WebSphere Virtual Enterprise
Version 7.0

IBM

z/OS Migration Guide

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Version 7.0

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Contents

Chapter 1. Migrating WebSphere Virtual Enterprise for z/OS

Use this information to migrate to WebSphere® Virtual Enterprise Version 7.0 for z/OS®.

About this task

The following procedure outlines the high-level steps for migrating the product for z/OS. See the individual tasks for more detailed information.

Procedure

- Migrate the product from Version 6.1.0.5 or Version 6.1.1 to Version 7.0
- Migrate to a Version 7.0 for z/OS cell.
  1. Migrate the deployment manager.
  2. Migrate the application server nodes.

Chapter 2. Migrating the product from Version 6.1.0.5 or Version 6.1.1 to Version 7.0

You can migrate WebSphere Virtual Enterprise for z/OS from Version 6.1.0.5 or Version 6.1.1 to Version 7.0.

Before you begin

- Ensure that WebSphere Virtual Enterprise Version 6.1.0.5 for z/OS or WebSphere Virtual Enterprise Version 6.1.1 for z/OS is installed and running in your current cell. See the Program Directory on the Library page for more information.
- To meet minimum requirements, update WebSphere Application Server Network Deployment for z/OS to Version 7.0.0.17. See the Latest fix packs for WebSphere Application Server for more information.
- Start all servers on all nodes to incorporate the changes for the WebSphere Application Server Network Deployment upgrade.

About this task

The process of migrating WebSphere Virtual Enterprise from Version 6.1.0.5 or Version 6.1.1 to Version 7.0 while maintaining the same version of WebSphere Application Server Network Deployment is known as an *upgrade*. To complete the following procedure, upgrade your deployment manager first. Next, upgrade each on demand router (ODR) before you migrate your application servers. To complete the migration process successfully, you must follow the steps as outlined, and you must run the commands within the steps as outlined.

Note: If either WebSphere eXtreme Scale Version 6.1.x or WebSphere Extended Deployment Compute Grid Version 6.1.x, or both, are configured in your environment, you must complete the steps to remove the products from the deployment manager and all other nodes in the cell. The commands to remove the products are outlined in the steps of the migration procedure.

Procedure

1. Mount the new product HFS for WebSphere Virtual Enterprise Version 7.0 in the `/usr/lpp/zWebSphereVE/V7R0` directory.
2. Enable access to the new WebSphere Virtual Enterprise Version 7.0 file system. Edit the `server.policy` file. You can use the policy tool in the `WAS_HOME/java/jre/bin` directory to edit the policy file, or you can manually edit the policy file. If you choose to manually edit the file, set permissions for the deployment manager and all of the application server nodes.

   To set permissions for the deployment manager, add the following lines to the `server.policy` file in the `/WAS_config_root/DeploymentManager/profiles/default/properties` directory:

   ```
   grant codeBase "file:/usr/lpp/zWebSphereVE/V7R0/lib/-" { permission java.security.AllPermission; };
   grant codeBase "file:/usr/lpp/zWebSphereVE/V7R0/-" { permission java.security.AllPermission; };
   ```

   To set permissions for each application server node, add the following two lines to the `server.policy` file in the `/WAS_config_root/AppServer/profiles/default/properties` directory:

   ```
   grant codeBase "file:/usr/lpp/zWebSphereVE/V7R0/lib/-" { permission java.security.AllPermission; };
   grant codeBase "file:/usr/lpp/zWebSphereVE/V7R0/-" { permission java.security.AllPermission; };
   ```

3. Optional: Customize your current cell with a WebSphere Virtual Enterprise Version 7.0 intermediate link. Run the following command to point an intermediate link to the WebSphere Virtual Enterprise Version 7.0 installation root. Specify the installation root as the value of the VE700_install_root variable, and specify the name of a new and unique directory as the value of the symlinkName variable.

   ```
   ln -s VE700_install_root symlinkName
   ```

   See the following usage example:

   ```
   ln -s /usr/lpp/zWebSphereVE/V7R0/WebSphere/ND/myVE700link
   ```

4. Migrate the deployment manager from Version 6.1.0.5 or Version 6.1.1 to WebSphere Virtual Enterprise Version 7.0. If WebSphere Extended Deployment Compute Grid or WebSphere eXtreme Scale are installed, run the **removeCG610** and **removeOG610** commands, which removes Compute Grid and eXtreme Scale for both Version 6.1.0.5 and Version 6.1.1 even though the command names contain the 610 string.

   Run the commands for the deployment manager from the WebSphere Virtual Enterprise Version 7.0 VE700_install_root/bin directory as shown in the following examples. If the current cell is customized with a WebSphere Virtual Enterprise Version 7.0 intermediate link, the value of the VE700_install_root variable is the intermediate link directory and not the actual installation root directory string.

   a. Run the following command if Compute Grid is installed.

   ```
   removeCG610.sh VE700_install_root WAS_config_root/DeploymentManager user_name user_password
   ```

   b. Run the following command if eXtreme Scale is installed.

   ```
   removeOG610.sh VE700_install_root WAS_config_root/DeploymentManager user_name user_password
   ```

   c. Run the **removeOps610** command as shown in the following example.

   ```
   removeOps610.sh VE700_install_root WAS_config_root/DeploymentManager user_name user_password
   ```

   d. Run the **removeBase610** command as shown in the following example.

   ```
   removeBase610.sh VE700_install_root WAS_config_root/DeploymentManager user_name user_password
   ```

   e. Run the **upgradeVE700** command as shown in the following example.

   ```
   upgradeVE700.sh VE700_install_root WAS_config_root/DeploymentManager user_name user_password
   ```

5. Start the deployment manager.

6. Migrate the ODR node from Version 6.1.0.5 or Version 6.1.1 to WebSphere Virtual Enterprise Version 7.0. If WebSphere Extended Deployment Compute Grid or WebSphere eXtreme Scale are installed, run the **removeCG610** and **removeOG610** commands, which removes Compute Grid and eXtreme Scale for both Version 6.1.0.5 and Version 6.1.1 even though the command names contain the 610 string.

   Run the commands from the WebSphere Virtual Enterprise Version 7.0 VE700_install_root/bin directory as shown in the following examples. If the current cell is customized with a WebSphere Virtual Enterprise Version 7.0 intermediate link, the value of the VE700_install_root variable is the intermediate link directory and not the actual installation root directory string.

   a. Run the following command if Compute Grid is installed.

   ```
   removeCG610.sh VE700_install_root WAS_config_root/AppServer user_name user_password
   ```

   b. Run the following command if eXtreme Scale is installed.

   ```
   removeOG610.sh VE700_install_root WAS_config_root/AppServer user_name user_password
   ```

   c. Run the **removeOps610** command as shown in the following example.

   ```
   removeOps610.sh VE700_install_root WAS_config_root/AppServer user_name user_password
   ```

   d. Run the **removeBase610** command as shown in the following example.

   ```
   removeBase610.sh VE700_install_root WAS_config_root/AppServer user_name user_password
   ```

   e. Run the **upgradeVE700** command as shown in the following example.

```
upgradeVE700.sh VE700_install_root WAS_config_root/AppServer user_name user_password
```

7. Migrate the additional application server nodes from Version 6.1.0.5 or Version 6.1.1 to WebSphere Virtual Enterprise Version 7.0. If WebSphere Extended Deployment Compute Grid or WebSphere eXtreme Scale are installed, run the **removeCG610** and **removeOG610** commands, which removes Compute Grid and eXtreme Scale for both Version 6.1.0.5 and Version 6.1.1 even though the command names contain the 610 string.

   Run the commands from the WebSphere Virtual Enterprise Version 7.0 `VE700_install_root/bin` directory as shown in the following examples. If the current cell is customized with a WebSphere Virtual Enterprise Version 7.0 intermediate link, the value of the VE700_install_root variable is the intermediate link directory and not the actual installation root directory string.

   a. Run the following command if Compute Grid is installed.
   ```
   removeCG610.sh VE700_install_root WAS_config_root/AppServer2 user_name user_password
   ```
   b. Run the following command if eXtreme Scale is installed.
   ```
   removeOG610.sh VE700_install_root WAS_config_root/AppServer2 user_name user_password
   ```
   c. Run the **removeOps610** command as shown in the following example.
   ```
   removeOps610.sh VE700_install_root WAS_config_root/AppServer2 user_name user_password
   ```
   d. Run the **removeBase610** command as shown in the following example.
   ```
   removeBase610.sh VE700_install_root WAS_config_root/AppServer2 user_name user_password
   ```
   e. Run the **upgradeVE700** command as shown in the following example.
   ```
   upgradeVE700.sh VE700_install_root WAS_config_root/AppServer2 user_name user_password
   ```

8. Stop the deployment manager.
9. Start your new Version 7.0 cell.

Chapter 3. Migrating to a Version 7.0 for z/OS cell

You can migrate your existing product configurations to a WebSphere Virtual
Enterprise Version 7.0 for z/OS and WebSphere Application Server Network
Deployment Version 7.0 for z/OS cell.

Before you begin

To meet minimum requirements, update WebSphere Application Server Network
Deployment for z/OS to Version 7.0.0.17. See the Latest fix packs for WebSphere
Application Server for more information.

Procedure

1. Prepare to migrate your existing cell.
   a. Install WebSphere Application Server Network Deployment Version 7.0 for
      z/OS. Use the same cell name and node names that you used for the cell
      name and node names of your existing WebSphere Application Server
      Network Deployment Version 6.1.0.x configuration. See Installing your
      application serving environment for more information.
   b. Install WebSphere Virtual Enterprise Version 7.0 for z/OS. Use the same cell
      name and node names that you used for the cell name and node names of
      your existing Version 6.1.0.5Version 6.1.1 configuration. See the Program
      Directory on the Library page for more information.
   c. Augment the deployment manager and application server node profiles for
      WebSphere Virtual Enterprise Version 7.0 for z/OS. See the *z/OS
      Customization Guide* on the Library page for more information.
2. Migrate the deployment manager.
3. Migrate each node one at a time.

Migrating the deployment manager for z/OS

You can migrate the deployment manager from your current Version 6.1.0.x for
z/OS and Version 6.1.0.5 Version 6.1.1 for z/OS cell to a new WebSphere
Application Server Network Deployment Version 7.0 for z/OS and WebSphere
Extended Deployment Version 7.0 cell.

Before you begin

Install and configure your WebSphere Virtual Enterprise Version 7.0 for z/OS and
WebSphere Application Server Network Deployment Version 7.0 for z/OS cell.

Procedure

1. Create and mount a new configuration file system as the target of the
   migration.
2. Mount the product HFS for WebSphere Application Server Network
   Deployment Version 7.0 for z/OS at `/usr/lpp/zWebSphere/V7R0`.
3. Use the z/OS Migration Management Tool or the **zmmt** command to generate
   and run the Job Control Language (JCL) jobs for WebSphere Application Server
   Network Deployment Version 7.0 for z/OS. See Migrating product
   configurations with migration tools for more information.

4. Use the WebSphere Customization Toolbox to generate the Version 7.0 augmentation job for the deployment manager. Specify the directory name that you specified in step 1 as the mount point of the configuration file system. See the *z/OS Customization Guide* on the Library page for more information.

5. Use the WebSphere Customization Toolbox to upload and run the augmentation job. See the *z/OS Customization Guide* for more information.

6. Run the **VEUpgrade** command to copy the existing configuration to the new Version 7.0 cell as shown in the following example:

```
VEUpgrade.sh -userID user_name -password user_password -sourceWasHome install_root/DeploymentManager
-sourceProfilePath install_root/DeploymentManager/profiles/default -targetProfilePath
configuration_root/DeploymentManager/profiles/default
```

Note: You must run the **VEUpgrade** command from the `configuration_root/DeploymentManager/bin` directory.

After you run the **VEUpgrade** command, review the `VEUpgrade.log` and `VEUpgrade.trace` files in the `configuration_root/DeploymentManager/logs` directory.

7. Start the new deployment manager.

What to do next

Migrate each application server node one at a time.

Migrating an application server node for z/OS

You can migrate an application server node from your current WebSphere Application Server Network Deployment Version 6.1.0.x for z/OS and WebSphere Virtual Enterprise Version 6.1.1 for z/OS cell to a new WebSphere Application Server Network Deployment Version 7.0 for z/OS and WebSphere Virtual Enterprise Version 7.0 for z/OS cell.

Before you begin

Migrate the deployment manager.

Procedure

1. Create and mount a new configuration file system as the target of the migration.

2. Mount the product HFS for WebSphere Application Server Network Deployment Version 7.0.x for z/OS at `/usr/lpp/zWebSphere/V7R0`.

3. Use the z/OS Migration Management Tool or **zmmt** command to generate and run the Job Control Language (JCL) jobs for Version 7.0.x. See Migrating product configurations with migration tools for more information.

4. Use the WebSphere Customization Toolbox to generate the WebSphere Virtual Enterprise Version 7.0 for z/OS augmentation job for each node. Specify the directory name that you specified in step 1 as the mount point of the configuration file system. See the *z/OS Customization Guide* for more information.

5. Use the WebSphere Customization Toolbox to upload and run the augmentation job for each node. See the *z/OS Customization Guide* for more information.

6. Start the deployment manager if it is not already started.

7. Run the **VEUpgrade** command to copy the existing configuration to the new Version 7.0 cell as shown in the following example:

```
VEUpgrade.sh -userID user_name -password user_password -sourceWasHome install_root/AppServer
-sourceProfilePath install_root/AppServer/profiles/default -targetProfilePath configuration_root/AppServer/profiles/default
```

> **Note:** You must run the **VEUpgrade** command from the `configuration_root/AppServer/bin` directory.

> After you run the **VEUpgrade** command, review the VEUpgrade.log and VEUpgrade.trace files in the `configuration_root/AppServer/logs` directory.

8. Start each node.

VEUpgrade command

Use the **VEUpgrade** command to migrate product configuration data from an existing WebSphere Virtual Enterprise cell to a new WebSphere Virtual Enterprise Version 7.0 cell.

Location

Run the command from the `target_profile_root/bin` directory.

Parameters

-userID
Specifies the administrative user name for authentication if security is enabled on the workstation. Because the migration utility does not check for the **-userID** parameter, you must specify it or the migration process fails. (Required)

-password
Specifies the administrative password for authentication if security is enabled on the workstation. Because the migration utility does not check for the **-password** parameter, you must specify it or the migration process fails. (Required)

-sourceWasHome
Specifies the install_root directory of the existing product installations from which the configuration is migrated. (Required)

-sourceProfilePath
Specifies the fully qualified path of the existing profile from which the configuration is migrated. (Required)

-targetProfilePath
Specifies the fully qualified path to the target profile. (Required)

-traceLevel
Specifies the trace level for generating diagnostic messages. (Optional)

-traceDir
Specifies the directory of the XDUpgrade.log and XDUpgrade.trace files. The default directory is `target_profile_root/logs`. (Optional)

Usage

The following example migrates the deployment manager to the new cell:

```
VEUpgrade.sh|.bat -userid user_name -password user_password
-sourcewashome install_root/DeploymentManager -sourceprofilepath install_root/DeploymentManager/profiles/default
-targetprofilepath target_profile_path/DeploymentManager/profiles/default
```

The following example migrates an application server to the new cell:

```
VEUpgrade.sh|.bat -userid user_name -password user_password
-sourcewashome install_root/AppServer -sourceprofilepath install_root/AppServer/profiles/default
-targetprofilepath target_profile_path/AppServer/profiles/default
```

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