Lab 10_01: Configuring JVMs

Performance Checklist

Configure the JVM

Lab Overview:

In this exercise, you will configure the JVM memory settings for both a Standalone server and a Domain.

Lab Resources/Configuration:

Lab Files Location:	n/a
Application URL:	n/a

Success Criteria: You will have configured the JVM at the Host, Server Group and Server level.

Lab Outline:

1. Configure the JVM for a Standalone Server
2. Verify the JVM Settings
3. Configure the JVM for a Server Group
4. Verify the JVM Settings
5. Configure the JVM for a Host
6. Verify the JVM Settings
7. Configure the JVM for a Server
8. Verify the JVM Settings

Before you begin...

Stop all running instances of EAP.

- ☐ 1. Configure the JVM for a Standalone Server
  - ☐ 1.1. Using a text editor, open the following file in your ***EAP_HOME*/bin** folder:

    On RHEL:

    ```
    standalone.conf
    ```

    On Windows:

    ```
    standalone.conf.bat
    ```

  - ☐ 1.2. Locate the **JAVA_OPTS** variable that defines **-Xms** and **-Xmx**.
  - ☐ 1.3. Set both **-Xms** and **-Xmx** to 768m.
  - ☐ 1.4. Change the **-XX:MaxPermSize** to 512m.

- ☐ 1.5. Save your changes.

☐ 2. Verify the JVM Settings

- ☐ 2.1. In a terminal window, start your standalone instance.
- ☐ 2.2. Look for the following output in the terminal window:

```
=========================================================================
  JBoss Bootstrap Environment
  JBOSS_HOME: /opt/jboss-eap-6.0.0
  JAVA: /opt/jdk1.6.0_24/bin/java
  JAVA_OPTS: -server -Xms768m -Xmx768m -XX:MaxPermSize=512m -
Djava.net.preferIPv4Stack=true -Dorg.jboss.resolver.warning=true
 -Dsun.rmi.dgc.client.gcInterval=3600000
 -Dsun.rmi.dgc.server.gcInterval=3600000 -
Djboss.modules.system.pkgs=org.jboss.byteman
=========================================================================
```

☐ 3. Configure the JVM for a Server Group

- ☐ 3.1. Stop the standalone instance from the previous step.
- ☐ 3.2. Start your **machine1** Domain Controller.
- ☐ 3.3. Click on the **Server Groups** link on the **Server** page of the Management Console to view the list of **Available Group Configurations**.
- ☐ 3.4. Click on **production-group** in the list.
- ☐ 3.5. Click on the **JVM Configuration** tab, then click the **Edit** button.
- ☐ 3.6. Enter **production-group-jvm** for the **Name**.
- ☐ 3.7. Enter **1024m** for the **Heap Size** and **Max Heap Size**. Enter **256m** for the **Permgen Size**.
- ☐ 3.8. Click the **Save** button to save changes.

☐ 4. Verify the JVM Settings

- ☐ 4.1. Open the **domain.xml** file for machine1.
- ☐ 4.2. Near the end of the file in the **<server-group>** section of **production-group**, you should see the **production-group-jvm** defined.
- ☐ 4.3. You can also enter the following command in the CLI:

```
/server-group=production-group/jvm=production-group-jvm:read-resource
```

☐ 5. Configure the JVM for a Host

- ☐ 5.1. Start your **host2** Host Controller.
- ☐ 5.2. Go to the **Server** page of the Management Console.
- ☐ 5.3. Select **host2** from the **Host** drop-down menu.

- ☐ 5.4. Click on the **JVM Configurations** link. This page is for configuring JVM's at the Host level.
- ☐ 5.5. Click the **Add** button to define a new JVM for **host2**.
- ☐ 5.6. Enter **host2-jvm** for the **Name** and **1303m** for the **Heap Size** and **Max Heap Size**. Set the **Permgen Size** and **Max Permgen Size** at **256m**.
- ☐ 5.7. Click the **Save** button.

☐ 6. Verify the JVM Settings

- ☐ 6.1. Open the file **host-slave.xml** on **machine2**.
- ☐ 6.2. In the **<jvms>** section you should see your **host2-jvm** definition.
- ☐ 6.3. You can also enter the following command from the CLI:

```
/host=host2/jvm=host2-jvm:read-resource
```

☐ 7. Configure the JVM for a Server

- ☐ 7.1. Back on the **Server** page of the Management Console, select host2 again from the **Host** drop-down menu.
- ☐ 7.2. Click on the **Server Configurations** link.
- ☐ 7.3. Select **production-server-A** from the list of **Available Server Configurations**.
- ☐ 7.4. On the **JVM Configuration** tab, click the **Edit** button.
- ☐ 7.5. Enter **server-jvm** for the **Name** and **756m** for both the **Heap Size** and the **Max Heap Size**.
- ☐ 7.6. Click the **Save** button to save your changes.

☐ 8. Verify the JVM Settings

- ☐ 8.1. Look at the **host-slave.xml** file of host2.
- ☐ 8.2. In the **production-server-A** tag, verify the **server-jvm** definition appears.
- ☐ 8.3. For your changes to take effect, stop and restart the **host2** Host Controller of **machine2**.
- ☐ 8.4. **Optional**: On RHEL, open a terminal window and enter the following command:

```
ps -eaf | grep production-server-A
```

You will see the command used to start this server. Verify its JVM settings match the values you configured. Run the same command for **production-server-B**:

```
ps -eaf | grep production-server-B
```