IBM WebSphere Application Server V8 Lab:
addNode –asExistingNode

Scenario

You are the system administrator for a small IBM WebSphere Application Server V8 installation that includes a deployment manager node on host-1, and an application server node on host-2. You receive an alert on your smart phone indicating that host-2 failed due to a hard drive crash. After talking with your coworker, you learn the following:
- A profile backup is not available for the failed node.
- Another machine, host-3, includes sufficient capacity to host the failed application server node.
- WebSphere Application Server V8.0 is installed in the same directory on host-2 and host-3.

Goals

During this lab, you will learn to use the `addNode` command with the new `–asExistingNode` option to quickly move an application server node to a new host.

Supporting documentation is included in the following WebSphere Application Server V8.0 information center topic: **Recovering or moving nodes with the addNode -asExistingNode command**

This lab is provided **AS-IS**, with no formal IBM support.

Prerequisites

Hosts

This lab requires three host machines. Within the lab instructions, the hosts are assumed to be set up in the following manner:

- o host-1 – Deployment Manager
  - WebSphere Application Server V8.0 Installation
    - Application server root
      - Windows: C:\Program Files\IBM\WebSphere\AppServer
      - UNIX/Linux: /opt/IBM/WebSphere/AppServer
  - Deployment Manager Node
    - Profile name: Dmgr01
    - Profile path
      - Windows: C:\Program Files\IBM\WebSphere\AppServer\profiles\Dmgr01
      - UNIX/Linux: /opt/IBM/WebSphere/AppServer/profiles/Dmgr01
    - Cell name: Dmgr01Cell
    - Node name: Dmgr01Node
    - Server name: dmgr
  - WebSphere Administrative Account
    - User name: was
    - Password: was

- o host-2 – Failed (Not Available)
  - WebSphere Application Server V8.0 Installation
    - Application server root
      - Windows: C:\Program Files\IBM\WebSphere\AppServer
      - UNIX/Linux: /opt/IBM/WebSphere/AppServer
  - Application Server Node
    - Profile name: AppSrv01
    - Profile path
      - Windows: C:\Program Files\IBM\WebSphere\AppServer\profiles\AppSrv01
      - UNIX/Linux: /opt/IBM/WebSphere/AppServer/profiles/AppSrv01
    - Node name: AppSrv01Node
    - Server name: server1

- o host-3 – New
  - WebSphere Application Server V8.0 Installation
    - Application server root
      - Windows: C:\Program Files\IBM\WebSphere\AppServer
      - UNIX/Linux: /opt/IBM/WebSphere/AppServer

Procedure

1. On host-1 (deployment manager), use wsadmin to change the host name of the application server node.

   a. Start the deployment manager.

   b. Open a command prompt and change to the deployment manager profile bin directory, for example,

   Windows
   ```
   C:\Program Files\IBM\WebSphere\AppServer\profiles\Dmgr01\bin
   ```

   UNIX/Linux
   ```
   /opt/IBM/WebSphere/AppServer/profiles/Dmgr01/bin
   ```

   c. Run the following command to start wsadmin:

   ```
   wsadmin -lang jython -userName admin_user_name -password admin_password
   ```

   For example:

   Windows
   ```
   wsadmin -lang jython -username was -password was
   ```

   UNIX/Linux
   ```
   ./wsadmin.sh -lang jython -username was -password was
   ```

   Note: The -userName and -password options are only required when administrative security is enabled.

d. Run the following command to change the host name of the application server node:

```
AdminTask.changeHostName('[-hostName new_host_name -nodeName node_name]')
```

For example:

```
AdminTask.changeHostName('[-hostName host-3 -nodeName AppSrv01Node]')
```

e. Run the following command to save the changes:

```
AdminConfig.save()
```

f. Run the following command to quit wsadmin:

```
quit
```

2. On host-3, create a new <u>custom</u> profile that includes the profile name, profile directory, and node name assigned to the failed application server node.

    a. Start the Profile Management Tool for the appropriate WebSphere Application Server installation.

    b. Click **Create**.

    c. Elect to create a <u>custom</u> profile.

    d. Select **Advanced profile creation**.

    e. Specify the profile name and profile directory assigned to the failed application server node, for example,
        o Profile name: `AppSrv01`
        o Profile directory
            ▪ Windows: `C:\Program Files\IBM\WebSphere\AppServer\profiles\AppSrv01`
            ▪ UNIX/Linux: `/opt/IBM/WebSphere/AppServer/profiles/AppSrv01`

    f. Specify the node name assigned to the failed application server node and the new host name, for example,
        o Node name: `AppSrv01Node`
        o Host name: `host-3`

    g. Elect to federate the node later.

    h. Adjust the security certificate settings as required for your environment.

    i. Review the profile creation summary information. Then click **Create**.

    j. Do not elect to launch the First steps console. Click **Finish** to close the profile creation wizard.

    k. Close the WebSphere Customization Toolbox.

3. On host-3, use the `addNode` command with the `-asExistingNode` option to federate the custom node as the existing application server node (in essence transforming the new custom node into the existing application server node).

    a. Open a command prompt and change to the application server profile bin directory, for example,

    Windows
    `C:\Program Files\IBM\WebSphere\AppServer\profiles\AppSrv01\bin`

    UNIX/Linux
    `/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/bin`

    b. Run the following command:

    `addNode dmgr_host_name dmgr_soap_port -asExistingNode -username admin_user_name -password admin_password`

    For example:

    Windows
    `addNode host-1 8879 -asExistingNode -username was -password was`

    UNIX/Linux
    `./addNode.sh host-1 8879 -asExistingNode -username was -password was`

    Note: The `-username` and `-password` options are only required when administrative security is enabled.

4. Log in to the administrative console for the deployment manager, specifying an an appropriate user ID and password if administrative security is enabled. Then do the following:

    a. Click *Environment > Virtual hosts*. Then click the virtual host **default_host**. Next, click **Host Aliases**. Finally, adjust all entries associated with the application server node to include the new host name, for example, `host-3`. Ensure that you save all changes to the master configuration before proceeding to the next step.

    b. Click *Servers > Server Types > WebSphere application servers*. Then do the following:

        i. Verify that the failed application server node now resides on the new host.

        ii. Start the applications servers.

        iii. Verify that it is possible to access applications installed on the application server.