run commands to load the common base events to the server.
  - \_\_\_ a. batchcbewriter61 -Dsource.filename=allevents.xml
  - \_\_\_ b. When it prompts you for user identity and password, enter 'admin' for both (without the quotation marks)
- \_\_\_ 5. When you run BatchCBEWriter61, you should see results such as:

```
C:\Labfiles70\BatchCBEWriter>batchcbewriter61 -Dsource.filename=allevents.xml
Getting CBEs.
Getting Emitter.
Removing GlobalInstanceIds.
Setting missing values.
Changing Instance Ids.
Updating timestamps.
Validating CBEs.
Sending CBEs.
START=12:39:48.843
Sending cbe[10].
Sending cbe[20].
Sending cbe[30].
Sending cbe[40].
Sending cbe[50].
Sending cbe[60].
END=12:40:11.734
TotalTime=22891 milliseconds.
```

- \_\_\_ 6. Check the logs on monitor server and process server for errors.
- \_\_\_ 7. Since the Clips and Tacks application is stopped the events should stay in the incoming events table. On the monitor server, open the DB2 control center, and navigate to the

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INCOMING\_EVENTS table. Open the table to view the 68 event records that were submitted:

**Open Table - INCOMING\_EVENTS**  
WSBETA147 - DB2 - MON7CC - CLIPSANDTACKS.INCOMING\_EVENTS

Edits to these results are performed as searched UPDATEs and DELETEs. Use the Tools Settings change the form of editing.

ID	VERSION	QUEUE_ID	OBSERVED	PAYLOAD_VARCHAF
64	200709111207...	active		
65	200709111207...	active	0	
66	200709111207...	active	0	
67	200709111207...	active	0	
68	200709111207...	active	0	

Commit Roll Back Filter Fetch More Rows

Automatically commit updates 68 row(s) in memory

8. Start the ClipsAndTacksApplication on the monitor server, then wait a few minutes, then check the MCT\_CLPSNDTCKSM\_<timestamp> table in the DB2 control center for records. You should see 20 monitoring context instances:

**Open Table - MCT\_CLPSNDTCKSM\_20070911120730**  
WSBETA147 - DB2 - MON7CC - CLIPSANDTACKS.MCT\_CLPSNDTCKSM\_20070911120730

Edits to these results are performed as searched UPDATEs and DELETEs. Use the Tools Settings change the form of editing.

MCID	PARENT_MCID	CREATION_TIME	TERMINATION_TIME	AB_
1		Jan 14, 2010 6:39:4...	Jan 1, 9999 12:00:00 A...	
2		Jan 14, 2010 6:39:4...	Jan 14, 2010 6:39:48 P...	
3		Jan 14, 2010 6:39:4...	Jan 1, 9999 12:00:00 A...	
4		Jan 14, 2010 6:39:4...	Jan 1, 9999 12:00:00 A...	
5		Jan 14, 2010 6:39:4...	Jan 14, 2010 6:39:48 P...	
6		Jan 14, 2010 6:39:4...	Jan 1, 9999 12:00:00 A...	
7		Jan 14, 2010 6:39:4...	Jan 1, 9999 12:00:00 A...	
8		Jan 14, 2010 6:39:4...	Jan 14, 2010 6:39:48 P...	
9		Jan 14, 2010 6:39:4...	Jan 1, 9999 12:00:00 A...	
10		Jan 14, 2010 6:39:4...	Jan 14, 2010 6:39:48 P...	
11		Jan 14, 2010 6:39:4...	Jan 14, 2010 6:39:48 P...	
12		Jan 14, 2010 6:39:4...	Jan 1, 9999 12:00:00 A...	
13		Jan 14, 2010 6:39:4...	Jan 1, 9999 12:00:00 A...	
14		Jan 14, 2010 6:39:4...	Jan 1, 9999 12:00:00 A...	
15		Jan 14, 2010 6:39:4...	Jan 14, 2010 6:39:48 P...	
16		Jan 14, 2010 6:39:4...	Jan 1, 9999 12:00:00 A...	
17		Jan 14, 2010 6:39:4...	Jan 14, 2010 6:39:48 P...	
18		Jan 14, 2010 6:39:4...	Jan 1, 9999 12:00:00 A...	
19		Jan 14, 2010 6:39:4...	Jan 1, 9999 12:00:00 A...	
20		Jan 14, 2010 6:39:4...	Jan 14, 2010 6:39:48 P...	

## What you did in this exercise

You installed DB2 and a stand-alone monitor server onto machine 1. Then you installed a stand-alone process server on machine 2. Then you configured and verified the queue bypass connection. Also, you deployed a model and sent events from the remote server to the monitor server.