



IBM Software Group

# IBM WebSphere Application Server V6.1

## *Manageprofiles command line tool*



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This presentation will focus on manageprofiles command line tool for WebSphere Application Server V6.1. It's a complimentary presentation to Profile Management Tool presentation.

## Agenda

- Review of profile concepts
- manageprofiles command line tool



The agenda for this presentation includes an overview of Profiles and the manageprofiles command line tool used to create them, a description of the types and templates, and some examples.

## Profiles overview

- WebSphere Application Server V6.1 files are divided into two categories
  - ▶ Core product files
    - Application binaries for WebSphere Application Server; these are shared across all profiles
  - ▶ User files
    - Customizations, including configuration files, installed applications, resource adapters, properties, log files
- Profiles are collections of related user files
  - ▶ A profile defines a WebSphere Application Server runtime environment
  - ▶ Profiles share product binaries
  - ▶ A profile can optionally be created at install time
  - ▶ Additional profiles can be added later



The manageprofile tool

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WebSphere Application Server V6.1 files are divided into two categories; the core product files and user files.

-product files which include the application binaries needed to run the Application Server  
 -user files which contain information used by the Application Server. User files contain defined variables, resources and log files.

A **profile** is a collection of these files, creating a WebSphere Application Server runtime environment. When combined, the core product files (or the installed binaries) and the configuration files (or a profile) make up a fully functional WebSphere Application Server installation.

Note that profiles share the core product binaries – only one base installation supports multiple operating environments, which substantially simplifies maintenance.

You have the option of creating a profile during installation time, or create them later. At least one profile is required to have a functional WebSphere installation.

This sharing of product binary files and the separation of configuration files is an efficient use of disk space when creating multiple configurations. In addition, updates to the binary files are more easily applied as they reside in one location per physical machine, even when multiple profiles are configured.

In summary,

Profiles are collections of related user files that define a WebSphere Application Server runtime environment and share product binaries. They can optionally be created at install time or added later

## Section

# ***Manageprofiles command line tool***



This section addresses the command line tool used to create and manage profiles.

## Manageprofiles command line tool

### manageprofiles

- ▶ .bat on Windows®
- ▶ .sh on Linux®, UNIX®
- ▶ V6.0 wasprofile command line tool has been enhanced and renamed to manageprofiles in V6.1
- ▶ Command line interface for profile management functions
- ▶ manageprofiles command line tool creates all application server run-time environments.
- ▶ This command line tool and its graphical user interface the Profile Management tool are the only ways to create run-time environments.



The WebSphere Application Server V6.0 wasprofile command line tool has been enhanced and renamed to manageprofiles in V6.1

The manageprofiles command creates the run-time environment for a WebSphere Application Server profile.

The manageprofiles command and its graphical user interface, the Profile Management tool, are the only ways to create run-time environments.

## Manageprofiles command line – cont'd

- `manageprofiles` command is located in the following:
  - ▶ Location on Windows: `<install_root>\bin\manageprofiles.bat`
  - ▶ Location on UNIX: `<install_root>/bin/manageprofiles.sh`
  - ▶ V6.0 “wasprofile” tool has been deprecated
- Enhancements to the `manageprofiles` command include the capability to
  - ▶ Generate default values
  - ▶ Use a response file as input
  - ▶ Backup and restore profiles
  - ▶ Configure optional features
- The `manageprofiles` command also includes support for other profile operations, such as listing profiles and profile deletion



The `manageprofiles` command is located in the `bin` directory of the installation root of WebSphere Application Server. This command on Windows is called `manageprofiles.bat`, on UNIX it is `manageprofiles.sh`. The WebSphere application Server V6.0 “wasprofile” tool has been deprecated.

Enhancements to this command line tool include the ability to query and set the default profile, backup and restore profiles.

The command-line interface can be driven by a response file containing the input arguments for a given command in properties file key/value format.

An important new command line capability is `setDefaultName`. In V6.0 the default profile could only be set when it was created. It can now be done after profile creation from the command line in V6.1

The `manageprofiles` command is the only way to delete a profile. Profiles cannot be deleted from the Profile Management Tool.

## Manageprofiles command line – Syntax

- The manageprofiles command is used to perform the following:
  - ▶ create a profile (-create)
  - ▶ delete a profile (-delete)
  - ▶ augment a profile (-augment)
  - ▶ unaugment a profile (-unaugment)
  - ▶ delete all profiles (-deleteAll)
  - ▶ list all profiles (-listProfiles)
  - ▶ get a profile name (-getName)
  - ▶ get a profile path (-getPath)
  - ▶ validate a profile registry (-validateRegistry)
  - ▶ validate and update a profile registry (-validateAndUpdateRegistry)
  - ▶ get the default profile name (-getDefaultName)
  - ▶ set the default profile name (-setDefaultName)
  - ▶ backup a profile (-backupProfile)
  - ▶ restore a profile (-restoreProfile)
- For detailed help, use the -help parameter.



The manageprofiles command is used to perform the functions listed here.

For detailed help including the required parameters for each of the tasks accomplished with the manageprofiles command, use the -help parameter. The output from the help command will specify which parameters are required and which are optional.

## Manageprofiles command line :Logs

- creates a log for each profile it creates
  - ▶ The logs are in the install\_root/logs/manageprofiles directory. The files are named in this pattern: manageprofiles\_create\_profile\_name.log.
- creates a log for each profile it deletes
  - ▶ The logs are in the install\_root/logs/manageprofiles directory. The files are named in this pattern: manageprofiles\_delete\_profile\_name.log.



The manageprofiles command creates a log for every profile that it creates. The logs are located in the logs directory which is located in the installation root directory of WebSphere. The files are named in this pattern: manageprofiles\_create\_profile\_name.log.

The command also creates a log for every profile that it deletes. Similarly the logs are located in the logs directory which is located in the installation root directory of WebSphere. The files are named in this pattern: manageprofiles\_delete\_profile\_name.log.



## Default value generator for manageprofiles

- Creating a profile
  - ▶ **Example:** `manageprofiles -create -templatePath <fully_qualified_template_path>`
  - ▶ Some templates are provided here: `<install_root>\profileTemplates`
- If using a profile template and no values are supplied, the following arguments are automatically generated
  - ▶ **profileName:** unique profile name
  - ▶ **profilePath:** intended location of the profile in the file system
  - ▶ **hostName:** host name where the profile is being created
  - ▶ **nodeName:** unique node name
  - ▶ **cellName:** unique cell name for each profile



When creating a profile, you can specify values for the profile, however when no values are supplied, the following arguments are automatically generated:

- **profileName** which is the unique profile name
- **profilePath** which is the intended location of the profile in the file system
- **hostName** which is the host name where the profile is being created
- **nodeName** which is the unique node name
- **cellName** which is the unique cell name for each profile

Default values will be generated for most of the required arguments. Required arguments vary based on which type of profile is being created.

Default arguments are generated for some optional arguments as well, such as **isDefault** and **enableAdminSecurity**.

Other defaults includes **isDefault** which defaults to true if this is the first profile being created or if there is no default profile; false otherwise

**enableAdminSecurity** is the other default which defaults to false

Note that : It is important to specify the fully qualified template path and not a relative template path on the `manageprofiles` command.

## Response file for manageprofiles

- Profile operations can be driven by a response file containing input arguments for a given command in properties file key/value format
  - Example:** `manageprofiles -response <response_file >`
- The following is an example response file for a create operation:

```
create
profileName=testResponseFileCreate
profilePath=<PROFILE_HOME>
templatePath=<install_root>/profileTemplates/default
nodeName=myNodeName
cellName=myCellName
hostName=myHostName
omitAction=myOptionalAction1, myOptionalAction2
```

- <PROFILE\_HOME> refers to the fully qualified path to a profile
  - For example, in Windows™:  
C:\Program Files\IBM\WebSphere\AppServer\profiles\AppSrv01



The command-line interface can be driven by a response file containing the input arguments for a given command in properties file key/value format as shown in the example. The response file will contain values such as profile name, profile path, template path, node name, cell name and hostname.

## Backup and restore with manageprofiles

### ▪ Backup

- ▶ Performs a file system backup of the profile folder and the profile metadata from the profile registry file
- ▶ Use the following command to perform a backup:
  - `manageprofiles -backupProfile -profileName <profile_name> -backupFile <backup_file>`

### ▪ Restore

- ▶ Reconstructs the profile based on the archived profile folder and metadata
- ▶ A profile cannot be restored if it already exists in the profile registry or profile directory
- ▶ The restore operation does not check the integrity of the profile against the system install
- ▶ Use the following command to perform a restore:
  - `manageprofiles -restoreProfile -backupFile <backup_file>`



The manageprofiles utility provides commands to backup and restore profiles. Profile **backup** is a file system backup of a profile folder and the appropriate profile metadata from the profile registry file. A profile backup is different from a backupConfig; profile backup contains more than a profile configuration tree, it contains various profile-specific script files and relevant information from the profile registry. Backup creates a temporary file called profileRegistry.xml under the profile path to store the profile registry information such as profile path, template path and any possible augments. This temporary file is saved as a part of the profile backup archive.

The restore operation will register the profile using the profileRegistrySnippet.xml information and uncompress the archive in to profile directory.

Restore will fail if the profile is currently registered, or if the profile still exists on the file system. The restore operation will not overwrite a currently registered profile entry, and it will not overwrite a currently existing profile directory. You will need to remove the profile prior to performing the restore operation.

## Omit optional features with manageprofiles

- The following features are optional
  - ▶ Deploying the administrative console
  - ▶ Installing and configuring the default application
  - ▶ Installing and configuring samples
- Available optional features vary by profile type
- All optional features for a given profile type are **installed by default** with the manageprofiles command
- Explicitly omit optional features using the “-omitAction” parameter
  - ▶ `manageprofiles -create -templatePath <install_root>/profileTemplates/default -omitAction deployAdminConsole samplesInstallAndConfig defaultAppDeployAndConfig`



There are currently three optional features defined for use with the manageprofiles command namely:

- Deploying the administrative console
- Installing the default application, and
- installing the samples

Not all optional features are applicable to every profile type. A deployment manager, for example, can have an administrative console deployed to it, but not have any default and sample applications installed. Whereas an application server profile can have an administrative console deployed and both the default and sample applications installed.

If you are creating a profile using one of the supplied templates, all of the applicable optional features for that profile type will be included by default. If you do not want those optional features, you can explicitly omit them using the **-omitAction** option as shown in the example.

## Other new parameters for manageprofiles

- Enable administrative security
  - ▶ `manageprofiles -create -templatePath <install_root>/profileTemplates/dmgr -enableAdminSecurity true -adminUserName <user_name> -adminPassword <password>`
- Change the default profile
  - ▶ `manageprofiles -setDefaultName -profileName <profile_name>`
- List the default profile
  - ▶ `manageprofiles -getDefaultName`



Other new parameters are available with the `manageprofiles` command in this release.

You can enable administrative security from the command line.

Note that, by default, administrative security is NOT enabled from the command line. This is a difference between the Profile Management Tool and the `manageprofiles` command.

You can change the default profile and query the name of the default profile.

## Section

# ***Summary and reference***



This section will summarize the manageprofiles command line tool topics that have been covered in this presentation.

## Summary

- Profiles define a runtime environment for WebSphere Application Server
- WebSphere Application Server V6.1 profile management tools have been enhanced to provide a better interface
- The graphical Profile Management Tool and the command line based manageprofiles utility are complementary tools for administering profiles



To summarize, profiles are a key component of the WebSphere Application Server environment, and the focus in V6.1 has been to enhance the profile management tools to provide a better interface with more options.

The graphical Profile Management Tool and the manageprofiles command line interface are the two tools that you have at your disposal to administer your V6.1 profiles.

## Section

# *Appendix*



This section contains the appendix



## Profiles: Required disk space

- A minimum of 40 MB of available temporary space is required for creating a profile
- The required space listed below must be available in the directory in which the profile is being created

Profile type	Requirement
Application server	▪ 200 MB disk space
Deployment manager	▪ 30 MB disk space
Custom	▪ 10 MB disk space
Cell	▪ 230 MB disk space



A minimum amount of space must be available in the directory where you create a profile. An error can occur when you do not provide enough space to create a profile. Verify that you have, in addition to the minimum space required for a particular profile, an additional 40 MB of space. The 40 MB of space is used for log files and temporary files.

Both the **manageprofiles** command and the Profile Management tool can create a cell profile that has both a federated Application Server profile and a deployment manager profile. However, the Profile Management tool and the **manageprofiles** command create cell profiles differently. The differences are important to understand in terms of the available disk space needed to create the cell profiles. You can create a cell profile in one pass through the Profile Management tool. In this case you need 230 MB of available disk space to create the cell profile. However, to create a cell profile using the **manageprofiles** command that is equivalent to the cell profile that the Profile Management tool creates, you must create two individual profiles, the cell deployment manager profile and the cell node profile. The cell deployment manager profile requires 30 MB of available disk space, while the cell node profile requires 200 MB of available disk space.

## More manageprofiles examples

- List all profiles
  - ▶ `manageprofiles -listProfiles`
- Delete a profile
  - ▶ `manageprofiles -delete -profileName <profile_name>`
- Backup a profile
  - ▶ `manageprofiles -backupProfile -profileName <profile_name> -backupFile <backupFile_name>`
- Restore a profile
  - ▶ `manageprofiles -restoreProfile -backupFile <file_name>`



These examples illustrate the use of the parameters detailed on slide seven.

## Tips for configuring default security

- Use the username and password options for commands after enabling security:
  - ▶ `stopServer hostname -username <name> -password <password>`
  - ▶ `stopManager -username <name> -password <password>`
  - ▶ `wsadmin -username <name> -password <password>`
- If security is enabled for both a deployment manager and a stand-alone profile, you have to use both user IDs to federate the node
  - ▶ Use the following command  
`addNode dmgr_host dmgr_port`
    - `-localusername <username for stand-alone server>`
    - `-localpassword <password for stand-alone server>`
    - `-username <username for dmgr>`
    - `-password <password for dmgr>`
    - `<other parameters to addNode> ...`



Note that the `addNode` command shown should be placed on a single line.

If a GUI is available, it will pop up a user/password prompt so that they do not appear as plain text on the command line.

## Log files for problem determination

- Profile Management Tool wizard logs are saved under
  - ▶ <install\_root>/logs/manageprofiles/pmt.log
- Every time the manageprofiles command is invoked, log files are created under
  - ▶ <install\_root>/logs/manageprofiles directory
  - ▶ Naming convention: <profileName>\_<action>.log
  - ▶ Example: AppSrv01\_create.log
- Any logs generated during profile customization or configuration are saved under
  - ▶ <install\_root>/logs/manageprofiles/<profile\_name>
- Exit codes are as follows
  - ▶ 0 – success
  - ▶ 1 – failure
  - ▶ 2 - partial success



In V6.0 all the configuration action logs were saved under <profilesPath>/logs directory. In V6.1 profile creation logs are saved under < install\_root>/logs. In case of profile creation failure, all the actions will be rolled back and the profile directory will be deleted. Profile logs under <install\_root> will now help to analyze the problem.

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