



IBM Software Group

IBM® WebSphere® Application Server V6

System Management

Commands



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This presentation will focus on some of the system management commands of IBM WebSphere Application Server V6.

Goals

- Describe many common command line tools provided by WebSphere Application Server V6
- Commands to start, stop and monitor different processes (Deployment Manager, Node Agents, Application Servers) are described in a separate presentation
- Pre-requisites:
 - ▶ Basic understanding of WebSphere Application Server V6 system management architecture – provided in a separate presentation



The goals of this presentation are to describe some of the IBM WebSphere Application Server V6 command line tools.

Agenda

- Discuss the following tools:
 - ▶ Tools for Backup and restore configuration
 - ▶ Tools that affect Nodes
 - syncNode and cleanupNode
 - ▶ Problem Determination tools
 - ▶ Utility tools
 - ▶ Status tools
 - ▶ Miscellaneous tools



Command line tools that will be covered in this presentation include tools to back up and restore IBM WebSphere Application Server configurations, node level commands, troubleshooting tools, utility and status tools, and miscellaneous tools. The commands to start and stop the different processes are covered in a separate presentation.

Section

Command Line Tools



This section addresses command line tools.

Command Line Tools:

- Several command line tools exist to start, stop, and monitor WebSphere Application Server processes and nodes
- Commands only work on local servers or Nodes
- All commands are run from “bin” directory of the profile, <PROFILE_HOME>/bin or product install <WAS_HOME>/bin
 - ▶ Commands run from the <PROFILE_HOME>/bin directory apply only to that specific profile – RECOMMENDED
 - No need to provide the “-profileName” option when running from the profile bin directory
 - ▶ Commands run from the <WAS_HOME>/bin directory apply to the default profile, when no profile option is specified

There are several tools that exist to work with IBM WebSphere Application Server processes that are discussed in a separate module. This module covers command line tools that will help you administer and manage the IBM WebSphere Application Server. Note that these commands only work on local IBM WebSphere Application Servers or nodes and are run from the profile home or install root bin directory. <PROFILE_HOME> is something that looks like '<mount point>/AppServer/profiles/default'. <WAS_HOME> looks like '<mount point>/AppServer'.

Backup and Restore Configuration

- **backupConfig <file-name>**
 - ▶ Utility to back-up configuration to a zipped file
 - ▶ For Stand-alone node, run backupConfig at the Node level
 - ▶ For Network Deployment Cell, run backupConfig at the DMgr level, since it contains the master repository
- **restoreConfig <file-name>**
 - ▶ Utility to restore the configuration of your Stand-alone Application Server or the Cell from a backed up configuration file
- **Note that backing up the configuration is not sufficient to recreate the entire system**
 - ▶ There might be other directories like application binaries, that reside outside the configuration



The backupConfig command is a simple tool to back up the configuration of your IBM WebSphere Application Server node to a file. By default, all servers on the node stop before the backup is made so that partially synchronized information is not saved. If you do not have root authority, you must specify a path for the backup file in a location where you have write permission. The backup file will be in zipped format and a .zip extension is recommended.

The restoreConfig command is a simple utility to restore the configuration of your IBM WebSphere Application Server after backing up the configuration using the backupConfig command. By default, all servers on the node stop before the configuration restores so that a node synchronization does not occur during the restoration. If the configuration directory already exists, it is renamed before the restoration occurs.

Node Level Utility Command Line Tools

- syncNode
 - ▶ Forces full synchronization between the node and the Deployment Manager
 - ▶ Used as error recovery tool, in case the node level configuration is damaged to the point where the Node Agent does not start
 - ▶ Can also be done through the Administrative Console or wsadmin

- cleanupNode <cellhost> <cellport>
 - ▶ Removes node configuration after node is forcefully removed from the cell
 - ▶ Executed at the DMgr



The syncNode command forces a configuration synchronization to occur between the node and the deployment manager for the cell in which the node is configured. The node agent server runs a configuration synchronization service that keeps the node configuration synchronized with the master cell configuration. If the node agent is unable to run because of a problem in the node configuration, you can use the syncNode command to perform a synchronization when the deployment manager is not running in order to force the node configuration back in sync with the cell configuration.

The cleanupNode command cleans up a node configuration from the cell repository. Only use this command to clean up a node if you have a node defined in the cell configuration, but the node no longer exists.

Problem Determination Command Line Tools

- dumpNameSpace
 - ▶ Displays Java™ Naming and Directory Interface (JNDI) namespace and entries



The name space stored by a given name server can be dumped with the dumpNameSpace tool that is shipped with IBM WebSphere Application Server. This tool can be invoked from the command line or from a Java program. The naming service for the WebSphere Application Server host must be active when this tool is invoked

Utility Command Line Tools

- **ws_ant**
 - ▶ Launch ANT with WebSphere Application Server extensions

- **ejbdeploy**
 - ▶ Generate container specific deployment classes for EJBs
 - Can also be done during Application install time

- **GenPluginCfg**
 - ▶ Regenerate HTTP server Plug-in configuration file
 - Can also be done with the Administrative Console or wsadmin



There are various utility command line tools that are available as well. Here you see some of the more common tools that are used. `Ws_ant` will invoke Another Neat Tool (ANT) with IBM WebSphere Application Server extensions. The `ejbdeploy` tool is used to generate deployment code and can be invoked from the command line or during application install time. One other command line tool that is beneficial is the ability to generate the http server plug-in configuration file. This can also be done using the administrative console.

Status/Version Command Line Tools

- **serverStatus**
 - ▶ Retrieves server status
 - Syntax: serverStatus <server name>
- **versionInfo**
 - ▶ Provides IBM WebSphere Application Server Version Report
- **genHistoryReport, genVersionReport**
 - ▶ Generate html history/version reports



The server status command can be used to obtain the status of one or all of the servers configured on a node. The version info command generates reports from data it extracts from XML files in the properties/version folder to give you detail on the version of WebSphere Application Server. The genHistoryReport and genVersionReport will generate html files that give the version and history information of WebSphere Application Server.

Other Command Line Tools

- **ivt (Installation Verification Test)**
 - ▶ Syntax: `ivt.sh server_name profile_name -p port_number [-host host_name]`

- **PropFilePasswordEncoder**
 - ▶ Used to replace clear text passwords in configuration files with encoded values
 - re-encode passwords
 - ▶ Syntax:
 - `PropFilePasswordEncoder -Filename -password properties list`
 - `EncAuthDataFile -Input file -output file`

- **JspBatchCompiler**
 - ▶ Pre-compile JSPs in a Web module



The `ivt` command starts the installation verification test (IVT) program. The IVT verifies that the installation of the application server profile was successful. Each Stand-alone Application Server configuration has its own IVT command it can run. After the server process initializes, the IVT runs a series of verification tests and displays pass or fail status.

The `JspBatchCompiler` command is an IBM enhancement to JSP support in which IBM WebSphere Application Server provides a batch JSP compiler. Use this function to batch compile your JSP files and thereby enable faster responses to the initial client requests for the JSP files on your production Web server. Batch compiling makes the first request for a JSP file much faster because the JSP file is translated and compiled into a servlet. Batch compiling is also useful as a fast way to resynchronize all of the JSP files for an application.

Summary

- Covered some of the more common command line administrative tools



In summary, this module has covered command line tools to help you perform some of IBM WebSphere Application Server's more common administrative tasks.

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