

# V

## Appendixes

The following individual, unrelated sections are referenced from other sections:

- ◆ [Appendix A, “Server Console Commands,” on page 1089](#)
- ◆ [Appendix B, “Load/Unload Actions,” on page 1097](#)
- ◆ [Appendix C, “Requirements for Server Software Packages,” on page 1101](#)
- ◆ [Appendix D, “Registry Entries for Server Software Package Components,” on page 1107](#)
- ◆ [Appendix E, “Using Server Software Packages to Delete Directories on Servers,” on page 1113](#)



# A

## Server Console Commands

This section is referenced from other sections.

You can perform some of the Novell® ZENworks® for Servers (ZfS) functions using command line entries on a NetWare® server console. The server commands documented here are those that are applicable to ZfS Server Policies and Tiered Electronic Distribution (TED).

For ways to perform the server console commands in a Web browser using the ZfS Management role in Novell iManager, see [Chapter 16, “Novell iManager,” on page 481](#).

A ZfS console command that is typed on a server console is executed only on that server. For more information, review the following sections:

- ♦ [“ZfS Console Commands” on page 1089](#)
- ♦ [“Java Console Commands” on page 1095](#)

## ZfS Console Commands

The following table lists the ZfS server console commands with short descriptions of the commands. The table also indicates at which server console prompt a command can be given.

The column heading M is for the server’s main console prompt, Z for the ZfS prompt, and T for the TED prompt. Under a console prompt column, a Y indicates that the command can be issued at that prompt and a – indicates that the command cannot be issued at that prompt.

Command	M	Z	T	Description
HELP	Y	Y	Y	Displays a list of available commands. Only the commands applicable to a component will be displayed.
HELP <i>command</i>	Y	Y	Y	Displays help for the specified command.
CLS	Y	Y	Y	Clears the screen. Useful for quickly recognizing which information is new when you type a command.
DOWN <i>option</i>	Y	Y	–	<p>This is similar to the command used on the server's main console prompt. However, if you use DOWN at the ZfS prompt, server policy settings for downing the server will be followed.</p> <p>For the ZfS prompt, this command has several options:</p> <ul style="list-style-type: none"> <li>♦ <b>DOWN SERVER:</b> Downs the server only; does not bring it back up.</li> <li>♦ <b>DOWN STATUS:</b> Displays the current down status.</li> <li>♦ <b>DOWN RESTART:</b> Downs the server, then restarts it.</li> <li>♦ <b>DOWN RESET:</b> Downs the server, then resets it.</li> <li>♦ <b>DOWN CANCEL:</b> Allows you to cancel the down, up to when the server is actually taken down. This will not leave the server in an unusable state.</li> <li>♦ <b>DOWN !:</b> Causes the down process to execute immediately, ignoring the Down Server Process policy that can be in effect.</li> </ul>

Command	M	Z	T	Description
EVENTS <i>option</i>	-	Y	-	<p>The command has three options:</p> <ul style="list-style-type: none"> <li>◆ <b>EVENTS LIST:</b> Lists all registered events, including third-party events.</li> <li>◆ <b>EVENTS STATUS:</b> Gives the status of each event.</li> <li>◆ <b>EVENTS FIRE <i>event_ID</i>:</b> Allows you to manually run an event.</li> </ul>
EXIT	-	Y	-	Closes the current command prompt's Java* software. For example, if given at the Subscriber prompt, the Subscriber's Java software is closed.
EXITALL	-	Y	-	Closes the current command prompt's Java and native software.
LISTPLUGINS	-	Y	-	Lists the current ZFS plug-ins.
PACKAGE <i>option</i>	-	Y	-	<p>You can do the following for the software packages installed on the server:</p> <ul style="list-style-type: none"> <li>◆ <b>PACKAGE LIST:</b> Lists the currently installed software packages.</li> <li>◆ <b>PACKAGE PROCESS</b> <i>full_package_path</i>: Use this to manually install a software package.</li> <li>◆ <b>PACKAGE ROLLBACK:</b> Rolls back (uninstalls) the most recently installed software package. For example, you installed three software packages on a server (Package1, Package2, and Package3). Package1 was installed first and Package3 was installed last. If you want to roll back Package2, you will need to first roll back Package3. To do so, you would type <code>package rollback</code> at the server console once for Package3, then again for Package2.</li> </ul>
POLICY	-	Y	-	Lists the effective server policies. For more information on the options available for the POLICY command, see <a href="#">"POLICY" on page 1094</a> .

Command	M	Z	T	Description
PROMPT	-	Y	Y	Temporarily resets the current prompt. It will revert back to whatever is specified in the eDirectory object for the console prompt when the Java process is exited or restarted, or when the REFRESH command is given.
REFRESH	-	Y	-	<p>Manually forces a refresh of a policy, including pending changes to service locations for the current server and temporary changes to Zfs prompts.</p> <p><b>IMPORTANT:</b> Do not refresh the Distributor more often than every three minutes.</p> <p>Used alone, it refreshes only the ZENworks for Servers policy. Use POLICY REFRESH to refresh all policies.</p> <p>Also restarts the current component's Java process by running the DIST.NCF or SUB.NCF file.</p> <p>You can use this to restart Java as well, because these Java processes will restart Java when they are run.</p> <p>Note that changes to TED object properties are not in effect until the related Distributor re-reads eDirectory.</p>
SETCONSOLELEVEL <i>number</i>	-	-	-	<p>Sets the console message level:</p> <p><b>0:</b> No messages</p> <p><b>1:</b> Errors</p> <p><b>2:</b> Successes &amp; level 1 messages</p> <p><b>3:</b> Warnings &amp; level 2 messages</p> <p><b>4:</b> Information &amp; level 3 messages</p> <p><b>5:</b> Trace information &amp; level 4 messages</p> <p><b>6:</b> Developer trace information &amp; level 5 messages</p>

Command	M	Z	T	Description
SETFILELEVEL <i>number</i>	-	Y	Y	Sets the file message level:  <b>0:</b> No messages <b>1:</b> Errors <b>2:</b> Successes & level 1 messages <b>3:</b> Warnings & level 2 messages <b>4:</b> Information & level 3 messages <b>5:</b> Trace information & level 4 messages <b>6:</b> Developer trace information & level 5 messages
SHOWSCHEDULE	-	Y	-	Lists the current schedules.
SHOWVARS	-	Y	-	Lists the currently-defined variables.
STATUS	-	Y	-	Lists the current status of Policy and Distribution Services, including: Base Path Plug-ins Loaded Events Registered Scheduled Items Console Level
TIME	Y	Y	Y	Returns the current date and time that the server is set to.
VERSION	Y	Y	Y	Returns the Zfs version for the Zfs and TED prompts, and the NetWare version for the console's main prompt.

# POLICY

The following are the possible options for the POLICY command at the ZfS prompt.

Command	Description
POLICY ENFORCE <i>policy_number</i>	Used to manually enforce a specific policy. The <i>policy_number</i> can be found using the POLICY LIST command.  This is useful for enforcing a policy ahead of its schedule. However, you will usually use POLICY REFRESH first to ensure you are enforcing the most recent changes.
POLICY ENFORCE ALL	Used to manually enforce all effective policies, such as after doing a POLICY REFRESH.
POLICY EVENTBASED	Lists the event-based policies.
POLICY LIST	Lists the current effective policies. Each policy listed has a corresponding policy number for reference when using the POLICY ENFORCE command.
POLICY PLUGINS	Lists the current policy enforcers and the current event handlers.
POLICY REFRESH	Refreshes only the server's policies and schedules, as required (unlike the REFRESH command, which refreshes policies and undoes any changes made to the prompts).  After using this command, you should do a POLICY ENFORCE.
POLICY REFRESHONLY	Refreshes the server's policies, but does not schedule effective policies.
POLICY RESCHEDULEONLY	Reschedules all current policies according to their schedules. Does not refresh the effective policies.
POLICY SCHEDULES	Lists all policy schedules that are in effect.

# Java Console Commands

The following table lists some useful Java Virtual Machine (JVM\*) commands.

Command	Description
<code>java -show</code>	Lists all loaded Java processes.
<code>java -killnnn</code>	Kills the specified Java process. ( <i>nnn</i> represents the Java process number from the <code>java -show</code> listing.)
<code>java -killall</code>	Stops all loaded Java processes; however, it leaves Java loaded.
<code>java -version</code>	Displays the JVM version.
<code>java -exit</code> or <code>unload java</code>	This attempts to unload all Java process, including the JVM. <code>java -exit</code> is the preferred command.  This command is required for unloading any native NLM™ files that are called from Java, such as ZENFILE.NLM.



# B

## Load/Unload Actions

This section is referenced from other sections.

This information is used in several setup steps for the Server Policies (see [Chapter 18, “Server Policies,” on page 591](#)) or Server Software Packages (see [Chapter 19, “Server Software Packages,” on page 641](#)) components.

- ◆ [“Load NLM/Process” on page 1097](#)
- ◆ [“Load Java Class” on page 1098](#)
- ◆ [“Unload Process” on page 1098](#)
- ◆ [“Start Service” on page 1098](#)
- ◆ [“Stop Service” on page 1099](#)

### Load NLM/Process

For all supported platforms.

If you select an NLM to be loaded by the software package, and the NLM is already running on the target server, the package installation will fail and will be rolled back (if rollback is enabled).

You can make sure that an NLM is not already loaded when you are including it in the software package by adding an unload option for that NLM before adding the load option—but only if this NLM does not require user input from the keyboard to unload it.

**Filename:** This must be the exact name, including the full path to the executable, unless the path to the file is a system path variable. For NLM files, including the .NLM extension.

**Parameters:** Include any command line parameters for the NLM or process being run.

**Wait for this Process to Terminate before Continuing:** You can check this option for an NLM or process that will terminate itself. It must terminate within 10 minutes or the whole loading process will fail. By default, this option is dimmed.

## Load Java Class

For all supported platforms.

**Filename:** This must be the exact name. The .CLASS extension is not necessary.

**Parameters:** Include any command line parameters for the Java application being run.

**JVM Parameters:** Include any parameters for the Java machine.

**Wait for this Process to Terminate before Continuing:** You can check this option for a Java application that will terminate itself. There is no time limit. It will wait as long as the application is running. By default, this option is dimmed.

## Unload Process

For all supported platforms.

If the NLM requires intervention to unload, you must remember to unload it manually before trying to install the software package.

**Filename:** This must be the exact name (the path is not required). Because many NLM files require user input to unload, their unloading cannot be automated.

**Wait for this Process to Unload before Continuing:** You can check this option for a process that will unload itself. By default, this option is dimmed.

## Start Service

For Windows\* servers only.

**Service Name:** This must be the exact name.

**Wait For This Service to Finish Running Before Continuing:** You can check this option for a service that will start itself. By default, this option is dimmed.

# Stop Service

For Windows servers only.

**Service Name:** This must be the exact name.

**Wait For This Service to Stop Before Continuing:** You can check this option for a service that will stop itself. By default, this option is unchecked.



# C

## Requirements for Server Software Packages

This section is referenced from other sections.

This information is used in several setup steps for software packages. For more information, see [Chapter 19, “Server Software Packages,” on page 641](#).

**IMPORTANT:** By selecting a requirement, you are prescribing that it must be met to allow the software package or package component to be installed.

Requirement	Description
<a href="#">Operating System</a>	The operating system (OS) requirements for running the files in the software package, including both the OS the files need for running and whether the target server has that OS.
<a href="#">Memory (RAM)</a>	The minimum RAM required for running the files in the software package. If the target server does not meet that minimum, the software package will not be distributed to it.
<a href="#">Disk Space</a>	The minimum free disk space required for installing the files on the target server. If the target server does not meet that minimum free space, the software package will not be distributed to it.
<a href="#">SET Commands</a>	Which NetWare SET commands you want specifically configured on the target server for the software package.
<a href="#">Registry</a>	The registry changes that can be required on the target server for the files in the software package. For more information on configuring individual registry entries, see <a href="#">Appendix D, “Registry Entries for Server Software Package Components,” on page 1107</a> .

Requirement	Description
File	Indicates whether a file on the target server should exist or have a certain date.
PRODUCTS.DAT	Changes to PRODUCTS.DAT that the software package requires. Usually, the changes are to update the versions of the software on the server from the contents of the software package. The PRODUCTS.DAT file is used to determine which software and which version exist on the server.

## Operating System

You can require the server to have a certain operating system before installing the software package.

To configure the server operating system requirement:

- 1 With the operating system requirement selected, select the server's platform.

Available platforms are NetWare, Windows, Linux\*, and Solaris\*.

- 2 Select the version relationship:

Any  
Less Than  
Less Than or Equal To  
Equal To  
Greater Than  
Greater Than or Equal To

- 3 If you select any option other than Any for the Version field, the Major, Minor, and Revision fields should be filled in according to the information in the following table:

Operating System Version	Major	Minor	Revision
NetWare 5.1 + SP1	5	1	1
NetWare 5.1 + SP2	5	10	2
NetWare 5.1 + SP3	5	10	3
NetWare 6	6	0	0

Operating System Version	Major	Minor	Revision
Linux (Red Hat* 7.1)	2	4	2
Solaris 8	5	8	N/A

The Version field is dimmed if you select the Windows platform.

The Major and Minor fields are for the upper version limit. The Revision field is for the required service pack revision.

## Memory (RAM)

To configure the server memory requirement:

- 1 With the memory requirement selected, select the condition:
  - Less Than
  - Less Than or Equal To
  - Greater Than
  - Greater Than or Equal To
- 2 Enter the size in megabytes of RAM for the condition selected.

## Disk Space

To configure the disk space requirement:

- 1 With the disk space requirement selected, select the root location.

The two options are SYS Volume and Volume. To conserve disk space usage on NetWare servers, do not select the SYS: volume if you have other volumes with available disk space.

Examples of locations you can enter:

**NetWare:**

SYS:

DATA:

**Windows:**

C:\

\\MyServer\Data\ (*shared folder*)

**Linux or Solaris:**

/  
/usr  
/usr/data  
/usr/data  
/etc  
/mnt/files

For Linux and Solaris servers, it is any path that identifies a disk partition.

- 2** If you selected Volume, enter the volume's name.
- 3** Select the condition:
  - Less Than
  - Less Than or Equal To
  - Greater Than
  - Greater Than or Equal To
- 4** Enter the free disk space needed in megabytes for the condition selected.

## SET Commands

When adding SET commands, the SET Commands Wizard is automatically run.

To configure the SET commands requirement:

- 1** With the SET commands requirement selected, enter the name of the SET command.
- 2** Enter the SET command's value.

## Registry

You can require certain entries to exist in the registry before installing the software package.

To configure the registry requirement:

- 1** With the registry requirement selected, select the Entry Type:
  - Key
  - Name
  - Data

**2** For both entry types Key and Name, select if it Exists or Does Not Exist.

or

For the entry type Data, select if it Equals or Does Not Equal.

**3** Enter the text for the Key, Name, or Data (depending on which you selected in **Step 1**).

Make sure you add the two backslashes to the beginning of the Key. For example, \\HKEY\_LOCAL\_MACHINE\software\... .

**IMPORTANT:** The % symbol is not valid in NetWare registry names.

## File

To configure the file requirement:

**1** With the file requirement selected, enter the name.

Include the file's full path.

**2** Select the required file status:

File Exists

File Does Not Exist

Date Is

## PRODUCTS.DAT

**WARNING:** Modifying the PRODUCTS.DAT file could prevent something from running or being installed on the NetWare server. Never modify any entries supplied by Novell.

To configure the PRODUCTS.DAT requirement:

**1** With the PRODUCTS.DAT requirement selected, enter the name of item in the .DAT file.

**IMPORTANT:** Names are case-sensitive.

The item is the ID of the product in the .DAT file.

**2** Enter the version text that corresponds with the item selected in **Step 1**.

**3** Select whether the version Contains, Begins With, or Matches the version specified in **Step 2**.

**4** Enter the description text that corresponds with the item selected in **Step 1**.

**5** Select whether the description Contains, Begins With, or Matches the description entered in **Step 4**.



# D

## Registry Entries for Server Software Package Components

This section is referenced from other sections.

The following information is used in several setup steps for software packages. For more information, see [“Registry Settings” on page 675](#).

The NetWare or Windows registry entries you can change are keys, value names, and value data. You can select keys and value data types for entering changes, and you can enter the corresponding value names when you select one of the types.

In all cases, you must enter the exact key name or value name that is expected in the registry, as well as the correct data values.

The registry settings under HKEY\_LOCAL\_MACHINE are the only ones you can configure using a software package.

The following registry entries can be changed when you install a software package:

- ◆ [“Key” on page 1108](#)
- ◆ [“Binary” on page 1108](#)
- ◆ [“Expand String” on page 1109](#)
- ◆ [“\(Default\)” on page 1109](#)
- ◆ [“DWord” on page 1110](#)
- ◆ [“Multi-Value String” on page 1110](#)
- ◆ [“String” on page 1110](#)

# Key

Keys create the paths to the various registry entries. For example, HKEY\_LOCAL\_MACHINE is a key at the root level, and HARDWARE is a key directly under it. The keys are displayed with folder icons in tree fashion. You can click the plus or minus signs to expand or compress the tree structure.

In the box where HKEY\_LOCAL\_MACHINE is displayed, you need to use the Key registry entry to create the path for where the other registry entries will be placed.

To configure a Key entry:

- 1** In the box displaying your key tree, click the location where you want the key entered.
- 2** Click Key from the drop-down box > click Add.  
New Key #1 is displayed.
- 3** Change the default key name to the key name that you need.
- 4** Select a condition for making the registry change:  
Create  
Delete
- 5** To apply the setting to all subordinate keys, click Apply To All.

# Binary

A value data type that is a list of hexadecimal numbers, such as:

d0 04 72 6e

You must first use the Key registry setting option to create the path to the key that will hold the Binary information.

To configure a Binary entry:

- 1** In the box displaying your key tree, click the location where you want the binary data entered.
- 2** Click Binary from the drop-down box > click Add.  
New Value #1 is displayed.
- 3** Change the default Binary name to the name that you need.

**4** Select a condition for making the registry change:

Create  
Delete

**5** Enter the binary data.

The Data box is a hexadecimal editor. There are three unlabeled columns:

**First:** Binary counter of the number of hexadecimal characters, beginning with 0000.

**Second:** Hexadecimal data, eight entries per row.

**Third:** Plain text ASCII characters corresponding to the hexadecimal data.

You can enter data in either the second or third column. As you enter data in one the second (hexadecimal) column, the corresponding characters are displayed in the third (text) column, and vice versa.

## Expand String

NetWare only. Currently not supported.

## (Default)

This is usually the first data entry for a key.

You must first use the Key registry setting option to create the path to the key that will hold the (Default) entry.

To configure a (Default) entry:

**1** In the box displaying your key tree, click the location where you want the (Default) entry made.

**2** Click (Default) from the drop-down box > click Add.

(Default) is displayed.

**3** With the (Default) entry selected, select a condition for making the registry change:

Create  
Delete

**4** Enter a string in Data.

# DWord

DWords are based on hexadecimal code that is represented in Double WORD format. For example:

```
0x00100022
```

You must first use the Key registry setting option to create the path to the key that will hold the DWord information.

To configure a DWord entry:

- 1** In the box displaying your key tree, click the location where you want the DWord entry made.
- 2** Click DWord from the drop-down box > click Add.  
New Value #1 is displayed.
- 3** Change the default DWord name to the name that you need.
- 4** Select a condition for making the registry change:  
Create  
Delete
- 5** Enter the DWord string in Data.

# Multi-Value String

NetWare only. Currently not supported.

# String

String values are easy-to-read sequences of words or numbers within quote marks.

You must first use the Key registry setting option to create the path to the key that will hold the String information.

To configure a String entry:

- 1** In the box displaying your key tree, click the location where you want the String data entered.
- 2** Click String from the drop-down box > click Add.  
New Value #1 is displayed.

- 3** Change the default String name to the name that you need.
- 4** Select a condition for making the registry change:
  - Create
  - Delete
- 5** Enter the string in Data.



# E

## Using Server Software Packages to Delete Directories on Servers

If you want to delete certain directories from a number of different network servers (NetWare®, Windows\*, Linux\*, and Solaris\*), you normally do not have an automated method for performing this task. However, if you are using Novell® ZENworks® for Servers (ZfS) 3 Policy and Distribution Services, the Server Software Packages feature of ZfS provides the capability for you to delete specified directories from any Subscriber server's file system.

To automate the deletion of specified directories on multiple servers, you will first set up path variables (if necessary), create a Server Software Package in its namespace in ConsoleOne™, compile the software package, then distribute the package using Tiered Electronic Distribution (TED). No further user intervention will be required.

Do the following in order to create a software package that will delete specified directories on a server:

1. [“Setting Up Variables for Use With the Server Software Package” on page 1114](#)
2. [“Creating the Server Software Package” on page 1115](#)
3. [“Creating and Configuring the Server Software Package Component” on page 1116](#)
4. [“Compiling the Server Software Package” on page 1117](#)
5. [“Manually Testing that the Directories Have Been Deleted” on page 1118](#)
6. [“In Summary” on page 1118](#)

# Setting Up Variables for Use With the Server Software Package

Before you create the software package, you must set up the variables in your Subscriber objects' properties if you will be using variables in paths (for instance, if your target servers have different operating systems, like NetWare and Windows).

**1** Identify the directories to be deleted:

**1a** Identify the root of the path, such as its volume name (NetWare), drive letter (Windows), or /usr (for Linux and Solaris). For example, DATA:.

**1b** Identify the rest of the path, including the parent directory to the directories to be deleted, such as ZENWORKS\PDS\TED\DIST where DIST is the parent directory.

**1c** Identify the directories to be deleted, such as OldDist.TED.ZfS3.Novell.

The resulting full path and directory to be deleted would be:

```
DATA:\ZENWORKS\PDS\TED\DIST\OldDist.TED.ZfS3.Novell
```

You might have varying path elements from server to server. You should use variables as necessary to allow for those differences (see [Step 2](#) and [Step 3](#)).

**2** In ConsoleOne, create a variable to represent DATA:, D:, or /usr for each Subscriber where the directories to be deleted reside, such as DELETEDDIRROOT.

If you name a directory to be deleted that does not exist on a target server, nothing will be done for that directory on that server.

You can also define variables globally using the Tiered Electronic Distribution policy, where you would define the default value for a variable and allow the exceptions to be defined in the applicable Subscriber objects' properties.

**3** In ConsoleOne, create a Subscriber variable to represent where any path elements are different.

If you have an extra directory between the root of the drive on your Windows servers (such as ZFS3), you will need to create a variable on all of your target Subscriber servers for that part of the path. For example, if

your Windows servers have ZFS3\ZENWORKS at the root of the D: drive, and your NetWare servers have only ZENWORKS at the root of the DATA: volume, create a variable (such as %TARGET%) to represent ZFS3\ZENWORKS on your Windows Subscribers and ZENWORKS on your NetWare Subscribers.

**4** Repeat **Step 2** and **Step 3** as necessary.

## Creating the Server Software Package

- 1** In the left pane in ConsoleOne where the Zfs 3 snap-ins have been installed, right-click the Server Software Packages namespace.
- 2** Click File > New > Software Package. to start the Create New Server Software Package Wizard.
- 3** Click Next.
- 4** Enter a name for the software package, such as Delete Old Directories.
- 5** Specify a path and filename for the software package template file (.SPK), such as C:\TEMP\DELETEDIRS.SPK.

**IMPORTANT:** If you save your .SPK file to a network server, use a UNC path so that you will still have access to that software package file if your drive letters change.

You can also save your .SPK files to a workstation or server, because the .SPK file sizes do not become large. For this particular type of software package (where you are only giving instructions for deleting directories and are not compiling data files), the .CPK (compiled software package) version will be similar in size. Therefore, for management purposes, you may want to save these .SPK files and their corresponding .CPK files in the same location, which can be on a workstation or server.

- 6** Click Finish.
- 7** If necessary, click the plus sign to expand the Server Software Package namespace to view the new package.

Unless otherwise instructed, steps in the subsequent sections should be performed from the same instance of ConsoleOne you used in the above steps, because your .SPK files will be accessible from there.

# Creating and Configuring the Server Software Package Component

- 1** Right-click the software package object that you just created and select New Component.
- 2** Enter a name for the component, such as Delete Directories.
- 3** If necessary, click the plus sign to expand the Server Software Package object.
- 4** Right-click the component and select Properties.
- 5** Click the Copy File tab.
- 6** Click the drop-down list button next to the Add button and select Add File Group.
- 7** Click Add.
- 8** Enter a name for the file group, such as Delete Working Directories.
- 9** In the Group Target Path field, enter the name of the variable that you created containing the location of the directories to be deleted, and add any path information that is not contained in the variable; however, do not enter the name of the directory to be deleted as part of that path.

For example, if the location for the directories to be deleted is the same for all target servers, enter the actual volume (NetWare) or drive (Windows) with the path information (which can also contain variables).

However, if you need to use variables because the server operating systems are different, then enter the variable name (within the % symbols) plus the full path (which can also contain variables) to the directory just above the directories to be deleted. For example, %DELETEDDIRROOT% (variable name) and %TARGET%\PDS\TED\DIST (full path to the parent directory of the directories you want to delete).

**IMPORTANT:** When using variables, the path you enter must be the directory containing the directory to be deleted. In Step 11 you will add the actual directory names to be deleted.

- 10** Click OK to exit the dialog box.
- 11** Click the drop-down list button again and select Add Directory.  
Make sure you first select the tree item under which you want to add this directory.
- 12** Click Add.

- 13** To change the name (“Directory”) that defaults in the tree structure to the actual directory name that you want deleted (such as OldDist.TED.ZfS3.Novell), edit the directory name and press the Enter key to save the change.

If you do not press the Enter key, “Directory” will be displayed again. The Rename button allows you to edit the directory name.

- 14** Click the drop-down list button next to the Copy Mode combo box and select Delete.
- 15** Click Apply.
- 16** Repeat **Step 10** through **Step 15** for each directory you want this software package to delete using this component’s file group.

You can start at **Step 6** to add other file groups, or from **Step 1** to add a new component. You might want to repeat from these steps if you cannot add all of your directories to be deleted under the file group that you created in **Step 6**.

- 17** When finished configuring the software package component, click OK or Close.

Using the examples from the above steps, you would have entered:

```
%DELETEDDIRROOT%
```

and

```
%TARGET%\PDS\TED\DIST
```

and

```
OldDist.ZfS3.TED.Novell
```

in order to delete the directories having these paths:

```
DATA:\ZENWORKS\PDS\TED\DIST\OldDist.TED.ZfS3.Novell  
D:\ZFS3\ZENWORKS\PDS\TED\DIST\OldDist.TED.ZfS3.Novell
```

## Compiling the Server Software Package

You now have an .SPK file that serves as the template for what you want to delete. You need to compile this .SPK file into a .CPK file.

- 1** Right-click the software package, such as Delete Old Directories.
- 2** Select Compile to start the Compile Software Package Wizard.
- 3** Click Next on the first page of the wizard.

- 4 Enter the full path and filename for the .CPK file that you will be generating.

**IMPORTANT:** Do not use the .SPK extension for this filename, or your template file could be overwritten by its compiled version if they are stored in the same location. This would prevent you from making further edits to the software package. You can use the same filename, such as DELETEDIRS, but you should use only the .CPK filename extension.

- 5 Click Next, then click Finish.

## Manually Testing that the Directories Have Been Deleted

The software package is now ready for sending as a Software Package type of Distribution. However, for testing, you can manually process the software package on one of the target servers to determine that the directories were deleted as intended.

- 1 On a server where you want to delete a directory, create a directory that is contained in your software package (such as OldDist.TED.ZfS3.Novell) under ZENWORKS\PDS\TED\DIST.
- 2 Copy the .CPK file (for example, DELETEDIRS.CPK) to the TEMP directory on that server.
- 3 At the server's ZfS console prompt, enter the PACKAGE PROCESS command to process the software package.

For example, if it was a NetWare server, at the ZfS prompt you would enter:

```
package process data:\temp\deletedirs.cpk
```

ZfS will process the package and report that it has finished processing. Check the server's file system to see that the OldDist.TED.ZfS3.Novell directory, or the directories you specified, were deleted.

## In Summary

After you are satisfied with the result of your test, you can distribute the DELETEDIRS.CPK file using TED to all your target Subscriber servers with your new Software Package Distribution in order to delete directories on your Subscriber servers' file systems.