

IBM WebSphere Application Server V8 lab: Migration

Scenario

You are the system administrator for a WebSphere Application Server V7 installation that includes a deployment manager node and two application server nodes, all on host-1. The installation includes all feature packs and fix packs available to date. It is now time to migrate the configuration profiles to a fresh WebSphere Application Server V8.0 installation.

For more information about product migration, see the following WebSphere Application Server V8 information center topic: **Migrating product configurations**

Goals

During this lab, you will learn to do the following:

1. Migrate a deployment manager profile using the Configuration Migration Tool.
2. Migrate an application server profile using the Configuration Migration Tool.
3. Migrate an application server profile using the command line.
4. Verify the success of a migration.

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

Prerequisites

Hosts

This lab requires a single host machine. Within the lab instructions, it is assumed to be set up in the following manner:

- host-1
 - WebSphere Application Server V7 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
 - Application Server Node 1
 - 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
 - Application Server Node 2
 - Profile name: AppSrv02
 - Profile path
 - Windows: C:\Program Files\IBM\WebSphere\AppServer\profiles\AppSrv02
 - UNIX/Linux: /opt/IBM/WebSphere/AppServer/profiles/AppSrv02
 - Node name: AppSrv02Node
 - Server name: server1
 - WebSphere Administrative Account
 - User name: was
 - Password: was
 - WebSphere Application Server V8.0 Installation
 - Application server root
 - Windows: C:\Program Files\IBM\WebSphere\AppServerV8
 - UNIX/Linux: /opt/IBM/WebSphere/AppServerV8

Task 1: Migrate the deployment manager profile using the Configuration Migration Tool

1. Start the Configuration Migration Tool for the WebSphere Application Server V8.0 installation.
2. Use the Configuration Migration Tool to migrate deployment manager profile Dmgr01.
 - a. Within the Configuration Migration tool, click **New**.
 - b. Select the existing WebSphere Application Server V7 installation.
 - c. Select the source profile, Dmgr01, and elect to create a backup of the configuration information.
 - d. Specify an appropriate WebSphere administrative user name and password.
 - e. Elect to disable the source deployment manager after migration.
 - f. Accept the default Migration output directory, Trace directory, and Trace levels.
 - g. Elect to migrate the deployment manager to a new profile.
 - h. Accept the default (current) profile name and host name.
 - i. Elect to migrate and install the applications in the default directory of the target profile.
 - j. Elect to migrate object types to support script compatibility and stop the migration if any exception occurs while migrating databases. Do not elect to migrate the My Tasks customizations.
 - k. Click **Migrate** to begin migrating the deployment manager profile to the WebSphere Application Server V8 installation.
 - l. After the migration completes, click each tab (Backup Source Profile, Migrate from Source Profile, Create Target Profile, and Migrate to Target Profile) to view the migration history.
 - m. On the Migration Results screen, click the link to each log file to view the migration output.
 - n. Click **Finish**.

Task 2: Migrate application server profile AppSrv01 using the Configuration Migration Tool

1. Start deployment manager Dmgr01 in the WebSphere Application Server V8 installation.
2. Use the Configuration Migration Tool to migrate application server profile AppSrv01.
 - a. Within the Configuration Migration tool, click **New**.
 - b. Select the existing WebSphere Application Server V7 installation.
 - c. Select the source profile, AppSrv01, and elect to create a backup of the configuration information.
 - d. Specify the WebSphere administrative user name and password. Then click **Test Connection** to ensure that the Configuration Migration Tool can communicate with the deployment manager. The test may require 10 or 15 seconds to complete.
 - e. Accept the default Migration output directory, Trace directory, and Trace levels.
 - f. Elect to migrate the application server to a new profile.
 - g. Accept the default (current) profile name and host name.
 - h. Elect to use the TCP/IP ports assigned to the source (original) profile.
 - i. Elect to migrate object types to support script compatibility and stop the migration if any exception occurs while migrating databases.
 - j. Click **Generate Commands** to save the equivalent migration and backup commands to a text file. Save the file to the following directory:

Windows
C:\temp

UNIX/Linux
/tmp

Do not delete this file, as it is required to complete the next phase of this lab.
 - k. Click **Migrate** to begin migrating the application server profile to the WebSphere Application Server V8 installation.
 - l. After the migration completes, click each tab (Backup Source Profile, Migrate from Source Profile, Create Target Profile, and Migrate to Target Profile) to view the migration history.
 - m. On the Migration Results screen, click the link to each log file to view the migration output.
 - n. Click **Finish**.

Task 3: Migrate application server profile AppSrv02 using the command line

1. Close the WebSphere Customization Toolbox (containing the Configuration Migration Tool) if it is still running.

2. Create and use a script to migrate application server profile AppSrv02.

a. Locate the "Generated Commands" (.txt) file that you created when migrating application server profile AppSrv01. The file name will include the text "MigrationCommands", and should be located in the following directory:

Windows
C:\temp

UNIX/Linux
/tmp

b. Rename the file to the following:

Windows
MigrateAppSrv02.bat

UNIX/Linux
MigrateAppSrv02.sh

c. Use a text editor to make the following changes to the script:

i. Change EVERY instance of AppSrv01 to AppSrv02 (separate strings and embedded strings) to appropriately adjust the profile name, node name, and path entries within the commands.

ii. Within the final command, change the `-password` entry (`*****`) to the actual WebSphere administrative password.

iii. Optionally, change the log file names to include a more accurate time.

iv. If you are using Windows, add the DOS command `call` to the beginning of each of the four commands included in the batch file, for example:

```
call C:\Program Files\IBM\WebSphere\AppServer\bin\backupConfig.bat...
```

d. Open a command prompt the change to the following directory:

Windows
C:\temp

UNIX/Linux
/tmp

e. Run the following command:

Windows
MigrateAppSrv02

UNIX/Linux

```
./MigrateAppSrv02.sh
```

f. After the migration is complete, review the log files that are located in the following directory:

Windows

```
C:\Program Files\IBM\WebSphere\WSMigration\AppSrv02\logs
```

UNIX/Linux

```
/opt/IBM/WebSphere/WSMigration/AppSrv02/logs
```

Task 4: Verify the success of the migration

1. Open a command prompt and change to the bin directory for application server profile AppSrv01, for example,

Windows

```
C:\Program Files\IBM\WebSphere\AppServerV8\profiles\AppSrv01\bin
```

UNIX/Linux

```
/opt/IBM/WebSphere/AppServerV8/profiles/AppSrv01/bin
```

Then run the following command to start the node agent associated with application server profile AppSrv01:

Windows

```
startnode
```

UNIX/Linux

```
./startNode.sh
```

2. Log in to the administrative console for deployment manager Dmgr01, specifying an appropriate user name and password if administrative security is enabled. Then do the following:

a. Click *Servers > Server Types > WebSphere application servers*. Then start server1 on node AppSrv01Node. Verify that server1 starts properly.

b. Stop server1 on node AppSrv01Node.

c. Click *System Administration > Node agents*. Then stop the node agent residing on node AppSrv01Node.

3. Repeat steps 1 and 2 for application server profile AppSrv02.