



IBM Software Group

IBM WebSphere Application Server V6.1

Migration



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This presentation will show the Migration changes for WebSphere® Application Server V6.1 on z/OS®.

Agenda

- Overview
- Application Migration
- Deployment Manager Migration
- Daemon Migration
- Co-Existence Questions

This presentation will briefly discuss application migration, deployment manager migration, daemon migration, and finally address a few common co-existence questions.

Overview

- Very similar to V6.0
- ISPF dialog panels to create JCL jobs
- No zPMT option available at this time
- Levels supported V5.0.2, V5.1, V6.0

V6.1 migration is very similar to V6.0.2. ISPF dialog panels are used to create the JCL necessary for migration; there is no zPMT option available for migration at this time. Supported levels for migration are V5.0.2, V5.1, and V6.0.

Application Migration

```
----- WebSphere Application Server for z/OS Customization -----
Option ==> _
Server Customization (2 of 2)

Specify the following to customize your migration, then press Enter
to continue.

Migration Options
  Migrate scripts to support compatibility: Y
  Enable Tracing: Script: N Profile: N PreUpgrade: N PostUpgrade: N
  Temporary Directory Location: /tmp/migrate
  Migration Identifier.....: 49651

Application Migration Settings:
  Application Migration Preference: Y (Y/S/P/N)
  (Y) Migrate and install applications using the Application
  Installation Directory.
  (S) Migrate Applications and generate scripts for later installation.
  (P) Migrate Applications and keep the same application installation
  directories as the previous version.
  (N) Do not migrate applications.

Application Installation Directory:
  ==> /WebSphere/V6R0/AppServer/profiles/default/installedApps
```

New in WebSphere Application Server V6.1 is the ability to specify whether to migrate applications or not. Previous releases of the WebSphere Application Server would always migrate applications on z/OS. Shown here is a screen capture of the application migration option.

Deployment Manager Migration

- Deployment manager migration requires WebSphere administrative userid/password (same as federated node)
- The old deployment manager is not disabled
- Federation migration no longer runs within the deployment manager using the migration MBean

Deployment Manager migration now requires a WebSphere Administrative userid and password, this behavior is identical to migration of a federated node. In WebSphere Application Server V6.1, the old deployment manager is no longer disabled during migration. Federated migration has been completely redesigned. It no longer runs within the Deployment Manager using the migration MBean.

Daemon Migration

- Daemon migration requires manually updating JCL started proc. if in a mixed cell environment.

For example:

If you have both V5.1 and V6.1 on the same LPAR as the Deployment Manager, add the following to both your V6.1 and V5.1 daemon JCL procedure's "Z" member:

```
//STEPLIB DD DSN=hlq61.SBBOLD2,DISP=SHR
// DD DSN=hlq61.SBBOLOAD,DISP=SHR
// DD DSN=hlq61.SBBOLPA,DISP=SHR
// DD DSN=hlq51.SBBOLD2,DISP=SHR
// DD DSN=hlq51.SBBOLPA,DISP=SHR
```

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The WebSphere™ Application Server for z/OS V6.1 requires that the daemon process be at the highest level of code of any of the servers that it manages on the same LPAR. It will be at the V6.1 level when the deployment manager is started. If the deployment manager manages nodes on the same LPAR in a mixed-cell environment, the daemon started JCL procedure for both the deployment manager and the down-level nodes must have both the V6.1 libraries and those of the highest level of the down-level nodes in STEPLIB.

If you are migrating from V5.1 and you have an application server node on the same LPAR as the deployment manager, for example, add the following to both your V6.1 and V5.1 daemon JCL procedure's "Z" member ("Z=BBO5DMNZ") using your library names:

```
/*STEPLIB Setup
/*
//STEPLIB DD DSN=hlq61.SBBOLD2,DISP=SHR
// DD DSN=hlq61.SBBOLOAD,DISP=SHR
// DD DSN=hlq61.SBBOLPA,DISP=SHR
// DD DSN=hlq51.SBBOLD2,DISP=SHR
// DD DSN=hlq51.SBBOLPA,DISP=SHR
/*
```

The *hlq51.SBBOLOAD* library is intentionally left out of this example. It will not do any harm if it is there, but it is not needed.

After you migrate all nodes to V6.1 and before you remove the previous version's libraries from the system, you must update the daemon JCL procedure and remove the previous version's libraries from the STEPLIB concatenation. Failure to do so will result in a failure of the daemon to start.

Additional information is available in the WebSphere Application Server V6.1 info center.

DB2® Migration

- DB2 Legacy JDBC™ driver not supported in V6.1
- Must migrate to the DB2 Universal JDBC Driver, (recommended to upgrade prior to migration to V6.1.)
- A whitepaper is available called “JDBC Migration White Paper and Utility for DB2 on z/OS” to aid in the migration from the Legacy driver to the Universal driver.

▶ <http://www.ibm.com/support/docview.wss?uid=swg27007826>

The DB2® Legacy JDBC™ driver is not supported with WebSphere V6.1. Migration to the DB2 Universal JDBC Driver is required. The recommendation is to upgrade to Universal JDBC driver prior to migration to V6.1.

A White paper is available describing tools that will aid in the migration from the legacy driver to the universal driver. The white paper is called “JDBC Migration White Paper and Utility for DB2 on z/OS” and is located at the URL listed here.

Migration: Co Existence Questions

- Is it possible to have a cell operating with only some of the nodes migrated and others not?
 - ▶ yes
- Can my newly-migrated WebSphere Application Server for z/OS Version 6.1 deployment manager still "talk" to Version 5 or 6.0 nodes?
 - ▶ yes
- Is it possible to have cells at WebSphere Application Server for z/OS Version 6.1 coexist with other cells at Version 5 or 6.0?
 - ▶ yes

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Here are some common Co Existence Questions :

Is it possible to have a cell operating with only some of the nodes migrated and others not?

Yes, that is possible. WebSphere Application Server Version 5.1 can coexist with Version 6.1 in the same cell and on the same LPAR. When migrating from Version 5.0, however, you need to migrate the deployment manager node and other application server nodes on that same MVS image one right after the other — or essentially at the same time. Version 5.0 and Version 6.1 nodes cannot exist in the same cell on the same LPAR.

Can my newly-migrated WebSphere Application Server for z/OS Version 6.1 deployment manager still "talk" to Version 5 or 6.0 nodes?

Yes. A deployment manager migrated to the Version 6.1 level of code can manage a Version 5 or 6.0 node. Changes made through the administrative console will be applied to the node. There are a few things to keep in mind:

When a deployment manager is migrated to Version 6.1, a new copy of the "master configuration" is created. The old copy of the master configuration (the Version 5 or 6.0 copy) still exists. But when the Version 6.1 deployment manager makes changes to the configuration, it makes it to the new Version 6.1 copy of the master configuration. So while it is possible to use the Version 5 or 6.0 copy of the code, any changes made in Version 6.1 will not be seen when the older code is restored.

A Version 5 or 6.0 deployment manager has no ability to manage a Version 6.1 node.

A WebSphere Application Server Version 6.1 deployment cell can contain mixed releases of Version 5 or 6.0 nodes, but there is no mixed-node management support for Version 6.0.0 and Version 6.0.1. The Version 6.1 migration tools still migrate these nodes during deployment-manager migration, but they issue a warning message that the nodes cannot be managed by the Version 6.1 deployment manager. You can then do one of the following based on your needs.

Upgrade all Version 6.0.0 and Version 6.0.1 nodes to at least Version 6.0.2. This will allow them to be administered by a Version 6.1 deployment manager.

Immediately migrate these nodes to Version 6.1.

Is it possible to have cells at WebSphere Application Server for z/OS Version 6.1 coexist with other cells at Version 5 or 6.0?

Yes, it is. This is true for a sysplex or any given MVS image. There are some restrictions, most of which have been present in past versions as well: No two cells can have the same cell short name.

Version 5.0 cannot coexist with Version 6.1 in the same cell on the same LPAR. If you have multiple Version 5.0 nodes on the same LPAR, all nodes must be migrated to Version 6.1 at the same time.

Only one version of the code can exist in LPA/LNKLST; the rest must be included in STEPLIB. See [Link pack area, link list, and STEPLIB](#).

There are other things you must consider for separate cells, regardless of whether they are at different versions of the code; for example, you must have a separate HFS mount point and separate JCL procedures.

Addition information can be found in the WebSphere Application Server V6.1 info center.

Summary and Reference

- Migration process very similar to past releases
- The JDBC Legacy driver is no longer supported
- Application migration is optional

In conclusion, the migration process is very similar to past releases. The JDBC legacy driver is no longer supported on WebSphere Application Server V6.1. Enhancements include, optional application migration.

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