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clock timezone 168
do 171
dead 174
exit 175
hostname 176
icmp echo 177
interface 178
ipv6 address autoconfig 180
ipv6 address dhcp 182
ip address 184
ip default-gateway 185
ip domain-name 186
ip name-server 187
ip route 189
kron occurrence 190
kron policy-list 192
logging 194
ntp server 196
password-policy 198
repository 200
service 203
shutdown 204
snmp-server community 205
snmp-server contact 206
snmp-server host 207
snmp-server location 208
username 209
Glossary 211
Preface

This guide describes how you can configure and maintain the Cisco Prime Infrastructure Release 1.0 using the command-line interface (CLI). Each topic provides a high-level summary of the tasks required for using the CLI for the Cisco Prime Infrastructure in the Cisco Unified Network Solution that runs on supported appliances for small, medium, and large Cisco Prime Infrastructure deployments.

This preface contains the following topics:

- Who Should Read This Guide, page ix
- How to Use This Guide, page ix
- How This Guide Is Organized, page x
- Document Conventions, page x
- Documentation Updates, page xi
- Related Documentation, page xi
- Obtaining Documentation and Submitting a Service Request, page xii

Who Should Read This Guide

The majority of the instructions in this guide are straightforward; however, a few are complex. Therefore, only experienced users should use these instructions.

Note

Use this guide in conjunction with the documentation listed in Related Documentation, on page xi.

How to Use This Guide

We recommend that you use the information in this guide as follows:

- Read the document in its entirety. Subsequent sections build on information and recommendations discussed in previous sections.
- Use this document for all-inclusive information about the Cisco Prime Infrastructure appliance.
• Do not vary the command-line conventions.

## How This Guide Is Organized

The following table lists the major sections of this guide.

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter 1</td>
<td>Overview of the Cisco Prime Infrastructure Command-Line Interface</td>
<td>Provides an overview of the Cisco Prime Infrastructure CLI environment and command modes.</td>
</tr>
<tr>
<td>Chapter 2</td>
<td>Using the Cisco Prime Infrastructure Command-Line Interface</td>
<td>Describes how you can access and administer Cisco Prime Infrastructure using the CLI.</td>
</tr>
<tr>
<td>Appendix A</td>
<td>Cisco Prime Infrastructure Command Reference</td>
<td>Provides a complete description of all Cisco Prime Infrastructure 2.0 CLI commands.</td>
</tr>
<tr>
<td>Appendix B</td>
<td>Command Reference</td>
<td>Provides a complete description of all Cisco Prime Infrastructure CLI commands.</td>
</tr>
</tbody>
</table>

## Document Conventions

This guide uses the following conventions to convey instructions and information.

<table>
<thead>
<tr>
<th>Convention</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>bold</strong> font</td>
<td>Commands and keywords.</td>
</tr>
<tr>
<td><em>italic</em> font</td>
<td>Variables for which you supply values.</td>
</tr>
<tr>
<td>[...]</td>
<td>Keywords or arguments that appear within square brackets are optional.</td>
</tr>
<tr>
<td>{x</td>
<td>y</td>
</tr>
<tr>
<td><strong>courier</strong> font</td>
<td>Examples of information displayed on the screen.</td>
</tr>
<tr>
<td><strong>bold courier</strong> font</td>
<td>Examples of information you must enter.</td>
</tr>
<tr>
<td>&lt;.....&gt;</td>
<td>Nonprinting characters (for example, passwords) appear in angle brackets.</td>
</tr>
</tbody>
</table>
**Documentation Updates**

This table lists the documentation upation dates.

*Table 1: Updates to the CLI Reference Guide for the Cisco Prime Infrastructure*

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/1/10</td>
<td>Cisco Network Control System (NCS) Release 1.0</td>
</tr>
<tr>
<td>05/31/12</td>
<td>Cisco Network Control System (NCS) Release 1.1</td>
</tr>
<tr>
<td>08/27/12</td>
<td>Cisco Prime Infrastructure Release 1.2</td>
</tr>
</tbody>
</table>

**Related Documentation**

The tables lists the Cisco Prime Infrastructure documents.

*Table 2: Product Documentation*

<table>
<thead>
<tr>
<th>Document Title</th>
<th>Location</th>
</tr>
</thead>
</table>
Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly What’s New in Cisco Product Documentation, which also lists all new and revised Cisco technical documentation, at:


Subscribe to the *What's New in Cisco Product Documentation* as a Really Simple Syndication (RSS) feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service and Cisco currently supports RSS version 2.0.
Overview of the Cisco Prime Infrastructure Command-Line Interface

This chapter provides an overview of how to access the Cisco Prime Infrastructure command-line interface (CLI), the different command modes, and the commands that are available in each mode.

You can configure and monitor the Cisco Prime Infrastructure through the web interface. You can also use the CLI to perform the configuration and monitoring tasks described in this guide.

The section contains the following topics:

• Accessing the Cisco Prime Infrastructure Command Environment, page 1
• User Accounts and Modes in the Cisco Prime Infrastructure CLI, page 2
• Command Modes in the Cisco Prime Infrastructure CLI, page 6
• CLI Audit, page 14

Accessing the Cisco Prime Infrastructure Command Environment

You can access the Cisco Prime Infrastructure CLI through a secure shell (SSH) client or the console port using one of the following machines:

• Windows PC running Windows XP/Vista
• Apple Computer running Mac OS X 10.4 or later
• PC running Linux
User Accounts and Modes in the Cisco Prime Infrastructure CLI

Two different types of accounts are available on the Cisco Prime Infrastructure CLI:

- Admin (administrator)
- Operator (user)

When you power on the Cisco Prime Infrastructure appliance for the first time, you are prompted to run the `setup` utility to configure the appliances. During this setup process, an administrator user account, also known as an Admin account, is created. After you enter the initial configuration information, the appliance automatically reboots and prompts you to enter the username and the password that you specified for the Admin account. You must use this Admin account to log in to the Cisco Prime Infrastructure CLI for the first time.

An Admin can create and manage Operator (user) accounts (which have limited privileges and access to the Cisco Prime Infrastructure server). An Admin account also provides the functionality that is needed to use the Cisco Prime Infrastructure CLI.

To create more users (with admin and operator privileges) with SSH access to the Cisco Prime Infrastructure CLI, you must enter the `username` command in configuration mode (see Command Modes in the Cisco Prime Infrastructure CLI).

Table 3: Command Privileges lists the command privileges for each type of user account: Admin and Operator (user).

**Table 3: Command Privileges**

<table>
<thead>
<tr>
<th>User Account</th>
<th>Admin</th>
<th>Operator (User)</th>
</tr>
</thead>
<tbody>
<tr>
<td>application commands</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td><strong>backup</strong></td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>backup-logs</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>cdp run</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>clock</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>configure terminal</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>copy commands</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>debug</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>delete</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>dir</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>User Account</td>
<td>Admin</td>
<td>Operator (User)</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------</td>
<td>------------------</td>
</tr>
<tr>
<td>exit</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>forceout</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>halt</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>mkdir</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>ncs</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>nslookup</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>patch</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>patch install</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>patch remove</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>ping</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>ping6</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>reload</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>repository</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>restore commands</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>rmdir</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>root</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>root_enable</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>show application</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>show backup</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>show cdp</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>show clock</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>show cpu</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>show disks</td>
<td>*</td>
<td>*</td>
</tr>
</tbody>
</table>
## User Accounts and Modes in the Cisco Prime Infrastructure CLI

<table>
<thead>
<tr>
<th>User Account</th>
<th>Admin</th>
<th>Operator (User)</th>
</tr>
</thead>
<tbody>
<tr>
<td>show icmp_status</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>show interface</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>show inventory</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>show ip route</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>show logging</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>show logins</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>show memory</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>show ntp</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>show ports</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>show process</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>show repository</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>show restore</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>show running-config</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>show startup-config</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>show tech-support</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>show terminal</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>show timezone</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>show timezones</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>show udi</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>show uptime</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>show users</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>show version</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>ssh</td>
<td>*</td>
<td>*</td>
</tr>
</tbody>
</table>
Overview of the Cisco Prime Infrastructure Command-Line Interface

User Accounts and Modes in the Cisco Prime Infrastructure CLI

<table>
<thead>
<tr>
<th>User Account</th>
<th>Admin</th>
<th>Operator (User)</th>
</tr>
</thead>
<tbody>
<tr>
<td>tech</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>telnet</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>terminal</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>traceroute</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>undebug</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>write</td>
<td>*</td>
<td></td>
</tr>
</tbody>
</table>

Logging in to the Cisco Prime Infrastructure server places you in operator (user) mode or admin (EXEC) mode, which always requires a username and password for authentication.

You can tell which mode you are in by looking at the prompt. A right angle bracket (>) appears at the end of operator (user) mode prompt; a pound sign (#) appears at the end of admin mode prompt, regardless of the submode.
Command Modes in the Cisco Prime Infrastructure CLI

The Cisco Prime Infrastructure supports the following command modes:
EXEC Commands

EXEC commands primarily include system-level commands such as show and reload (for example, application installation, application start and stop, copy files and installations, restore backups, and display information).

- Table 4: Summary of EXEC Commands describes the EXEC commands
- Table 5: Summary of show Commands describes the show commands in EXEC mode

For detailed information on EXEC commands, see Understanding Command Modes.
EXEC or System-Level Commands

Table 4: Summary of EXEC Commands describes EXEC mode commands.

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>application install</td>
<td>Installs a specific application bundle.</td>
</tr>
<tr>
<td>application remove</td>
<td>Removes a specific application.</td>
</tr>
<tr>
<td>application start</td>
<td>Starts or enables a specific application.</td>
</tr>
<tr>
<td>application stop</td>
<td>Stops or disables a specific application.</td>
</tr>
<tr>
<td>application upgrade</td>
<td>Upgrades a specific application bundle.</td>
</tr>
<tr>
<td>backup</td>
<td>Performs a backup and places the backup in a repository.</td>
</tr>
<tr>
<td>backup-logs</td>
<td>Performs a backup of all the logs on the Cisco Prime Infrastructure to a remote location.</td>
</tr>
<tr>
<td>clock</td>
<td>Sets the system clock on the Cisco Prime Infrastructure server.</td>
</tr>
<tr>
<td>configure</td>
<td>Enters configuration mode.</td>
</tr>
<tr>
<td>copy</td>
<td>Copies any file from a source to a destination.</td>
</tr>
<tr>
<td>debug</td>
<td>Displays any errors or events for various command situations; for example, backup and restore, configuration, copy, resource locking, file transfer, and user management.</td>
</tr>
<tr>
<td>delete</td>
<td>Deletes a file in the Cisco Prime Infrastructure server.</td>
</tr>
<tr>
<td>dir</td>
<td>Lists the files in the Cisco Prime Infrastructure server.</td>
</tr>
<tr>
<td>exit</td>
<td>Disconnects the encrypted session with a remote system. Exits from the current command mode to the previous command mode.</td>
</tr>
<tr>
<td>forceout</td>
<td>Forces the logout of all the sessions of a specific Cisco Prime Infrastructure server system user.</td>
</tr>
<tr>
<td>halt</td>
<td>Disables or shuts down the Cisco Prime Infrastructure server.</td>
</tr>
<tr>
<td>help</td>
<td>Describes the help utility and how to use it in the Cisco Prime Infrastructure server.</td>
</tr>
<tr>
<td>mkdir</td>
<td>Creates a new directory.</td>
</tr>
<tr>
<td>ncs</td>
<td>NCS related commands to start, stop and backup server.</td>
</tr>
<tr>
<td>Command</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>nslookup</td>
<td>Queries the IPv4 address or hostname of a remote system.</td>
</tr>
<tr>
<td>patch</td>
<td>Installs System or Application patch.</td>
</tr>
<tr>
<td>ping</td>
<td>Determines the IPv4 network connectivity to a remote system.</td>
</tr>
<tr>
<td>ping6</td>
<td>Determines the IPv6 network connectivity to a remote system.</td>
</tr>
<tr>
<td>reload</td>
<td>Reboots the Cisco Prime Infrastructure server.</td>
</tr>
<tr>
<td>restore</td>
<td>Restores a previous backup.</td>
</tr>
<tr>
<td>rmdir</td>
<td>Removes an existing directory.</td>
</tr>
<tr>
<td>root</td>
<td>Executes the root shell.</td>
</tr>
<tr>
<td>root_enable</td>
<td>Activates the root command.</td>
</tr>
<tr>
<td>show</td>
<td>Provides information about the Cisco Prime Infrastructure server.</td>
</tr>
<tr>
<td>ssh</td>
<td>Starts an encrypted session with a remote system.</td>
</tr>
<tr>
<td>tech</td>
<td>Provides Cisco Technical Assistance Center (TAC) commands.</td>
</tr>
<tr>
<td>telnet</td>
<td>Establishes a Telnet connection to a remote system.</td>
</tr>
<tr>
<td>terminal length</td>
<td>Sets terminal line parameters.</td>
</tr>
<tr>
<td>terminal session-timeout</td>
<td>Sets the inactivity timeout for all terminal sessions.</td>
</tr>
<tr>
<td>terminal session-welcome</td>
<td>Sets the welcome message on the system for all terminal sessions.</td>
</tr>
<tr>
<td>terminal terminal-type</td>
<td>Specifies the type of terminal connected to the current line of the current session.</td>
</tr>
<tr>
<td>traceroute</td>
<td>Traces the route of a remote IP address.</td>
</tr>
<tr>
<td>unddebug</td>
<td>Disables the output (display of errors or events) of the debug command for various command situations; for example, backup and restore, configuration, copy, resource locking, file transfer, and user management.</td>
</tr>
<tr>
<td>write</td>
<td>Erases the startup configuration that forces to run the setup utility and prompt the network configuration, copies the running configuration to the startup configuration, and displays the running configuration on the console.</td>
</tr>
</tbody>
</table>
show Commands

The `show` commands are used to display the Cisco Prime Infrastructure settings and are among the most useful commands. See Table 5: Summary of show Commands for a summary of the show commands. The show commands must be followed by a keyword; for example, `show application status`. Some show commands require an argument or variable after the keyword to function; for example, `show application version`.

Table 5: Summary of show Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>application</code> (requires keyword)</td>
<td>Displays information about the installed application; for example, status information or version information.</td>
</tr>
<tr>
<td><code>backup</code> (requires keyword)</td>
<td>Displays information about the backup.</td>
</tr>
<tr>
<td><code>cdp</code> (requires keyword)</td>
<td>Displays information about the enabled Cisco Discovery Protocol interfaces.</td>
</tr>
<tr>
<td><code>clock</code></td>
<td>Displays the day, date, time, time zone, and year of the system clock.</td>
</tr>
<tr>
<td><code>cpu</code></td>
<td>Displays CPU information.</td>
</tr>
<tr>
<td><code>disks</code></td>
<td>Displays file-system information of the disks.</td>
</tr>
<tr>
<td><code>icmp-status</code></td>
<td>Displays the Internet Control Message Protocol (ICMP) echo response configuration information.</td>
</tr>
<tr>
<td><code>interface</code></td>
<td>Displays statistics for all the interfaces configured on the Cisco Prime Infrastructure.</td>
</tr>
<tr>
<td><code>inventory</code></td>
<td>Displays information about the hardware inventory, including the Cisco Prime Infrastructure appliance model and serial number.</td>
</tr>
<tr>
<td><code>logging</code> (requires keyword)</td>
<td>Displays the Cisco Prime Infrastructure server logging information.</td>
</tr>
<tr>
<td><code>logins</code> (requires keyword)</td>
<td>Displays the login history of the Cisco Prime Infrastructure server.</td>
</tr>
<tr>
<td><code>memory</code></td>
<td>Displays memory usage by all running processes.</td>
</tr>
<tr>
<td><code>ntp</code></td>
<td>Displays the status of the Network Time Protocol (NTP) servers.</td>
</tr>
<tr>
<td><code>ports</code></td>
<td>Displays all the processes listening on the active ports.</td>
</tr>
<tr>
<td><code>process</code></td>
<td>Displays information about the active processes of the Cisco Prime Infrastructure server.</td>
</tr>
<tr>
<td>Command</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>repository (requires keyword)</td>
<td>Displays the file contents of a specific repository.</td>
</tr>
<tr>
<td>restore (requires keyword)</td>
<td>Displays the restore history in the Cisco Prime Infrastructure.</td>
</tr>
<tr>
<td>running-config</td>
<td>Displays the contents of the configuration file that currently runs in the Cisco Prime Infrastructure.</td>
</tr>
<tr>
<td>startup-config</td>
<td>Displays the contents of the startup configuration in the Cisco Prime Infrastructure.</td>
</tr>
<tr>
<td>tech-support</td>
<td>Displays system and configuration information that you can provide to the TAC when you report a problem.</td>
</tr>
<tr>
<td>terminal</td>
<td>Displays information about the terminal configuration parameter settings for the current terminal line.</td>
</tr>
<tr>
<td>timezone</td>
<td>Displays the current time zone in the Cisco Prime Infrastructure.</td>
</tr>
<tr>
<td>timezones</td>
<td>Displays all the time zones available for use in the Cisco Prime Infrastructure.</td>
</tr>
<tr>
<td>udi</td>
<td>Displays information about the unique device identifier (UDI) of the Cisco Prime Infrastructure.</td>
</tr>
<tr>
<td>uptime</td>
<td>Displays how long the system you are logged in to has been up and running.</td>
</tr>
<tr>
<td>users</td>
<td>Displays information about the system users.</td>
</tr>
<tr>
<td>version</td>
<td>Displays information about the currently loaded software version, along with hardware and device information.</td>
</tr>
</tbody>
</table>
Configuration Commands

Configuration commands include **interface** and **repository**. To access configuration mode, run the **configure** command in EXEC mode.

Some of the configuration commands require that you enter the configuration submode to complete the configuration.

**Table 6: Summary of Configuration Commands** describes the configuration commands.

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>backup-staging-url</strong></td>
</tr>
<tr>
<td><strong>cdp holdtime</strong></td>
</tr>
<tr>
<td><strong>cdp run</strong></td>
</tr>
<tr>
<td><strong>cdp timer</strong></td>
</tr>
<tr>
<td><strong>clock timezone</strong></td>
</tr>
<tr>
<td><strong>do</strong></td>
</tr>
<tr>
<td><strong>Note</strong></td>
</tr>
<tr>
<td><strong>end</strong></td>
</tr>
<tr>
<td><strong>exit</strong></td>
</tr>
<tr>
<td><strong>hostname</strong></td>
</tr>
<tr>
<td><strong>icmp echo</strong></td>
</tr>
<tr>
<td><strong>interface</strong></td>
</tr>
<tr>
<td><strong>ipv6 address autoconfig</strong></td>
</tr>
<tr>
<td><strong>ipv6 address dhcp</strong></td>
</tr>
<tr>
<td><strong>ip address</strong></td>
</tr>
<tr>
<td><strong>Note</strong></td>
</tr>
<tr>
<td>Command</td>
</tr>
<tr>
<td>-------------------------</td>
</tr>
<tr>
<td>ip default-gateway</td>
</tr>
<tr>
<td>ip domain-name</td>
</tr>
<tr>
<td>ip name-server</td>
</tr>
<tr>
<td>kron occurrence</td>
</tr>
<tr>
<td>kron policy-list</td>
</tr>
<tr>
<td>logging</td>
</tr>
<tr>
<td>logging loglevel</td>
</tr>
<tr>
<td>no</td>
</tr>
<tr>
<td>ntp</td>
</tr>
<tr>
<td>password-policy</td>
</tr>
<tr>
<td>repository</td>
</tr>
<tr>
<td>service</td>
</tr>
<tr>
<td>snmp-server community</td>
</tr>
<tr>
<td>snmp-server contact</td>
</tr>
<tr>
<td>snmp-server host</td>
</tr>
<tr>
<td>snmp-server location</td>
</tr>
<tr>
<td>username</td>
</tr>
</tbody>
</table>

For detailed information on configuration mode and submode commands, see Understanding Command Modes.
You must have administrator access to execute the Cisco Prime Infrastructure configuration commands. Whenever an administrator logs in to configuration mode and executes a command that causes configurational changes in the Cisco Prime Infrastructure server, the information related to those changes is logged in the Cisco Prime Infrastructure operational logs.

**Table 7: Configuration Mode Commands for the Operation Log** describes configuration mode commands that generate operational logs.

<table>
<thead>
<tr>
<th>Description</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>clock</td>
<td>Sets the system clock on the Cisco Prime Infrastructure server.</td>
</tr>
<tr>
<td>ip name-server</td>
<td>Sets the DNS servers for use during a DNS query.</td>
</tr>
<tr>
<td>hostname</td>
<td>Sets the hostname of the system.</td>
</tr>
<tr>
<td>ip address</td>
<td>Sets the IP address and netmask for the Ethernet interface.</td>
</tr>
<tr>
<td>ntp server</td>
<td>Allows synchronization of the software clock by the NTP server for the system.</td>
</tr>
</tbody>
</table>

In addition to configuration mode commands, some commands in EXEC mode generate operational logs. **Table 8: EXEC Mode Commands for the Operation Log** describes EXEC mode commands that generate operational logs.

<table>
<thead>
<tr>
<th>Description</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>backup</td>
<td>Performs a backup (NCS and ADE OS) and places the backup in a repository.</td>
</tr>
<tr>
<td>restore</td>
<td>Restores from backup the file contents of a specific repository.</td>
</tr>
<tr>
<td>backup-logs</td>
<td>Backs up system logs.</td>
</tr>
</tbody>
</table>
Using the Command-Line Interface

This chapter provides helpful tips for understanding and configuring the Cisco Prime Infrastructure from the command-line interface (CLI). The Cisco Prime Infrastructure can be deployed for small, medium, and large deployments and is available on different platforms and also as a software that can run on VMware. This section contains the following topics:

- Before Accessing the Cisco Prime Infrastructure CLI, page 15
- Running the Setup Utility to Configure the Cisco Prime Infrastructure, page 15
- Accessing the Cisco Prime Infrastructure CLI, page 17
- Understanding Command Modes, page 21
- Navigating the CLI Commands, page 26
- Where to Go Next, page 32

Before Accessing the Cisco Prime Infrastructure CLI

Before logging in to the Cisco Prime Infrastructure CLI, ensure that you have completed the installation tasks as specified in the Cisco Prime Network Control System Hardware Installation Guide, Release 1.0.

Running the Setup Utility to Configure the Cisco Prime Infrastructure

When you power up the Cisco Prime Infrastructure appliances for the first time, you are prompted to run the setup utility to configure the Cisco Prime Infrastructure appliances. Before you run the utility using the setup command, ensure that you have values for the following network configuration prompts:

- Hostname
- IP address
- Netmask
- Gateway
- Domain
- Nameserver
- Network Time Protocol (NTP) server (optional)
- User ID
- Password

This example shows sample output of the `setup` command:

```
**********************************************
Please type 'setup' to configure the appliance
**********************************************
localhost login: setup
Press 'Ctrl-C' to abort setup
Enter hostname[]: NCS
Enter IP address[]: 172.16.90.183
Enter IP default netmask[]: 255.255.255.0
Enter IP default gateway[]: 172.16.90.1
Enter default DNS domain[]: example.com
Enter primary nameserver[]: 172.16.168.183
Add/Edit another nameserver? Y/N : n
Enter primary NTP server[time.nist.gov]:
Add/Edit secondary NTP server? Y/N : n
Enter username[admin]:
Enter password:
Enter password again:
Bringing up network interface...
Pinging the gateway...
Pinging the primary nameserver...
Do not use 'Ctrl-C' from this point on...
Appliance is configured
```

After you enter the required information, the Cisco Prime Infrastructure appliance automatically reboots and the following login prompt appears:

```
machine_name login:  
```

where `machine_name` identifies the hostname that you specified when you ran the `setup` command.

In this example, this prompt appears:

```
NCS login:  
```

To log in, use the administrator user account (and the corresponding password) that you created during the setup process. You must also use this Admin account to log in to the Cisco Prime Infrastructure CLI for the first time. After accessing the CLI as an administrator, you can create more users (with admin and operator privileges) with SSH access to the CLI by running the `username` command in configuration mode.

---

**Note**

The administrator user account and the corresponding password (a CLI user account) that you created during the initial setup wizard can be used to manage the Cisco Prime Infrastructure application using the CLI. The CLI user has privileges to start and stop the Cisco Prime Infrastructure application software, backup and restore the Cisco Prime Infrastructure application data, apply software patches and upgrades to the Cisco Prime Infrastructure application software, view all the system and the application logs, and reload or shutdown the Cisco Prime Infrastructure appliance. To protect the CLI user credentials, explicitly create users with access to the CLI.
Any users that you create from the Cisco Prime Infrastructure web interface cannot automatically log in to the Cisco Prime Infrastructure CLI. You must explicitly create users with access to the CLI. To create these users, you must log in to the CLI using the Admin account that you created during setup; then, enter configuration mode, and run the `username` command.

**Accessing the Cisco Prime Infrastructure CLI**

Before logging in to the Cisco Prime Infrastructure CLI, ensure that you have completed the hardware installation and configuration process outlined in the "Before Accessing the Cisco Prime Infrastructure CLI" section.

To log in to the Cisco Prime Infrastructure server and access the CLI, use an SSH secure shell client or the console port. You can log in from:

- A PC running Windows XP/Vista.
- A PC running Linux.
- An Apple computer running Mac OS X 10.4 or later.
- Any terminal device compatible with VT100 or ANSI characteristics. On the VT100-type and ANSI devices, you can use cursor-control and cursor-movement keys. Keys include left arrow, up arrow, down arrow, right arrow, Delete, and Backspace. The CLI senses the use of the cursor-control keys and automatically uses the optimal device characteristics.

To exit the CLI, use the `exit` command from EXEC mode. You are currently in one of the configuration modes and you want to exit the CLI, enter the `end`, `exit`, or `Ctrl-z` command to return to EXEC mode, and then enter the `exit` command.

**Supported Hardware and Software Platforms**

The following valid terminal types can access the Cisco Prime Infrastructure:

- 1178
- 2621
- 5051
- 6053
- 8510
- altos5
- amiga
- ansi
- apollo
- Apple_Terminal
• att5425
• ibm327x
• kaypro
• vt100

See the terminfo database for a complete listing.
You can also access the Cisco Prime Infrastructure through an SSH client or the console port.

Opening the CLI with Secure Shell

Note
To access the Cisco Prime Infrastructure CLI environment, use any SSH client that supports SSH v2.

The following example shows you how to log in with a Secure Shell (SSH) client (connecting to a wired WAN) via a PC by using Windows XP. Assuming that Cisco Prime Infrastructure is preconfigured through the setup utility to accept an Admin (administrator) user, log in as Admin.

SUMMARY STEPS

1. Use any SSH client and start an SSH session.
2. Press Enter or Spacebar to connect.
3. Enter a hostname, username, port number, and authentication method.
4. Click Connect, or press Enter.
5. Enter your assigned password for the administrator.
6. (Optional) Enter a profile name in the text box and click Add to Profile.
7. Click Close on the Add Profile window.

DETAILED STEPS

<table>
<thead>
<tr>
<th>Command or Action</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td>Use any SSH client and start an SSH session. The SSH window appears.</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td>Press Enter or Spacebar to connect. The Connect to Remote Host window appears.</td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
<td>Enter a hostname, username, port number, and authentication method. In this example, you enter ncs for the hostname, admin for the username, and 22 for the port number; and, for the authentication method, choose Password from the drop-down list.</td>
</tr>
<tr>
<td><strong>Step 4</strong></td>
<td>Click Connect, or press Enter. The Enter Password window appears.</td>
</tr>
<tr>
<td><strong>Step 5</strong></td>
<td>Enter your assigned password for the administrator. The SSH with the Add Profile window appears.</td>
</tr>
<tr>
<td><strong>Step 6</strong></td>
<td>(Optional) Enter a profile name in the text box and click Add to Profile.</td>
</tr>
</tbody>
</table>
Opening the CLI Using a Local PC

If you need to configure NCS locally (without connecting to a wired LAN), you can connect a PC to the console port on the Cisco Prime Infrastructure appliance by using a null-modem cable.

The serial console connector (port) provides access to the CLI locally by connecting a terminal to the console port. The terminal is a PC running terminal-emulation software or an ASCII terminal. The console port (EIA/TIA-232 asynchronous) requires only a null-modem cable.

To connect a PC running terminal-emulation software to the console port, use a DB-9 female to DB-9 female null-modem cable.

To connect an ASCII terminal to the console port, use a DB-9 female to DB-25 male straight-through cable with a DB-25 female to DB-25 female gender changer.

The default parameters for the console port are 9600 baud, 8 data bits, no parity, 1 stop bit, and no hardware flow control.

Note

If you are using a Cisco switch on the other side of the connection, set the switchport to duplex auto, speed auto (the default).

To connect to the console port and open the CLI, complete the following steps:

**SUMMARY STEPS**

1. Connect a null-modem cable to the console port on the Cisco ISE-3315 and to the COM port on your PC.
2. Set up a terminal emulator to communicate with the Cisco Prime Infrastructure. Use the following settings for the terminal emulator connection: 9600 baud, 8 data bits, no parity, 1 stop bit, and no flow control.
3. When the terminal emulator activates, press **Enter**.
4. At the window, enter your username, then press **Enter**.
5. Enter the password, then press **Enter**.

**DETAILED STEPS**

<table>
<thead>
<tr>
<th>Command or Action</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td>Connect a null-modem cable to the console port on the Cisco ISE-3315 and to the COM port on your PC.</td>
</tr>
<tr>
<td>Command or Action</td>
<td>Purpose</td>
</tr>
<tr>
<td>------------------</td>
<td>---------</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td>Set up a terminal emulator to communicate with the Cisco Prime Infrastructure. Use the following settings for the terminal emulator connection: 9600 baud, 8 data bits, no parity, 1 stop bit, and no flow control.</td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
<td>When the terminal emulator activates, press <strong>Enter</strong>.</td>
</tr>
<tr>
<td><strong>Step 4</strong></td>
<td>At the window, enter your username, then press <strong>Enter</strong>.</td>
</tr>
<tr>
<td><strong>Step 5</strong></td>
<td>Enter the password, then press <strong>Enter</strong>. When the CLI activates, you can enter CLI commands to configure the Cisco Prime Infrastructure.</td>
</tr>
</tbody>
</table>
Understanding Command Modes

This section describes the Cisco Prime Infrastructure command modes in detail. This section contains the following topics:

- EXEC Mode
- Configuration Mode
- Configuration Submodes
EXEC Mode

When you start a session on the Cisco Prime Infrastructure, you begin in admin or EXEC mode. From EXEC mode, you can enter configuration mode. Most of the EXEC commands (one-time commands), such as `show` commands, display the current configuration status. The admin or EXEC mode prompt consists of the device name or hostname before a pound sign (#), as shown:

`ncs/admin# (Admin or EXEC mode)`

**Note**
Throughout this guide, the Cisco Prime Infrastructure server uses the name `ncs` in place of the hostname and `admin` of the Cisco Prime Infrastructure server for the user account.

You can always tell when you are in EXEC mode or configuration mode by looking at the prompt.

- In EXEC mode, a pound sign (#) appears after the NCS server hostname and your username.
  
  For example:

  `ncs/admin#`

- In configuration mode, the ‘config’ keyword and a pound sign (#) appear after the hostname of the Cisco Prime Infrastructure server and your username.
  
  For example:

  `ncs/admin# configure
  Enter configuration commands, one per line. End with CNTL/Z.
  ncs/admin(config)# (configuration mode)`

If you are familiar with UNIX, you can equate EXEC mode to root access. You could also equate it to the administrator level in Windows NT or the supervisor in NetWare. In this mode, you have permission to access everything in the Cisco Prime Infrastructure server, including the configuration commands. However, you cannot enter configuration commands directly. Before you can change the actual configuration of the Cisco Prime Infrastructure server, you must enter configuration mode by entering the `configure` or `configure terminal (conf t)` command. Enter this command only when in EXEC mode.

For example:

`ncs/admin# conf t
Enter configuration commands, one per line. End with CNTL-Z.
ncs(config)# (configuration mode)`

The configuration mode has several submodes; each has its own prompt. To enter these submodes, you must first enter configuration mode by entering the `configure terminal` command.

To exit configuration mode, enter the `end`, `exit`, or `Ctrl-z` command. To exit EXEC mode, enter the `exit` command. To exit both configuration and EXEC modes, enter this sequence of commands:

`ncs/admin(config)# exit
ncs/admin# exit`

To obtain a listing of commands in EXEC mode, enter a question mark (?):

`ncs/admin# ?`
Configuration Mode

Use configuration mode to make changes to the existing configuration. When you save the configuration, these commands remain across Cisco Prime Infrastructure server reboots, but only if you run either of these commands:

- `copy running-config startup-config`
- `write memory`

To enter configuration mode, run the `configure` or `configure terminal (conf t)` command in EXEC mode. When in configuration mode, the Cisco Prime Infrastructure expects configuration commands.

For example:

```
ncs/admin# configure
ncs/admin(config)#
```

From this level, you can enter commands directly into the Cisco Prime Infrastructure configuration. To obtain a listing of commands in this mode, enter a question mark (`?`):

```
ncs/admin(config)# ?
```

The configuration mode has several configuration submodes. Each of these submodes places you deeper in the prompt hierarchy. When you enter `exit`, the Cisco Prime Infrastructure backs you out one level and returns you to the previous level. When you enter `exit` again, the Cisco Prime Infrastructure backs you out to the EXEC level.

**Note**

In configuration mode, you can alternatively enter `Ctrl-z` instead of the `end` or `exit` command.
Configuration Submodes

In the configuration submodes, you can enter commands for specific configurations. For example:

```
ncs/admin# config t
ncs/admin(config)# interface GigabitEthernet 0
ncs/admin(config-GigabitEthernet)#
```

To obtain a list of commands in this mode, enter a question mark (?):

```
ncs/admin(config-GigabitEthernet)# ?
```

Use the exit or end command to exit this prompt and return to the configuration prompt.

The below table lists the commands in the interface GigabitEthernet 0 configuration submode. Other configuration submodes exist including those specific to the kron, repository, and password policy commands.
<table>
<thead>
<tr>
<th>Command</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>interface GigabitEthernet</code></td>
<td>Enter the command that you want to configure for the interface. This example uses the <code>interface GigabitEthernet</code> command. Enter ? to display what you must enter next on the command line. This example shows the available <code>interface GigabitEthernet</code> configuration submode commands.</td>
</tr>
<tr>
<td><code>ip ?</code></td>
<td>Enter the command that you want to configure for the interface. This example uses the <code>ip</code> command. Enter ? to display what you must enter next on the command line. This example shows the available <code>ip</code> configuration submode commands.</td>
</tr>
<tr>
<td><code>ip address &lt;A.B.C.D&gt; ?</code></td>
<td>Enter the command that you want to configure for the interface. This example uses the <code>ip address</code> command. Enter ? to display what you must enter next on the command line. In this example, you must enter an IPv4 address. A carriage return <code>&lt;cr&gt;</code> does not appear; therefore, you must enter additional arguments to complete the command.</td>
</tr>
<tr>
<td><code>ip address &lt;A.B.C.D&gt;</code></td>
<td>Enter the keyword or argument that you want to use. This example uses the 172.16.0.1 IP address. Enter ? to display what you must enter next on the command line. In this example, you must enter a network mask. A carriage return <code>&lt;cr&gt;</code> does not display; therefore, you must enter additional arguments to complete the command.</td>
</tr>
<tr>
<td><code>ip address 172.16.0.1 255.255.255.224 ?</code></td>
<td>Enter the network mask. This example uses the 255.255.255.224 IP address. Enter ? to display what you must enter next on the command line. In this example, you can press Enter. A carriage return <code>&lt;cr&gt;</code> displays; you can press Enter to complete the command.</td>
</tr>
</tbody>
</table>
Navigating the CLI Commands

This section describes how to navigate the commands and modes on the Cisco Prime Infrastructure and contains the following topics:

- Getting Help
- Using the No and Default Forms of Commands
- Command Line Conventions
Getting Help

Use the question mark (?) and the arrow keys to help you enter commands:

• For a list of available commands, enter a question mark (?):

  ncs/admin# ?

• To complete a command, enter a few known characters before ? (with no space):

  ncs/admin# a?

• To display keywords and arguments for a command, enter ? at the prompt or after entering part of a command followed by a space:

  ncs/admin# show ?

The Cisco NCS displays a list and brief description of available keywords and arguments.

---

Note

The <cr> symbol in command help stands for “carriage return”, which means to press the Return or the Enter key). The <cr> at the end of command help output indicates that you have the option to press Enter to complete the command and that the arguments and keywords in the list preceding the <cr> symbol are optional. The <cr> symbol by itself indicates that no more arguments or keywords are available, and that you must press Enter to complete the command.

---

• To redisplay a command that you previously entered, press the Up Arrow key. Continue to press the Up Arrow key to see more commands.
Using the No and Default Forms of Commands

Some EXEC or configuration commands have a no form. In general, use the no form to disable a function. Use the command without the no keyword to re-enable a disabled function or to enable a function disabled by default; for example, an IP address enabled by default. To disable the IP address, use the no ip address command; to re-enable the IP address, use the ip address command.

Configuration commands can also have a default form, which returns the command settings to the default values. Most commands disable by default, so in such cases using the default form has the same result as using the no form of the command. However, some commands are enabled by default and have variables set to certain default values. In these cases, the default form of the command enables the command and sets the variables to their default values.

See Appendix A, Cisco Prime Infrastructure Command Reference for a description of the complete syntax of the configuration commands, and the no and default forms of a command.
Command Line Conventions

This section contains some basic command-line convention and operation information that is essential to the use of this guide. This section contains the following topics:

- Command Line Editing Key Conventions
- Command Line Completion
- Continuing Output at the --More-- Prompt
Command Line Editing Key Conventions

The Cisco Prime Infrastructure provides a number of keyboard shortcuts that you can use to edit an entered line.

Tab
Press Tab to try to finish the current command.
If you press the Tab key:

- At the beginning of a line, the system lists all the short-form options.
- When you enter a partial command, the system lists all the short form options beginning with those characters.
- When only one possible option is available, the system fills in the option automatically.

Ctrl-c
Press Ctrl-c to abort the sequence. Pressing this key sequence breaks out of any executing command and returns to the previous mode.

Ctrl-z
Press Ctrl-z to exit configuration mode and return to previous configuration mode.

? 
Enter a question mark (?) at the prompt to list the available commands.
Command Line Completion

Command-line completion makes the Cisco Prime Infrastructure CLI more user-friendly. It saves you extra key strokes and helps out when you cannot remember the syntax of a command.

For example, for the `show running-config` command:

```
ncs/admin# show running-config
```

You can:

```
ncs/admin# sh run
```

The Cisco Prime Infrastructure expands the command `sh run` to `show running-config`.

Another shortcut is to press the Tab key after you type `sh`; the Cisco Prime Infrastructure CLI fills in the rest of the command, in this case `show`.

If the Cisco Prime Infrastructure CLI does not understand a command, it repeats the entire command line and places a caret symbol (^) under the point at which it is unable to parse the command.

For example:

```
ncs/admin# show unning-configuration
```

% Invalid input detected at ' рань marker.
The caret symbol (^) points to the first letter in the command line that the Cisco Prime Infrastructure does not understand. Usually, this means that you need to provide additional arguments to complete the command or you misspelled the command. In this case, you omitted the "r" in the "unning" command. To fix the error, retyp e the command.

In another form of command-line completion, you can start a command by entering the first few characters, then pressing the Tab key. As long as you can match one command, the Cisco Prime Infrastructure CLI will complete the command. For example, if you type `sh` and press Tab, the Cisco Prime Infrastructure completes the `sh` with `show`. If NCS does not complete the command, you can enter a few more letters and press Tab again. For more information, see Tab.
Continuing Output at the --More-- Prompt

When working with the Cisco Prime Infrastructure CLI, output often extends beyond the visible screen length. For cases where output continues beyond the bottom of the screen, such as with the output of many `?` or `show` commands, the output pauses and a --More-- prompt appears at the bottom of the screen. To resume output, press Return to scroll down one line, or press the spacebar to display the next full screen of output.

Tip If the output pauses on your screen but you do not see the --More-- prompt, try entering a smaller value for the screen length by using the `terminal length` EXEC command. Command output will not pause if you set the length value to zero (0).

Where to Go Next

Now that you are familiar with some of the Cisco Prime Infrastructure CLI basics, you can begin to configure the Cisco Prime Infrastructure by using the CLI.

Remember that:

- You can use the question mark (?) and arrow keys to help you enter commands.

- Each command mode restricts you to a set of commands. If you have difficulty entering a command, check the prompt and then enter the question mark (?) to see a list of available commands.

- To disable a feature, enter the keyword `no` before the command; for example, `no ip address`.

- You must save your configuration changes so that you preserve them during a system reload or power outage.

Proceed to Appendix A, "Cisco Prime Infrastructure" Command Reference" for command listings, descriptions, syntax, usage guidelines, and sample output.
Command Reference

This appendix contains necessary information on disk space management for all types of Cisco Prime Infrastructure deployments and an alphabetical listing of the commands specific to the Cisco Prime Infrastructure. The commands comprise the following modes:

- EXEC
  - System-level
  - Show

- Configuration
  - configuration submode

Use EXEC mode system-level `config` or `configure` command to access configuration mode.

Each of the commands in this appendix is followed by a brief description of its use, command syntax, usage guidelines, and one or more examples. Throughout this appendix, the Cisco Prime Infrastructure server uses the name `ncs` in place of the Cisco Prime Infrastructure server’s hostname.

<table>
<thead>
<tr>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>If an error occurs in any command usage, use the <code>debug</code> command to determine the cause of the error.</td>
</tr>
</tbody>
</table>

This section contains the following topics:

- Disk Space Management in Cisco Prime Infrastructure, page 33
- EXEC Commands, page 37
- show Commands, page 119
- Configuration Commands, page 163

Disk Space Management in Cisco Prime Infrastructure

This section provides information on disk space in the Cisco Prime Infrastructure appliances for all types of deployments. Each of the Cisco Prime Infrastructure appliances has different amount of disk space, and managing that disk space is important to enable you to use the Cisco Prime Infrastructure efficiently.
Before proceeding to use the Cisco Prime Infrastructure CLI commands, familiarize yourself with disk space management in the Cisco Prime Infrastructure appliances. You can deploy the Cisco Prime Infrastructure on appliances with small, medium and large form factors and VMware. Table 10: Cisco Prime Infrastructure Appliances Configuration provides information on Cisco Prime Infrastructure appliances on all the form factors and the available disk space that you need to manage the Cisco Prime Infrastructure.

**Table 10: Cisco Prime Infrastructure Appliances Configuration**

<table>
<thead>
<tr>
<th>Appliance Form Factor</th>
<th>Cisco Prime Infrastructure Appliances</th>
<th>Hard Disk Configuration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small</td>
<td>-</td>
<td>2 x 250GB SATA HDD.</td>
</tr>
<tr>
<td>Medium</td>
<td>-</td>
<td>2 x 300 GB SAS RAID HDD.</td>
</tr>
<tr>
<td>Large</td>
<td>-</td>
<td>4 x 300 GB SAS RAID HDD.</td>
</tr>
<tr>
<td>VMware</td>
<td>NCS-DEMO-10 (to run a Demo/Evaluation)</td>
<td>30GB</td>
</tr>
<tr>
<td></td>
<td>L-NCS-1.0-K9 (to run the PxP production image)</td>
<td>60GB</td>
</tr>
<tr>
<td></td>
<td>L-NCS-1.0-K9 (to run M&amp;T production image)</td>
<td>200GB</td>
</tr>
</tbody>
</table>

**Table 11: Disk Space on /var Partition** lists the disk space that you may use on the /var partition that has a total of 6 GB of disk space. You may use 308 MB of the 6 GB of disk space for the operating system and the Cisco ADE OS 2.0 log files. You can then use the remaining 5.7 GB of disk space for a medium and large type deployment.

**Table 11: Disk Space on /var Partition**

<table>
<thead>
<tr>
<th>Process</th>
<th>Files</th>
<th>Small</th>
<th>Medium and Large</th>
<th>VMware</th>
<th>VMware</th>
<th>VMware</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linux OS</td>
<td>System</td>
<td>-</td>
<td>258MB</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Cisco ADE OS 2.0</td>
<td>/var/log/ade/ADE.log</td>
<td>-</td>
<td>50MB</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

All the files that you create in the Cisco Prime Infrastructure reside in the /opt partition. You must manage the disk space for the files that you create in the /opt partition so that the files increase in size within the limits that do not have an impact on other files and services in the system.

**Table 12: Disk Space on /opt Partition** lists the disk space that you may use on the /opt partition that has a total of 410 GB of disk space. You may use 161 GB of disk space and the remaining of 249 GB for a medium and large type deployment. The remaining 249 GB of disk space can be better utilized for the database growth after you consider the disk space required for backup, restore, and replication.
### Table 12: Disk Space on /opt Partition

<table>
<thead>
<tr>
<th>Process</th>
<th>Files</th>
<th>Small</th>
<th>Medium and Large</th>
<th>VMware</th>
<th>VMware</th>
<th>VMware</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCOcpm</td>
<td>Application product files (includes Oracle, Tomcat, and TimesTen)</td>
<td></td>
<td>7.5 GB</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PxP Database</td>
<td>/opt/oracle/base/oradata/cpm10/cpm01.dbf</td>
<td></td>
<td>31 GB</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MnT Database</td>
<td>opt/oracle/base/oradata/cpm10/mnt01.dbf</td>
<td></td>
<td>120 GB</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TimesTen User Cache Database</td>
<td>opt/oracle/base/product/11.2.0/dbhome_1/dbs/datfttuser.dbf</td>
<td></td>
<td>100 GB</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oracle RDBMS System</td>
<td>Redo Logs (redo01.log, redo02.log and redo03.log) Built-in databases:</td>
<td></td>
<td>50 MB</td>
<td>30 MB</td>
<td>104 MB</td>
<td>770 MB</td>
</tr>
<tr>
<td></td>
<td>temp01.dbf example01.dbf system01.dbf undotbs01.dbf sysaux01.dbf</td>
<td></td>
<td></td>
<td>160 MB</td>
<td>580 MB</td>
<td>5 MB</td>
</tr>
<tr>
<td></td>
<td>users01.dbf control01.ctl</td>
<td></td>
<td></td>
<td>5 MB</td>
<td>9 MB</td>
<td></td>
</tr>
<tr>
<td>Monit</td>
<td>/opt/CSCOcpm/logs/monit.log</td>
<td>55 MB</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CPM PSC Log</td>
<td>/opt/CSCOcpm/logs/cpm-psc.log*.*</td>
<td></td>
<td>200 MB</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CPM PrRT Log</td>
<td>/opt/CSCOcpm/logs/cpm-psc.log*.*</td>
<td></td>
<td>200 MB</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CPM Profiler Log</td>
<td>/opt/CSCOcpm/profiler/logs/profiler.log*</td>
<td></td>
<td>200 MB</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MnT Collector Log</td>
<td>/opt/CSCOcpm/logs/mnt-collector.out</td>
<td></td>
<td>20 MB</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MnT Decap Log</td>
<td>/opt/CSCOcpm/logs/mnt-decap.out</td>
<td></td>
<td>100 MB</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Process</td>
<td>Files</td>
<td>Small</td>
<td>Medium and Large</td>
<td>VMware</td>
<td>VMware</td>
<td>VMware</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>----------------------------------------</td>
<td>-------</td>
<td>------------------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>CPM Client Provisioning agent binaries</td>
<td>/opt/CSCOcpm/provisioning</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>100 MB</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tomcat</td>
<td>/opt/CSCOcpm/appsrv/apache-tomcat-6.0.18/logs*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PrRT Audit Logger</td>
<td>/opt/CSCOcpm/logs/prrt.log</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CPM Database Backup and Restore Tasks</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CPM Replication Streams Queues and Staging Areas</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MnT Historical Data</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For detailed information on logging into the Cisco Prime Infrastructure, refer to the Cisco Prime Network Control System Configuration Guide, Release 1.0.

This appendix contains the following sections:

- EXEC Commands
- show Commands
- Configuration Commands
EXEC Commands

This section lists each EXEC command and each command page includes a brief description of its use, command syntax, any command defaults, command modes, usage guidelines, and an example of the command and any related commands. This section contains the following list of commands:
You are not allowed to run the `application install` command from the CLI under normal operations because the Cisco Prime Infrastructure application is preinstalled with a Cisco IOS image on all supported appliances and VMware.

To install a specific application other than the Cisco Prime Infrastructure, use the `application install` command in EXEC mode. To remove this function, use the `application remove` command.

`application install application-bundle remote-repository-name`

**Syntax Description**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>application-bundle</code></td>
<td>Application bundle filename. Up to 255 alphanumeric characters.</td>
</tr>
<tr>
<td><code>remote-repository-name</code></td>
<td>Remote repository name. Up to 255 alphanumeric characters.</td>
</tr>
</tbody>
</table>

**Command Default**

No default behavior or values.

**Command Modes**

EXEC

**Usage Guidelines**

Installs the specified application bundle on the appliance. The application bundle file is pulled from the specified repository.

If you enter the `application install` or `application remove` command when another installation or removal operation of an application is in progress, you will see the following warning message:

An existing application install, remove, or upgrade is in progress. Try again shortly.

**Examples**

```bash
ncs/admin# application install ncs-appbundle-1.0.2.054.i386.tar.gz myrepository
Do you want to save the current configuration ? (yes/no) [yes] ? y
Please enter yes or no
Do you want to save the current configuration ? (yes/no) [yes] ? yes
Generating configuration...
Saved the running configuration to startup successfully
Initiating Application installation...
Extracting NCS database content...
Starting NCS database processes...
Restarting NCS database processes...
Creating NCS M&T session directory...
Performing NCS database priming...
Application successfully installed
```

```bash
ncs/admin# application install ncs-appbundle-1.0.2.054.i386.tar.gz myrepository
Do you want to save the current configuration ? (yes/no) [yes] ? no
Initiating Application installation...
Extracting NCS database content...
Starting NCS database processes...
```
Restarting NCS database processes...
Creating NCS M&T session directory...
Performing NCS database priming...
Application successfully installed

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>application remove</td>
<td>Removes or uninstalls an application.</td>
</tr>
<tr>
<td>application start</td>
<td>Starts or enables an application.</td>
</tr>
<tr>
<td>application stop</td>
<td>Stops or disables an application.</td>
</tr>
<tr>
<td>application upgrade</td>
<td>Upgrades an application bundle.</td>
</tr>
<tr>
<td>show application</td>
<td>Shows application information for the installed application packages on the system.</td>
</tr>
</tbody>
</table>
application remove

You are not allowed to run the `application remove` command from the CLI to remove the Cisco Prime Infrastructure application unless you are explicitly instructed to do so for an upgrade.

To remove a specific application other than the Cisco Prime Infrastructure, use the `application remove` command in EXEC mode. To remove this function, use the `no` form of this command.

```
application remove application-name
no application remove application-name
```

**Syntax Description**

```
application-name
```

Application name. Up to 255 alphanumeric characters.

**Command Default**

No default behavior or values.

**Command Modes**

EXEC mode.

**Usage Guidelines**

Removes or uninstalls an application.

**Examples**

```
ncs/admin# application remove ncs
Continue with application removal? [y/n] y
Application successfully uninstalled
ncs/admin#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>application install</td>
<td>Installs an application bundle.</td>
</tr>
<tr>
<td>application start</td>
<td>Starts or enables an application.</td>
</tr>
<tr>
<td>application stop</td>
<td>Stops or disables an application.</td>
</tr>
<tr>
<td>application upgrade</td>
<td>Upgrades an application bundle.</td>
</tr>
<tr>
<td>show application</td>
<td>Shows application information for the installed application packages on the system.</td>
</tr>
</tbody>
</table>
application reset-config

**Note**
This command is not currently supported by Prime Infrastructure.

To reset an application configuration to factory defaults, use the `application reset-config` command in EXEC mode.

**Syntax Description**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>application-name</code></td>
<td>Name of the application to reset its configuration to factory defaults. Up to 255 alphanumeric characters.</td>
</tr>
</tbody>
</table>

**Command Default**
No default behavior or values.

**Command Modes**
EXEC

**Usage Guidelines**
You can use the `application reset-config` command to reset the Cisco Prime Infrastructure configuration to factory defaults without reimaging the Cisco Prime Infrastructure appliance or VMware.

**Examples**

```
ncs/admin# application reset-config ncs
Initialize your identity policy database to factory defaults? (y/n): y
Reinitializing local policy database to factory default state...
Stopping NCS Monitoring & Troubleshooting Log Processor...
Stopping NCS Monitoring & Troubleshooting Log Collector...
Stopping NCS Monitoring & Troubleshooting Alert Process...
Stopping NCS Application Server...
Stopping NCS Monitoring & Troubleshooting Session Database...
Stopping NCS Database processes...
Extracting NCS database content...
Starting NCS database processes...
Restarting NCS database processes...
Creating NCS M&T session directory...
Performing NCS database priming...
Application successfully reset configuration
ncs/admin# application reset-config ncs
Initialize your identity policy database to factory defaults? (y/n): n
Existing policy database will be retained.
Application successfully reset configuration
ncs/admin#
```
application start

To enable a specific application, use the `application start` command in EXEC mode. To remove this function, use the `no` form of this command.

```
application start application-name
```

**Syntax Description**

```
application-name  Name of the predefined application that you want to enable. Up to 255 alphanumeric characters.
```

**Command Default**

No default behavior or values.

**Command Modes**

EXEC

**Usage Guidelines**

Enables an application.

You cannot use this command to start the Cisco Prime Infrastructure application. If you use this command to start the application, you can see that the Cisco Prime Infrastructure is already running.

**Examples**

```
ncs/admin# application start NCS
NCS Database processes is already running, PID: 7585
NCS M&T Session Database is already running, PID: 7851
NCS Application Server process is already running, PID: 7935
NCS M&T Log Collector is already running, PID: 7955
NCS M&T Log Processor is already running, PID: 8005
NCS M&T Alert Processor is already running, PID: 8046
ncs/admin#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>application install</td>
<td>Installs an application bundle.</td>
</tr>
<tr>
<td>application remove</td>
<td>Removes or uninstalls an application.</td>
</tr>
<tr>
<td>application stop</td>
<td>Stops or disables an application.</td>
</tr>
<tr>
<td>application upgrade</td>
<td>Upgrades an application bundle.</td>
</tr>
<tr>
<td>show application</td>
<td>Shows application information for the installed application packages on the system.</td>
</tr>
</tbody>
</table>
application stop

To disable a specific application, use the **application stop** command in EXEC mode. To remove this function, use the no form of this command.

**application stop application-name**

**Syntax Description**

| **application-name** | Name of the predefined application that you want to disable. Up to 255 alphanumeric characters. |

**Command Default**

No default behavior or values.

**Command Modes**

EXEC

**Usage Guidelines**

Disables an application.

**Examples**

```plaintext
ncs/admin# application stop NCS
Stopping NCS Monitoring & Troubleshooting Log Processor...
Stopping NCS Monitoring & Troubleshooting Log Collector...
Stopping NCS Monitoring & Troubleshooting Alert Process...
Stopping NCS Application Server...
Stopping NCS Monitoring & Troubleshooting Session Database...
Stopping NCS Database processes...
ncs/admin#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>application install</td>
<td>Installs an application bundle.</td>
</tr>
<tr>
<td>application remove</td>
<td>Removes or uninstalls an application.</td>
</tr>
<tr>
<td>application start</td>
<td>Starts or enables an application.</td>
</tr>
<tr>
<td>application upgrade</td>
<td>Upgrades an application bundle.</td>
</tr>
<tr>
<td>show application</td>
<td>Shows application information for the installed application packages on the system.</td>
</tr>
</tbody>
</table>
**application upgrade**

To upgrade a specific application bundle, use the `application upgrade` command in EXEC mode. To remove this function, use the `application remove` command.

`application upgrade application-bundle remote-repository-name`

**Syntax Description**

- **application-bundle**: Application name. Up to 255 alphanumeric characters.
  - **Note**: Enter the application name as ‘NCS’ in uppercase.

- **remote-repository-name**: Remote repository name. Up to 255 alphanumeric characters.

**Command Default**

No default behavior or values.

**Command Modes**

EXEC

**Usage Guidelines**

Upgrades an application bundle, and preserves any application configuration data.

If you enter the `application upgrade` command when another application upgrade operation is in progress, you will see the following warning message:

An existing application install, remove, or upgrade is in progress. Try again shortly.

**Caution**

Do not enter the `backup` or `restore` commands when the upgrade is in progress. This action might cause the database to be corrupted.

**Examples**

```
ncs/admin# application upgrade NCS-appbundle-1.0.2.054.i386.tar.gz myremoterepository
Do you want to save the current configuration? [yes/no] [yes] ? yes
Generating configuration...
Saved the running configuration to startup successfully
ncs/admin#
```

```
ncs/admin# application upgrade NCS-appbundle-1.0.2.054.i386.tar.gz myremoterepository
Do you want to save the current configuration? [yes/no] [yes] ? no
Initiating Application Upgrade...
nccs/admin#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>application install</td>
<td>Installs an application bundle.</td>
</tr>
<tr>
<td>Command</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>application remove</td>
<td>Removes or uninstalls an application.</td>
</tr>
<tr>
<td>application start</td>
<td>Starts or enables an application.</td>
</tr>
<tr>
<td>application stop</td>
<td>Stops or disables an application.</td>
</tr>
<tr>
<td>show application</td>
<td>Shows application information for the installed application packages on the system.</td>
</tr>
</tbody>
</table>
**backup**

To perform a backup (including the Cisco Prime Infrastructure and Cisco ADE OS data) and place the backup in a repository, use the `backup` command in EXEC mode. To perform a backup of only the Cisco Prime Infrastructure application data without the Cisco ADE OS data, use the `application` command.

```
backup backup-name repository repository-name application application-name
```

**Syntax Description**

- `backup-name`: Name of backup file. Up to 100 alphanumeric characters.
- `repository-name`: Location where the files should be backed up to. Up to 80 alphanumeric characters.
- `application-name`: Application name. Up to 255 alphanumeric characters.

**Note** Enter the application name as 'NCS' in upper case.

**Command Default**

No default behavior or values.

**Command Modes**

EXEC

**Usage Guidelines**

Performs a backup of the Cisco Prime Infrastructure and Cisco ADE OS data and places the backup in a repository.

To perform a backup of only the Cisco Prime Infrastructure application data without the Cisco ADE OS data, use the `application` command.

**Examples**

```
ncs/admin# backup mybackup repository myrepository
% Creating backup with timestamped filename: mybackup-100805-1222.tar.gpg
ncs/admin# backup with timestamped filename: mybackup-100805-1240.tar.gpg
ncs/admin# backup mybackup repository myrepository application NCS
% Creating backup with timestamped filename: mybackup-100805-1240.tar.gpg
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>backup-logs</td>
<td>Backs up system logs.</td>
</tr>
<tr>
<td>delete</td>
<td>Deletes a file from the Cisco Prime Infrastructure server.</td>
</tr>
<tr>
<td>dir</td>
<td>Lists a file from the Cisco Prime Infrastructure server.</td>
</tr>
<tr>
<td>reload</td>
<td>Reboots the system.</td>
</tr>
<tr>
<td>Command</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>repository</td>
<td>Enters the repository submode for configuration of backups.</td>
</tr>
<tr>
<td>restore</td>
<td>Restores from backup the file contents of a specific repository.</td>
</tr>
<tr>
<td>show backup history</td>
<td>Displays the backup history of the system.</td>
</tr>
<tr>
<td>show repository</td>
<td>Displays the available backup files located on a specific repository.</td>
</tr>
</tbody>
</table>
backup-logs

To back up system logs, use the `backup-logs` command in EXEC mode. To remove this function, use the `no` form of this command.

```
backup-logs backup-name repository repository-name
```

**Syntax Description**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>backup-name</td>
<td>Name of one or more files to back up. Up to 100 alphanumeric characters.</td>
</tr>
<tr>
<td>repository-name</td>
<td>Location where files should be backed up to. Up to 80 alphanumeric characters.</td>
</tr>
</tbody>
</table>

**Command Default**

No default behavior or values.

**Command Modes**

EXEC

**Usage Guidelines**

Backs up system logs.

**Examples**

```
ncs/admin# backup-logs mybackup repository myrepository
% Creating log backup with timestamped filename: mybackup-100805-1754.tar.gz
ncs/admin#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>backup</td>
<td>Performs a backup (Cisco Prime Infrastructure and Cisco ADE OS) and places the backup in a repository.</td>
</tr>
<tr>
<td>restore</td>
<td>Restores from backup the file contents of a specific repository.</td>
</tr>
<tr>
<td>repository</td>
<td>Enters the repository submode for configuration of backups.</td>
</tr>
<tr>
<td>show backup history</td>
<td>Shows the backup history of the system.</td>
</tr>
<tr>
<td>show repository</td>
<td>Shows the available backup files located on a specific repository.</td>
</tr>
</tbody>
</table>
clock

To set the system clock, use the `clock` command in EXEC mode. To remove this function, use the `no` form of this command.

```
clock set [month day hh:min:ss yyyy]
```

**Syntax Description**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>month</code></td>
<td>Current month of the year by name. Up to three alphabetic characters. For example, Jan for January.</td>
</tr>
<tr>
<td><code>day</code></td>
<td>Current day (by date) of the month. Value = 0 to 31. Up to two numbers.</td>
</tr>
<tr>
<td><code>hh:mm:ss</code></td>
<td>Current time in hours (24-hour format), minutes, and seconds.</td>
</tr>
<tr>
<td><code>yyyy</code></td>
<td>Current year (no abbreviation).</td>
</tr>
</tbody>
</table>

**Command Default**

No default behavior or values.

**Command Modes**

EXEC

**Usage Guidelines**

Sets the system clock. You must restart the Cisco Prime Infrastructure server after you reset the clock for the change to take effect.

**Examples**

```
ncs/admin# clock set May 5 18:07:20 2010
ncs/admin# show clock
Thu May 5 18:07:26 UTC 2010
ncs/admin#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>show clock</code></td>
<td>Displays the time and date set on the system software clock.</td>
</tr>
</tbody>
</table>
**configure**

To enter configuration mode, use the `configure` command in EXEC mode. If the `replace` option is used with this command, copies a remote configuration to the system which overwrites the existing configuration.

**configure terminal**

**Syntax Description**

| terminal | Executes configuration commands from the terminal. |

**Command Default**

No default behavior or values.

**Command Modes**

EXEC

**Usage Guidelines**

Use this command to enter configuration mode. Note that commands in this mode write to the running configuration file as soon as you enter them (press Enter).

To exit configuration mode and return to EXEC mode, enter `end`, `exit`, or `Ctrl-z`.

To view the changes that you have made to the configuration, use the `show running-config` command in EXEC mode.

**Examples**

```
ncs/admin# configure
Enter configuration commands, one per line. End with CNTL/Z.
ncs/admin(config)#

ncs/admin# configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
ncs/admin(config)#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>show running-config</code></td>
<td>Displays the contents of the currently running configuration file or the configuration.</td>
</tr>
<tr>
<td><code>show startup-config</code></td>
<td>Displays the contents of the startup configuration file or the configuration.</td>
</tr>
</tbody>
</table>
copy

To copy any file from a source to a destination, use the **copy** command in EXEC mode. The **copy** command in the Cisco Prime Infrastructure copies a configuration (running or startup).

**Running Configuration**

The Cisco Prime Infrastructure active configuration stores itself in the Cisco Prime Infrastructure RAM. Every configuration command you enter resides in the running configuration. If you reboot your Cisco Prime Infrastructure server, you lose the running configuration. If you make changes that you want to save, you must copy the running configuration to a safe location, such as a network server, or save it as the Cisco Prime Infrastructure server startup configuration.

**Startup Configuration**

You cannot edit a startup configuration directly. All commands that you enter store themselves in the running configuration, which you can copy into the startup configuration.

In other words, when you boot a Cisco Prime Infrastructure server, the startup configuration becomes the initial running configuration. As you modify the configuration, the two diverge: the startup configuration remains the same; the running configuration reflects the changes that you have made. If you want to make your changes permanent, you must save the running configuration to the startup configuration using the **write memory** command. The **write memory** command makes the current running configuration permanent.

If you do not save the running configuration, you will lose all your configuration changes during the next reboot of the Cisco Prime Infrastructure server. You can also save a copy of the running and startup configurations using the following commands, to recover in case of loss of configuration:

```
copy startup-config [location]
copy running-config [location]
```

**Note**

The **copy** command is supported only for the local disk and not for a repository.

**Syntax Description**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>running-config</td>
<td>Represents the current running configuration file.</td>
</tr>
<tr>
<td>startup-config</td>
<td>Represents the configuration file used during initialization (startup).</td>
</tr>
<tr>
<td>protocol</td>
<td>See Table 13: Protocol Prefix Keywords for protocol keyword options.</td>
</tr>
<tr>
<td>hostname</td>
<td>Hostname of destination.</td>
</tr>
<tr>
<td>location</td>
<td>Location of disk:/&lt;dirpath&gt;</td>
</tr>
<tr>
<td>logs</td>
<td>The system log files.</td>
</tr>
</tbody>
</table>
**copy**

**all**  
Copies all Cisco Prime Infrastructure log files from the system to another location. All logs are packaged as ncslogs.tar.gz and transferred to the specified directory on the remote host.

**filename**  
Allows you to copy a single Cisco Prime Infrastructure log file and transfer it to the specified directory on the remote host, with its original name.

**log_filename**  
Name of the Cisco Prime Infrastructure log file, as displayed by the `show logs` command (up to 255 characters).

**mgmt**  
Copies the Cisco Prime Infrastructure management debug logs and Tomcat logs from the system, bundles them as mgmtlogs.tar.gz, and transfers them to the specified directory on the remote host.

**runtime**  
Copies the Cisco Prime Infrastructure runtime debug logs from the system, bundles them as runtime logs.tar.gz, and transfers them to the specified directory on the remote host.

**Command Default**
No default behavior or values.

**Command Modes**
EXEC

**Usage Guidelines**
The fundamental function of the `copy` command allows you to copy a file (such as a system image or configuration file) from one location to another location. The source and destination for the file specified uses the Cisco Prime Infrastructure file system, through which you can specify any supported local or remote file location. The file system being used (a local memory source or a remote system) dictates the syntax used in the command.

You can enter on the command line all the necessary source and destination information and the username and password to use; or, you can enter the `copy` command and have the server prompt you for any missing information. You can enter up to a maximum of 2048 characters of source and destination URL information on the command line.

**Tip**
Aliases reduce the amount of typing that you need to do. For example, type `copy run start` (the abbreviated form of the `copy running-config startup-config` command).

The entire copying process might take several minutes and differs from protocol to protocol and from network to network.

Use the filename relative to the directory for file transfers.

Possible error is the standard FTP error message.
Table 13: Protocol Prefix Keywords

<table>
<thead>
<tr>
<th>Keyword</th>
<th>Source of Destination</th>
</tr>
</thead>
<tbody>
<tr>
<td>ftp</td>
<td>Source or destination URL for FTP network server. The syntax for this alias: <code>ftp://[location]/directory/filename</code></td>
</tr>
<tr>
<td>sftp</td>
<td>Source or destination URL for an SFTP network server. The syntax for this alias: <code>sftp://[location]/directory/filename</code></td>
</tr>
<tr>
<td>tftp</td>
<td>Source or destination URL for a TFTP network server. The syntax for this alias: <code>tftp://[location]/directory/filename</code></td>
</tr>
</tbody>
</table>

Examples

```
ncs/admin# copy run start
Generating configuration...
ncs/admin#
ncs/admin# copy running-config startup-config
Generating configuration...
ncs/admin#
ncs/admin# copy start run
ncs/admin#
ncs/admin# copy startup-config running-config
ncs/admin#
ncs/admin# copy logs disk: /
Collecting logs...
ncs/admin#
ncs/admin# copy disk:/mydesktop-100805-1910.tar.gz ftp://myftpserver/mydir
Username: [Enter]
Password: [Enter]
```

Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>application install</td>
<td>Starts or stops a Cisco Prime Infrastructure instance.</td>
</tr>
<tr>
<td>backup</td>
<td>Performs a backup (Cisco Prime Infrastructure and Cisco ADE OS) and places the backup in a repository.</td>
</tr>
<tr>
<td>delete</td>
<td>Deletes a file from the Cisco Prime Infrastructure server.</td>
</tr>
<tr>
<td>dir</td>
<td>Lists a file from the Cisco Prime Infrastructure server.</td>
</tr>
<tr>
<td>reload</td>
<td>Reboots the system.</td>
</tr>
<tr>
<td>restore</td>
<td>Restores from backup the file contents of a specific repository.</td>
</tr>
<tr>
<td>show application</td>
<td>Shows application status and version information.</td>
</tr>
<tr>
<td>Command</td>
<td>Description</td>
</tr>
<tr>
<td>-------------</td>
<td>-------------------------------------------</td>
</tr>
<tr>
<td>show version</td>
<td>Displays information about the software version of the system.</td>
</tr>
</tbody>
</table>
**debug**

To display errors or events for command situations, use the `debug` command in EXEC mode.

```
debug {all | application | backup-restore | cdp | config | icmp | copy | locks | logging | snmp | system | transfer | user | utils}
```

**Syntax Description**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>all</code></td>
<td>Enables all debugging.</td>
</tr>
<tr>
<td><code>application</code></td>
<td>Application files.</td>
</tr>
<tr>
<td><code>all</code></td>
<td>Enables all application debug output. Set level between 0 and 7, with 0 being severe and 7 being all.</td>
</tr>
<tr>
<td><code>install</code></td>
<td>Enables application install debug output. Set level between 0 and 7, with 0 being severe and 7 being all.</td>
</tr>
<tr>
<td><code>operation</code></td>
<td>Enables application operation debug output. Set level between 0 and 7, with 0 being severe and 7 being all.</td>
</tr>
<tr>
<td><code>uninstall</code></td>
<td>Enables application uninstall debug output. Set level between 0 and 7, with 0 being severe and 7 being all.</td>
</tr>
<tr>
<td><code>backup-restore</code></td>
<td>Backs up and restores files.</td>
</tr>
<tr>
<td><code>all</code></td>
<td>Enables all debug output for backup-restore. Set level between 0 and 7, with 0 being severe and 7 being all.</td>
</tr>
<tr>
<td><code>backup</code></td>
<td>Enables backup debug output for backup-restore. Set level between 0 and 7, with 0 being severe and 7 being all.</td>
</tr>
<tr>
<td><code>backup-logs</code></td>
<td>Enables backup-logs debug output for backup-restore. Set level between 0 and 7, with 0 being severe and 7 being all.</td>
</tr>
<tr>
<td><code>history</code></td>
<td>Enables history debug output for backup-restore. Set level between 0 and 7, with 0 being severe and 7 being all.</td>
</tr>
<tr>
<td><code>restore</code></td>
<td>Enables restore debug output for backup-restore. Set level between 0 and 7, with 0 being severe and 7 being all.</td>
</tr>
<tr>
<td><code>cdp</code></td>
<td>Cisco Discovery Protocol configuration files.</td>
</tr>
<tr>
<td><code>all</code></td>
<td>Enables all Cisco Discovery Protocol configuration debug output. Set level between 0 and 7, with 0 being severe and 7 being all.</td>
</tr>
<tr>
<td><code>config</code></td>
<td>Enables configuration debug output for Cisco Discovery Protocol. Set level between 0 and 7, with 0 being severe and 7 being all.</td>
</tr>
<tr>
<td><code>infra</code></td>
<td>Enables infrastructure debug output for Cisco Discovery Protocol. Set level between 0 and 7, with 0 being severe and 7 being all.</td>
</tr>
<tr>
<td><strong>config</strong></td>
<td>Configuration files.</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>• <em>all</em>—Enables all configuration debug output. Set level between 0 and 7, with 0 being severe and 7 being all.</td>
<td></td>
</tr>
<tr>
<td>• <em>backup</em>—Enables backup configuration debug output. Set level between 0 and 7, with 0 being severe and 7 being all.</td>
<td></td>
</tr>
<tr>
<td>• <em>clock</em>—Enables clock configuration debug output. Set level between 0 and 7, with 0 being severe and 7 being all.</td>
<td></td>
</tr>
<tr>
<td>• <em>infra</em>—Enables configuration infrastructure debug output. Set level between 0 and 7, with 0 being severe and 7 being all.</td>
<td></td>
</tr>
<tr>
<td>• <em>kron</em>—Enables command scheduler configuration debug output. Set level between 0 and 7, with 0 being severe and 7 being all.</td>
<td></td>
</tr>
<tr>
<td>• <em>network</em>—Enables network configuration debug output. Set level between 0 and 7, with 0 being severe and 7 being all.</td>
<td></td>
</tr>
<tr>
<td>• <em>repository</em>—Enables repository configuration debug output. Set level between 0 and 7, with 0 being severe and 7 being all.</td>
<td></td>
</tr>
<tr>
<td>• <em>service</em>—Enables service configuration debug output. Set level between 0 and 7, with 0 being severe and 7 being all.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>icmp</strong></th>
<th>Internet Control Message Protocol (ICMP) echo response configuration.</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>all</em>—Enable all debug output for ICMP echo response configuration. Set level between 0 and 7, with 0 being severe and 7 being all.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>copy</strong></th>
<th>Copy commands. Set level between 0 and 7, with 0 being severe and 7 being all.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>locks</strong></th>
<th>Resource locking.</th>
</tr>
</thead>
<tbody>
<tr>
<td>• <em>all</em>—Enables all resource locking debug output. Set level between 0 and 7, with 0 being severe and 7 being all.</td>
<td></td>
</tr>
<tr>
<td>• <em>file</em>—Enables file locking debug output. Set level between 0 and 7, with 0 being severe and 7 being all.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>logging</strong></th>
<th>Logging configuration files.</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>all</em>—Enables all logging configuration debug output. Set level between 0 and 7, with 0 being severe and 7 being all.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>snmp</strong></th>
<th>SNMP configuration files.</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>all</em>—Enables all SNMP configuration debug output. Set level between 0 and 7, with 0 being severe and 7 being all.</td>
<td></td>
</tr>
</tbody>
</table>
### system

**System files.**

- **all**—Enables all system files debug output. Set level between 0 and 7, with 0 being severe and 7 being all.

- **id**—Enables system ID debug output. Set level between 0 and 7, with 0 being severe and 7 being all.

- **info**—Enables system info debug output. Set level between 0 and 7, with 0 being severe and 7 being all.

- **init**—Enables system init debug output. Set level between 0 and 7, with 0 being severe and 7 being all.

### transfer

**File transfer.** Set level between 0 and 7, with 0 being severe and 7 being all.

### user

**User management.**

- **all**—Enables all user management debug output. Set level between 0 and 7, with 0 being severe and 7 being all.

- **password-policy**—Enables user management debug output for password-policy. Set level between 0 and 7, with 0 being severe and 7 being all.

### utils

**Utilities configuration files.**

- **all**—Enables all utilities configuration debug output. Set level between 0 and 7, with 0 being severe and 7 being all.

---

**Command Default**

No default behavior or values.

**Command Modes**

EXEC mode.

**Usage Guidelines**

Use the `debug` command to identify various failures within the Cisco Prime Infrastructure server; for example, setup failures or configuration failures.

**Examples**

```bash
ncs/admin# debug all
ncs/admin# mkdir disk:/1
ncs/admin# 6 (15347): utils: vsh_root_stubs.c[2742] [admin]: mkdir operation success

ncs/admin# rmdir disk:/1
6 [15351]: utils: vsh_root_stubs.c[2601] [admin]: Invoked Remove Directory disk:/1 command
6 [15351]: utils: vsh_root_stubs.c[2663] [admin]: Remove Directory operation success
ncs/admin#

ncs/admin# unddebug all
ncs/admin#
```
### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>undo<strong>ug</strong></td>
<td>Disables the output (display of errors or events) of the <strong>debug</strong> command for various command situations.</td>
</tr>
</tbody>
</table>
delete

To delete a file from the Cisco Prime Infrastructure server, use the `delete` command in EXEC mode. To remove this function, use the `no` form of this command.

```
delete filename [disk:/path]
```

**Syntax Description**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>filename</code></td>
<td>Filename. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td><code>disk:/path</code></td>
<td>Location.</td>
</tr>
</tbody>
</table>

**Command Default**

No default behavior or values.

**Command Modes**

EXEC mode.

**Usage Guidelines**

If you attempt to delete the configuration file or image, the system prompts you to confirm the deletion. Also, if you attempt to delete the last valid system image, the system prompts you to confirm the deletion.

**Examples**

```
ncs/admin# delete disk:/hs_err_pid19962.log
ncs/admin#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>dir</code></td>
<td>Lists all the files on the Cisco Prime Infrastructure server.</td>
</tr>
</tbody>
</table>
dir

To list a file from the Cisco Prime Infrastructure server, use the **dir** command in EXEC mode. To remove this function, use the **no** form of this command.

```
dir [word][recursive]
```

**Syntax Description**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>word</td>
<td>Directory name. Up to 80 alphanumeric characters. Requires <code>disk:/</code> preceding the directory name.</td>
</tr>
<tr>
<td>recursive</td>
<td>Lists a local directory or filename recursively.</td>
</tr>
</tbody>
</table>

**Command Default**

No default behavior or values.

**Command Modes**

EXEC mode.

**Usage Guidelines**

None.

**Examples**

```
ncs/admin# dir
Directory of disk:/
2034113 Aug 05 2010 19:58:39 ADElogs.tar.gz
4096 Jun 10 2010 02:34:03 activemq-data/
4096 Aug 04 2010 23:14:53 logs/
16384 Jun 09 2010 02:59:34 lost+found/
4096 Aug 04 2010 23:15:20 target/
4096 Aug 05 2010 12:25:55 temp/

Usage for disk: filesystem
8076189696 bytes total used
6371618816 bytes free
15234142208 bytes available

ncs/admin#
ncs/admin# dir disk:/logs
0 Aug 05 2010 11:53:52 usermgmt.log

Usage for disk: filesystem
8076189696 bytes total used
6371618816 bytes free
15234142208 bytes available

ncs/admin#
ncs/admin# dir recursive
Directory of disk:/
2034113 Aug 05 2010 19:58:39 ADElogs.tar.gz
```
Directory of disk:/logs

0 Aug 05 2010 11:53:52 usermgmt.log

Directory of disk:/temp

281 Aug 05 2010 19:12:45 RoleBundles.xml
6631 Aug 05 2010 19:12:34 PipDetails.xml
69 Aug 05 2010 19:12:45 GroupRoles.xml
231 Aug 05 2010 19:12:34 ApplicationGroupTypes.xml
544145 Aug 05 2010 19:12:35 ResourceTypes.xml
45231 Aug 05 2010 19:12:34 UserTypes.xml
715 Aug 05 2010 19:12:34 ApplicationGroups.xml
261 Aug 05 2010 19:12:34 ApplicationTypes.xml
1010 Aug 05 2010 19:12:34 Pdps.xml
1043657 Aug 05 2010 19:12:44 Groups.xml
281003 Aug 05 2010 19:12:38 Resources.xml
69 Aug 05 2010 19:12:45 GroupUsers.xml
2662 Aug 05 2010 19:12:44 RoleTypes.xml
79 Aug 05 2010 19:12:34 UserStores.xml
4032 Aug 05 2010 19:12:38 GroupTypes.xml
1043 Aug 05 2010 19:12:34 Organization.xml
58377 Aug 05 2010 19:12:46 UserRoles.xml
300 Aug 05 2010 19:12:45 Contexts.xml
958 Aug 05 2010 19:12:34 Applications.xml
28010 Aug 05 2010 19:12:45 Roles.xml
122761 Aug 05 2010 19:12:45 Users.xml

Directory of disk:/activemq-data

4096 Jun 10 2010 02:34:03 localhost/

Directory of disk:/activemq-data=localhost

0 Jun 10 2010 02:34:03 lock
4096 Jun 10 2010 02:34:03 journal/
4096 Jun 10 2010 02:34:03 kr-store/
4096 Jun 10 2010 02:34:03 tmp_storage/

Directory of disk:/activemq-data=localhost/journal

33030144 Aug 06 2010 03:40:26 data-1
2088 Aug 06 2010 03:40:26 data-control

Directory of disk:/activemq-data=localhost/kr-store

4096 Aug 06 2010 03:40:27 data/
4096 Aug 06 2010 03:40:26 state/

Directory of disk:/activemq-data=localhost/kr-store/data

102 Aug 06 2010 03:40:27 index-container-roots
0 Aug 06 2010 03:40:27 lock

Directory of disk:/activemq-data=localhost/kr-store/state

3073 Aug 06 2010 03:40:26 hash-index-store-state_state
51 Jul 20 2010 21:33:33 index-transactions-state
204 Aug 06 2010 03:40:26 index-store-state
306 Jun 10 2010 02:34:03 index-kaha
290 Jun 10 2010 02:34:03 data-kaha-1
71673 Aug 06 2010 03:40:26 data-store-state-1
0 Jun 10 2010 02:34:03 lock

Directory of disk:/activemq-data=localhost/tmp_storage

No files in directory
Directory of disk:/target
4096 Aug 04 2010 23:15:20 logs/

Directory of disk:/target/logs
0 Aug 04 2010 23:15:20 ProfilerPDP.log
2208 Aug 05 2010 11:54:26 ProfilerSensor.log

Directory of disk:/lost+found
No files in directory

Usage for disk: filesystem
8076189696 bytes total used
6371618816 bytes free
15234142208 bytes available

Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>delete</td>
<td>Deletes a file from the Cisco Prime Infrastructure server.</td>
</tr>
</tbody>
</table>
exit

To close an active terminal session by logging out of the Cisco Prime Infrastructure server or to move up one mode level from configuration mode, use the `exit` command in EXEC mode.

exit

Syntax Description
This command has no arguments or keywords.

Command Default
No default behavior or values.

Command Modes
EXEC mode.

Usage Guidelines
Use the `exit` command in EXEC mode to exit an active session (log out of the Cisco Prime Infrastructure server) or to move up from configuration mode.

Examples
ncs/admin# exit

Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>end</code></td>
<td>Exits configuration mode.</td>
</tr>
<tr>
<td><code>exit</code></td>
<td>Exits configuration mode or EXEC mode.</td>
</tr>
<tr>
<td><code>Ctrl-z</code></td>
<td>Exits configuration mode.</td>
</tr>
</tbody>
</table>
**forceout**

To force users out of an active terminal session by logging them out of the Cisco Prime Infrastructure server, use the `forceout` command in EXEC mode.

`forceout username`

**Syntax Description**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>username</code></td>
<td>The name of the user. Up to 31 alphanumeric characters.</td>
</tr>
</tbody>
</table>

**Command Default**

No default behavior or values.

**Command Modes**

EXEC mode.

**Usage Guidelines**

Use the `forceout` command in EXEC mode to force a user from an active session.

**Examples**

```plaintext
ncs/admin# forceout user1
ncs/admin#
```
halt

To shut down and power off the system, use the **halt** command in EXEC mode.

**halt**

This command has no arguments or keywords.

**Command Default**

No default behavior or values.

**Command Modes**

EXEC mode.

**Usage Guidelines**

Before you enter the **halt** command, ensure that the Cisco Prime Infrastructure is not performing any backup, restore, installation, upgrade, or remove operation. If you enter the **halt** command while the Cisco Prime Infrastructure is performing any of these operations, you will get one of the following warning messages:

- **WARNING:** A backup or restore is currently in progress! Continue with halt?
- **WARNING:** An install/upgrade/remove is currently in progress! Continue with halt?

If you get any of these warnings, enter **Yes** to halt the operation, or enter **NO** to cancel the halt.

If no processes are running when you use the **halt** command or if you enter **Yes** in response to the warning message displayed, the Cisco Prime Infrastructure asks you to respond to the following option:

**Do you want to save the current configuration?**

Enter **YES** to save the existing Cisco Prime Infrastructure configuration. The Cisco Prime Infrastructure displays the following message:

**Saved the running configuration to startup successfully**

**Examples**

```
ncs/admin# halt
ncs/admin#
```
mkdir

To create a new directory on Cisco Prime Infrastructure server, use the `mkdir` command in EXEC mode.

`mkdir directory-name [disk:/path]`

**Syntax Description**

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>directory-name</td>
<td>The name of the directory to create. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td>disk:/path</td>
<td>Use <code>disk:/path</code> with the directory name.</td>
</tr>
</tbody>
</table>

**Command Default**

No default behavior or values.

**Command Modes**

EXEC mode.

**Usage Guidelines**

Use `disk:/path` with the directory name; otherwise, an error appears that indicates that the `disk:/path` must be included.

**Examples**

```bash
ncs/admin# mkdir disk:/test
ncs/admin# dir
Directory of disk:/
  4096 May 06 2010 13:34:49 activemq-data/
  4096 May 06 2010 13:40:59 logs/
  16384 Mar 01 2010 16:07:27 lost+found/
  4096 May 06 2010 13:42:53 target/
  4096 May 07 2010 12:26:04 test/
Usage for disk: filesystem
     181067776 bytes total used
      19084521472 bytes free
       20314165248 bytes available
ncs/admin#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>dir</td>
<td>Displays a list of files on Prime Infrastructure server.</td>
</tr>
<tr>
<td>rmdir</td>
<td>Removes an existing directory.</td>
</tr>
</tbody>
</table>
ncs start

To start Cisco Prime Infrastructure server, use the ncs start command. To see the messages in the console, use the ncs start verbose command.

ncs start [verbose]

Syntax Description

| verbose | Displays the detailed messages during the start process. |

Command Default
No default behavior or values.

Command Modes
EXEC mode.

Examples
This example shows how to start Cisco Prime Infrastructure server:

```
> ncs start verbose
Starting Network Control System...
Starting Health Monitor
Starting Health Monitor as a primary
Checking for Port 8082 availability... OK
Starting Health Monitor Web Server...
Health Monitor Web Server Started.
Starting Health Monitor Server...
Health Monitor Server Started.
Starting Service Name: Reporting
Starting dependency service: NMS Server
Starting dependency service: Matlab
Starting remoting: Matlab Server
Checking for Port 20555 availability... OK
Remoting Service Matlab Server application root: /opt/CSCOncs
Starting Remoting Service Web Server Matlab Server...
Remoting Service Web Server Matlab Server Started.
Starting Remoting Service Matlab Server...
Remoting 'Matlab Server' started successfully.
Starting dependency service: Ftp
Starting remoting: Ftp Server
Checking for Port 20558 availability... OK
Starting up FTP server
Started FTP
FTP Server started
Remoting Service Ftp Server application root: /opt/CSCOncs
Starting Remoting Service Web Server Ftp Server...
Remoting Service Web Server Ftp Server Started.
Starting Remoting Service Ftp Server...
Remoting 'Ftp Server' started successfully.
Starting dependency service: Tftp
Starting remoting: Tftp Server
Checking for Port 20559 availability... OK
Starting up TFTP server...
TFTP Server started.
Remoting Service Tftp Server application root: /opt/CSCOncs
Starting Remoting Service Web Server Tftp Server...
Remoting Service Web Server Tftp Server Started.
Starting Remoting Service Tftp Server...
Remoting 'Tftp Server' started successfully.
```
Starting NMS Server
Checking for running servers.
  Checking if DECAP is running.
  00:00 DECAP is not running.
  00:00 Check complete. No servers running.
  00:10 DECAP setup complete.
Starting Server ...
Reporting started successfully

Starting Service Name: Ftp
  Ftp is already running.

Starting Service Name: Database
  00:40 Server started.
  00:40 DONE
  Done
  Database is already running.

Starting Service Name: Tftp
  Tftp is already running.

Starting Service Name: Matlab
  Matlab is already running.

Starting Service Name: NMS Server
  NMS Server is already running.

Network Control System started successfully.

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ncs stop</td>
<td>Stops Cisco Prime Infrastructure server.</td>
</tr>
<tr>
<td>ncs status</td>
<td>Displays the current status of Cisco Prime Infrastructure server.</td>
</tr>
</tbody>
</table>
ncs stop

To stop Cisco Prime Infrastructure server, use the ncs stop command. To see the detailed messages, use the ncs stop verbose command.

ncs stop [verbose]

Syntax Description

| verbose | Displays the detailed messages during the stop process. |

Command Default

No default behavior or values.

Command Modes

EXEC mode.

Usage Guidelines

The ncs ha authkey command changes the authorization for the health monitor.

Examples

This example shows how to stop Cisco Prime Infrastructure server:

```bash
> ncs stop verbose
Stopping Network Control System...
Stopping Network Control System server
Stopping Service Name: Reporting
Stopping Reporting
Reporting successfully shutdown.
Stopping Service Name: Ftp
Stopping NMS Server
Stopping Reporting Server(XMF) ..DONE
NMS Server successfully shutdown.

Stopping remoting: Ftp Server
Stopping FTP server...
Stopped FTP server.
Stopping Remoting Web Server Ftp Server...
Remoting Web Server Ftp Server stopped.
Remoting 'Ftp Server' stopped successfully.
Stopping Service Name: Database
Shutting down database server ...
Stopping XMP ....DONE

Stopping Service Name: Tftp
Stopping remoting: Tftp Server
Stopping TFTP server...
Stopped TFTP server.
Stopping Remoting Web Server Tftp Server...
Remoting Web Server Tftp Server stopped.
Remoting 'Tftp Server' stopped successfully.
Stopping Service Name: Matlab
Stopping remoting: Matlab Server
Stopping Remoting Web Server Matlab Server...
Remoting Web Server Matlab Server stopped.
Warning: latest version of matlab app-defaults file not found.
Contact your system administrator to have this file installed.
Remoting 'Matlab Server' stopped successfully.
```
Stopping Service Name: NMS Server
NMS Server is not running.
Stopping Tomcat...
Tomcat Stopped.

Network Control System successfully shutdown.

Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ncs start</td>
<td>Starts Cisco Prime Infrastructure server.</td>
</tr>
<tr>
<td>ncs status</td>
<td>Displays the current status of Cisco Prime Infrastructure server.</td>
</tr>
</tbody>
</table>
ncs status

To display Cisco Prime Infrastructure server status, use the ncs status command.

ncs status

This command has no arguments or keywords.

Command Default

No default behavior or values.

Command Modes

EXEC mode.

Examples

This example shows how to display the status of Cisco Prime Infrastructure server:

> ncs status
Health Monitor Server is running.
Reporting is running.
Ftp Server is Success
Database server is running
Tftp Server is Success
Matlab Server is Success
NMS Server is running.

Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ncs start</td>
<td>Starts Cisco Prime Infrastructure server.</td>
</tr>
<tr>
<td>ncs stop</td>
<td>Stops Cisco Prime Infrastructure server.</td>
</tr>
</tbody>
</table>
ncs password ftpuser

To change the FTP username and password, use the `ncs password ftpuser username password password` command.

```plaintext
ncs password ftpuser username password password
```

**Syntax Description**

<table>
<thead>
<tr>
<th>username</th>
<th>The ftpuser name</th>
</tr>
</thead>
<tbody>
<tr>
<td>password</td>
<td>The modified password. The password cannot contain 'cisco' or 'ocsic', or any variant obtained by changing the capitalization of letters therein or by substituting '1', '!', or '@' for 'i', '0' for 'o', or '$' for 's'.</td>
</tr>
</tbody>
</table>

**Command Default**

No default behavior or values.

**Command Modes**

EXEC mode.

**Examples**

This example shows how to change the FTP username and password:

```plaintext
> ncs password ftpuser
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ncs start</td>
<td>Starts Cisco Prime Infrastructure server.</td>
</tr>
<tr>
<td>ncs stop</td>
<td>Stops Cisco Prime Infrastructure server.</td>
</tr>
<tr>
<td>ncs status</td>
<td>Displays the current status of Cisco Prime Infrastructure server.</td>
</tr>
<tr>
<td>ncs password root</td>
<td>Changes the root password.</td>
</tr>
<tr>
<td>password</td>
<td></td>
</tr>
</tbody>
</table>
ncs password root password

To change the root password, use the `ncs password root password` command.

`ncs password root password password`

**Syntax Description**

- `password` modified password. The password cannot contain 'cisco' or 'ocsic', or any variant obtained by changing the capitalization of letters therein or by substituting '1', '!', or '!' for i, '0' for 'o', or '$' for 's'.

**Command Default**

No default behavior or values.

**Command Modes**

EXEC mode.

**Examples**

This example shows how to migrate WCS archived files to Cisco Prime Infrastructure server:

```
> ncs password root password Private123
Loading USER - root
Validating new password..
Resetting password ..
Resetting password COMPLETED.
EXECUTION STATUS : Success
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ncs start</td>
<td>Start Cisco Prime Infrastructure server.</td>
</tr>
<tr>
<td>ncs stop</td>
<td>Stops Cisco Prime Infrastructure server.</td>
</tr>
<tr>
<td>ncs status</td>
<td>Displays the current status of Cisco Prime Infrastructure server.</td>
</tr>
<tr>
<td>ncs password ftpuser</td>
<td>Changes the FTP username and password.</td>
</tr>
</tbody>
</table>
ncs ha authkey

To enter the authentication key for high availability (HA), use the ncs ha authkey command.

ncs ha authkey authorization key

**Syntax Description**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>authorization</td>
<td>The authorization key for high availability. Up to 255 alphanumeric characters.</td>
</tr>
</tbody>
</table>

**Command Default**

No default behavior or values.

**Command Modes**

EXEC mode.

**Usage Guidelines**

The ncs ha authkey command changes the authorization for the health monitor.

**Examples**

This example shows how to set up the authorization key for high availability:

ncs ha authkey cisco123

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ncs ha remove</td>
<td>Removes the high availability configuration settings from Cisco Prime Infrastructure.</td>
</tr>
<tr>
<td>ncs ha status</td>
<td>Provides the current status of high availability.</td>
</tr>
</tbody>
</table>
ncs ha remove

To remove the high availability configuration settings from Prime Infrastructure, use the ncs ha remove command.

ncs ha remove

Syntax Description

This command has no arguments or keywords.

Command Default

No default behavior or values.

Command Modes

EXEC mode.

Usage Guidelines

The ncs ha remove command removes the high availability configuration settings from Prime Infrastructure. If you enter this command, you will see the following confirmation message:

High availability configuration will be removed.
Do you wish to continue? (Y/N)

Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ncs ha authkey</td>
<td>Allows you to enter the authentication key for high availability in Prime Infrastructure. This command also changes the authorization for the health monitor.</td>
</tr>
<tr>
<td>ncs ha status</td>
<td>Provides the current status of high availability.</td>
</tr>
</tbody>
</table>
ncs ha status

To display the current status of high availability (HA), use the `ncs ha status` command.

```
ncs ha status
```

**Syntax Description**
This command has no arguments or keywords.

**Command Default**
No default behavior or values.

**Command Modes**
EXEC mode.

**Usage Guidelines**
Displays the current status of HA.

If you enter the `ncs ha status` command when HA is not configured, you will see the following response:

```
[State] Stand Alone
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>ncs ha authkey</code></td>
<td>Allows you to enter the authentication key for high availability in Prime Infrastructure. This command also changes the authorization for the health monitor.</td>
</tr>
<tr>
<td><code>ncs ha remove</code></td>
<td>Removes the high availability configuration.</td>
</tr>
</tbody>
</table>
ncs key genkey

To generate a new RSA key and self-signed certificate, use the `ncs key genkey` command.

```
ncs key genkey -newdn -csr csrfilename repository repositoryname
```

**Syntax Description**

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>-newdn</td>
<td>Generates a new RSA key and self-signed cert with domain information.</td>
</tr>
<tr>
<td>-csr</td>
<td>Generates new CSR certificate file.</td>
</tr>
<tr>
<td>repository</td>
<td>Repository command.</td>
</tr>
<tr>
<td>csrfilename</td>
<td>CSR filename.</td>
</tr>
<tr>
<td>repositoryname</td>
<td>Location where the files should be backed up to. Up to 80 alphanumeric characters.</td>
</tr>
</tbody>
</table>

**Command Default**

No default behavior or values.

**Command Modes**

EXEC mode.

**Examples**

This example shows how to generate new rsa key and certificate files in Cisco Prime Infrastructure server:

```
>ncs key genkey -newdn -csr csrfile.cert repository ncs-sftp-repo
Generating RSA key
INFO: no staging url defined, using local space. rval:2
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ncs key importcacert</td>
<td>Applies a CA certificate to trust store in Cisco Prime Infrastructure.</td>
</tr>
<tr>
<td>ncs key listcacerts</td>
<td>Lists all the CA certificates exist in Cisco Prime Infrastructure trust store.</td>
</tr>
<tr>
<td>ncs key deletecacert</td>
<td>Deletes a CA certificates exist in Cisco Prime Infrastructure trust store.</td>
</tr>
<tr>
<td>ncs key importsignedcert</td>
<td>Applies a RSA key and signed certificate to Cisco Prime Infrastructure.</td>
</tr>
<tr>
<td>ncs key importkey</td>
<td>Applies a RSA key and certificate to Cisco Prime Infrastructure.</td>
</tr>
</tbody>
</table>
After entering this command, enter the `ncs stop` and `ncs start` command to restart Cisco Prime Infrastructure server to make changes into effect.
**ncs key importcacert**

To apply a CA certificate to a trust store in Cisco Prime Infrastructure, use the `ncs key importcacert` command.

```
ncs key importcacert aliasname ca-cert-filename repository repositoryname
```

**Syntax Description**

- **aliasname**: A short name given for this CA certificate.
- **ca-cert-filename**: CA certificate file name.
- **repositoryname**: The repository name configured in Cisco Prime Infrastructure where the ca-cert-filename is hosted.

**Command Default**

No default behavior or values.

**Command Modes**

EXEC mode.

**Examples**

This example shows how to apply the CA certificate file to a trust store in Cisco Prime Infrastructure server:

```
> ncs key importcacert alias1 cacertfile repository ncs-sftp-repo
```

**Note**

After applying this command, enter `ncs stop` and `ncs start` command to restart Cisco Prime Infrastructure server to make changes into effect.

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ncs key genkey</td>
<td>Generates a new RSA key and self-signed certificate.</td>
</tr>
<tr>
<td>ncs key listcacerts</td>
<td>Lists all the CA certificates exist in Cisco Prime Infrastructure trust store.</td>
</tr>
<tr>
<td>ncs key deletecacert</td>
<td>Deletes a CA certificates exist in Cisco Prime Infrastructure trust store.</td>
</tr>
<tr>
<td>ncs key importsignedcert</td>
<td>Applies a RSA key and signed certificate to Cisco Prime Infrastructure.</td>
</tr>
<tr>
<td>ncs key importkey</td>
<td>Applies a RSA key and certificate to Cisco Prime Infrastructure.</td>
</tr>
</tbody>
</table>
ncs key importkey

To apply an RSA key and signed certificate to the NCS, use the `ncs key importkey` command.

```
ncs key importkey key-filename cert-filename repository repositoryname
```

**Syntax Description**

- **key-filename**: RSA private key file name.
- **cert-filename**: Certificate file name.
- **repositoryname**: The repository name configured in the NCS where the key-file and cert-file is hosted.

**Command Default**

No default behavior or values.

**Command Modes**

EXEC mode.

**Examples**

This example shows how to apply the new RSA key and certificate files to the NCS server.

```
> ncs key importkey keyfile certfile repository ncs-sftp-repo
```

**Note**

After applying this command, enter `ncs stop` and `ncs start` command to restart the NCS server to make changes into effect.

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ncs key genkey</td>
<td>Generates a new RSA key and self-signed certificate.</td>
</tr>
<tr>
<td>ncs key listcacerts</td>
<td>Lists all the CA certificates exist in NCS trust store.</td>
</tr>
<tr>
<td>ncs key deletecacert</td>
<td>Deletes a CA certificates exist in NCS trust store.</td>
</tr>
<tr>
<td>ncs key importsignedcert</td>
<td>Applies a RSA key and signed certificate to NCS.</td>
</tr>
<tr>
<td>ncs key importcacert</td>
<td>Applies a CA certificate to trust store in NCS.</td>
</tr>
</tbody>
</table>
ncs key listcacerts

To list all the CA certificates that exist in the NCS trust store, use the ncs key listcacerts command.

ncs key listcacerts

This command has no arguments or keywords.

Command Default
No default behavior or values.

Command Modes
EXEC mode.

Examples
This example shows how to list all the CA certificates exist in NCS trust store:

```bash
> ncs key listcacerts
Certificate utnuserfirsthardwareca from CN=UTN-USERFirst-Hardware, OU=http://www.example.com, O=The USERTRUST Network, L=Salt Lake City, ST=UT, C=US
Certificate gtecybertrust5ca from CN=GTE CyberTrust Root 5, OU="GTE CyberTrust Solutions, Inc.", O=GTE Corporation, C=US
Certificate equifaxsecureebusinessca1 from CN=Equifax Secure eBusiness CA-1, O=Equifax Secure Inc., C=US
Certificate thawtepersonalfreemailca from EMAILADDRESS=email@example.com, CN=Thawte Personal Freemail CA, OU=Certification Services Division, O=Thawte Consulting, L=Cape Town, ST=Western Cape, C=ZA
Certificate addtrustclass1ca from CN=AddTrust Class 1 CA Root, OU=AddTrust TTP Network, O=AddTrust AB, C=SE
Certificate aolrootca from CN=America Online Root Certification Authority 1, O=America Online Inc., C=US
Certificate geotrustuniversalca from CN=GeoTrust Universal CA, O=GeoTrust Inc., C=US
Certificate digicertglobalrootca from CN=DigiCert Global Root CA, OU=www.example.com, O=DigiCert Inc, C=US
Certificate certumtrustednetworkca from CN=Certum Trusted Network CA, OU=Certum Certification Authority, O=Unizeto Technologies S.A., C=PL
Certificate swisssignsilverg2ca from CN=SwissSign Silver CA - G2, O=SwissSign AG, C=CH
```

Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ncs key genkey</td>
<td>Generates a new RSA key and self-signed certificate.</td>
</tr>
<tr>
<td>ncs key importkey</td>
<td>Applies a RSA key and signed certificate to NCS.</td>
</tr>
<tr>
<td>ncs key deletecacert</td>
<td>Deletes a CA certificates exist in NCS trust store.</td>
</tr>
<tr>
<td>ncs key importsignedcert</td>
<td>Applies an RSA key and signed certificate to NCS.</td>
</tr>
<tr>
<td>ncs key importcert</td>
<td>Applies a CA certificate to trust store in NCS.</td>
</tr>
</tbody>
</table>
ncs key deletecacert

To delete CA certificates that exist in Cisco Prime Infrastructure trust store, use the **ncs key deletecacert** command.

**ncs key deletecacert aliasname**

### Syntax Description

| aliasname | The short or alias name of the CA certificate which needs to be deleted from Cisco Prime Infrastructure trust store. |

### Command Default

No default behavior or values.

### Command Modes

EXEC mode.

### Examples

This example shows how to delete CA certificates exist in Cisco Prime Infrastructure trust store:

```
> ncs key deletecacert certumtrustednetworkca
Deleting certificate from trust store
```

### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ncs key genkey</strong></td>
<td>Generates a new RSA key and self-signed certificate.</td>
</tr>
<tr>
<td><strong>ncs key importkey</strong></td>
<td>Applies an RSA key and signed certificate to Cisco Prime Infrastructure.</td>
</tr>
<tr>
<td><strong>ncs key listcacerts</strong></td>
<td>Lists all CA certificates that exist in Cisco Prime Infrastructure trust store.</td>
</tr>
<tr>
<td><strong>ncs key importsignedcert</strong></td>
<td>Applies an RSA key and signed certificate to Cisco Prime Infrastructure.</td>
</tr>
<tr>
<td><strong>ncs key importcert</strong></td>
<td>Applies a CA certificate to trust store in Cisco Prime Infrastructure.</td>
</tr>
</tbody>
</table>
ncs key importsignedcert

To apply an RSA key and signed certificate, use the ncs key importsignedcert command.

**Syntax Description**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>signed-cert-filename</td>
<td>Signed certificate filename.</td>
</tr>
<tr>
<td>repositoryname</td>
<td>The repository name configured in Cisco Prime Infrastructure where the key-file and cert-file is hosted.</td>
</tr>
</tbody>
</table>

**Command Default**

No default behavior or values.

**Command Modes**

EXEC mode.

**Examples**

This example shows how to apply signed certificate files to Cisco Prime Infrastructure server:

```
> ncs key importsignedcert signed-certfile repository ncs-sftp-repo
```

**Note**

After applying this command, enter **ncs stop** and **ncs start** command to restart Cisco Prime Infrastructure server to make changes into effect.

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ncs key genkey</td>
<td>Generates a new RSA key and self-signed certificate.</td>
</tr>
<tr>
<td>ncs key importkey</td>
<td>Applies an RSA key and signed certificate to Cisco Prime Infrastructure.</td>
</tr>
<tr>
<td>ncs key deleteacert</td>
<td>Deletes a CA certificates exist in Cisco Prime Infrastructure trust store.</td>
</tr>
<tr>
<td>ncs key listacerts</td>
<td>Lists all CA certificates that exist in Cisco Prime Infrastructure trust store.</td>
</tr>
<tr>
<td>ncs key importacert</td>
<td>Applies a CA certificate to trust store in Cisco Prime Infrastructure.</td>
</tr>
</tbody>
</table>
ncs cleanup

To free up and reclaim the disk space, use the **ncs cleanup** command.

**ncs cleanup**

This command has no arguments or keywords.

**Command Default**

No default behavior or values.

**Command Modes**

EXEC mode.

**Usage Guidelines**

When Prime Infrastructure does not have enough disk space, an alarm is raised to free up and reclaim the disk space. If you enter the **ncs cleanup** command, you will see the following confirmation message:

Do you want to delete all the files in the local disk partition? (Y/N)
**ncs db sql**

To run the SQL query from Cisco Prime Infrastructure terminal, use the `ncs db sql` command in EXEC mode.

`ncs db sql query_string`

**Syntax Description**

`query_string` Enter the sql query string enclosed in double quotes.

**Command Default**

No default behavior or values.

**Command Modes**

EXEC mode.

**Usage Guidelines**

The Cisco Prime Infrastructure database server should be in running state to successfully execute this command.

**Examples**

This example shows how to run a DB sql query on Cisco Prime Infrastructure server:

```plaintext
ncs/admin# ncs db sql "select count(*) from clientcount"
COUNT(*)-------------------
75
ncs/admin#
```
ncs db reinitdb

To reinitialize the NCS database, use the `ncs db reinitdb` command in EXEC mode. This command removes all data present in the database.

`ncs db reinitdb`

This command has no arguments or keywords.

**Command Default**
No default behavior or values.

**Command Modes**
EXEC mode.

**Usage Guidelines**
You can use this command if the NCS database becomes unstable or unusable, or if you want to remove the old data and start with a clean database.

**Examples**

This example shows how to run a DB sql query on the NCS server:

```
admin# ncs db reinitdb
> All data will be lost. Do you wish to continue? (y/n)
y
> Creating a new, empty database. This may take 10 to 20 minutes
> Database re-initialization completed
admin#
```
nslookup

To look up the hostname of a remote system on the Cisco Prime Infrastructure server, use the `nslookup` command in EXEC mode.

```
nslookup word
```

**Syntax Description**

| word | IPv4 address or hostname of a remote system. Up to 64 alphanumeric characters. |

**Command Default**

No default behavior or values.

**Command Modes**

EXEC mode.

**Examples**

```
ncs/admin# nslookup 209.165.200.225  
Trying "209.165.200.225.in-addr.arpa"  
Received 127 bytes from 171.70.168.183#53 in 1 ms  
Trying "209.165.200.225.in-addr.arpa"  
Host 209.165.200.225.in-addr.arpa. not found: 3(NXDOMAIN)  
Received 127 bytes from 171.70.168.183#53 in 1 ms

ncs/admin# nslookup 209.165.200.225  
Trying "225.200.165.209.in-addr.arpa"  
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 65283  
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 2, ADDITIONAL: 0  

;; QUESTION SECTION:  
;225.200.165.209.in-addr.arpa. IN PTR  

;; ANSWER SECTION:  

;; AUTHORITY SECTION:  
200.165.209.in-addr.arpa. 86400 IN NS ns1.got.net.  
200.165.209.in-addr.arpa. 86400 IN NS ns2.got.net.

Received 119 bytes from 171.70.168.183#53 in 28 ms

ncs/admin#
```
patch install

The **patch install** command installs a patch bundle of the application only on a specific node where you run the **patch install** command from the CLI.

---

**Note**

In a Cisco Prime Infrastructure distributed deployment environment, install the patch bundle of the application from the primary Policy Administration Point (PAP) node in the Cisco Prime Infrastructure Administration user interface so that the patch bundle automatically gets installed on all the secondary nodes.

To install a patch bundle of the application, use the **patch** command in EXEC mode.

**patch install** *patch-bundle repository*

---

**Syntax Description**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>repository</em></td>
<td>Repository name. Up to 255 alphanumeric characters.</td>
</tr>
</tbody>
</table>

---

**Command Default**

No default behavior or values.

**Command Modes**

EXEC mode.

**Usage Guidelines**

Installs a specific patch bundle of the application.

If you attempt to install a patch that is an older version of the existing patch, then you receive the following error message:

```
% Patch to be installed is an older version than currently installed version.
```

**Examples**

```
ncs/admin# patch install ncs-appbundle-1.0.2.054-3.i386.tar.gz myrepository
Do you want to save the current configuration ? (yes/no) [yes] ? yes
Generating configuration...
Saved the running configuration to startup successfully
Initiating Application Patch installation...

Patch successfully installed
ncs/admin#
```

```
ncs/admin# patch install ncs-appbundle-1.0.2.054-3.i386.tar.gz myrepository
Do you want to save the current configuration ? (yes/no) [yes] ? no
Initiating Application Patch installation...

Patch successfully installed
ncs/admin#
```

```
ncs/admin# patch install ncs-appbundle-1.0.2.054-2.1386.tar.gz disk
Do you want to save the current configuration ? (yes/no) [yes] ? yes
```
Generating configuration...  
Saved the running configuration to startup successfully  
Initiating Application Patch installation...  
% Patch to be installed is an older version than currently installed version.  
ncs/admin#  

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>patch remove</td>
<td>Removes a specific patch bundle version of the application.</td>
</tr>
<tr>
<td>show version</td>
<td>Displays information about the currently loaded software version, along</td>
</tr>
<tr>
<td></td>
<td>with hardware and device information.</td>
</tr>
</tbody>
</table>
**patch remove**

In a Cisco Prime Infrastructure distributed deployment environment, remove the patch bundle of the application from the primary Policy Administration Point (PAP) node in the Cisco Prime Infrastructure Administration user interface so that the patch bundle automatically gets uninstalled from all the secondary nodes.

To remove a specific patch bundle version of the application, use the `patch remove` command in EXEC mode.

```
patch remove word word
```

**Syntax Description**

<table>
<thead>
<tr>
<th>word</th>
<th>The name of the application for which the patch is to be removed. Up to 255 alphanumeric characters.</th>
</tr>
</thead>
<tbody>
<tr>
<td>word</td>
<td>The patch version number to be removed. Up to 255 alphanumeric characters.</td>
</tr>
</tbody>
</table>

**Command Default**

No default behavior or values.

**Command Modes**

EXEC mode.

**Usage Guidelines**

Removes a specific patch bundle of the application.

If you attempt to remove a patch that is not installed, then you receive the following error message:

```
% Patch is not installed
```

**Examples**

```
ncs/admin# patch remove ncs 3
Continue with application patch uninstall? [y/n] y
Application patch successfully uninstalled
ncs/admin#
ncs/admin# patch remove ncs 3
Continue with application patch uninstall? [y/n] y
% Patch is not installed
ncs/admin#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>patch install</td>
<td>Installs a specific patch bundle of the application.</td>
</tr>
<tr>
<td>Command</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>show version</td>
<td>Displays information about the currently loaded software version, along with hardware and device information.</td>
</tr>
</tbody>
</table>
ping

To diagnose the basic IPv4 network connectivity to a remote system, use the ping command in EXEC mode.

```plaintext
ping {ip-address | hostname} [Df] [packetsize] [pingcount]
```

**Syntax Description**

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ip-address</td>
<td>IP address of the system to ping. Up to 32 alphanumeric characters.</td>
</tr>
<tr>
<td>hostname</td>
<td>Hostname of the system to ping. Up to 32 alphanumeric characters.</td>
</tr>
<tr>
<td>df</td>
<td>Specification for packet fragmentation.</td>
</tr>
<tr>
<td>packetsize</td>
<td>Size of the ping packet.</td>
</tr>
<tr>
<td>pingcount</td>
<td>Number of ping echo requests.</td>
</tr>
</tbody>
</table>

**Command Default**

No default behavior or values.

**Command Modes**

EXEC mode.

**Usage Guidelines**

The ping command sends an echo request packet to an address, then awaits a reply. The ping output can help you evaluate path-to-host reliability, delays over the path, and whether you can reach a host.

**Examples**

```
nos/admin# ping 172.16.0.1 df 2 packetsize 10 pingcount 2
PING 172.16.0.1 (172.16.0.1) 10(38) bytes of data.
18 bytes from 172.16.0.1: icmp_seq=0 ttl=40 time=306 ms
18 bytes from 172.16.0.1: icmp_seq=1 ttl=40 time=300 ms
--- 172.16.0.1 ping statistics ---
2 packets transmitted, 2 received, 0% packet loss, time 1001ms
rtt min/avg/max/mdev = 300.302/303.557/306.812/3.255 ms, pipe 2
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ping6</td>
<td>Ping a remote IPv6 address.</td>
</tr>
</tbody>
</table>
ping6

Similar to the IPv4 ping command, use the IPv6 ping6 command in EXEC mode.

ping6 {ip-address | hostname} [GigabitEthernet0-3]/packetsize/packetsize][pingcount/pingcount]

Syntax Description

- **ip-address**: IP address of the system to ping. Up to 64 alphanumeric characters.
- **hostname**: Hostname of the system to ping. Up to 64 alphanumeric characters.
- **GigabitEthernet**: Selects the ethernet interface.
- **packetsize**: Size of the ping packet. Size of the ping packet; the value can be between 0 and 65507.
- **packetsize**: Specifies the size of the ping packet; the value can be between 0 and 65507.
- **pingcount**: Number of ping echo requests.
- **pingcount**: Specifies the number of ping echo requests; the value can be between 1 and 10.

Command Default

No default behavior or values.

Command Modes

EXEC mode.

Usage Guidelines

The IPv6 ping6 command sends an echo request packet to an address, then awaits a reply. The ping output can help you evaluate path-to-host reliability, delays over the path, and whether you can reach a host.

The IPv6 ping6 command is similar to the existing IPv4 ping command that does not support the IPv4 ping fragmentation (df in IPv4) options, but allows an optional specification of an interface. The interface option is primarily useful for pinning with link-local addresses that are interface-specific. The packetsize and pingcount options work identically the same as they do with the IPv4 command.

Examples

ncs/admin# ping6 3ffe:302:11:2:20c:29ff:feaf:da05
64 bytes from 3ffe:302:11:2:20c:29ff:feaf:da05: icmp_seq=0 ttl=64 time=0.599 ms
64 bytes from 3ffe:302:11:2:20c:29ff:feaf:da05: icmp_seq=1 ttl=64 time=0.150 ms
64 bytes from 3ffe:302:11:2:20c:29ff:feaf:da05: icmp_seq=2 ttl=64 time=0.070 ms
64 bytes from 3ffe:302:11:2:20c:29ff:feaf:da05: icmp_seq=3 ttl=64 time=0.065 ms
4 packets transmitted, 4 received, 0% packet loss, time 3118ms
rtt min/avg/max/mdev = 0.065/0.221/0.599/0.220 ms, pipe 2

ncs/admin#

ncs/admin# ping6 3ffe:302:11:2:20c:29ff:feaf:da05 GigabitEthernet 0 packetsize 10 pingcount 2
18 bytes from 3ffe:302:11:2:20c:29ff:feaf:da05: icmp_seq=0 ttl=64 time=0.073 ms
18 bytes from 3ffe:302:11:2:20c:29ff:feaf:da05: icmp_seq=1 ttl=64 time=0.073 ms
2 packets transmitted, 2 received, 0% packet loss, time 1040ms
rtt min/avg/max/mdev = 0.073/0.073/0.073/0.000 ms, pipe 2
ncs/admin#

Related Commands

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ping</td>
</tr>
<tr>
<td>Pings a remote IP address.</td>
</tr>
</tbody>
</table>
reload

To reload the Cisco Prime Infrastructure operating system, use the **reload** command in EXEC mode.

**reload**

No arguments or keywords.

**Command Default**

No default behavior or values.

**Command Modes**

EXEC mode.

**Usage Guidelines**

The **reload** command reboots the system. Use the **reload** command after you enter configuration information into a file and save the running-configuration to the persistent startup-configuration on the CLI and save any settings in the web Administration user interface session.

Before you enter the **reload** command, ensure that the Cisco Prime Infrastructure is not performing any backup, restore, installation, upgrade, or remove operation. If the Cisco Prime Infrastructure performs any of these operations and you enter the **reload** command, you will notice any of the following warning messages:

- WARNING: A backup or restore is currently in progress! Continue with reload?
- WARNING: An install/upgrade/remove is currently in progress! Continue with reload?

If you get any of these warnings, enter YES to halt the operation, or enter NO to cancel the halt.

If no processes are running when you use the **reload** command or you enter YES in response to the warning message displayed, the Cisco Prime Infrastructure asks you to respond to the following option:

Do you want to save the current configuration ?

Enter YES to save the existing Cisco Prime Infrastructure configuration. The Cisco Prime Infrastructure displays the following message:

- Saved the running configuration to startup successfully

**Examples**

```
ncs/admin# reload
Do you want to save the current configuration ? (yes/no) [yes] ? yes
Generating configuration...
Saved the running configuration to startup successfully
Continue with reboot? [y/n] y
Broadcast message from root (pts/0) (Fri Aug 7 13:26:46 2010):
The system is going down for reboot NOW!
ncs/admin#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>halt</strong></td>
<td>Disables the system.</td>
</tr>
</tbody>
</table>
re
clo
d
To perform a restore of a previous backup, use the `restore` command in EXEC mode. A restore operation restores data related to the Cisco Prime Infrastructure as well as the Cisco ADE OS. To perform a restore of a previous backup of the application data of the Cisco Prime Infrastructure only, add the `application` command to the `restore` command in EXEC mode. To remove this function, use the `no` form of this command.

Use the following command to restore data related to the Cisco Prime Infrastructure application and Cisco ADE OS:

```
restore filename repository repository-name
```

Use the following command to restore data related only to the NCS application:

```
restore filename repository repository-name application application
```

### Syntax Description

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>filename</code></td>
<td>Name of the backed-up file that resides in the repository. Up to 120 alphanumeric characters.</td>
</tr>
<tr>
<td><strong>Note</strong></td>
<td>You must add the .tar.gpg extension after the filename (for example, myfile.tar.gpg).</td>
</tr>
<tr>
<td><code>repository</code></td>
<td>The repository keyword.</td>
</tr>
<tr>
<td><code>repository-name</code></td>
<td>Name of the repository you want to restore from backup.</td>
</tr>
<tr>
<td><code>application</code></td>
<td>The application keyword.</td>
</tr>
<tr>
<td><code>application name</code></td>
<td>The name of the application data to be restored. Up to 255 alphanumeric characters.</td>
</tr>
<tr>
<td><strong>Note</strong></td>
<td>Enter the application name as 'NCS' in upper case.</td>
</tr>
</tbody>
</table>

### Command Default

No default behavior or values.

### Command Modes

EXEC mode.

### Usage Guidelines

When you use these two commands in the Cisco Prime Infrastructure, the Cisco Prime Infrastructure server restarts automatically.

### Examples

```bash
ncs/admin# restore mybackup-100818-1502.tar.gpg repository myrepository
Restore may require a reboot to successfully complete. Continue? (yes/no) [yes] ? yes
Stopping NCS Monitoring & Troubleshooting Log Processor...
Stopping NCS Monitoring & Troubleshooting Log Collector...
Stopping NCS Monitoring & Troubleshooting Alert Process...
Stopping NCS Monitoring & Troubleshooting Session Database...
Starting NCS Application Server...
Stopping NCS Database processes...
Starting NCS Database processes...
```
Starting NCS Application Server...
Starting NCS Monitoring & Troubleshooting Session Database...
Starting NCS Monitoring & Troubleshooting Log Collector...
Starting NCS Monitoring & Troubleshooting Log Processor...
Starting NCS Monitoring & Troubleshooting Alert Process...
Note: NCS Processes are initializing. Use 'show application status NCS' CLI to verify all processes are in running state.

Broadcast message from root (pts/0) (Wed Aug 18 15:34:58 2010):

ncs/admin# Last login: Wed Aug 18 14:00:27 2010 from 10.77.137.60
ncs/admin# show application status NCS

  NCS Database listener is running, PID: 3024
  NCS Database is running, number of processes: 34
  NCS Application Server is still initializing.
  NCS M&T Session Database is running, PID: 2793
  NCS M&T Log Collector is running, PID: 3336
  NCS M&T Log Processor is running, PID: 3379
  NCS M&T Alert Process is running, PID: 3442

Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>backup</td>
<td>Performs a backup (Cisco Prime Infrastructure and Cisco ADE OS) and places the backup in a repository.</td>
</tr>
<tr>
<td>backup-logs</td>
<td>Backs up system logs.</td>
</tr>
<tr>
<td>repository</td>
<td>Enters the repository submode for configuration of backups.</td>
</tr>
<tr>
<td>show repository</td>
<td>Displays the available backup files located on a specific repository.</td>
</tr>
<tr>
<td>show backup history</td>
<td>Displays the backup history of the system.</td>
</tr>
</tbody>
</table>

restore
rmdir

To remove an existing directory, use the rmdir command in EXEC mode.

```
rmdir word
```

**Syntax Description**

| word | Directory name. Up to 80 alphanumeric characters. |

**Command Default**

No default behavior or values.

**Command Modes**

EXEC mode.

**Examples**

```
ncs/admin# mkdir disk:/test
ncs/admin# dir
Directory of disk://

4096 May 06 2010 13:34:49 activemq-data/
4096 May 06 2010 13:40:59 logs/
16384 Mar 01 2010 16:07:27 lost+found/
4096 May 06 2010 13:42:53 target/
4096 May 07 2010 12:26:04 test/

Usage for disk: filesystem
181067776 bytes total used
19084521472 bytes free
20314165248 bytes available
ncs/admin#
ncs/admin# rmdir disk:/test
ncs/admin# dir
Directory of disk://

4096 May 06 2010 13:34:49 activemq-data/
4096 May 06 2010 13:40:59 logs/
16384 Mar 01 2010 16:07:27 lost+found/
4096 May 06 2010 13:42:53 target/

Usage for disk: filesystem
181063680 bytes total used
19084525568 bytes free
20314165248 bytes available
ncs/admin#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>dir</td>
<td>Displays a list of files on the Cisco Prime Infrastructure server.</td>
</tr>
<tr>
<td>mkdir</td>
<td>Creates a new directory.</td>
</tr>
</tbody>
</table>
root

To execute the root shell, use the root command in EXEC mode.

**Note**
For developer use only, not for end users.

**Note**
This command and the root_enable command can only be used on the NCS locally hard-wired console port via Telnet. If you try to access this port over a LAN via SSH or Telnet, the commands are disallowed and the following message appears: % Error : root patch only available on a console port.

**root**

This command has no arguments or keywords.

**Command Default**
No default behavior or values.

**Command Modes**
EXEC mode.

**Usage Guidelines**
Requires installation of the root_enable application or patch. The root command prompts for the password used with root_enable and puts you in a bash shell with root privileges.

There are no defaults for the password.

If the password is already set, the root_enable command generates the following error message:

% Error : root patch password already set

If the password is not set, the root command generates the following error message:

% Error : root patch password not set.

**Examples**
The following example illustrates the use of the root command:

ncs/admin# root
% Error : root patch password not set

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>root_enable</td>
<td>Activates the root command.</td>
</tr>
</tbody>
</table>
root_disable

To disable the root user restoring admin shell access, use the `root_disable` command in the EXEC mode.

Note
For developer use only, not for end users.

Note
This command and the `root_enable` command can only be used on Cisco Prime Infrastructure locally hard-wired console port via Telnet. If you try to access this port over a LAN via SSH or Telnet, the commands are disallowed and the following message appears:
% Error : root patch only available on a console port.

root_disable

This command has no arguments or keywords.

Command Default
No default behavior or values.

Command Modes
EXEC mode.

Examples
The following example illustrates the use of the `root_disable` command:

```
ncs/admin# root_disable
```

Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>root_enable</code></td>
<td>Executes the root shell.</td>
</tr>
</tbody>
</table>
root_enable

To activate the root command, use the root_enable command in the EXEC mode.

Note
For developer use only, not for end users.

Note
This command and the root command can only be used on Cisco Prime Infrastructure locally hard-wired console port via Telnet. If you try to access this port over a LAN via SSH or Telnet, the commands are disallowed and the following message appears:
% Error : root patch only available on a console port.

root_enable

This command has no arguments or keywords.

Command Default
No default behavior or values.

Command Modes
EXEC mode.

Usage Guidelines
Requires installation of the root_enable application or patch. The root command prompts for the password used with root_enable and puts you in a bash shell with root privileges.
There are no defaults for the password.
If the password is already set, the root_enable command generates the following error message:
% Error : root patch password already set
If the password is not set, the root command generates the following error message:
% Error : root patch password not set

Examples
The following example illustrates the use of the root_enable command:

ncs/admin# root_enable
% Error : root patch password already set

Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>root</td>
<td>Executes the root shell.</td>
</tr>
</tbody>
</table>
show

To show the running system information, use the `show` command in EXEC mode. The `show` commands are used to display the Cisco Prime Infrastructure settings and are among the most useful commands.

The commands in Table A-6 require the `show` command to be followed by a keyword; for example, `show application status`. Some `show` commands require an argument or variable after the keyword to function; for example, `show application version`.

For detailed information on all the Cisco Prime Infrastructure `show` commands, see `show Commands`.

**Syntax Description**

*Table 14: Summary of show Commands*

<table>
<thead>
<tr>
<th>Command(1)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>application</td>
<td>Displays information about the installed application; for example, status or version. (requires keyword)(2)</td>
</tr>
<tr>
<td>backup</td>
<td>Displays information about the backup. (requires keyword)</td>
</tr>
<tr>
<td>cdp</td>
<td>Displays information about the enabled Cisco Discovery Protocol interfaces. (requires keyword)</td>
</tr>
<tr>
<td>clock</td>
<td>Displays the day, date, time, time zone, and year of the system clock.</td>
</tr>
<tr>
<td>cpu</td>
<td>Displays CPU information.</td>
</tr>
<tr>
<td>disks</td>
<td>Displays file-system information of the disks.</td>
</tr>
<tr>
<td>interface</td>
<td>Displays statistics for all the interfaces configured on the Cisco ADE OS.</td>
</tr>
<tr>
<td>logging</td>
<td>Displays system logging information. (requires keyword)</td>
</tr>
<tr>
<td>logins</td>
<td>Displays login history. (requires keyword)</td>
</tr>
<tr>
<td>memory</td>
<td>Displays memory usage by all running processes.</td>
</tr>
<tr>
<td>ntp</td>
<td>Displays the status of the Network Time Protocol (NTP).</td>
</tr>
<tr>
<td>ports</td>
<td>Displays all the processes listening on the active ports.</td>
</tr>
<tr>
<td>process</td>
<td>Displays information about the active processes of the Cisco Prime Infrastructure server.</td>
</tr>
<tr>
<td><strong>Command</strong></td>
<td><strong>Description</strong></td>
</tr>
<tr>
<td>------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>repository</td>
<td>Displays the file contents of a specific repository. (requires keyword)</td>
</tr>
<tr>
<td>restore</td>
<td>Displays restore history on the Cisco Prime Infrastructure server. (requires keyword)</td>
</tr>
<tr>
<td>running-config</td>
<td>Displays the contents of the currently running configuration file on the Cisco Prime Infrastructure server.</td>
</tr>
<tr>
<td>startup-config</td>
<td>Displays the contents of the startup configuration on the Cisco Prime Infrastructure server.</td>
</tr>
<tr>
<td>tech-support</td>
<td>Displays system and configuration information that you can provide to the TAC when you report a problem.</td>
</tr>
<tr>
<td>terminal</td>
<td>Displays information about the terminal configuration parameter settings for the current terminal line.</td>
</tr>
<tr>
<td>timezone</td>
<td>Displays the time zone of the Cisco Prime Infrastructure server.</td>
</tr>
<tr>
<td>timezones</td>
<td>Displays all the time zones available for use on the Cisco Prime Infrastructure server.</td>
</tr>
<tr>
<td>udi</td>
<td>Displays information about the unique device identifier (UDI) of the Cisco Prime Infrastructure.</td>
</tr>
<tr>
<td>uptime</td>
<td>Displays how long the system you are logged in to has been up and running.</td>
</tr>
<tr>
<td>users</td>
<td>Displays information for currently logged in users.</td>
</tr>
<tr>
<td>version</td>
<td>Displays information about the installed application version.</td>
</tr>
</tbody>
</table>

1. The commands in this table require that the show command precedes a keyword; for example, show application.
2. Some show commands require an argument or variable after the keyword to function; for example, show application version. This show command displays the version of the application installed on the system (see show application).

**Command Default**: EXEC

**Command Modes**: EXEC

**Usage Guidelines**: All show commands require at least one keyword to function.
Examples

ncs/admin# show application
<name>    <Description>
ncs       Cisco Network Control System
ncs/admin#
To start an encrypted session with a remote system, use the `ssh` command in EXEC mode.

**Note**
An Admin or Operator (user) can use this command (see Table 3: Command Privileges).

```
ssh [ip-address | hostname] username port [number] version [1 | 2] delete hostkey word
```

**Syntax Description**
- `ip-address`: IP address of the remote system. Up to 64 alphanumeric characters.
- `hostname`: Hostname of the remote system. Up to 64 alphanumeric characters.
- `username`: Username of the user logging in through SSH.
- `port [number]`: (Optional) Indicates the port number of the remote host. From 0 to 65,535. Default 22.
- `delete hostkey`: Deletes the SSH fingerprint of a specific host.
- `word`: IPv4 address or hostname of a remote system. Up to 64 alphanumeric characters.

**Command Default**
Disabled.

**Command Modes**
EXEC mode (Admin or Operator).

**Usage Guidelines**
The `ssh` command enables a system to make a secure, encrypted connection to another remote system or server. This connection provides functionality similar to that of an outbound Telnet connection except that the connection is encrypted. With authentication and encryption, the SSH client allows for secure communication over an insecure network.

**Examples**
```
ncs/admin# ssh ncsi admin
admin@ncsi's password:
ncsi/admin#
ncs/admin# ssh delete host ncs
ncs/admin#
```
**tech dump tcp**

To dump a Transmission Control Protocol (TCP) packet to the console, use the `tech dump tcp` command in EXEC mode.

**tech dump tcp gigabit-ethernet**

**Syntax Description**

| gigabit-ethernet | Gigabit Ethernet interface number 0 to 1. |

**Command Default**

Disabled.

**Command Modes**

EXEC mode.

**Examples**

```
ncs/admin# tech dump tcp 0
140816:141088(272) ack 1921 win 14144
1000 packets captured
1000 packets received by filter
0 packets dropped by kernel
ncs/admin#
```
**telnet**

To log in to a host that supports Telnet, use the `telnet` command in operator (user) or EXEC mode.

```
telnet [ip-address | hostname] port number
```

**Syntax Description**

- `ip-address`  
  IP address of the remote system. Up to 64 alphanumeric characters.
- `hostname`  
  Hostname of the remote system. Up to 64 alphanumeric characters.
- `port number`  
  (Optional) Indicates the port number of the remote host. From 0 to 65,535.

**Command Default**

No default behavior or values.

**Command Modes**

Operator: EXEC mode.

**Examples**

```
ncs/admin# telnet 172.16.0.11 port 23
ncs.cisco.com login: admin
password: 
Last login: Mon Jul 2 08:45:24 on ttyS0
ncs/admin#
```
**terminal length**

To set the number of lines on the current terminal screen for the current session, use the `terminal length` command in EXEC mode.

```
terminal length integer
```

**Syntax Description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>integer</code></td>
<td>Number of lines on the screen. Contains between 0 to 511 lines, inclusive. A value of zero (0) disables pausing between screens of output.</td>
</tr>
</tbody>
</table>

**Command Default**

24 lines.

**Command Modes**

EXEC mode.

**Usage Guidelines**

The system uses the length value to determine when to pause during multiple-screen output.

**Examples**

```
ncs/admin# terminal length 0
ncs/admin#
```
terminal session-timeout

To set the inactivity timeout for all sessions, use the `terminal session-timeout` command in EXEC mode.

```
terminal session-timeout minutes
```

**Syntax Description**

- `minutes` Sets the number of minutes for the inactivity timeout. From 0 to 525,600. Zero (0) disables the timeout.

**Command Default**

30 minutes.

**Command Modes**

EXEC mode.

**Usage Guidelines**

Setting the `terminal session-timeout` command to zero (0) results in no timeout being set.

**Examples**

```
ncs/admin# terminal session-timeout 40
ncs/admin#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>terminal session-welcome</code></td>
<td>Sets a welcome message on the system for all users who log in to the system.</td>
</tr>
</tbody>
</table>
**terminal session-welcome**

To set a welcome message on the system for all users who log in to the system, use the `terminal session-welcome` command in EXEC mode.

```
terminal session-welcome string
```

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>string</th>
<th>Welcome message. Up to 2,048 alphanumeric characters.</th>
</tr>
</thead>
</table>

**Command Default**

No default behavior or values.

**Command Modes**

EXEC mode.

**Usage Guidelines**

Specify a message using up to 2,048 characters.

**Examples**

```
cs/admin# terminal session-welcome Welcome
ncs/admin#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>terminal session-timeout</code></td>
<td>Sets the inactivity timeout for all sessions.</td>
</tr>
</tbody>
</table>
**terminal terminal-type**

To specify the type of terminal connected to the current line for the current session, use the `terminal terminal-type` command in EXEC mode.

```
terminal terminal-type type
```

**Syntax Description**

- **type**
  - Defines the terminal name and type, and permits terminal negotiation by hosts that provide that type of service. Up to 80 alphanumeric characters.

**Command Default**

- VT100.

**Command Modes**

- EXEC mode.

**Usage Guidelines**

Indicate the terminal type if it is different from the default of VT100.

**Examples**

```
ncs/admin# terminal terminal-type vt220
ncs/admin#
```
tracert

To discover the routes that packets take when traveling to their destination address, use the tracert command in EXEC mode.

```
tracert [ip-address | hostname]
```

**Syntax Description**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ip-address</td>
<td>IP address of the remote system. Up to 32 alphanumeric characters.</td>
</tr>
<tr>
<td>hostname</td>
<td>Hostname of the remote system. Up to 32 alphanumeric characters.</td>
</tr>
</tbody>
</table>

**Command Default**

No default behavior or values.

**Command Modes**

EXEC mode.

**Examples**

```
ncs/admin# tracert 172.16.0.11
tracert to 172.16.0.11 (172.16.0.11), 30 hops max, 38 byte packets
  1 172.16.0.11 0.067 ms 0.036 ms 0.032 ms
ncs/admin#
```
# undebug

To disable debugging functions, use the **undebug** command in EXEC mode.

```
undebug {all | application | backup-restore | cdp | config | copy | icmp | locks | logging | snmp | system | transfer | user | utils}
```

## Syntax Description

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>all</td>
<td>Disables all debugging.</td>
</tr>
<tr>
<td>application</td>
<td>Application files.</td>
</tr>
<tr>
<td>all</td>
<td>Disables all application debug output.</td>
</tr>
<tr>
<td>install</td>
<td>Disables application install debug output.</td>
</tr>
<tr>
<td>operation</td>
<td>Disables application operation debug output.</td>
</tr>
<tr>
<td>uninstall</td>
<td>Disables application uninstall debug output.</td>
</tr>
<tr>
<td>backup-restore</td>
<td>Backs up and restores files.</td>
</tr>
<tr>
<td>all</td>
<td>Disables all debug output for backup-restore.</td>
</tr>
<tr>
<td>backup</td>
<td>Disables backup debug output for backup-restore.</td>
</tr>
<tr>
<td>backup-logs</td>
<td>Disables backup-logs debug output for backup-restore.</td>
</tr>
<tr>
<td>history</td>
<td>Disables history debug output for backup-restore.</td>
</tr>
<tr>
<td>restore</td>
<td>Disables restore debug output for backup-restore.</td>
</tr>
<tr>
<td>cdp</td>
<td>Cisco Discovery Protocol configuration files.</td>
</tr>
<tr>
<td>all</td>
<td>Disables all Cisco Discovery Protocol configuration debug output.</td>
</tr>
<tr>
<td>config</td>
<td>Disables configuration debug output for Cisco Discovery Protocol.</td>
</tr>
<tr>
<td>infra</td>
<td>Disables infrastructure debug output for Cisco Discovery Protocol.</td>
</tr>
<tr>
<td>config</td>
<td>Configuration files.</td>
</tr>
<tr>
<td>----------------</td>
<td>---------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>• all—Disables all configuration debug output.</td>
</tr>
<tr>
<td></td>
<td>• backup—Disables backup configuration debug output.</td>
</tr>
<tr>
<td></td>
<td>• clock—Disables clock configuration debug output.</td>
</tr>
<tr>
<td></td>
<td>• infra—Disables configuration infrastructure debug output.</td>
</tr>
<tr>
<td></td>
<td>• kron—Disables command scheduler configuration debug output.</td>
</tr>
<tr>
<td></td>
<td>• network—Disables network configuration debug output.</td>
</tr>
<tr>
<td></td>
<td>• repository—Disables repository configuration debug output.</td>
</tr>
<tr>
<td></td>
<td>• service—Disables service configuration debug output.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>copy</th>
<th>Copy commands.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>icmp</th>
<th>ICMP echo response configuration.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>all—Disable all debug output for ICMP echo response configuration. Set level between 0 and 7, with 0 being severe and 7 being all.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>locks</th>
<th>Resource locking.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• all—Disables all resource locking debug output.</td>
</tr>
<tr>
<td></td>
<td>• file—Disables file locking debug output.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>logging</th>
<th>Logging configuration files.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>all—Disables all debug output for logging configuration.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>snmp</th>
<th>SNMP configuration files.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>all—Disables all debug output for SNMP configuration.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>system</th>
<th>System files.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• all—Disables all system files debug output.</td>
</tr>
<tr>
<td></td>
<td>• id—Disables system ID debug output.</td>
</tr>
<tr>
<td></td>
<td>• info—Disables system info debug output.</td>
</tr>
<tr>
<td></td>
<td>• init—Disables system init debug output.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>transfer</th>
<th>File transfer.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>user</th>
<th>User management.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• all—Disables all user management debug output.</td>
</tr>
<tr>
<td></td>
<td>• password-policy—Disables user management debug output for password-policy.</td>
</tr>
</tbody>
</table>
Utilities configuration files.

**all**—Disables all utilities configuration debug output.

**Command Default**
No default behavior or values.

**Command Modes**
EXEC mode.

**Examples**
```
ncs/admin# undebug all
ncs/admin#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>debug</td>
<td>Displays errors or events for command situations.</td>
</tr>
</tbody>
</table>
write

To copy, display, or erase Cisco Prime Infrastructure server configurations, use the write command with the appropriate argument in EXEC mode.

write {erase | memory | terminal}

Syntax Description

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>erase</td>
<td>Erases the startup configuration.</td>
</tr>
<tr>
<td>memory</td>
<td>Copies the running configuration to the startup configuration.</td>
</tr>
<tr>
<td>terminal</td>
<td>Copies the running configuration to console.</td>
</tr>
</tbody>
</table>

Command Default

No default behavior or values.

Command Modes

EXEC mode.

Examples

The following is an example of the write command with the memory keyword.

ncs/admin# write memory
Generating configuration...
ncs/admin#

The following is an example of the write command with the terminal keyword.

ncs/admin# write terminal
Generating configuration...
!
hostname ncs
!
ip domain-name cisco.com
!
interface GigabitEthernet 0
  ip address 10.201.2.121 255.255.255.0
  ipv6 address autoconfig
!
interface GigabitEthernet 1
  shutdown
!
interface GigabitEthernet 2
  shutdown
!
interface GigabitEthernet 3
  shutdown
!
ip name-server 171.68.226.120
!
ip default-gateway 10.201.2.1
!
clock timezone UTC

ntp server clock.cisco.com
!
username admin password hash $1$6yQQaFXM5UBgbp7ggD1bG3kpExywwZ0 role admin
!
service sshd
!
repository myrepository
  url disk:
    user admin password hash 2b50ca94445f240f491e077b5f49fa0375942f38
!
password-policy
  lower-case-required
  upper-case-required
  digit-required
  no-username
  disable-cisco-passwords
  min-password-length 6
!
logging localhost
logging loglevel 6
!
cdp timer 60
cdp holdtime 180
cdp run GigabitEthernet 0
!
icmp echo on
!
ncs/admin#
show Commands

This section lists each **show** command, each command includes a brief description of its use, any command defaults, command modes, command syntax, usage guidelines, and an example of the command and any related commands. This section contains the following list of commands:
show application

To show application information of the installed application packages on the system, use the **show application** command in EXEC mode.

```plaintext
show application [status | version [app_name]]
```

### Syntax Description

<table>
<thead>
<tr>
<th><strong>show application</strong></th>
<th>The command to display the Cisco Prime Infrastructure application information.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>status</strong></td>
<td>Displays the status of the installed application.</td>
</tr>
<tr>
<td><strong>version</strong></td>
<td>Displays the application version for an installed application— the Cisco Prime Infrastructure.</td>
</tr>
<tr>
<td><strong>app_name</strong></td>
<td>Name of the installed application.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Output modifier variables:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>begin</strong>—Matched pattern. Up to 80 alphanumeric characters.</td>
<td></td>
</tr>
<tr>
<td><strong>count</strong>—Count the number of lines in the output. Add number after the word count.</td>
<td></td>
</tr>
<tr>
<td><strong>end</strong>—End with line that matches. Up to 80 alphanumeric characters.</td>
<td></td>
</tr>
<tr>
<td><strong>exclude</strong>—Exclude lines that match. Up to 80 alphanumeric characters.</td>
<td></td>
</tr>
<tr>
<td><strong>include</strong>—Include lines that match. Up to 80 alphanumeric characters.</td>
<td></td>
</tr>
<tr>
<td><strong>last</strong>—Display last few lines of output. Add number after the word last. Up to 80 lines to display. Default 10.</td>
<td></td>
</tr>
</tbody>
</table>

|—| Output modifier variables (see **Table A-8** ).                                      |
Table 15: Output Modifier Variables for Count or Last

<table>
<thead>
<tr>
<th>Output modifier variables:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• begin—Matched pattern. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td>• count—Count the number of lines in the output. Add number after the word count.</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>• end—End with line that matches. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td>• exclude—Exclude lines that match. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td>• include—Include lines that match. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td>• last—Display last few lines of output. Add number after the word last. Up to 80 lines to display. Default 10.</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

**Command Default**
No default behavior or values.

**Command Modes**
EXEC

**Examples**

**Example 1**

```
ncs/admin# show application
<name> <Description>
ncs Cisco Network Control System
ncs/admin#
```

**Example 2**

```
ncs/admin# show application version NCS
Cisco Network Control System
---------------------------------------------
Version : 1.0.2.051
Build Date : Mon Aug  2 00:34:25 2010
Install Date : Thu Aug  5 17:48:49 2010
ncs/admin#
```

**Example 3**

```
ncs/admin# show application status NCS
NCS Database listener is running, PID: 21096
NCS Database is running, number of processes: 27
NCS Application Server is running, PID: 21432
NCS M&T Session Database is running, PID: 21365
NCS M&T Log Collector is running, PID: 21468
NCS M&T Log Processor is running, PID: 21494
NCS M&T Alert Process is running, PID: 21524
ncs/admin#
```
## Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>application install</td>
<td>Installs an application bundle.</td>
</tr>
<tr>
<td>application remove</td>
<td>Removes or uninstalls an application.</td>
</tr>
<tr>
<td>application start</td>
<td>Starts or enables an application.</td>
</tr>
<tr>
<td>application stop</td>
<td>Stops or disables an application.</td>
</tr>
<tr>
<td>application upgrade</td>
<td>Upgrades an application bundle.</td>
</tr>
</tbody>
</table>
show backup history

To display the backup history of the system, use the `show backup history` command in EXEC mode.

Syntax Description

This command has no arguments or keywords.

Command Default

No default behavior or values.

Command Modes

EXEC

Usage Guidelines

None.

Examples

Example 1

```
ncs/admin# show backup history
ncs/admin#
```

Example 2

```
ncs/admin# show backup history
backup history is empty
ncs/admin#
```

Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>backup</td>
<td>Performs a backup (Cisco Prime Infrastructure and Cisco ADE OS) and places the backup in a repository.</td>
</tr>
<tr>
<td>restore</td>
<td>Restores from backup the file contents of a specific repository.</td>
</tr>
<tr>
<td>repository</td>
<td>Enters the repository submode for configuration of backups.</td>
</tr>
<tr>
<td>show repository</td>
<td>Displays the available backup files located on a specific repository.</td>
</tr>
</tbody>
</table>
show cdp

To display information about the enabled Cisco Discovery Protocol interfaces, use the show cdp command in EXEC mode.

show cdp {all | neighbors}

**Syntax Description**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>all</td>
<td>Shows all the enabled Cisco Discovery Protocol interfaces.</td>
</tr>
<tr>
<td>neighbors</td>
<td>Shows the Cisco Discovery Protocol neighbors.</td>
</tr>
</tbody>
</table>

**Command Default**

No default behavior or values.

**Command Modes**

EXEC

**Examples**

**Example 1**

```bash
cs/admin# show cdp all
CDP protocol is enabled ...
  broadcasting interval is every 60 seconds.
  time-to-live of cdp packets is 180 seconds.
  CDP is enabled on port GigabitEthernet0.
cs/admin#
```

**Example 2**

```bash
cs/admin# show cdp neighbors
CDP Neighbor : 000c297840e5
  Local Interface : GigabitEthernet0
  Device Type : L-NCS-1.0-50
  Port : eth0
  Address : 172.23.90.114

CDP Neighbor : ise5-esw5
  Local Interface : GigabitEthernet0
  Device Type : cisco WS-C3560E-24TD
  Port : GigabitEthernet0/5
  Address : 172.23.90.45

CDP Neighbor : 000c29e29926
  Local Interface : GigabitEthernet0
  Device Type : L-NCS-1.0-50
  Port : eth0
  Address : 172.23.90.115

CDP Neighbor : 000c290fba98
  Local Interface : GigabitEthernet0
  Device Type : L-NCS-1.0-50
  Port : eth0
  Address : 172.23.90.111

cs/admin#
```
### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>cdp holdtime</strong></td>
<td>Specifies the length of time that the receiving device should hold a Cisco Discovery Protocol packet from your router before discarding it.</td>
</tr>
<tr>
<td><strong>cdp run</strong></td>
<td>Enables the Cisco Discovery Protocol.</td>
</tr>
<tr>
<td><strong>cdp timer</strong></td>
<td>Specifies how often the Cisco Prime Infrastructure server sends Cisco Discovery Protocol updates.</td>
</tr>
</tbody>
</table>
show clock

To display the day, month, date, time, time zone, and year of the system software clock, use the `show clock` command in EXEC mode.

```
show clock
```

**Syntax Description**

No arguments or keywords.

**Command Default**

No default behavior or values.

**Command Modes**

EXEC

**Examples**

```
ncs/admin# show clock
Fri Aug 6 10:46:39 UTC 2010
ncs/admin#
```

**Note**

The `show clock` output in the previous example includes Coordinated Universal Time (UTC) or Greenwich Mean Time (GMT), Great Britain, or Zulu time (see Tables Table 22: Common Time Zones, Table 23: Australia Time Zones, and Table 24: Asia Time Zones on pages A-84 and A-85 for sample time zones).

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>clock</td>
<td>Sets the system clock for display purposes.</td>
</tr>
</tbody>
</table>
show cpu

To display CPU information, use the show cpu command in EXEC mode.

**show cpu [statistics] [ ] [ ]**

<table>
<thead>
<tr>
<th>Syntax Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>statistics Displays CPU statistics.</td>
</tr>
</tbody>
</table>

Output modifier variables:

- **begin**—Matched pattern. Up to 80 alphanumeric characters.
- **count**—Count the number of lines in the output. Add number after the word count.
  —Output modifier variables (see Table A-9).
- **end**—End with line that matches. Up to 80 alphanumeric characters.
- **exclude**—Exclude lines that match. Up to 80 alphanumeric characters.
- **include**—Include lines that match. Up to 80 alphanumeric characters.
- **last**—Display last few lines of output. Add number after the word last. Up to 80 lines to display. Default 10.
  —Output modifier variables (see Table A-9).

**Table 16: Output Modifier Variables for Count or Last (continued) (continued)**

<table>
<thead>
<tr>
<th>Output modifier variables:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>begin</strong>—Matched pattern. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td><strong>count</strong>—Count the number of lines in the output. Add number after the word count.</td>
</tr>
</tbody>
</table>
  —Output modifier variables. |
| **end**—End with line that matches. Up to 80 alphanumeric characters. |
| **exclude**—Exclude lines that match. Up to 80 alphanumeric characters. |
| **include**—Include lines that match. Up to 80 alphanumeric characters. |
| **last**—Display last few lines of output. Add number after the word last. Up to 80 lines to display. Default 10. |
  —Output modifier variables. |

**Command Default**

No default behavior or values.
Command Modes
EXEC

Examples

Example 1

ncs/admin# show cpu

processor : 0
model : Intel(R) Xeon(R) CPU E5320 @ 1.86GHz
speed(MHz): 1861.914
cache size: 4096 KB

ncs/admin#

Example 2

ncs/admin# show cpu statistics
user time: 265175
kernel time: 166835
idle time: 5356204
i/o wait time: 162676
irq time: 4055

ncs/admin#

Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show disks</td>
<td>Displays the system information of all disks.</td>
</tr>
<tr>
<td>show memory</td>
<td>Displays the amount of system memory that each system process uses.</td>
</tr>
</tbody>
</table>
show disks

To display the disks file-system information, use the `show disks` command in EXEC mode.

```
show disks [] []
```

### Syntax Description

Output modifier variables:

- `begin`—Matched pattern. Up to 80 alphanumeric characters.
- `count`—Count the number of lines in the output. Add number after the word `count`.
- `end`—End with line that matches. Up to 80 alphanumeric characters.
- `exclude`—Exclude lines that match. Up to 80 alphanumeric characters.
- `include`—Include lines that match. Up to 80 alphanumeric characters.
- `last`—Display last few lines of output. Add number after the word `last`. Up to 80 lines to display. Default 10.

<table>
<thead>
<tr>
<th></th>
<th>Output modifier variables:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><code>begin</code>—Matched pattern. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td></td>
<td><code>count</code>—Count the number of lines in the output. Add number after the word <code>count</code>.</td>
</tr>
<tr>
<td></td>
<td><code>end</code>—End with line that matches. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td></td>
<td><code>exclude</code>—Exclude lines that match. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td></td>
<td><code>include</code>—Include lines that match. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td></td>
<td><code>last</code>—Display last few lines of output. Add number after the word <code>last</code>. Up to 80 lines to display. Default 10.</td>
</tr>
</tbody>
</table>

### Table 17: Output Modifier Variables for Count or Last

<table>
<thead>
<tr>
<th></th>
<th>Output modifier variables:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><code>begin</code>—Matched pattern. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td></td>
<td><code>count</code>—Count the number of lines in the output. Add number after the word <code>count</code>.</td>
</tr>
<tr>
<td></td>
<td><code>end</code>—End with line that matches. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td></td>
<td><code>exclude</code>—Exclude lines that match. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td></td>
<td><code>include</code>—Include lines that match. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td></td>
<td><code>last</code>—Display last few lines of output. Add number after the word <code>last</code>. Up to 80 lines to display. Default 10.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Output modifier variables.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><code>begin</code>—Matched pattern. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td></td>
<td><code>count</code>—Count the number of lines in the output. Add number after the word <code>count</code>.</td>
</tr>
<tr>
<td></td>
<td><code>end</code>—End with line that matches. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td></td>
<td><code>exclude</code>—Exclude lines that match. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td></td>
<td><code>include</code>—Include lines that match. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td></td>
<td><code>last</code>—Display last few lines of output. Add number after the word <code>last</code>. Up to 80 lines to display. Default 10.</td>
</tr>
</tbody>
</table>

### Command Default

No default behavior or values.
**Command Modes**

EXEC

**Usage Guidelines**

Only platforms that have a disk file system support the `show disks` command.

**Examples**

```
ncs/admin# show disks
temp. space 2% used (17828 of 988116)
disk: 3% used (143280 of 5944440)

Internal filesystems:
  all internal filesystems have sufficient free space

ncs/admin#
```
show icmp-status

To display the Internet Control Message Protocol echo response configuration information, use the show icmp_status command in EXEC mode.

```
show icmp_status {> file ||}
```

**Syntax Description**

<table>
<thead>
<tr>
<th></th>
<th>Output direction.</th>
</tr>
</thead>
<tbody>
<tr>
<td>file</td>
<td>Name of file to redirect standard output (stdout).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Output modifier commands:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• begin</td>
<td>Matched pattern. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td>• count</td>
<td>Count the number of lines in the output. Add number after the word count.</td>
</tr>
<tr>
<td></td>
<td>—Output modifier commands (see Table A-11).</td>
</tr>
<tr>
<td>• end</td>
<td>End with line that matches. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td>• exclude</td>
<td>Exclude lines that match. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td>• include</td>
<td>Include lines that match. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td>• last</td>
<td>Display last few lines of output. Add number after the word last. Up to 80 lines to display. Default 10.</td>
</tr>
<tr>
<td></td>
<td>—Output modifier commands (see Table A-11).</td>
</tr>
</tbody>
</table>

**Table 18: Output Modifier Variables for Count or Last**

<table>
<thead>
<tr>
<th></th>
<th>Output modifier variables:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• begin</td>
<td>Matched pattern. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td>• count</td>
<td>Count the number of lines in the output. Add number after the word count.</td>
</tr>
<tr>
<td></td>
<td>—Output modifier variables.</td>
</tr>
<tr>
<td>• end</td>
<td>End with line that matches. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td>• exclude</td>
<td>Exclude lines that match. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td>• include</td>
<td>Include lines that match. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td>• last</td>
<td>Display last few lines of output. Add number after the word last. Up to 80 lines to display. Default 10.</td>
</tr>
<tr>
<td></td>
<td>—Output modifier variables.</td>
</tr>
</tbody>
</table>
**Command Default**
No default behavior or values.

**Command Modes**
EXEC

**Examples**

**Example 1**
ncs/admin# `show icmp_status`
icmp echo response is turned on
ncs/admin#

**Example 1**
ncs/admin# `show icmp_status`
icmp echo response is turned off
ncs/admin#

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>icmp echo</td>
<td>Configures the Internet Control Message Protocol (ICMP) echo requests.</td>
</tr>
</tbody>
</table>
show interface

To display the usability status of interfaces configured for IP, use the `show interface` command in EXEC mode.

`show interface [GigabitEthernet]`

### Syntax Description

<table>
<thead>
<tr>
<th><code>GigabitEthernet</code></th>
<th>Shows the Gigabit Ethernet interface. Either 0 or 1.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Output modifier variables:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• <code>begin</code>—Matched pattern. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td>• <code>count</code>—Count the number of lines in the interface. Add number after the word <code>count</code>.</td>
</tr>
<tr>
<td>• <code>end</code>—End with line that matches. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td>• <code>exclude</code>—Exclude lines that match. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td>• <code>include</code>—Include lines that match. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td>• <code>last</code>—Display last few lines of output. Add number after the word <code>last</code>. Up to 80 lines to display. Default 10.</td>
</tr>
</tbody>
</table>

### Command Default

No default behavior or values.

### Command Modes

EXEC

### Usage Guidelines

None.

In the `show interface GigabitEthernet 0` output, you can find that the interface has three IPv6 addresses. The first internet address (starting with 3ffe) is the result of using stateless autoconfiguration. For this to work, you need to have IPv6 route advertisement enabled on that subnet. The next address (starting with fe80) is a link local address that does not have any scope outside the host. You always see a link local address regardless of the IPv6 autoconfiguration or DHCPv6 configuration. The last address (starting with 2001) is the result obtained from an IPv6 DHCP server.

### Examples

**Example 1**

```
ncs/admin# show interface
eth0  Link encap:Ethernet  HWaddr 00:0C:29:6A:88:C4
       inet addr:172.23.90.113  Bcast:172.23.90.255  Mask:255.255.255.0
       inet6 addr: fe80::20c:29ff:fe6a:88c4/64 Scope:Link
       UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
       RX packets:48536  errors:0  dropped:0  overruns:0  frame:0
       TX packets:14152  errors:0  dropped:0  overruns:0  carrier:0
       collisions:0  txqueuelen:1000
       RX bytes:6507290 (6.2 MiB)  TX bytes:12443568 (11.8 MiB)
```
Interrupt:59 Base address:0x2000

lo   Link encap:Local Loopback
     inet addr:127.0.0.1  Mask:255.0.0.0
     inet6 addr: ::1/128 Scope:Host
       UP LOOPBACK RUNNING MTU:16436 Metric:1
       RX packets:1195025 errors:0 dropped:0 overruns:0 frame:0
       TX packets:1195025 errors:0 dropped:0 overruns:0 carrier:0
       collisions:0 txqueuelen:0
       RX bytes:649425800 (619.3 MiB) TX bytes:649425800 (619.3 MiB)

sit0   Link encap:IPv6-in-IPv4
       NOARP MTU:1480 Metric:1
       RX packets:0 errors:0 dropped:0 overruns:0 frame:0
       TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
       collisions:0 txqueuelen:0
       RX bytes:0 (0.0 b) TX bytes:0 (0.0 b)

Example 2

ncs/admin# show interface GigabitEthernet 0

eth0   Link encap:Ethernet  HWaddr 00:0C:29:AF:DA:05
       inet addr:172.23.90.116  Bcast:172.23.90.255  Mask:255.255.255.0
       inet6 addr: fe80::20c:29ff:feaf:da05/64 Scope:Link
       inet6 addr: 3ffe:302:11:2:20c:29ff:feaf:da05/64 Scope:Global
     UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
       RX packets:77848 errors:0 dropped:0 overruns:0 frame:0
       TX packets:23131 errors:0 dropped:0 overruns:0 carrier:0
       collisions:0 txqueuelen:1000
       RX bytes:10699801 (10.2 MiB) TX bytes:3448374 (3.2 MiB)
     Interrupt:59 Base address:0x2000

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>interface</td>
<td>Configures an interface type and enters the interface configuration submode.</td>
</tr>
<tr>
<td>ipv6 address autoconfig</td>
<td>Enables IPv6 stateless autoconfiguration on an interface.</td>
</tr>
<tr>
<td>ipv6 address dhcp</td>
<td>Enables IPv6 address DHCP on an interface.</td>
</tr>
</tbody>
</table>
show inventory

To display information about the hardware inventory, including the Cisco Prime Infrastructure appliance model and serial number, use the **show inventory** command in EXEC mode.

**show inventory**

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>Output modifier variables:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• <em>begin</em>—Matched pattern. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td></td>
<td>• <em>count</em>—Count the number of lines in the interface. Add number after the word <em>count</em>.</td>
</tr>
<tr>
<td></td>
<td>• <em>end</em>—End with line that matches. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td></td>
<td>• <em>exclude</em>—Exclude lines that match. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td></td>
<td>• <em>include</em>—Include lines that match. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td></td>
<td>• <em>last</em>—Display last few lines of output. Add number after the word <em>last</em>. Up to 80 lines to display. Default 10.</td>
</tr>
</tbody>
</table>

**Command Default**

No default behavior or values.

**Command Modes**

EXEC

**Examples**

```bash
ncs/admin# show inventory
NAME: "L-NCS-1.0-50 chassis", DESCR: "L-NCS-1.0-50 chassis"
PID: L-NCS-1.0-50 , VID: V01 , SN: H8JEGGOFWGG
Total RAM Memory: 1035164 kB
CPU Core Count: 1
CPU 0: Model Info: Intel(R) Xeon(R) CPU E5320 @ 1.86GHz
Hard Disk Count(*): 1
Disk 0: Device Name: /dev/sda
Disk 0: Capacity: 64.40 GB
Disk 0: Geometry: 255 heads 63 sectors/track 7832 cylinders
NIC Count: 1
NIC 0: Device Name: eth0
NIC 0: HW Address: 00:0C:29:6A:88:C4
NIC 0: Driver Descr: eth0: registered as PCnet/PCI II 79C970A

(*) Hard Disk Count may be Logical.

ncs/admin#
```
**show logging**

To display the state of system logging (syslog) and the contents of the standard system logging buffer, use the `show logging` command in EXEC mode.

```
show logging {application [application-name]} {internal} {system} |
```

### Syntax Description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>application</td>
<td>Displays application logs.</td>
</tr>
<tr>
<td>application-name</td>
<td>Application name. Up to 255 alphanumeric characters.</td>
</tr>
<tr>
<td>tail</td>
<td>Tail system syslog messages.</td>
</tr>
<tr>
<td>count</td>
<td>Tail last count messages. From 0 to 4,294,967,295.</td>
</tr>
<tr>
<td>count</td>
<td>Tail last count messages. From 0 to 4,294,967,295.</td>
</tr>
<tr>
<td>internal</td>
<td>Displays the syslogs configuration.</td>
</tr>
<tr>
<td>system</td>
<td>Displays the system syslogs.</td>
</tr>
<tr>
<td>begin</td>
<td>Matched pattern. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td>count</td>
<td>Count the number of lines in the interface. Add number after the word count.</td>
</tr>
<tr>
<td>end</td>
<td>End with line that matches. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td>exclude</td>
<td>Exclude lines that match. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td>include</td>
<td>Include lines that match. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td>last</td>
<td>Display last few lines of output. Add number after the word last. Up to 80 lines to display. Default 10.</td>
</tr>
</tbody>
</table>

### Command Default

No default behavior or values.

### Command Modes

EXEC

### Usage Guidelines

This command displays the state of syslog error and event logging, including host addresses, and for which, logging destinations (console, monitor, buffer, or host) logging is enabled.

### Examples

**Example 1**

```
ncs/admin# show logging system
```
ADEOS Platform log:  
-----------------
Aug 5 10:44:32 localhost debugd[1943]: [16618]: config:network: main.c[252] [setup]: Setup is complete
Aug 5 10:45:02 localhost debugd[1943]: [17291]: application:install cars_install.c[242] [setup]: Install initiated with bundle - ncs.tar.gz, repo - SystemDefaultPkgRepos
Aug 5 10:45:02 localhost debugd[1943]: [17291]: application:install cars_install.c[256] [setup]: Stage area - /storeddata/Installing/.1281030302
Aug 5 10:45:02 localhost debugd[1943]: [17291]: application:install cars_install.c[260] [setup]: Getting bundle to local machine
Aug 5 10:45:03 localhost debugd[1943]: [17291]: transfer: cars_xfer.c[58] [setup]: local copy in of ncs.tar.gz requested
Aug 5 10:45:46 localhost debugd[1943]: [17291]: application:install cars_install.c[269] [setup]: Got bundle at - /storeddata/Installing/.1281030302/ncs.tar.gz
Aug 5 10:45:46 localhost debugd[1943]: [17291]: application:install cars_install.c[279] [setup]: Unbundling package ncs.tar.gz
Aug 5 10:47:06 localhost debugd[1943]: [17291]: application:install cars_install.c[291] [setup]: Unbundling done. Verifying input parameters..
Aug 5 10:47:06 localhost debugd[1943]: [17291]: application:install cars_install.c[313] [setup]: Manifest file is at - /storeddata/Installing/.1281030302/manifest.xml
Aug 5 10:47:06 localhost debugd[1943]: [17291]: application:install cars_install.c[323] [setup]: Manifest file appname - ncs
Aug 5 10:47:09 localhost debugd[1943]: [17291]: application:install cars_install.c[386] [setup]: Manifest file pkgtype - CARS
Aug 5 10:47:09 localhost debugd[1943]: [17291]: application:install cars_install.c[398] [setup]: Verify dependency list -
Aug 5 10:47:09 localhost debugd[1943]: [17291]: application:install cars_install.c[410] [setup]: Verify app license -
Aug 5 10:47:09 localhost debugd[1943]: [17291]: application:install cars_install.c[420] [setup]: Verify app RPM's
Aug 5 10:47:09 localhost debugd[1943]: [17291]: application:install cars_install.c[428] [setup]: No of RPM's - 9
Aug 5 10:47:09 localhost debugd[1943]: [17291]: application:install cars_install.c[439] [setup]: Disk - 50
Aug 5 10:47:09 localhost debugd[1943]: [17291]: application:install ci_util.c[325] [setup]: Disk requested - 51200 KB
Aug 5 10:47:09 localhost debugd[1943]: [17291]: application:install ci_util.c[345] [setup]: More disk found Free = 40550400, req_disk = 51200
Aug 5 10:47:09 localhost debugd[1943]: [17291]: application:install ci_util.c[450] [setup]: Mem requested by app = 100
Aug 5 10:47:09 localhost debugd[1943]: [17291]: application:install ci_util.c[369] [setup]: Mem requested = 102400
Aug 5 10:47:09 localhost debugd[1943]: [17291]: application:install ci_util.c[384] [setup]: Found MemFree = MemFree value = 13028
Aug 5 10:47:09 localhost debugd[1943]: [17291]: application:install ci_util.c[400] [setup]: Found MemFree value = 13028
Aug 5 10:47:09 localhost debugd[1943]: [17291]: application:install ci_util.c[415] [setup]: Found Inactive MemFree value = 948148
Aug 5 10:47:09 localhost debugd[1943]: [17291]: application:install ci_util.c[420] [setup]: Found Inactive MemFree value = 948148
Aug 5 10:47:09 localhost debugd[1943]: [17291]: application:install ci_util.c[435] [setup]: Sufficient mem found
Aug 5 10:47:09 localhost debugd[1943]: [17291]: application:install ci_util.c[450] [setup]: Done checking memory...
Aug 5 10:47:09 localhost debugd[1943]: [17291]: application:install cars_install.c[461] [setup]: Verifying RPM's...
--More--  
( press Spacebar to continue) 

Example 2

cns/admin# show logging internal

log server: localhost
Global loglevel: 6
Status: Enabled

cns/admin#
Example 3

ncs/admin# show logging internal

log server: localhost
Global loglevel: 6
Status: Disabled
ncs/admin#
show logins

To display the state of system logins, use the **show logins** command in EXEC mode.

**show logins cli**

**Syntax Description**

| cli | Lists the cli login history. |

**Command Default**

No default behavior or values.

**Command Modes**

EXEC

**Usage Guidelines**

Requires the **cli** keyword; otherwise, an error occurs.

**Examples**

```
ncs/admin# show logins cli
admin pts/0 10.77.137.60 Fri Aug 6 09:45 still logged in
admin pts/0 10.77.137.60 Fri Aug 6 08:56 - 09:30 (00:33)
admin pts/0 10.77.137.60 Fri Aug 6 07:17 - 08:43 (01:26)
reboot system boot 2.6.18-164.el5PA Thu Aug 5 18:17 - (17:49)
admin tty1 Thu Aug 5 18:15 - down (00:00)
reboot system boot 2.6.18-164.el5PA Thu Aug 5 18:09 - (00:06)
setup tty1 Thu Aug 5 17:43 - 18:07 (00:24)
reboot system boot 2.6.18-164.el5PA Thu Aug 5 16:05 - (02:02)
wtmp begins Thu Aug 5 16:05:36 2010
ncs/admin#
```
show memory

To display the memory usage of all the running processes, use the `show memory` command in EXEC mode.

```
show memory
```

**Syntax Description**

No arguments or keywords.

**Command Default**

No default behavior or values.

**Command Modes**

EXEC

**Examples**

```
ncs/admin# show memory
  total memory:    1035164 kB
  free memory:    27128 kB
  cached:         358888 kB
  swap-cached:    142164 kB
ncs/admin#
```
show ntp

To show the status of the NTP associations, use the `show ntp` command in EXEC mode.

show ntp

**Syntax Description**

No arguments or keywords.

**Command Default**

No default behavior or values.

**Command Modes**

EXEC

**Examples**

ncs/admin# show ntp
Primary NTP : cd-ncs-ntp.cisco.com

synchronised to NTP server (10.56.60.29) at stratum 3
   time correct to within 99 ms
   polling server every 1024 s

remote   refid  st t when poll reach delay offset  jitter
--------- --------- ---- ---- -------- -------- -------- --------
 127.127.1.0 .LOCL.     10  1  36  64  377  0.000  0.000  0.001
*10.56.60.29 64.103.34.15  2 u  906 1024  377 270.657 3.831 14.345

Warning: Output results may conflict during periods of changing synchronization.
ncs/admin#
ncs/admin# show ntp
% no NTP servers configured
ncs/admin#

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ntp server</td>
<td>Allows synchronization of the software clock by the NTP server for the system.</td>
</tr>
</tbody>
</table>
show ports

To display information about all the processes listening on active ports, use the `show ports` command in EXEC mode.

`show ports [] []`

**Syntax Description**

Output modifier variables:

- `begin`—Matched pattern. Up to 80 alphanumeric characters.
- `count`—Count the number of lines in the interface. Add number after the word `count`.
  
  |—Output modifier variables (see Table A-12).
- `end`—End with line that matches. Up to 80 alphanumeric characters.
- `exclude`—Exclude lines that match. Up to 80 alphanumeric characters.
- `include`—Include lines that match. Up to 80 alphanumeric characters.
- `last`—Display last few lines of output. Add number after the word `last`. Up to 80 lines to display. Default 10.
  
  |—Output modifier variables (see Table A-12).

---

**Table 19: Output Modifier Variables for Count or Last**

| | Output modifier variables:
| | • `begin`—Matched pattern. Up to 80 alphanumeric characters.
| | • `count`—Count the number of lines in the output. Add number after the word `count`.
  
  |—Output modifier variables.
| | • `end`—End with line that matches. Up to 80 alphanumeric characters.
| | • `exclude`—Exclude lines that match. Up to 80 alphanumeric characters.
| | • `include`—Include lines that match. Up to 80 alphanumeric characters.
| | • `last`—Display last few lines of output. Add number after the word `last`. Up to 80 lines to display. Default 10.
  
  |—Output modifier variables.

---

**Command Default**

No default behavior or values.
Command Reference

**Command Reference Guide for Cisco Prime Infrastructure, Release 1.2**

**show ports**

**Command Modes**

- EXEC

**Usage Guidelines**

When you run the `show ports` command, the port must have an associated active session.

**Examples**

```
ncs/admin# show ports
Process : timestensubd (21372)
  tcp: 127.0.0.1:11298
Process : timestenorad (21609)
  tcp: 127.0.0.1:51715
  udp: ::1:28514, ::1:59055, ::1:45133, ::1:49082, ::1:64737, ::1:62570, ::1:19577, ::1:29821
Process : ttcservd (21382)
  tcp: 127.0.0.1:16612, 0.0.0.0:53385
Process : timestenrepd (21579)
  tcp: 127.0.0.1:62504, 0.0.0.0:18047
  udp: ::1:51436
Process : timestend (21365)
  tcp: 0.0.0.0:53384
Process : rpc.statd (2387)
  tcp: 0.0.0.0:8703
  udp: 0.0.0.0:867, 0.0.0.0:870
Process : timestensubd (21373)
  tcp: 127.0.0.1:43407
Process : portmap (2350)
  tcp: 0.0.0.0:111
  udp: 0.0.0.0:111
Process : Decap_main (21468)
  tcp: 0.0.0.0:2000
  udp: 0.0.0.0:9999
Process : timestensubd (21369)
  tcp: 127.0.0.1:37648
Process : timestensubd (21374)
  tcp: 127.0.0.1:64211
Process : sshd (2734)
  tcp: 172.23.90.113:22
Process : java (21432)
  tcp: 127.0.0.1:8888, ::2080, ::2020, ::ffff:127.0.0.1:8005, ::8009, ::8905, ::8010,
  ::2090, ::1099, ::9999, ::61616, ::8080, ::80,
  ::6000, ::8443, ::443
  udp: 0.0.0.0:1812, 0.0.0.0:1813, 0.0.0.0:1700, 0.0.0.0:10414, 0.0.0.0:3799, 0.0.0.0:1645,
  0.0.0.0:1646, ::8905, ::8906
Process : monit (21531)
  tcp: 127.0.0.1:2812
Process : java (21524)
  tcp: ::62627
Process : java (21494)
  tcp: ::ffff:127.0.0.1:20515
  udp: 0.0.0.0:20514
Process : tnsn32sr (21096)
  tcp: ::1521
Process : ora_d000_ncs1 (21222)
  tcp: ::26456
  udp: ::1:63198
Process : ntpd (21715)
  tcp: 172.23.90.113:123, 127.0.0.1:123, 0.0.0.0:123, ::1:123, fe80::20c:29ff:fe6a:123,
  ::123
Process : ora_pmon_ncs1 (21190)
  udp: ::1:51994
Process : ora_mmon_ncs1 (21218)
  udp: ::38941
Process : ora_s000_ncs1 (21224)
  udp: ::1:49864
ncs/admin#
```
show process

To display information about active processes, use the show process command in the EXEC mode.

show process |

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>(Optional) Output modifier variables:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• begin—Matched pattern. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td></td>
<td>• count—Count the number of lines in the interface. Add number after the word count.</td>
</tr>
<tr>
<td></td>
<td>• end—End with line that matches. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td></td>
<td>• exclude—Exclude lines that match. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td></td>
<td>• include—Include lines that match. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td></td>
<td>• last—Display last few lines of output. Add number after the word last. Up to 80 lines to display. Default 10.</td>
</tr>
</tbody>
</table>

| Command Default | No default behavior or values. |
| Command Modes   | EXEC |
| Usage Guidelines| None |

Examples
See Table A-13 for process field descriptions.

ncs/admin# show process
USER PID TIME TT COMMAND
root 1 00:00:02 ? init
root 2 00:00:00 ? migration/0
root 3 00:00:00 ? ksoftirqd/0
root 4 00:00:00 ? watchdog/0
root 5 00:00:00 ? events/0
root 6 00:00:00 ? khelper
root 7 00:00:00 ? kthread
root 10 00:00:01 ? kblockd/0
root 11 00:00:00 ? kacpid
root 170 00:00:00 ? cqueue/0
root 173 00:00:00 ? khubd  
root 175 00:00:00 ? kseriod  
root 239 00:00:32 ? kswapd0  
root 240 00:00:00 ? aio/0  
root 458 00:00:00 ? kpsmoused  
root 488 00:00:00 ? mpt_poll_0  
root 489 00:00:00 ? scsi_eh_0  
root 492 00:00:00 ? ata/0  
root 493 00:00:00 ? ata_aux  
root 500 00:00:00 ? kstriped  
root 509 00:00:07 ? kjournald  
root 536 00:00:00 ? kaudid  
root 569 00:00:00 ? udevd  
root 1663 00:00:00 ? kmpathd/0  
root 1664 00:00:00 ? kmpath_handlerd  
root 1691 00:00:00 ? kjournald  
root 1693 00:00:00 ? kjournald  
root 1695 00:00:00 ? kjournald  
root 1697 00:00:00 ? kjournald  
root 2284 00:00:00 ? auditd  
root 2286 00:00:00 ? audispd  
root 2318 00:00:10 ? debugd  
rpc 2350 00:00:00 ? portmap  
root 2381 00:00:00 ? rpciod/0  
--More--  
cns/admin#  

**Table 20: Show Process Field Descriptions**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>USER</td>
<td>Logged-in user.</td>
</tr>
<tr>
<td>PID</td>
<td>Process ID.</td>
</tr>
<tr>
<td>TIME</td>
<td>The time the command was last used.</td>
</tr>
<tr>
<td>TT</td>
<td>Terminal that controls the process.</td>
</tr>
<tr>
<td>COMMAND</td>
<td>Type of process or command used.</td>
</tr>
</tbody>
</table>
show process
**show repository**

To display the file contents of the repository, use the `show repository` command in EXEC mode.

`show repository repository-name`

**Syntax Description**

| `repository-name` | Name of the repository whose contents you want to view. Up to 30 alphanumeric characters. |

**Command Default**

No default behavior or values.

**Command Modes**

EXEC

**Examples**

```
ncs/admin# show repository myrepository
back1.tar.gpg
back2.tar.gpg
ncs/admin#
```  

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>backup</td>
<td>Performs a backup (Cisco Prime Infrastructure and Cisco ADE OS) and places the backup in a repository.</td>
</tr>
<tr>
<td>restore</td>
<td>Restores from backup the file contents of a specific repository.</td>
</tr>
<tr>
<td>repository</td>
<td>Enters the repository submode for configuration of backups.</td>
</tr>
<tr>
<td>show backup history</td>
<td>Displays the backup history of the system.</td>
</tr>
</tbody>
</table>
**show restore**

To display the restore history, use the `show restore` command in EXEC mode.

`show restore {history}`

**Syntax Description**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>history</td>
<td>Displays the restore history.</td>
</tr>
</tbody>
</table>

**Command Default**

No default behavior or values.

**Command Modes**

EXEC

**Examples**

**Example 1**

```shell
ncs/admin# show restore history
ncs/admin#
```

**Example 2**

```shell
ncs/admin# show restore history
restore history is empty
ncs/admin#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>backup</code></td>
<td>Performs a backup (Cisco Prime Infrastructure and Cisco ADE OS) and places the backup in a repository.</td>
</tr>
<tr>
<td><code>restore</code></td>
<td>Restores from backup the file contents of a specific repository.</td>
</tr>
<tr>
<td><code>repository</code></td>
<td>Enters the repository submode for configuration of backups.</td>
</tr>
<tr>
<td><code>show backup history</code></td>
<td>Displays the backup history of the system.</td>
</tr>
</tbody>
</table>
show running-config

To display the contents of the currently running configuration file or the configuration, use the show running-config command in EXEC mode.

Syntax Description

No arguments or keywords.

Command Default

The show running-config command displays all of the configuration information.

Command Modes

EXEC

Examples

ncs/admin# show running-config
Generating configuration...
!
hostname ncs
!
ip domain-name cisco.com
!
interface GigabitEthernet 0
  ip address 172.23.90.113 255.255.255.0
  ipv6 address autoconfig
!
ip name-server 171.70.168.183
!
ip default-gateway 172.23.90.1
!
clock timezone UTC
!
timezone time.nist.gov
!
username admin password hash $1$JbbHvKVG$xMZ/XL4tH15Knf.FfcZZr. role admin
!
service sshd
!
password-policy
  lower-case-required
  upper-case-required
  digit-required
  no-username
  disable-cisco-passwords
  min-password-length 6
!
logging localhost
logging loglevel 6
!
show running-config
!
cdp timer 60
!
cdp holdtime 180
!
cdp run GigabitEthernet 0
!
no cdp
!
ncs/admin#
### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>configure</td>
<td>Enters configuration mode.</td>
</tr>
<tr>
<td>show startup-config</td>
<td>Displays the contents of the startup configuration file or the configuration.</td>
</tr>
</tbody>
</table>
show startup-config

To display the contents of the startup configuration file or the configuration, use the `show startup-config` command in EXEC mode.

**show startup-config**

**Syntax Description**

No arguments or keywords.

**Command Default**

The `show startup-config` command displays all of the startup configuration information.

**Command Modes**

EXEC

**Examples**

```
ncs/admin# show startup-config
!
hostname ncs
!
ip domain-name cisco.com
!
interface GigabitEthernet 0
   ip address 172.23.90.113 255.255.255.0
   ipv6 address autoconfig
!
ip name-server 171.70.168.183
!
ip default-gateway 172.23.90.1
!
clock timezone UTC
!
ntp server time.nist.gov
!
username admin password hash $1$JbbHvKVG$xMZ/XL4tH15KnF.ffeZD. role admin
!
service sshd
!
password-policy
   lower-case-required
   upper-case-required
   digit-required
   no-username
   disable-cisco-passwords
   min-password-length 6
!
logging localhost
logging loglevel 6
!
cdp timer 60
!
cdp holdtime 180
!
cdp run GigabitEthernet 0
!
!}
```

ncs/admin#
## Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>configure</td>
<td>Enters configuration mode.</td>
</tr>
<tr>
<td>show running-config</td>
<td>Displays the contents of the currently running configuration file or the configuration.</td>
</tr>
</tbody>
</table>
show tech-support

To display technical support information, including email, use the **show tech-support** command in EXEC mode.

**show tech-support file** [word]

### Syntax Description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>file</td>
<td>Save any technical support data as a file in the local disk.</td>
</tr>
<tr>
<td>word</td>
<td>Filename to save. Up to 80 alphanumeric characters.</td>
</tr>
</tbody>
</table>

### Command Default

Passwords and other security information do not appear in the output.

### Command Modes

EXEC

### Usage Guidelines

The **show tech-support** command is useful for collecting a large amount of information about your Cisco Prime Infrastructure server for troubleshooting purposes. You can then provide output to technical support representatives when reporting a problem.

### Examples

```
ncs/admin# show tech-support
---------------------------------------------------------------------
Application Deployment Engine (ADE) - 2.0.0.568
Technical Support Debug Info follows...
---------------------------------------------------------------------

*************************************************************************
Checking dmidecode Serial Number(s)
*************************************************************************
None
VMware-56 4d 14 cb 54 3d 44 5d-49 ee c4 ad a5 6a 88 c4

*************************************************************************
Displaying System Uptime...
*************************************************************************
12:54:34 up 18:37, 1 user, load average: 0.14, 0.13, 0.12

*************************************************************************
Display Memory Usage (KB)
*************************************************************************
Mem: 1035164 1006180 28984 0 10784 345464
-/+ buffers/cache: 649932 385232
Swap: 2040244 572700 1467544

*************************************************************************
Displaying Processes (ax --forest)...
*************************************************************************
PID TTY STAT TIME COMMAND
1 ? Ss 0:02 init [3]
2 ? S< 0:00 [migration/0]
3 ? SN 0:00 [ksoftirqd/0]
4 ? S< 0:00 [watchdog/0]
```
show tech-support

---More---
(press Spacebar to continue)

ncs/admin#

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show interface</td>
<td>Displays the usability status of the interfaces.</td>
</tr>
<tr>
<td>show process</td>
<td>Displays information about active processes.</td>
</tr>
<tr>
<td>show running-config</td>
<td>Displays the contents of the current running configuration.</td>
</tr>
</tbody>
</table>
show terminal

To obtain information about the terminal configuration parameter settings, use the show terminal command in EXEC mode.

show terminal

Syntax Description

No arguments or keywords.

Command Default

No default behavior or values.

Command Modes

EXEC

Examples

ncs/admin# show terminal
TTY: /dev/pts/0 Type: "vt100"
Length: 27 lines, Width: 80 columns
Session Timeout: 30 minutes
ncs/admin#

Table A-14 describes the fields of the show terminal output.

Table 21: Show Terminal Field Descriptions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TTY: /dev/pts/0</td>
<td>Displays standard output to type of terminal.</td>
</tr>
<tr>
<td>Type: &quot;vt100&quot;</td>
<td>Type of current terminal used.</td>
</tr>
<tr>
<td>Length: 24 lines</td>
<td>Length of the terminal display.</td>
</tr>
<tr>
<td>Width: 80 columns</td>
<td>Width of the terminal display, in character columns.</td>
</tr>
<tr>
<td>Session Timeout: 30 minutes</td>
<td>Length of time, in minutes, for a session, after which the connection closes.</td>
</tr>
</tbody>
</table>
**show timezone**

To display the time zone set on the system, use the `show timezone` command in EXEC mode.

```bash
show timezone
```

**Syntax Description**
No arguments or keywords.

**Command Default**
No default behavior or values.

**Command Modes**
EXEC

**Examples**
```
ncs/admin# show timezone
UTC
ncs/admin#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>clock timezone</code></td>
<td>Sets the time zone on the system.</td>
</tr>
<tr>
<td><code>show timezones</code></td>
<td>Displays the time zones available on the system.</td>
</tr>
</tbody>
</table>
show timezones

To obtain a list of time zones from which you can select, use the show timezones command in EXEC mode.

**Syntax Description**

No arguments or keywords.

**Command Default**

No default behavior or values.

**Command Modes**

EXEC

**Usage Guidelines**

See clock timezone, for examples of the time zones available for the NCS server.

**Examples**

ncs/admin# show timezones
Africa/Blantyre
Africa/Dar_es_Salaam
Africa/Dakar
Africa/Asmara
Africa/Timbuktu
Africa/Maputo
Africa/Accra
Africa/Kigali
Africa/Tunis
Africa/Nouakchott
Africa/Ouagadougou
Africa/Windhoek
Africa/Douala
Africa/Johannesburg
Africa/Luanda
Africa/Lagos
Africa/Djibouti
Africa/Khartoum
Africa/Monrovia
Africa/Bujumbura
Africa/Porto-Novo
Africa/Malabo
Africa/Ceuta
Africa/Banjul
Africa/Cairo
Africa/Mogadishu
Africa/Brazzaville
Africa/Kampala
Africa/Sao_Tome
Africa/Algiers
Africa/Addis_Ababa
Africa/Ndjamena
Africa/Gaborone
Africa/Bamako
Africa/Freetown
--More--
(press Spacebar to continue)

ncs/admin#
## Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show timezone</td>
<td>Displays the time zone set on the system.</td>
</tr>
<tr>
<td>clock timezone</td>
<td>Sets the time zone on the system.</td>
</tr>
</tbody>
</table>
show udi

To display information about the UDI of the Cisco ISE 3315 appliance, use the `show udi` command in EXEC mode.

**show udi**

**Syntax Description**

No arguments or keywords.

**Command Default**

No default behavior or values.

**Command Modes**

EXEC

**Examples**

**Example 1**

`ncs/admin# show udi`
`SPID: L-NCS-1.0-50`
`VPID: V01`
`Serial: LAB12345678`
`ncs/admin#`

The following output appears when you run the `show udi` command on VMware servers.

**Example 2**

`ncs/admin# show udi`
`SPID: L-NCS-1.0-50`
`VPID: V01`
`Serial: 5C79C84ML9H`
`ncs/admin#`
show uptime

To display the length of time that you have been logged in to the Cisco Prime Infrastructure server, use the `show uptime` command in EXEC mode.

```
show uptime
```

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>(Optional) Output modifier variables:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• <code>begin</code>—Matched pattern. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td></td>
<td>• <code>count</code>—Count the number of lines in the output. Add number after the word <code>count</code>.</td>
</tr>
<tr>
<td></td>
<td>• <code>end</code>—End with line that matches. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td></td>
<td>• <code>exclude</code>—Exclude lines that match. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td></td>
<td>• <code>include</code>—Include lines that match. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td></td>
<td>• <code>last</code>—Display last few lines of output. Add number after the word <code>last</code>. Up to 80 lines to display. Default 10.</td>
</tr>
</tbody>
</table>

| Command Default | No default behavior or values. |
| Command Modes   | EXEC |

| Examples         | `ncs/admin# show uptime` |
|                 | 3 day(s), 18:55:02       |
|                 | `ncs/admin#`             |
show users

To display the list of users logged in to the Cisco Prime Infrastructure server, use the `show users` command in EXEC mode.

**Syntax Description**

No arguments or keywords.

**Command Default**

No default behavior or values.

**Command Modes**

EXEC

**Examples**

```
ncs/admin# show users
USERNAME ROLE HOST TTY LOGIN DATETIME
admin Admin 10.77.137.60 pts/0 Fri Aug 6 09:45:47 2010
ncs/admin#
```
show version

To display information about the software version of the system, use the show version command in EXEC mode.

show version

Syntax Description

No arguments or keywords.

Command Default

No default behavior or values.

Command Modes

EXEC

Usage Guidelines

This command displays version information about the Cisco ADE-OS software running on the Cisco Prime Infrastructure server, and displays the Cisco Prime Infrastructure version.

Examples

ncs/admin# show version
Cisco Application Deployment Engine OS Release: 2.0
ADE-OS Build Version: 2.0.0.568
ADE-OS System Architecture: i386

Copyright (c) 2005-2010 by Cisco Systems, Inc.
All rights reserved.
Hostname: pmbudev-vm3

Version information of installed applications
---------------------------------------------
Cisco Prime Network Control System
---------------------------------------------
Version : 1.0.2.051
Vendor : Wireless Networking Business Unit

ncs/admin#
Configuration Commands

This section list each configuration command. Each command includes a brief description of its use, command syntax, any command defaults and modes, usage guidelines, and an example of the command and any related commands.

Configuration commands include **interface** and **repository**.

**Note**

Some of the configuration commands require you to enter the configuration submode to complete the command configuration.

To access configuration mode, you must use the **configure** command in EXEC mode.

This section contains the following list of commands:
**backup-staging-url**

To allow you to configure a Network File System (NFS) location that the backup and restore operations will use as a staging area to package and unpackage backup files, use the **backup-staging-url** command in configuration mode.

```
backup-staging-url word
```

**Syntax Description**

<table>
<thead>
<tr>
<th>word</th>
<th>NFS URL for staging area. Up to 2048 alphanumeric characters. Use nfs://server:path(1).</th>
</tr>
</thead>
</table>

**Command Default**

No default behavior or values.

**Command Modes**

Configuration

**Usage Guidelines**

The URL is NFS only. The format of the command is **backup-staging-url nfs://server:path**.

**Caution**

Ensure that you secure your NFS server in such a way that the directory can be accessed only by the IP address of the Cisco Prime Infrastructure server.

**Examples**

```
ncs/admin(config)# backup-staging-url nfs://loc-filer02a:/vol/local1/private1/jdoe
ncs/admin(config)#
```
cdp holdtime

To specify the amount of time for which the receiving device should hold a Cisco Discovery Protocol packet from the Cisco Prime Infrastructure server before discarding it, use the **cdp holdtime** command in configuration mode. To revert to the default setting, use the **no** form of this command.

```plaintext
Syntax Description

  seconds  Specifies the hold time, in seconds. Value from 10 to 255 seconds.

Command Default

  180 seconds

Command Modes

  Configuration

Usage Guidelines

Cisco Discovery Protocol packets transmit with a time to live, or hold time, value. The receiving device will discard the Cisco Discovery Protocol information in the Cisco Discovery Protocol packet after the hold time has elapsed.

The **cdp holdtime** command takes only one argument; otherwise, an error occurs.

Examples

```plaintext
ncs/admin(config)# cdp holdtime 60
ncs/admin(config)#
```
**cdp run**

To enable the Cisco Discovery Protocol, use the `cdp run` command in configuration mode. To disable the Cisco Discovery Protocol, use the `no` form of this command.

`cdp run [GigabitEthernet]`

**Syntax Description**

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GigabitEthernet</td>
<td>Specifies the GigabitEthernet interface on which to enable the Cisco Discovery Protocol.</td>
</tr>
</tbody>
</table>

**Command Default**

No default behavior or values.

**Command Modes**

Configuration

**Usage Guidelines**

The command has one optional argument, which is an interface name. Without an optional interface name, the command enables the Cisco Discovery Protocol on all interfaces.

*Note*

The default for this command is on interfaces that are already up and running. When you are bringing up an interface, stop the Cisco Discovery Protocol first; then, start the Cisco Discovery Protocol again.

**Examples**

```
ncs/admin(config)# cdp run GigabitEthernet 0
ncs/admin(config)#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>cdp holdtime</td>
<td>Specifies the length of time that the receiving device should hold a Cisco Discovery Protocol packet from the Cisco Prime Infrastructure server before discarding it.</td>
</tr>
<tr>
<td>cdp timer</td>
<td>Specifies how often the Cisco Prime Infrastructure server sends Cisco Discovery Protocol updates.</td>
</tr>
</tbody>
</table>
**cdp timer**

To specify how often the Cisco Prime Infrastructure server sends Cisco Discovery Protocol updates, use the `cdp timer` command in configuration mode. To revert to the default setting, use the `no` form of this command.

```plaintext
Syntax Description

seconds Specifies how often, in seconds, the Cisco Prime Infrastructure server sends Cisco Discovery Protocol updates. Value from 5 to 254 seconds.

Command Default

60 seconds

Command Modes

Configuration

Usage Guidelines

Cisco Discovery Protocol packets transmit with a time to live, or hold time, value. The receiving device will discard the Cisco Discovery Protocol information in the Cisco Discovery Protocol packet after the hold time has elapsed.

The `cdp timer` command takes only one argument; otherwise, an error occurs.

Examples

ncs/admin(config)# cdp timer 60
ncs/admin(config)#

Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>cdp holdtime</code></td>
<td>Specifies the amount of time that the receiving device should hold a Cisco Discovery Protocol packet from the Cisco Prime Infrastructure server before discarding it.</td>
</tr>
<tr>
<td><code>cdp run</code></td>
<td>Enables the Cisco Discovery Protocol.</td>
</tr>
</tbody>
</table>
clock timezone

To set the time zone, use the **clock timezone** command in configuration mode. To disable this function, use the **no** form of this command.

**clock timezone timezone**

**Syntax Description**

- **timezone**: Name of the time zone visible when in standard time. Up to 64 alphanumeric characters.

**Command Default**

UTC

**Command Modes**

Configuration

**Usage Guidelines**

The system internally keeps time in UTC. If you do not know your specific time zone, you can enter the region, country, and city (see Tables Table 22: Common Time Zones, Table 23: Australia Time Zones, and Table 24: Asia Time Zones for sample time zones to enter on your system).

**Table 22: Common Time Zones**

<table>
<thead>
<tr>
<th>Acronym or name</th>
<th>Time Zone Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe</td>
<td>GMT, GMT0, GMT-0, GMT+0, UTC, Greenwich, Universal, Zulu</td>
</tr>
<tr>
<td></td>
<td>Greenwich Mean Time, as UTC</td>
</tr>
<tr>
<td>GB</td>
<td>British</td>
</tr>
<tr>
<td>GB-Eire, Eire</td>
<td>Irish</td>
</tr>
<tr>
<td>WET</td>
<td>Western Europe Time, as UTC</td>
</tr>
<tr>
<td>CET</td>
<td>Central Europe Time, as UTC + 1 hour</td>
</tr>
<tr>
<td>EET</td>
<td>Eastern Europe Time, as UTC + 2 hours</td>
</tr>
<tr>
<td>United States and Canada</td>
<td></td>
</tr>
<tr>
<td>EST, EST5EDT</td>
<td>Eastern Standard Time, as UTC -5 hours</td>
</tr>
<tr>
<td>CST, CST6CDT</td>
<td>Central Standard Time, as UTC -6 hours</td>
</tr>
</tbody>
</table>
### Table 23: Australia Time Zones

<table>
<thead>
<tr>
<th>Acronym or name</th>
<th>Time Zone Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>MST, MST7MDT</td>
<td>Mountain Standard Time, as UTC -7 hours</td>
</tr>
<tr>
<td>PST, PST8PDT</td>
<td>Pacific Standard Time, as UTC -8 hours</td>
</tr>
<tr>
<td>HST</td>
<td>Hawaiian Standard Time, as UTC -10 hours</td>
</tr>
</tbody>
</table>

### AustraliaFootnote.

<table>
<thead>
<tr>
<th>ACTFootnote.</th>
<th>Adelaide</th>
<th>Brisbane</th>
<th>Broken_Hill</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canberra</td>
<td>Currie</td>
<td>Darwin</td>
<td>Hobart</td>
</tr>
<tr>
<td>Lord_Howe</td>
<td>Lindeman</td>
<td>LHIFootnote.</td>
<td>Melbourne</td>
</tr>
<tr>
<td>North</td>
<td>NSWFootnote.</td>
<td>Perth</td>
<td>Queensland</td>
</tr>
<tr>
<td>South</td>
<td>Sydney</td>
<td>Tasmania</td>
<td>Victoria</td>
</tr>
<tr>
<td>West</td>
<td>Yancowinna</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 24: Asia Time Zones

<table>
<thead>
<tr>
<th>AsiaFootnote.</th>
<th>Almaty</th>
<th>Amman</th>
<th>Anadyr</th>
</tr>
</thead>
<tbody>
<tr>
<td>AdenFootnote.</td>
<td>Aqtobe</td>
<td>Ashgabat</td>
<td>Ashkhabad</td>
</tr>
<tr>
<td>Aqtau</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baghdad</td>
<td>Bahrain</td>
<td>Baku</td>
<td>Bangkok</td>
</tr>
<tr>
<td>Beirut</td>
<td>Bishkek</td>
<td>Brunei</td>
<td>Calcutta</td>
</tr>
<tr>
<td>Choibalsan</td>
<td>Chongqing</td>
<td>Columbo</td>
<td>Damascus</td>
</tr>
<tr>
<td>Dhakar</td>
<td>Dili</td>
<td>Dubai</td>
<td>Dushanbe</td>
</tr>
</tbody>
</table>

3 (1) Enter the country and city together with a forward slash (/) between them; for example, Australia/Currie.
4 (2) ACT = Australian Capital Territory
5 (3) LHI = Lord Howe Island
6 (4) NSW = New South Wales
AsiaFootnote.

<table>
<thead>
<tr>
<th>City</th>
<th>City</th>
<th>City</th>
<th>City</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gaza</td>
<td>Harbin</td>
<td>Hong_Kong</td>
<td>Hovd</td>
</tr>
<tr>
<td>Irkutsk</td>
<td>Istanbul</td>
<td>Jakarta</td>
<td>Jayapura</td>
</tr>
<tr>
<td>Jerusalem</td>
<td>Kabul</td>
<td>Kamchatka</td>
<td>Kabul</td>
</tr>
<tr>
<td>Kashgar</td>
<td>Katmandu</td>
<td>Kuala_Lumpur</td>
<td>Kuching</td>
</tr>
<tr>
<td>Kuwait</td>
<td>Krasnoyarsk</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7 (1) The Asia time zone includes cities from East Asia, Southern Southeast Asia, West Asia, and Central Asia.
8 (2) Enter the region and city or country together separated by a forward slash (/); for example, Asia/Aden.

Note

Several more time zones are available to you. On your Cisco Prime Infrastructure server, enter the `show timezones command`. A list of all the time zones available in the Cisco Prime Infrastructure server appears. Choose the most appropriate one for your time zone.

Examples

```
ncs/admin(config)# clock timezone EST
ncs/admin(config)# exit
ncs/admin# show timezone
EST
ncs/admin#
```

Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show timezones</td>
<td>Displays a list of available time zones on the system.</td>
</tr>
<tr>
<td>show timezone</td>
<td>Displays the current time zone set on the system.</td>
</tr>
</tbody>
</table>
**do**

To execute an EXEC-level command from configuration mode or any configuration submode, use the `do` command in any configuration mode.

**do arguments**

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>timezone</td>
<td>Name of the time zone visible when in standard time. Up to 64 alphanumeric characters.</td>
</tr>
</tbody>
</table>

**Table 25: Command Options for the Do Command**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>application install</td>
<td>Installs a specific application.</td>
</tr>
<tr>
<td>application remove</td>
<td>Removes a specific application.</td>
</tr>
<tr>
<td>application start</td>
<td>Starts or enables a specific application</td>
</tr>
<tr>
<td>application stop</td>
<td>Stops or disables a specific application.</td>
</tr>
<tr>
<td>application upgrade</td>
<td>Upgrades a specific application.</td>
</tr>
<tr>
<td>backup</td>
<td>Performs a backup (Cisco Prime Infrastructure and Cisco ADE OS) and places the backup in a repository.</td>
</tr>
<tr>
<td>backup-logs</td>
<td>Performs a backup of all the logs on the Cisco Prime Infrastructure server to a remote location.</td>
</tr>
<tr>
<td>clock</td>
<td>Sets the system clock on the Cisco Prime Infrastructure server.</td>
</tr>
<tr>
<td>configure</td>
<td>Enters configuration mode.</td>
</tr>
<tr>
<td>copy</td>
<td>Copies any file from a source to a destination.</td>
</tr>
<tr>
<td>debug</td>
<td>Displays any errors or events for various command situations; for example, backup and restore, configuration, copy, resource locking, file transfer, and user management.</td>
</tr>
<tr>
<td>delete</td>
<td>Deletes a file on the Cisco Prime Infrastructure server.</td>
</tr>
<tr>
<td>dir</td>
<td>Lists files on the Cisco Prime Infrastructure server.</td>
</tr>
<tr>
<td>forceout</td>
<td>Forces the logout of all the sessions of a specific Cisco Prime Infrastructure node user.</td>
</tr>
<tr>
<td>Command</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>halt</td>
<td>Disables or shuts down the Cisco Prime Infrastructure server.</td>
</tr>
<tr>
<td>help</td>
<td>Describes the help utility and how to use it on the Cisco Prime Infrastructure server.</td>
</tr>
<tr>
<td>mkdir</td>
<td>Creates a new directory.</td>
</tr>
<tr>
<td>nslookup</td>
<td>Queries the IPv4 address or hostname of a remote system.</td>
</tr>
<tr>
<td>patch</td>
<td>Install System or Application patch.</td>
</tr>
<tr>
<td>pep</td>
<td>Configures the Inline PEP node.</td>
</tr>
<tr>
<td>ping</td>
<td>Determines the IPv4 network activity on a remote system.</td>
</tr>
<tr>
<td>ping6</td>
<td>Determines the IPv6 network activity on a IPv6 remote system.</td>
</tr>
<tr>
<td>reload</td>
<td>Reboots the Cisco Prime Infrastructure server.</td>
</tr>
<tr>
<td>restore</td>
<td>Performs a restore and retrieves the backup out of a repository.</td>
</tr>
<tr>
<td>rmdir</td>
<td>Removes an existing directory.</td>
</tr>
<tr>
<td>show</td>
<td>Provides information about the Cisco Prime Infrastructure server.</td>
</tr>
<tr>
<td>ssh</td>
<td>Starts an encrypted session with a remote system.</td>
</tr>
<tr>
<td>tech</td>
<td>Provides Technical Assistance Center (TAC) commands.</td>
</tr>
<tr>
<td>telnet</td>
<td>Establishes a Telnet connection to a remote system.</td>
</tr>
<tr>
<td>terminal length</td>
<td>Sets terminal line parameters.</td>
</tr>
<tr>
<td>terminal session-timeout</td>
<td>Sets the inactivity timeout for all terminal sessions.</td>
</tr>
<tr>
<td>terminal session-welcome</td>
<td>Sets the welcome message on the system for all terminal sessions.</td>
</tr>
<tr>
<td>terminal terminal-type</td>
<td>Specifies the type of terminal connected to the current line of the current session.</td>
</tr>
<tr>
<td>traceroute</td>
<td>Traces the route of a remote IP address.</td>
</tr>
<tr>
<td>undebug</td>
<td>Disables the output (display of errors or events) of the debug command for various command situations; for example, backup and restore, configuration, copy, resource locking, file transfer, and user management.</td>
</tr>
</tbody>
</table>
### Description

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>write</td>
<td>Erases the startup configuration that forces to run the setup utility and prompt the network configuration, copies the running configuration to the startup configuration, displays the running configuration on the console.</td>
</tr>
</tbody>
</table>

### Command Default

No default behavior or values.

### Command Modes

Configuration

### Usage Guidelines

Use this command to execute EXEC commands (such as show, clear, and debug commands) while configuring your server. After the EXEC command executes, the system will return to configuration mode you were using.

### Examples

```shell
ncs/admin(config)# do show run
Generating configuration...
!
hostname ncs
!
ip domain-name cisco.com
!
interface GigabitEthernet 0  
ip address 172.23.90.113 255.255.255.0
  ipv6 address autoconfig
!
ip name-server 171.70.168.183
!
ip default-gateway 172.23.90.1
!
clock timezone EST
!
ntp server time.nist.gov
!
username admin password hash $1$JbbHvKVG$xMZ/XL4tH15Knf.FfcZZr. role admin
!
service sshd
!
backup-staging-url nfs://loc-filer02a:/vol/local1/private1/jdoe
!
password-policy
  lower-case-required
  upper-case-required
  digit-required
  no-username
  disable-cisco-passwords
  min-password-length 6
!
logging localhost
logging loglevel 6
!
--More--
ncs/admin(config)#
```
end

To end the current configuration session and return to EXEC mode, use the `end` command in configuration mode.

```
end
```

**Syntax Description**

No arguments or keywords.

**Command Default**

No default behavior or values.

**Command Modes**

Configuration

**Usage Guidelines**

This command brings you back to EXEC mode regardless of what configuration mode or submode you are in.

Use this command when you finish configuring the system and you want to return to EXEC mode to perform verification steps.

```
ncs/admin(config)# end
ncs/admin#
```

**Examples**

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>exit</td>
<td>Exits configuration mode.</td>
</tr>
<tr>
<td>exit (EXEC)</td>
<td>Closes the active terminal session by logging out of the Cisco Prime Infrastructure server.</td>
</tr>
</tbody>
</table>
exit

To exit any configuration mode to the next-highest mode in the CLI mode hierarchy, use the `exit` command in configuration mode.

```
exit
```

**Syntax Description**
No arguments or keywords.

**Command Default**
No default behavior or values.

**Command Modes**
Configuration

**Usage Guidelines**
The `exit` command is used in the Cisco Prime Infrastructure server to exit the current command mode to the next highest command mode in the CLI mode hierarchy.

For example, use the `exit` command in configuration mode to return to EXEC mode. Use the `exit` command in the configuration submodes to return to configuration mode. At the highest level, EXEC mode, the `exit` command exits the EXEC mode and disconnects from the Cisco Prime Infrastructure server (see `exit`, for a description of the `exit` (EXEC) command).

**Examples**

```
nncs/admin(config)# exit
ncs/admin#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>end</code></td>
<td>Exits configuration mode.</td>
</tr>
<tr>
<td><code>exit</code> (EXEC)</td>
<td>Closes the active terminal session by logging out of the Cisco Prime Infrastructure server.</td>
</tr>
</tbody>
</table>
To set the hostname of the system, use the `hostname` command in configuration mode. To delete the hostname from the system, use the `no` form of this command, which resets the system to localhost.

**hostname word**

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>Command to configure the hostname.</th>
</tr>
</thead>
<tbody>
<tr>
<td>hostname</td>
<td>Name of the host. Contains at least 2 to 64 alphanumeric characters and an underscore (_). The hostname must begin with a character that is not a space.</td>
</tr>
<tr>
<td>word</td>
<td></td>
</tr>
</tbody>
</table>

**Command Default**

No default behavior or values.

**Command Modes**

Configuration

**Usage Guidelines**

A single instance type of command, `hostname` only occurs once in the configuration of the system. The hostname must contain one argument; otherwise, an error occurs.

**Examples**

```
ncs/admin(config)# hostname ncs-1
Changing the hostname or IP may result in undesired side effects, such as installed application(s) being restarted.
Are you sure you want to proceed? [y/n] y
Stopping NCS Monitoring & Troubleshooting Log Processor...
Stopping NCS Monitoring & Troubleshooting Log Collector...
Stopping NCS Monitoring & Troubleshooting Alert Process...
Stopping NCS Application Server...
Stopping NCS Monitoring & Troubleshooting Session Database...
Stopping NCS Database processes...
Starting NCS Database processes...
Starting NCS Monitoring & Troubleshooting Session Database...
Starting NCS Application Server...
Starting NCS Monitoring & Troubleshooting Log Collector...
Starting NCS Monitoring & Troubleshooting Log Processor...
Starting NCS Monitoring & Troubleshooting Alert Process...
Note: NCS Processes are initializing. Use 'show application status ncs' CLI to verify all processes are in running state.

ncs-1/admin(config)#
```

```
ncs-1/admin# show application status ncs
NCS Database listener is running, PID: 11142
NCS Database is running, number of processes: 29
NCS Application Server is still initializing.
NCS M&T Session Database is running, PID: 11410
NCS M&T Log Collector is running, PID: 11532
NCS M&T Log Processor is running, PID: 11555
NCS M&T Alert Process is running, PID: 11623
ncs-1/admin#
```
icmp echo

To configure the Internet Control Message Protocol (ICMP) echo responses, use the `icmp echo` command in configuration mode.

`icmp echo {off | on}`

**Syntax Description**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>off</code></td>
<td>Disables ICMP echo response</td>
</tr>
<tr>
<td><code>on</code></td>
<td>Enables ICMP echo response</td>
</tr>
</tbody>
</table>

**Command Default**

The system behaves as if the ICMP echo response is on (enabled).

**Command Modes**

Configuration

**Examples**

```
ncs/admin(config)# icmp echo off
ncs/admin(config)#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>show icmp-status</code></td>
<td>Display ICMP echo response configuration information.</td>
</tr>
</tbody>
</table>
interface

To configure an interface type and enter the interface configuration mode, use the interface command in configuration mode.

**Note**

VMware virtual machine may have a number of interfaces available that depends on how many network interfaces (NIC) are added to the virtual machine.

```
interface GigabitEthernet [0 | 1 | 2 | 3]
```

**Syntax Description**

<table>
<thead>
<tr>
<th>GigabitEthernet</th>
<th>Configures the Gigabit Ethernet interface.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 3</td>
<td>Number of the Gigabit Ethernet port to configure.</td>
</tr>
</tbody>
</table>

**Note**

After you enter the Gigabit Ethernet port number in the interface command, you enter the config-GigabitEthernet configuration submode (see the following Syntax Description).

<table>
<thead>
<tr>
<th>do</th>
<th>EXEC command. Allows you to perform any EXEC commands in this mode (see do).</th>
</tr>
</thead>
<tbody>
<tr>
<td>end</td>
<td>Exits the config-GigabitEthernet submode and returns you to EXEC mode.</td>
</tr>
<tr>
<td>exit</td>
<td>Exits the config-GigabitEthernet configuration submode.</td>
</tr>
<tr>
<td>ip</td>
<td>Sets the IP address and netmask for the Ethernet interface (see ip address ).</td>
</tr>
<tr>
<td>ipv6</td>
<td>Configures IPv6 autoconfiguration address and IPv6 address from DHCPv6 server. (see ipv6 address autoconfig and ipv6 address dhcp ).</td>
</tr>
<tr>
<td>no</td>
<td>Negates the command in this mode. Two keywords are available:</td>
</tr>
<tr>
<td></td>
<td>• ip—Sets the IP address and netmask for the interface.</td>
</tr>
<tr>
<td></td>
<td>• shutdown—Shuts down the interface.</td>
</tr>
<tr>
<td>shutdown</td>
<td>Shuts down the interface (see shutdown ).</td>
</tr>
</tbody>
</table>

**Command Default**

No default behavior or values.

**Command Modes**

Configuration
Usage Guidelines

You can use the `interface` command to configure subinterfaces to support various requirements.

Examples

```
ncs/admin(config)# interface GigabitEthernet 0
ncs/admin(config-GigabitEthernet)#
```

Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>show interface</code></td>
<td>Displays information about the system interfaces.</td>
</tr>
<tr>
<td><code>ip address</code> (interface configuration mode)</td>
<td>Sets the IP address and netmask for the interface.</td>
</tr>
<tr>
<td><code>shutdown</code> (interface configuration mode)</td>
<td>Shuts down the interface (see <code>shutdown</code> ).</td>
</tr>
</tbody>
</table>
ipv6 address autoconfig

To enable IPv6 stateless autoconfiguration, use the `interface GigabitEthernet 0` command in configuration mode. This command does not have a `no` form.

IPv6 address autoconfiguration is enabled by default in Linux. Cisco ADE 2.0 shows the IPv6 address autoconfiguration in the running configuration for any interface that is enabled.

```
interface GigabitEthernet 0
```

**Syntax Description**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>interface</td>
<td>The command to configure an interface.</td>
</tr>
<tr>
<td>GigabitEthernet</td>
<td>Configures the Gigabit Ethernet interface.</td>
</tr>
<tr>
<td>&lt;0 - 3&gt;</td>
<td>Number of the Gigabit Ethernet port to configure.</td>
</tr>
</tbody>
</table>

**Command Default**

No default behavior or values.

**Command Modes**

Configuration

**Usage Guidelines**

IPv6 stateless autoconfiguration has the security downfall of having predictable IP addresses. This downfall is resolved with privacy extensions. You can verify that the privacy extensions feature is enabled using the `show` command.

**Examples**

**Example 1**

```
ncs/admin# configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
ncs/admin(config)# interface GigabitEthernet 0
ncs/admin(config)# (config-GigabitEthernet)# ipv6 address autoconfig
ncs/admin(config)# (config-GigabitEthernet)# end
ncs/admin#
```

When IPv6 autoconfiguration is enabled, the running configuration shows the interface settings similar to the following:

```
!
interface GigabitEthernet 0
  ip address 172.23.90.116 255.255.255.0
  ipv6 address autoconfig
!
```

You can use the `show interface GigabitEthernet 0` command to display the interface settings. In example 2, you can see that the interface has three IPv6 addresses. The first address (starting with 3ffe) is obtained using the stateless autoconfiguration. For the stateless autoconfiguration to work, you must have IPv6 route advertisement enabled on that subnet. The next address (starting with fe80) is a link-local address that does not have any scope outside the host. You will always see a link local address regardless of the IPv6 autoconfiguration or DHCPv6 configuration. The last address (starting with 2001) is obtained from a IPv6 DHCP server.
Example 2

```
ncs/admin# show interface GigabitEthernet 0
eth0    Link encap:Ethernet  HWaddr 00:0C:29:AF:DA:05
        inet addr:172.23.90.116  Bcast:172.23.90.255  Mask:255.255.255.0
        inet6 addr:3ffe:302:11:2:20c:29ff:feaf:da05/64  Scope:Global
        inet6 addr:fe80::20c:29ff:feaf:da05/64  Scope:Link
        UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
        RX packets:77848  errors:0  dropped:0  overruns:0  frame:0
        TX packets:23131  errors:0  dropped:0  overruns:0  carrier:0
        collisions:0  txqueuelen:1000
        RX bytes:10699801 (10.2 MiB) TX bytes:3448374 (3.2 MiB)
        Interrupt:59  Base address:0x2000
```

To verify that the privacy extensions feature is enabled, you can use the `show interface GigabitEthernet 0` command. You can see two autoconfiguration addresses: one address is without the privacy extensions, and the other is with the privacy extensions.

In the example 3 below, the MAC is 3ffe:302:11:2:20c:29ff:feaf:da05/64 and the non-RFC3041 address contains the MAC, and the privacy-extension address is 302:11:2:9d65:e608:59a9:d4b9/64.

The output appears similar to the following:

Example 3

```
ncs/admin# show interface GigabitEthernet 0
eth0    Link encap:Ethernet  HWaddr 00:0C:29:AF:DA:05
        inet addr:172.23.90.116  Bcast:172.23.90.255  Mask:255.255.255.0
        inet6 addr:3ffe:302:11:2:20c:29ff:feaf:da05/64  Scope:Global
        inet6 addr:fe80::20c:29ff:feaf:da05/64  Scope:Link
        UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
        RX packets:60606  errors:0  dropped:0  overruns:0  frame:0
        TX packets:2771  errors:0  dropped:0  overruns:0  carrier:0
        collisions:0  txqueuelen:1000
        RX bytes:9430102 (8.9 MiB) TX bytes:466204 (455.2 KiB)
        Interrupt:59  Base address:0x2000
```

Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>show interface</code></td>
<td>Displays information about the system interfaces.</td>
</tr>
<tr>
<td><code>ip address (interface configuration mode)</code></td>
<td>Sets the IP address and netmask for the interface.</td>
</tr>
<tr>
<td><code>shutdown (interface configuration mode)</code></td>
<td>Shuts down the interface (see <code>shutdown</code>).</td>
</tr>
<tr>
<td><code>ipv6 address dhcp</code></td>
<td>Enables IPv6 address DHCP on an interface.</td>
</tr>
<tr>
<td><code>show running-config</code></td>
<td>Displays the contents of the currently running configuration file or the configuration.</td>
</tr>
</tbody>
</table>
ipv6 address dhcp

To enable IPv6 address DHCP, use the `interface GigabitEthernet 0` command in configuration mode. This command does not have a `no` form.

```
interface GigabitEthernet 0
```

**Syntax Description**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>interface</code></td>
<td>The command to configure an interface.</td>
</tr>
<tr>
<td><code>GigabitEthernet</code></td>
<td>Configures the Gigabit Ethernet interface.</td>
</tr>
<tr>
<td><code>0</code></td>
<td>Gigabit Ethernet port number to be configured.</td>
</tr>
</tbody>
</table>

**Command Default**

No default behavior or values.

**Command Modes**

Configuration

**Usage Guidelines**

None.

**Examples**

```
cs/admin# configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
cs/admin(config)# interface GigabitEthernet 0
cs/admin(config-GigabitEthernet)# ipv6 address dhcp
ncs/admin(config-GigabitEthernet)# end
ncs/admin#
```

When IPv6 DHCPv6 is enabled, the running configuration shows the interface settings similar to the following:

```
! interface GigabitEthernet 0
   ip address 172.23.90.116 255.255.255.0
   ipv6 address dhcp
!
```

**Note**

The IPv6 stateless autoconfiguration and IPv6 address DHCP are not mutually exclusive. It is possible to have both IPv6 stateless autoconfiguration and IPv6 address DHCP on the same interface. You can use the `show interface` command to display what IPv6 addresses are in use for a particular interface.

When both the IPv6 stateless autoconfiguration and IPv6 address DHCP are enabled, the running configuration shows the interface settings similar to the following:

```
! interface GigabitEthernet 0
   ip address 172.23.90.116 255.255.255.0
   ipv6 address dhcp
!
```
## Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>show interface</code></td>
<td>Displays information about the system interfaces.</td>
</tr>
<tr>
<td><code>ip address</code> configuration mode</td>
<td>Sets the IP address and netmask for the interface.</td>
</tr>
<tr>
<td><code>shutdown</code> configuration mode</td>
<td>Shuts down the interface (see <code>shutdown</code>).</td>
</tr>
<tr>
<td><code>ipv6 address autoconfig</code></td>
<td>Enables IPv6 stateless autoconfiguration on an interface.</td>
</tr>
<tr>
<td><code>show running-config</code></td>
<td>Displays the contents of the currently running configuration file or the configuration.</td>
</tr>
</tbody>
</table>
ip address

To set the IP address and netmask for the Ethernet interface, use the `ip address` command in interface configuration mode. To remove an IP address or disable IP processing, use the `no` form of this command.

```
ip address ip-address netmask
```

**Note**

You can configure the same IP address on multiple interfaces. You might want to do this to limit the configuration steps that are needed to switch from using one interface to another.

**Syntax Description**

<table>
<thead>
<tr>
<th><code>ip-address</code></th>
<th>IPv4 version IP address.</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>netmask</code></td>
<td>Mask of the associated IP subnet.</td>
</tr>
</tbody>
</table>

**Command Default**

Enabled.

**Command Modes**

Interface configuration

**Usage Guidelines**

Requires exactly one address and one netmask; otherwise, an error occurs.

**Examples**

```
ncs/admin(config)# interface GigabitEthernet 1
ncs/admin(config-GigabitEthernet)# ip address 209.165.200.227 255.255.255.224
```

Changing the hostname or IP may result in undesired side effects, such as installed application(s) being restarted.

To verify that NCS processes are running, use the 'show application status ncs' command.

```
ncs/admin(config-GigabitEthernet)#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>shutdown (interface configuration mode)</td>
<td>Disables an interface (see shutdown ).</td>
</tr>
<tr>
<td>ip default-gateway</td>
<td>Sets the IP address of the default gateway of an interface.</td>
</tr>
<tr>
<td>show interface</td>
<td>Displays information about the system IP interfaces.</td>
</tr>
<tr>
<td>interface</td>
<td>Configures an interface type and enters the interface mode.</td>
</tr>
</tbody>
</table>
ip default-gateway

To define or set a default gateway with an IP address, use the **ip default-gateway** command in configuration mode. To disable this function, use the **no** form of this command.

```
ip default-gateway ip-address
```

**Syntax Description**

- **ip-address**: IP address of the default gateway.

**Command Default**

Disabled.

**Command Modes**

Configuration

**Usage Guidelines**

If you enter more than one argument or no arguments at all, an error occurs.

**Examples**

```
ncs/admin(config)# ip default-gateway 209.165.202.129
ncs/admin(config)#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ip address (interface configuration mode)</td>
<td>Sets the IP address and netmask for the Ethernet interface.</td>
</tr>
</tbody>
</table>
To define a default domain name that the Cisco Prime Infrastructure server uses to complete hostnames, use the `ip domain-name` command in configuration mode. To disable this function, use the `no` form of this command.

**ip domain-name** word

**Syntax Description**

| word | Default domain name used to complete the hostnames. Contains at least 2 to 64 alphanumeric characters. |

**Command Default**

Enabled.

**Command Modes**

Configuration

**Usage Guidelines**

If you enter more or fewer arguments, an error occurs.

**Examples**

```
ncs/admin(config)# ip domain-name cisco.com
ncs/admin(config)#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>ip name-server</code></td>
<td>Sets the DNS servers for use during a DNS query.</td>
</tr>
</tbody>
</table>
**ip name-server**

To set the Domain Name Server (DNS) servers for use during a DNS query, use the `ip name-server` command in configuration mode. You can configure one to three DNS servers. To disable this function, use the `no` form of this command.

```
Example:
ncs/admin(config)# ip name-server 209.165.201.1
```

To verify that NCS processes are running, use the `show application status ncs` command.

```
ncs/admin(config)#
```

You can choose not to restart the Cisco Prime Infrastructure server; nevertheless, the changes will take effect.

**Syntax Description**

- `ip name-server` The command to configure IP addresses of name server(s) to use.
- `ip-address` Address of a name server.
- `ip-address*` (Optional) IP addresses of additional name servers.

**Note**

Using the `no` form of this command removes all the name servers from the configuration. Using the `no` form of this command and one of the IP names removes only that IP name server.

```
ip name-server ip-address [ip-address*]
```

**Command Default**

No default behavior or values.

**Command Modes**

Configuration

**Usage Guidelines**

The first name server that is added with the `ip name-server` command occupies the first position and the system uses that server first to resolve the IP addresses.

You can add name servers to the system one at a time or all at once, until you reach the maximum (3). If you already configured the system with three name servers, you must remove at least one server to add additional name servers.

To place a name server in the first position so that the subsystem uses it first, you must remove all name servers with the `no` form of this command before you proceed.
### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ip domain-name</td>
<td>Defines a default domain name that the server uses to complete hostnames.</td>
</tr>
</tbody>
</table>
ip route

To configure the static routes, use the **ip route** command in configuration mode. To remove static routes, use the **no** form of this command.

Static routes are manually configured, which makes them inflexible (they cannot dynamically adapt to network topology changes), but extremely stable. Static routes optimize bandwidth utilization, because no routing updates need to be sent to maintain them. They also make it easy to enforce routing policy.

**ip route** prefix mask **gateway** ip-address

**no ip route** prefix mask

<table>
<thead>
<tr>
<th>Syntax Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>prefix</td>
</tr>
<tr>
<td>mask</td>
</tr>
<tr>
<td>ip-address</td>
</tr>
</tbody>
</table>

**Command Default**

No default behavior or values.

**Command Modes**

Configuration.

**Examples**

```
ncs/admin(config)# ip route 192.168.0.0 255.255.0.0 gateway 172.23.90.2
ncs/admin(config)#
```
**kron occurrence**

To schedule one or more Command Scheduler commands to run at a specific date and time or a recurring level, use the **kron occurrence** command in configuration mode. To delete this schedule, use the **no** form of this command.

```
kron {occurrence} occurrence-name
```

**Syntax Description**

- **occurrence**: Schedules Command Scheduler commands.
- **occurrence-name**: Name of the occurrence. Up to 80 alphanumeric characters. (See the following note and Syntax Description.)

**Note**

After you enter the **occurrence-name** in the **kron occurrence** command, you enter the config-occurrence configuration submode (see the following syntax description).

```
at
   Identifies that the occurrence is to run at a specified calendar date and time. Usage: at [hh:mm] [day-of-week | day-of-month | month day-of-month].
```

```
do
   EXEC command. Allows you to perform any EXEC commands in this mode (see do).
```

```
end
   Exits the kron-occurrence configuration submode and returns you to EXEC mode.
```

```
exit
   Exits the kron-occurrence configuration mode.
```

```
no
   Negates the command in this mode. Three keywords are available:
   • at—Usage: at [hh:mm] [day-of-week | day-of-month | month day-of-month].
   • policy-list—Specifies a policy list to be run by the occurrence. Up to 80 alphanumeric characters.
   • recurring—Execution of the policy lists should be repeated.
```

```
policy-list
   Specifies a Command Scheduler policy list to be run by the occurrence.
```

```
recurring
   Identifies that the occurrences run on a recurring basis.
```

**Command Default**

No default behavior or values.


**Command Modes**

Configuration

**Usage Guidelines**

Use the `kron occurrence` and `policy-list` commands to schedule one or more policy lists to run at the same time or interval.

Use the `kron policy-list` command in conjunction with the `cli` command to create a Command Scheduler policy that contains the EXEC CLI commands to be scheduled to run on the Cisco Prime Infrastructure server at a specified time. See `kron policy-list`.

**Examples**

When you run the `kron` command, backup bundles are created with a unique name (by adding a time stamp) to ensure that the files do not overwrite each other.

**Example 1: Weekly Backup**

```
ncs/admin(config)# kron occurrence WeeklyBackup
ncs/admin(config-Occurrence)# at 14:35 Monday
ncs/admin(config-Occurrence)# policy-list SchedBackupPolicy
ncs/admin(config-Occurrence)# recurring
ncs/admin(config-Occurrence)# exit
ncs/admin(config)#
```

**Example 2: Daily Backup**

```
ncs/admin(config)# kron occurrence DailyBackup
ncs/admin(config-Occurrence)# at 02:00
ncs/admin(config-Occurrence)# exit
ncs/admin(config)#
```

**Command Reference Guide for Cisco Prime Infrastructure, Release 1.2**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>kron policy-list</td>
<td>Specifies a name for a Command Scheduler policy.</td>
</tr>
</tbody>
</table>
kron policy-list

To specify a name for a Command Scheduler policy and enter the kron-Policy List configuration submode, use the **kron policy-list** command in configuration mode. To delete a Command Scheduler policy, use the **no** form of this command.

**kron** `{policy-list}` **list-name**

### Syntax Description

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>policy-list</code></td>
<td>Specifies a name for Command Scheduler policies.</td>
</tr>
<tr>
<td><code>list-name</code></td>
<td>Name of the policy list. Up to 80 alphanumeric characters.</td>
</tr>
</tbody>
</table>

**Note**

After you enter the `list-name` in the **kron policy-list** command, you enter the config-Policy List configuration submode (see the following Syntax Description).

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>cli</code></td>
<td>Command to be executed by the scheduler. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td><code>do</code></td>
<td>EXEC command. Allows you to perform any EXEC commands in this mode (see <code>do</code>).</td>
</tr>
<tr>
<td><code>end</code></td>
<td>Exits from the config-policy list configuration submode and returns you to EXEC mode.</td>
</tr>
<tr>
<td><code>exit</code></td>
<td>Exits this submode.</td>
</tr>
<tr>
<td><code>no</code></td>
<td>Negates the command in this mode. One keyword is available:</td>
</tr>
<tr>
<td></td>
<td>• <code>cli</code>—Command to be executed by the scheduler.</td>
</tr>
</tbody>
</table>

**Command Default**

No default behavior or values.

**Command Modes**

Configuration

**Usage Guidelines**

Use the **kron policy-list** command in conjunction with the **cli** command to create a Command Scheduler policy that contains the EXEC CLI commands to be scheduled to run on the NCS server at a specified time. Use the **kron occurrence** and **policy list** commands to schedule one or more policy lists to run at the same time or interval. See **ip route**.

**Examples**

```
ncs/admin(config)# kron policy-list SchedBackupMonday
```
Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ip route</td>
<td>Specifies schedule parameters for a Command Scheduler occurrence and enters the config-Occurrence configuration mode.</td>
</tr>
</tbody>
</table>
logging

To enable the system to forward logs to a remote system or to configure the log level, use the `logging` command in configuration mode. To disable this function, use the `no` form of this command.

`logging {ip-address | hostname} {loglevel level}`

**Syntax Description**

- `ip-address` - IP address of remote system to which you forward logs. Up to 32 alphanumeric characters.
- `hostname` - Hostname of remote system to which you forward logs. Up to 32 alphanumeric characters.
- `loglevel` - The command to configure the log level for the logging command.
- `level` - Number of the desired priority level at which you set the log messages. Priority levels are (enter the number for the keyword):
  - 0-emerg—Emergencies: System unusable.
  - 1-alert—Alerts: Immediate action needed.
  - 2-crit—Critical: Critical conditions.
  - 3-err—Error: Error conditions.
  - 4-warn—Warning: Warning conditions.
  - 5-notif—Notifications: Normal but significant conditions.
  - 6-inform—(Default) Informational messages.
  - 7-debug—Debugging messages.

**Command Default**

No default behavior or values.

**Command Modes**

Configuration

**Usage Guidelines**

This command requires an IP address or hostname or the `loglevel` keyword; an error occurs if you enter two or more of these arguments.

**Examples**

`Example 1`

```
ncs/admin(config)# logging 209.165.200.225
ncs/admin(config)#
```
Example 2

```plaintext
cs/admin(config)# logging loglevel 0
ncs/admin(config)#
```

### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show logging</td>
<td>Displays list of logs for the system.</td>
</tr>
</tbody>
</table>
ntp server

To allow for software clock synchronization by the NTP server for the system, use the `ntp server` command in configuration mode. Allows up to three servers. To disable this capability, use the `no` form of this command.

```
ntp server {ip-address | hostname} [ip-address | hostname] [ip-address | hostname]
```

**Syntax Description**

- `ip-address | hostname` : IP address or hostname of the server providing the clock synchronization. Arguments are limited to 255 alphanumeric characters.

**Command Default**

No servers are configured by default.

**Command Modes**

Configuration

**Usage Guidelines**

Use this command if you want to allow the system to synchronize with a specified server.

To terminate NTP service on a device, you must enter the `no ntp` command without keywords or arguments. For example, if you previously entered the `ntp server` command and you now want to remove not only the server synchronization capability, but all NTP functions from the device, use the `no ntp` command without any keywords. This command ensures that all NTP functions are disabled and that the NTP service also terminates.

**Note**

This command gives conflicting information during the sync process. The sync process can take up to 20 minutes to complete.

**Examples**

```
ncs/admin(config)# ntp server ncs ncs1 ncs2
ncs/admin(config)#
ncs/admin# show ntp
Primary NTP : ncs
Secondary NTP : ncs1
Tertiary NTP : ncs2

synchronised to local net at stratum 11
time correct to within 11 ms
polling server every 1024 s

<table>
<thead>
<tr>
<th>remote</th>
<th>refid</th>
<th>st</th>
<th>t</th>
<th>when</th>
<th>poll</th>
<th>reach</th>
<th>delay</th>
<th>offset</th>
<th>jitter</th>
</tr>
</thead>
<tbody>
<tr>
<td>*127.127.1.0</td>
<td>.LOCL.</td>
<td>10</td>
<td>l</td>
<td>22</td>
<td>64</td>
<td>377</td>
<td>0.000</td>
<td>0.000</td>
<td>0.001</td>
</tr>
<tr>
<td>172.23.90.113</td>
<td>.INIT.</td>
<td>16</td>
<td>u</td>
<td>-1024</td>
<td>0</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>172.23.90.114</td>
<td>.INIT.</td>
<td>16</td>
<td>u</td>
<td>-1024</td>
<td>0</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>172.23.90.115</td>
<td>.INIT.</td>
<td>16</td>
<td>u</td>
<td>-1024</td>
<td>0</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td></td>
</tr>
</tbody>
</table>

Warning: Output results may conflict during periods of changing synchronization.
ncs admin#
```
### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show ntp</td>
<td>Displays the status information about the NTP associations.</td>
</tr>
</tbody>
</table>
password-policy

To enable or configure the passwords on the system, use the `password-policy` command in configuration mode. To disable this function, use the `no` form of this command.

**password-policy option**

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>digit-required</td>
<td>Requires a digit in the password.</td>
</tr>
<tr>
<td>disable-repeat-characters</td>
<td>Disables the ability of the password to contain more than four identical characters.</td>
</tr>
<tr>
<td>disable-cisco-password</td>
<td>Disables the ability to use the word Cisco or any combination as the password.</td>
</tr>
<tr>
<td>do</td>
<td>Exec command.</td>
</tr>
<tr>
<td>end</td>
<td>Exit from configure mode.</td>
</tr>
<tr>
<td>exit</td>
<td>Exit from this submode.</td>
</tr>
<tr>
<td>lower-case-required</td>
<td>Requires a lowercase letter in the password.</td>
</tr>
<tr>
<td>min-password-length</td>
<td>Specifies a minimum number of characters for a valid password. Integer length from 0 to 4,294,967,295.</td>
</tr>
<tr>
<td>no</td>
<td>Negate a command or set its defaults.</td>
</tr>
<tr>
<td>no-previous-password</td>
<td>Prevents users from reusing a part of their previous password.</td>
</tr>
<tr>
<td>no-username</td>
<td>Prohibits users from reusing their username as a part of a password.</td>
</tr>
<tr>
<td>password-expiration-days</td>
<td>Number of days until a password expires. Integer length from 0 to 80.</td>
</tr>
</tbody>
</table>

The `password-policy` command requires a policy option (see Syntax Description). You must enter the `password-expiration-enabled` command before the other password-expiration commands.

Syntax Description

- Option: Different command options.
### password-policy

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>password-expiration-enabled</td>
<td>Enables password expiration.</td>
</tr>
<tr>
<td></td>
<td><strong>Note</strong> You must enter the <code>password-expiration-enabled</code> command before the other password-expiration commands.</td>
</tr>
<tr>
<td>password-expiration-warning</td>
<td>Number of days before expiration that warnings of impending expiration begin. Integer length from 0 to 4,294,967,295.</td>
</tr>
<tr>
<td>password-lock-enabled</td>
<td>Locks a password after several failures.</td>
</tr>
<tr>
<td>password-lock-retry-count</td>
<td>Number of failed attempts before password locks. Integer length from 0 to 4,294,967,295.</td>
</tr>
<tr>
<td>upper-case-required</td>
<td>Requires an uppercase letter in the password.</td>
</tr>
<tr>
<td>special-required</td>
<td>Requires a special character in the password.</td>
</tr>
</tbody>
</table>

**Command Default**

No default behavior or values.

**Command Modes**

Configuration

**Examples**

```markdown
ncs/admin(config)# password-policy
ncs/admin(config-password-policy)# password-expiration-days 30
ncs/admin(config-password-policy)# exit
ncs/admin(config)#
```
To enter the repository submode for configuration of backups, use the `repository` command in configuration mode.

```
repository repository-name
```

**Syntax Description**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>repository-name</code></td>
<td>Name of repository. Up to 80 alphanumeric characters.</td>
</tr>
</tbody>
</table>

**Note**

After you enter the name of the repository in the `repository` command, you enter the config-Repository configuration submode (see the syntax description).

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>do</code></td>
<td>EXEC command. Allows you to perform any of the EXEC commands in this mode (see <code>do</code>).</td>
</tr>
<tr>
<td><code>end</code></td>
<td>Exits the config-Repository submode and returns you to EXEC mode.</td>
</tr>
<tr>
<td><code>exit</code></td>
<td>Exits this mode.</td>
</tr>
<tr>
<td><code>no</code></td>
<td>Negates the command in this mode.</td>
</tr>
<tr>
<td><code>url</code></td>
<td>URL of the repository. Up to 80 alphanumeric characters (see Table A-20).</td>
</tr>
<tr>
<td><code>user</code></td>
<td>Configure the username and password for access. Up to 30 alphanumeric characters.</td>
</tr>
</tbody>
</table>

**Table 26: URL Keywords**

<table>
<thead>
<tr>
<th>Keyword</th>
<th>Source of Destination</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>word</code></td>
<td>Enter the repository URL, including server and path info. Up to 80 alphanumeric characters.</td>
</tr>
<tr>
<td><code>cdrom:</code></td>
<td>Local CD-ROM drive (read only).</td>
</tr>
<tr>
<td>Keyword</td>
<td>Source of Destination</td>
</tr>
<tr>
<td>---------</td>
<td>-----------------------</td>
</tr>
<tr>
<td><strong>disk:</strong></td>
<td>Local storage. You can run the <code>show repository repository_name</code> to view all the files in the local repository. <strong>Note</strong> All local repositories are created on the <code>/localdisk</code> partition. When you specify <code>disk:/</code> in the repository URL, the system creates directories in a path that is relative to <code>/localdisk</code>. For example, if you entered <code>disk:/backup</code>, the directory is created at <code>/localdisk/backup</code>.</td>
</tr>
<tr>
<td><strong>ftp:</strong></td>
<td>Source or destination URL for an FTP network server. Use <code>url ftp://server/path(1)</code>.</td>
</tr>
<tr>
<td><strong>nfs:</strong></td>
<td>Source or destination URL for an NFS network server. Use <code>url nfs://server:path1</code>.</td>
</tr>
<tr>
<td><strong>sftp:</strong></td>
<td>Source or destination URL for an SFTP network server. Use <code>url sftp://server/path1</code>.</td>
</tr>
<tr>
<td><strong>tftp:</strong></td>
<td>Source or destination URL for a TFTP network server. Use <code>url tftp://server/path1</code>. <strong>Note</strong> You cannot use a TFTP repository for performing a Cisco Prime Infrastructure upgrade.</td>
</tr>
</tbody>
</table>

(1) Server is the server name and path refers to `/subdir/subsubdir`. Remember that a colon (:) is required after the server for an NFS network server.

**Command Default**

No default behavior or values.

**Command Modes**

Configuration

**Examples**

**Example 1**

```
nos/admin# configure terminal
ncs/admin(config)# repository myrepository
ncs/admin(config-Repository)# url sftp://example.test.com/repository/system1
ncs/admin(config-Repository)# user luke password example
ncs/admin(config-Repository)# exit
ncs/admin#
```

**Example 2**

```
nos/admin# configure terminal
ncs/admin(config)# repository myrepository
ncs/admin(config-Repository)# url disk:/
ncs/admin(config-Repository)# user luke password plain example
ncs/admin(config-Repository)# exit
ncs/admin#
```
<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>backup</td>
<td>Performs a backup (Cisco Prime Infrastructure and Cisco ADE OS) and places the backup in a repository.</td>
</tr>
<tr>
<td>restore</td>
<td>Performs a restore and takes the backup out of a repository.</td>
</tr>
<tr>
<td>show backup history</td>
<td>Displays the backup history of the system.</td>
</tr>
<tr>
<td>show repository</td>
<td>Displays the available backup files located on a specific repository.</td>
</tr>
</tbody>
</table>
To specify a service to manage, use the `service` command in configuration mode. To disable this function, use the `no` form of this command.

**service sshd**

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>service</td>
<td>The command to specify a service to be managed.</td>
</tr>
<tr>
<td>sshd</td>
<td>Secure Shell Daemon. The daemon program for SSH.</td>
</tr>
</tbody>
</table>

**Command Default**

No default behavior or values.

**Command Modes**

Configuration

**Examples**

```
ncs/admin(config)# service sshd
ncs/admin(config)#
```
shutdown

To shut down an interface, use the `shutdown` command in the interface configuration mode. To disable this function, use the `no` form of this command.

**Syntax Description**

No arguments or keywords.

**Command Default**

No default behavior or values.

**Command Modes**

Interface configuration

**Usage Guidelines**

When you shut down an interface using this command, you lose connectivity to the Cisco ISE-3315 appliance through that interface (even though the appliance is still powered on). However, if you have configured the second interface on the appliance with a different IP and have not shut down that interface, you can access the appliance through that second interface.

To shut down an interface, you can also modify the ifcfg-eth[0,1] file, which is located at `/etc/sysconfig/network-scripts`, using the ONBOOT parameter:

- Disable an interface: set ONBOOT="no"
- Enable an interface: set ONBOOT="yes"

You can also use the `no shutdown` command to enable an interface.

**Examples**

```
ncs/admin(config)# interface GigabitEthernet 0
ncs/admin(config-GigabitEthernet)# shutdown
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>interface</td>
<td>Configures an interface type and enters interface mode.</td>
</tr>
<tr>
<td>ip address (interface configuration mode)</td>
<td>Sets the IP address and netmask for the Ethernet interface.</td>
</tr>
<tr>
<td>show interface</td>
<td>Displays information about the system IP interfaces.</td>
</tr>
<tr>
<td>ip default-gateway</td>
<td>Sets the IP address of the default gateway of an interface.</td>
</tr>
</tbody>
</table>
snmp-server community

To set up the community access string to permit access to the Simple Network Management Protocol (SNMP), use the `snmp-server community` command in configuration mode. To disable this function, use the `no` form of this command.

```
snmp-server community word ro
```

**Syntax Description**

- `word`  
  Accessing string that functions much like a password and allows access to SNMP. No blank spaces allowed. Up to 255 alphanumeric characters.
- `ro`  
  Specifies read-only access.

**Command Default**

No default behavior or values.

**Command Modes**

Configuration

**Usage Guidelines**

The `snmp-server community` command requires a community string and the `ro` argument; otherwise, an error occurs.

**Examples**

```
ncs/admin(config)# snmp-server community new ro
ncs/admin(config)#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>snmp-server host</code></td>
<td>Sends traps to a remote system.</td>
</tr>
<tr>
<td><code>snmp-server location</code></td>
<td>Configures the SNMP location MIB value on the system.</td>
</tr>
<tr>
<td><code>snmp-server contact</code></td>
<td>Configures the SNMP contact MIB value on the system.</td>
</tr>
</tbody>
</table>
snmp-server contact

To configure the SNMP contact Management Information Base (MIB) value on the system, use the `snmp-server contact` command in configuration mode. To remove the system contact information, use the `no` form of this command.

`snmp-server contact` word

Syntax Description

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>word</code></td>
<td>String that describes the system contact information of the node. Up to 255 alphanumeric characters.</td>
</tr>
</tbody>
</table>

Command Default

No default behavior or values.

Command Modes

Configuration

Usage Guidelines

None.

Examples

```
ncs/admin(config)# snmp-server contact Luke
ncs/admin(config)#
```

Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>snmp-server host</code></td>
<td>Sends traps to a remote system.</td>
</tr>
<tr>
<td><code>snmp-server community</code></td>
<td>Sets up the community access string to permit access to the SNMP.</td>
</tr>
<tr>
<td><code>snmp-server location</code></td>
<td>Configures the SNMP location MIB value on the system.</td>
</tr>
</tbody>
</table>
snmp-server host

To send SNMP traps to a remote user, use the `snmp-server host` command in configuration mode. To remove trap forwarding, use the `no` form of this command.

```
snmp-server host {ip-address | hostname} version {1 | 2c} community
```

**Syntax Description**

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ip-address</td>
<td>IP address of the SNMP notification host. Up to 32 alphanumeric characters.</td>
</tr>
<tr>
<td>hostname</td>
<td>Name of the SNMP notification host. Up to 32 alphanumeric characters.</td>
</tr>
</tbody>
</table>
| version {1 | 2c} | (Optional) Version of the SNMP used to send the traps. Default = 1. If you use the version keyword, specify one of the following keywords:  
  - 1—SNMPv1.  
  - 2c—SNMPv2C. |
| community | Password-like community string that is sent with the notification operation. |

**Command Default**

Disabled.

**Command Modes**

Configuration

**Usage Guidelines**

The command takes arguments as listed; otherwise, an error occurs.

**Examples**

```
cs/admin(config)# snmp-server community new ro
ncs/admin(config)# snmp-server host 209.165.202.129 version 1 password
ncs/admin(config)#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>snmp-server community</td>
<td>Sets up the community access string to permit access to SNMP.</td>
</tr>
<tr>
<td>snmp-server location</td>
<td>Configures the SNMP location MIB value on the system.</td>
</tr>
<tr>
<td>snmp-server contact</td>
<td>Configures the SNMP contact MIB value on the system.</td>
</tr>
</tbody>
</table>
snmp-server location

To configure the SNMP location MIB value on the system, use the **snmp-server location** command in configuration mode. To remove the system location information, use the **no** form of this command.

**snmp-server location** *word*

**Syntax Description**

| Word | String that describes the physical location information of the system. Up to 255 alphanumeric characters. |

**Command Default**

No default behavior or values.

**Command Modes**

Configuration

**Usage Guidelines**

We recommend that you use underscores (_) or hyphens (-) between the terms within the *word* string. If you use spaces between terms within the *word* string, you must enclose the string in quotation marks (").

**Examples**

**Example 1**

```
ncs/admin(config)# snmp-server location Building_3/Room_214
```

**Example 2**

```
ncs/admin(config)# snmp-server location "Building 3/Room 214"
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>snmp-server host</td>
<td>Sends traps to a remote system.</td>
</tr>
<tr>
<td>snmp-server community</td>
<td>Sets up the community access string to permit access to SNMP.</td>
</tr>
</tbody>
</table>
username

To add a user who can access the Cisco ISE-3315 using SSH, use the `username` command in configuration mode. If the user already exists, the password, the privilege level, or both change with this command. To delete the user from the system, use the `no` form of this command.

```
username username password {hash | plain} password role {admin | user} [disabled [email email-address]]
```

For an existing user, use the following command option:

```
username username password role {admin | user} password
```

### Syntax Description

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>username</code></td>
<td>Only one word for the username argument. Blank spaces and quotation marks (&quot;) are not allowed. Up to 31 alphanumeric characters.</td>
</tr>
<tr>
<td><code>password</code></td>
<td>The command to use specify password and user role.</td>
</tr>
<tr>
<td><code>password</code></td>
<td>Password character length up to 40 alphanumeric characters. You must specify the password for all new users.</td>
</tr>
<tr>
<td>`hash</td>
<td>plain`</td>
</tr>
<tr>
<td>`role admin</td>
<td>user`</td>
</tr>
<tr>
<td><code>disabled</code></td>
<td>Disables the user according to the user's email address.</td>
</tr>
<tr>
<td><code>email email-address</code></td>
<td>The user's email address. For example, <a href="mailto:user1@example.com">user1@example.com</a>.</td>
</tr>
</tbody>
</table>

### Command Default

The initial user during setup.

### Command Modes

Configuration

### Usage Guidelines

The `username` command requires that the username and password keywords precede the `hash | plain` and the `admin | user` options.

### Examples

**Example 1**

```
ncs/admin(config)# username admin password hash ###### role admin
ncs/admin(config)#
```

**Example 2**

```
ncs/admin(config)# username admin password plain Secr3tp@swd role admin
ncs/admin(config)#
```

**Example 3**

```
ncs/admin(config)# username admin password plain Secr3tp@swd role admin email
```
### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>password-policy</td>
<td>Enables and configures the password policy.</td>
</tr>
<tr>
<td>show users</td>
<td>Displays a list of users and their privilege level. It also displays a list of logged-in users.</td>
</tr>
</tbody>
</table>
Glossary

A
ADE
Application Deployment Engine

C
CDP
Cisco Discovery Protocol. A proprietary tool that network administrators use to access a summary of protocol and address information about other devices that are directly connected to the device initiating the command.

CDP runs over the data-link layer connecting the physical media to the upper-layer protocols. Because CDP operates at this level, two or more CDP devices that support different network layer protocols (for example, IP and Novell IPX) can learn about each other.

Physical media supporting the Subnetwork Access Protocol (SNAP) encapsulation connect CDP devices. These can include all LANs, Frame Relay, and other WANs, and ATM networks.

Cisco Discovery Protocol
See CDP

CLI
Command-line interface. An interface through which the user can interact with the software operating system by entering commands and optional arguments.

client
Node or software program that requests services from a server. For example, the Secure Shell (SSH) client.

See also server.

command-line interface
See CLI
community string

A text string that acts as a password, which is used to authenticate messages sent between a management station and an IP Transfer Point (ITP) containing a SNMP agent. The community string sends in every packet between the manager and the agent.

D

DNS

Domain Name System. DNS associates various sorts of information with so-called domain names; most importantly, it serves as the "phone book" for the Internet: it translates human-readable computer hostnames (for example, en.wikipedia.org) into the IP addresses that networking equipment needs for delivering information. It also stores other information, such as the list of mail exchange servers that accept e-mail for a given domain. In providing a worldwide keyword-based redirection service, the DNS is an essential component of contemporary Internet use.

DNS name

Initial name of a node.

domain name

The style of identifier—a sequence of case-insensitive ASCII labels separated by dots (.) (for example, example.com.)—defined for subtrees in the Internet DNS [R1034] and used in other Internet identifiers, such as hostnames, mailbox names, and URLs.

Domain Name System

See DNS

F

FTP

File Transfer Protocol. Application protocol, part of the TCP/IP protocol stack, used for transferring files between network nodes. FTP is defined in RFC 959.

H

host

Computer system on a network. Similar to the term node; except, that host usually implies a computer system, whereas node generally applies to any network system, including access servers and ITPs.

host name

The name of the operating system's server or computer that contains the major program files.
IP

Internet Protocol. Network layer protocol in the TCP/IP stack offering a connectionless internetwork service. IP provides features for addressing, type-of-service specification, fragmentation and reassembly, and security. Documented in RFC 791.

IP address

32-bit address assigned to hosts by using TCP/IP. An IP address belongs to one of five classes (A, B, C, D, or E) and written as 4 octets separated by periods (.) (dotted-decimal format). Each address consists of a network number, an optional subnetwork number, and a host number. For routing, the network and subnetwork numbers stay together, while the host number addresses an individual host within the network or subnetwork. A subnet mask extracts network and subnetwork information from the IP address.

M

MIB

Management Information Base. A directory listing information used and maintained by a network’s management protocol, such as SNMP.

N

name server

A name server is a computer server that implements a name-service protocol. It will normally map a computer-usable identifier of a host to a human-usable identifier for that host. For example, a DNS server might translate the domain name en.wikipedia.org to the IP address 145.97.39.155.

Network Time Protocol

See NTP.

NTP

Network Time Protocol. A protocol for synchronizing the clocks of computer systems over packet-switched, variable-latency data networks. NTP uses User Datagram Protocol (UDP) port 123 as its transport layer. NTP is designed particularly to resist the effects of variable latency (jitter).

NTP is one of the oldest Internet protocols still in use (since before 1985). NTP was originally designed by Dave Mills of the University of Delaware, who still maintains it, along with a team of volunteers.

NTP is not related to the much simpler DAYTIME (RFC 867) and TIME (RFC 868) protocols.

NFS

Network File System. NFS allows a system to share directories and files with others over a network. By using NFS, users and programs can access files on remote systems almost as if they were local files. In NCS, the NFS must be open shared which basically mean that it should not need any credentials.
Port

In IP terminology, an upper-layer process that receives information from lower layers. Each numbered port associates with a specific process. For example, SMTP associates with port 25.

Secure Shell

See SSH.

erver

An application or device that performs services for connected clients as part of a client-server architecture. A server application, as defined by RFC 2616 (HTTP/1.1), is "an application program that accepts connections in order to service requests by sending back responses." Server computers are devices designed to run such an application or applications, often for extended periods of time, with minimal human direction. Examples of servers include web servers, e-mail servers, and file servers.

See also client.

Simple Network Management Protocol

See SNMP.

SSH

Secure Shell. A network protocol in which data is exchanged over a secure channel between two computers. Encryption provides confidentiality and integrity of data. SSH uses public-key cryptography to authenticate the remote computer and allow the remote computer to authenticate the user.

SSH is typically used to log in to a remote machine and execute commands; but, it also supports tunneling, forwarding arbitrary TCP ports, and X Window System (X11) connections. It can transfer files by using the associated SSH File Transfer Protocol (SFTP) or Secure Copy (SCP) protocols.

An SSH server, by default, listens on the standard TCP port 22. An SSH client program is typically used for establishing connections to an sshd daemon accepting remote connections. Both are commonly present on most modern operating systems. Proprietary, freeware, and open-source versions of various levels of complexity and completeness exist.

SNMP


SNMPv1

SNMPv1 is a simple request/response protocol. In the SNMPv1 framework, the network-management system installed a request, and managed devices return responses.
SNMPv2C

The second release of SNMP, described in RFC 1902. It provides additions to data types, counter size, and protocol operations. SNMPv2C support includes a bulk-retrieval mechanism and more detailed error message reporting to management stations. The bulk-retrieval mechanism supports the retrieval of tables and large quantities of information, minimizing the number of round-trip transmissions required. SNMPv2C improved error-handling support includes expanded error codes that distinguish different kinds of error conditions; these conditions are reported through a single error code in SNMPv1. Error return codes now report the error type. Three kinds of exceptions are also reported: No such object, No such instance, and End of MIB view.

T

TCP


Telnet

Telnet (TELetype NETwork). A network protocol used on the Internet or LAN connections. It was developed in 1969 beginning with RFC 0015 and standardized as IETF STD 8, one of the first Internet standards.

The term Telnet also refers to software that implements the client part of the protocol. Telnet clients have been available on most UNIX systems for many years and are available for virtually all platforms. Most network equipment and operating systems with a TCP/IP stack support some kind of Telnet service server for their remote configuration (including ones based on Windows NT). Recently, Secure Shell has begun to dominate remote access for UNIX-based machines.

Most often, a user telnets to a UNIX-like server system or a simple network device such as a switch. For example, you might “telnet in from home to check your e-mail at work.” In doing so, you would be using a Telnet client to connect from your computer to one of your servers. Once the connection is established, you would then log in with your account information and execute the operating system commands remotely on that computer, such as ls or cd.

TFTP

Trivial File Transfer Protocol. Simplified version of FTP that allows files to be transferred from one computer to another over a network.

Transmission Control Protocol

See TCP.

Trivial File Transfer Protocol

See TFTP.
UDI

Unique Device Identifier. Each identifiable product is an entity, as defined by the Entity MIB (RFC 2737) and its supporting documents. Some entities, such as a chassis, will have subentities like slots. An Ethernet switch might be a member of a super entity like a stack. Most Cisco entities that are orderable products will leave the factory with an assigned UDI. The UDI information is printed on a label that is affixed to the physical hardware device, and it is also stored electronically on the device in order to facilitate remote retrieval.

A UDI consists of the following elements: product identifier (PID), version identifier (VID), and serial number (SN).

The PID is the name by which the product can be ordered; it has been historically called the “Product Name” or “Part Number.” You use this identifier to order an exact replacement part.

The VID is the version of the product. Whenever a product is revised, the VID is incremented, according to a rigorous process derived from Telcordia GR-209-CORE, an industry guideline that governs product change notices.

The SN is the vendor-unique serialization of the product. Each manufactured product carries a unique serial number assigned at the factory, which cannot be changed in the field. This number identifies an individual, specific instance of a product.

Unique Device Identifier

See UDI.
INDEX

A
accessing, CLI 15, 17, 18
about 17
prerequisites 15
hardware installation 15
SSH 18
accounts, user 2
audience ix

C
CLI 15, 26
accessing 15
commands, navigating 26
CLI audit logs 14
command 6, 7, 10, 12, 21
modes 6, 7, 10, 12, 21
configuration 12
EXEC 7, 10
understanding 21
types of 6
command-line 30
editing, key 30
configuration 164, 165, 167, 168, 170, 171, 174, 175, 176, 177, 178, 180, 182, 184, 185, 186, 187, 189, 190, 192, 194, 196, 198, 200, 203, 204, 205, 206, 207, 208, 209
backup-staging-url 164
cdp holdtime 165
cdp run 166
cdp timer 167
clock timezone 168
do 171
del...
commands (continued)
EXEC (continued)
dir 60
exit 63
forceout 64
halt 65
mkdir 66
ncs db reinitdb 86
nslookup 87
patch install 88
patch remove 90
ping 92
ping6 93
reload 95
restore 97
rmrdir 99
show 119
ssh 106
tech 107
telnet 108
terminal length 109
terminal session-timeout 110
terminal session-welcome 111
terminal terminal-type 112
traceroute 113
undirbug 114
write 117
show 10, 120, 123, 124, 126, 127, 129, 131, 133, 135, 136, 139, 140, 141, 142, 144, 147, 148, 149, 151, 153, 155, 156, 157, 159, 160, 161, 162
show application 120
show backup history 123
show cdp 124
show clock 126
show cpu 127
show disks 129
show icmp-status 131
show interface 133
show inventory 135
show logging 136
show logins 139
show memory 140
show ntp 141
show ports 142
show process 144
show repository 147
show restore 148
show running-configuration 149
show startup-configuration 151
show tech-support 153
show terminal 155
show timezone 156
show timezones 157
show udi 159
commands (continued)
show (continued)
show uptime 160
show users 161
show version 162
configuration commands 12, 163
console port 1
conventions x, 30, 31, 32
command-line, completion 31
command-line, editing 30
document x
more prompt 32

D
default forms of commands, using 28
disk space, managing 34
document ix, x, xi
   audience ix
   conventions x
   organization x
   related xi
   using ix

E
EXEC commands 7, 37

H
help, getting 27

M
mode 5, 22, 23, 24
   about 5
   configuration 23
   configuration, submodes 24
   EXEC 22

N
navigating, commands 26
no forms of commands, using 28
Index

R
related documentation xi

S
setup utility 2, 15
show commands 10
supported platforms 17
    hardware 17

T
types of commands 6

U
user 2, 5
    accounts 2
    modes 5
using 18, 19
    PC locally 19
    SSH 18
utility, setup 15