



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 . The 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, any command defaults, command modes, usage guidelines, and one or more examples. Throughout this appendix, the server uses the name *ncs* in place of the server's hostname.



Note

If an error occurs in any command usage, use the **debug** command to determine the cause of the error.

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Disk Space Management in

This section provides information on disk space in the appliances for all types of deployments. Each of the appliances has a different amount of disk space, and managing that disk space is important to enable you to use the efficiently.

Before proceeding to use the CLI commands, familiarize yourself with disk space management in the appliances. You can deploy the on appliances with small, medium and large form factors and VMware. [Table 1: Appliances Configuration](#) provides information on appliances on all of the form factors and the available disk space that you need to manage the .

Table 1: Appliances Configuration

| Appliance Form Factor | Appliances | Hard Disk Configuration |
|-----------------------|--|--------------------------|
| Small | - | 2 x 250 GB SATA HDD. |
| Medium | - | 2 x 300 GB SAS RAID HDD. |
| Large | - | 4 x 300 GB SAS RAID HDD. |
| VMware | NCS-DEMO-10 (to run a Demo/Evaluation) | 30 GB |
| | L-NCS-1.0-K9 (to run the PxP production image) | 60 GB |
| | L-NCS-1.0-K9 (to run M&T production image) | 200 GB |

[Table 2: 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 2: Disk Space on /var Partition

| Process | Files | Small | Medium and Large | VMware |
|------------------|----------------------|-------|------------------|--------|
| Linux OS | System | - | 258 MB | - |
| Cisco ADE OS 2.0 | /var/log/ade/ADE.log | - | 50 MB | - |

All of the files that you create in the 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 3: 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 3: Disk Space on /opt Partition

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

For detailed information on logging into the , refer to the *Cisco Prime Network Control System Configuration Guide, Release 2.0*.

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.

application install



Note

You are not allowed to run the **application install** command from the CLI under normal operations because the application is preinstalled with a Cisco IOS image on all supported appliances and VMware.

To install a specific application other than the , 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

| | |
|-------------------------------|---|
| <i>application-bundle</i> | Application bundle filename. Up to 255 alphanumeric characters. |
| <i>remote-repository-name</i> | Remote repository name. Up to 255 alphanumeric characters. |

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

```
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

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 NCSdatabase processes...
```

```
Creating NCS M&T session directory...
Performing NCS database priming...

Application successfully installed
```

Related Commands

| Command | Description |
|-------------------------------------|---|
| application remove | Removes or uninstalls an application. |
| application start | Starts or enables an application. |
| application stop | Stops or disables an application. |
| application upgrade | Upgrades an application bundle. |
| show application | Shows application information for the installed application packages on the system. |

application remove



Note

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

To remove a specific application other than the , 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

| | |
|-------------------------|--|
| <i>application-name</i> | Application name. Up to 255 alphanumeric characters. |
|-------------------------|--|

Command Default

No default behavior or values.

Command Modes

EXEC

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

| Command | Description |
|-------------------------------------|---|
| application install | Installs an application bundle. |
| application start | Starts or enables an application. |
| application stop | Stops or disables an application. |
| application upgrade | Upgrades an application bundle. |
| show application | Shows application information for the installed application packages on the system. |

application reset-config



Note

This command is not currently supported by .

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

application reset-config *application-name*

Syntax Description

| | |
|-------------------------|--|
| <i>application-name</i> | Name of the application to reset its configuration to factory defaults. Up to 255 alphanumeric characters. |
|-------------------------|--|

Command Default

No default behavior or values.

Command Modes

EXEC

Usage Guidelines

You can use the **application reset-config** command to reset the configuration to factory defaults without reimaging the 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

| | |
|-------------------------|--|
| <i>application-name</i> | 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 application. If you use this command to start the application, you can see that the 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

| Command | Description |
|-------------------------------------|---|
| application install | Installs an application bundle. |
| application remove | Removes or uninstalls an application. |
| application stop | Stops or disables an application. |
| application upgrade | Upgrades an application bundle. |
| show application | Shows application information for the installed application packages on the system. |

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

| | |
|-------------------------|---|
| <i>application-name</i> | 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

```
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

| | Description |
|-------------------------------------|---|
| application install | Installs an application bundle. |
| application remove | Removes or uninstalls an application. |
| application start | Starts or enables an application. |
| application upgrade | Upgrades an application bundle. |
| show application | Shows application information for the installed application packages on the system. |

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 'PI' 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
Initiating Application Upgrade...
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...
ncs/admin#
```

Related Commands

| Command | Description |
|-------------------------------------|---------------------------------|
| application install | Installs an application bundle. |

| Command | Description |
|------------------------------------|---|
| application remove | Removes or uninstalls an application. |
| application start | Starts or enables an application. |
| application stop | Stops or disables an application. |
| show application | Shows application information for the installed application packages on the system. |

backup

To perform a backup (including the 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 application data without the Cisco ADE OS data, use the **application** command.

backup *backup-name* *repository repository-name* **application** *application-name*

Syntax Description

| | |
|-------------------------|--|
| <i>backup-name</i> | Name of the backup file. Up to 100 alphanumeric characters. |
| <i>repository-name</i> | Name of the location where the files should be backed up to. Up to 80 alphanumeric characters. |
| <i>application-name</i> | Application name. Up to 255 alphanumeric characters. Note Enter the application name as 'PI' in uppercase. |

Command Default

No default behavior or values.

Command Modes

EXEC

Usage Guidelines

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

To perform a backup of only the 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#

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

Related Commands

| Command | Description |
|-----------------------------|---------------------------------|
| backup-logs | Backs up the system logs. |
| delete | Deletes a file from the server. |
| dir | Lists a file from the server. |
| reload | Reboots the system. |

| Command | Description |
|-------------------------------------|---|
| repository | Enters the repository submode for configuration of backups. |
| restore | Restores from backup the file contents of a specific repository. |
| show backup history | Displays the backup history of the system. |
| show repository | Displays the available backup files located on a specific repository. |

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

| | |
|------------------------|--|
| <i>backup-name</i> | Name of one or more files to back up. Up to 100 alphanumeric characters. |
| <i>repository-name</i> | Location where files should be backed up to. Up to 80 alphanumeric characters. |

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

| Command | Description |
|-------------------------------------|--|
| backup | Performs a backup (and Cisco ADE OS) and places the backup in a repository. |
| restore | Restores from backup the file contents of a specific repository. |
| repository | Enters the repository submode for configuration of backups. |
| show backup history | Shows the backup history of the system. |
| show repository | Shows the available backup files located on a specific repository. |

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

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

Command Default

No default behavior or values.

Command Modes

EXEC

Usage Guidelines

Sets the system clock. You must restart the 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

| Command | Description |
|----------------------------|--|
| show clock | Displays the time and date set on the system software clock. |

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 press **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

| Command | Description |
|-------------------------------------|---|
| show running-config | Displays the contents of the currently running configuration file or the configuration. |
| show startup-config | Displays the contents of the startup configuration file or the configuration. |

copy

To copy any file from a source to a destination, use the **copy** command in EXEC mode.

Syntax Description

| | |
|-----------------------|--|
| <i>running-config</i> | Represents the current running configuration file. |
| <i>startup-config</i> | Represents the configuration file used during initialization (startup). |
| <i>protocol</i> | See Table 4: Protocol Prefix Keywords for protocol keyword options. |
| <i>hostname</i> | Hostname of destination. |
| <i>location</i> | Location of disk: /<dirpath>. |
| <i>logs</i> | The system log files. |
| <i>all</i> | Copies all 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. |
| <i>filename</i> | Allows you to copy a single log file and transfer it to the specified directory on the remote host, with its original name. |
| <i>log_filename</i> | Name of the log file, as displayed by the show logs command (up to 255 characters). |
| <i>mgmt</i> | Copies the 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. |
| <i>runtime</i> | Copies the runtime debug logs from the system, bundles them as runtimelogs.tar.gz, and transfers them to the specified directory on the remote host. |

Command Default

No default behavior or values.

Command Modes

EXEC

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 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 of 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.

The **copy** command in the copies a configuration (running or startup).

The active configuration stores itself in the RAM. Every configuration command you enter resides in the running configuration. If you reboot your 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 server 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 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.


Note

If you do not save the running configuration, you will lose all your configuration changes during the next reboot of the 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.


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 4: Protocol Prefix Keywords

| Keyword | Destination |
|-------------|--|
| ftp | URL for FTP network server. The syntax for this alias: ftp://location/directory |
| sftp | URL for an SFTP network server. The syntax for this alias: sftp://location/directory |

| Keyword | Destination |
|-------------|---|
| tftp | URL for a TFTP network server. The syntax for this alias: tftp://location/directory |

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#
```

This command is used to copy the certificate file from pnp to ftp.

```
ncs/admin# copy server.key /localdisk/tftp
copy server.crt /localdisk/tftp
copy ncs_server_certificate /localdisk/tftp
```

Examples

This command is used to copy the certificate from ftp to pnp.

```
copy tftp://<PI Server IP Address>/server.key disk:/
copy tftp://<PI Server IP Address>/server.crt disk:/
copy tftp://<PI Server IP Address>/ncs_server_certificate.crt disk:/
```

Related Commands

| Command | Description |
|-------------------------------------|--|
| application install | Starts or stops a instance. |
| backup | Performs a backup (and Cisco ADE OS) and places the backup in a repository. |
| delete | Deletes a file from the server. |
| dir | Lists a file from the server. |
| reload | Reboots the system. |
| restore | Restores from backup the file contents of a specific repository. |
| show application | Shows application status and version information. |
| show version | Displays information about the software version of the system. |

 copy

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

| | |
|-----------------------|---|
| all | Enables all debugging. |
| application | <p>Application files.</p> <ul style="list-style-type: none"> • <i>all</i>—Enables all application debug output. Set level between 0 and 7, with 0 being severe and 7 being all. • <i>install</i>—Enables application install debug output. Set level between 0 and 7, with 0 being severe and 7 being all. • <i>operation</i>—Enables application operation debug output. Set level between 0 and 7, with 0 being severe and 7 being all. • <i>uninstall</i>—Enables application uninstall debug output. Set level between 0 and 7, with 0 being severe and 7 being all. |
| backup-restore | <p>Backs up and restores files.</p> <ul style="list-style-type: none"> • <i>all</i>—Enables all debug output for backup-restore. Set level between 0 and 7, with 0 being severe and 7 being all. • <i>backup</i>—Enables backup debug output for backup-restore. Set level between 0 and 7, with 0 being severe and 7 being all. • <i>backup-logs</i>—Enables backup-logs debug output for backup-restore. Set level between 0 and 7, with 0 being severe and 7 being all. • <i>history</i>—Enables history debug output for backup-restore. Set level between 0 and 7, with 0 being severe and 7 being all. • <i>restore</i>—Enables restore debug output for backup-restore. Set level between 0 and 7, with 0 being severe and 7 being all. |
| cdp | <p>Cisco Discovery Protocol configuration files.</p> <ul style="list-style-type: none"> • <i>all</i>—Enables all Cisco Discovery Protocol configuration debug output. Set level between 0 and 7, with 0 being severe and 7 being all. • <i>config</i>—Enables configuration debug output for Cisco Discovery Protocol. Set level between 0 and 7, with 0 being severe and 7 being all. • <i>infra</i>—Enables infrastructure debug output for Cisco Discovery Protocol. Set level between 0 and 7, with 0 being severe and 7 being all. |

| | |
|----------------|--|
| config | <p>Configuration files.</p> <ul style="list-style-type: none"> • <i>all</i>—Enables all configuration debug output. Set level between 0 and 7, with 0 being severe and 7 being all. • <i>backup</i>—Enables backup configuration debug output. Set level between 0 and 7, with 0 being severe and 7 being all. • <i>clock</i>—Enables clock configuration debug output. Set level between 0 and 7, with 0 being severe and 7 being all. • <i>infra</i>—Enables configuration infrastructure debug output. Set level between 0 and 7, with 0 being severe and 7 being all. • <i>kron</i>—Enables command scheduler configuration debug output. Set level between 0 and 7, with 0 being severe and 7 being all. • <i>network</i>—Enables network configuration debug output. Set level between 0 and 7, with 0 being severe and 7 being all. • <i>repository</i>—Enables repository configuration debug output. Set level between 0 and 7, with 0 being severe and 7 being all. • <i>service</i>—Enables service configuration debug output. Set level between 0 and 7, with 0 being severe and 7 being all. |
| icmp | <p>Internet Control Message Protocol (ICMP) echo response configuration.</p> <p><i>all</i>—Enable all debug output for ICMP echo response configuration. Set level between 0 and 7, with 0 being severe and 7 being all.</p> |
| copy | Copy commands. Set level between 0 and 7, with 0 being severe and 7 being all. |
| locks | <p>Resource locking.</p> <ul style="list-style-type: none"> • <i>all</i>—Enables all resource locking debug output. Set level between 0 and 7, with 0 being severe and 7 being all. • <i>file</i>—Enables file locking debug output. Set level between 0 and 7, with 0 being severe and 7 being all. |
| logging | <p>Logging configuration files.</p> <p><i>all</i>—Enables all logging configuration debug output. Set level between 0 and 7, with 0 being severe and 7 being all.</p> |
| snmp | <p>SNMP configuration files.</p> <p><i>all</i>—Enables all SNMP configuration debug output. Set level between 0 and 7, with 0 being severe and 7 being all.</p> |

| | |
|-----------------|--|
| system | System files. <ul style="list-style-type: none"> • <i>all</i>—Enables all system files debug output. Set level between 0 and 7, with 0 being severe and 7 being all. • <i>id</i>—Enables system ID debug output. Set level between 0 and 7, with 0 being severe and 7 being all. • <i>info</i>—Enables system info debug output. Set level between 0 and 7, with 0 being severe and 7 being all. • <i>init</i>—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. <ul style="list-style-type: none"> • <i>all</i>—Enables all user management debug output. Set level between 0 and 7, with 0 being severe and 7 being all. • <i>password-policy</i>—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. <p><i>all</i>—Enables all utilities configuration debug output. Set level between 0 and 7, with 0 being severe and 7 being all.</p> |

Command Default

No default behavior or values.

Command Modes

EXEC

Usage Guidelines

Use the **debug** command to identify various failures within the server; for example, setup failures or configuration failures.

Examples

```

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# undebug all
ncs/admin#
```

Related Commands

| Command | Description |
|-------------------------|---|
| undebug | Disables the output (display of errors or events) of the debug command for various command situations. |

delete

To delete a file from the 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

| | |
|-------------------|---|
| <i>filename</i> | Filename. Up to 80 alphanumeric characters. |
| <i>disk:/path</i> | Location. |

Command Default

No default behavior or values.

Command Modes

EXEC

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

| Command | Description |
|---------------------|---------------------------------------|
| dir | Lists all of the files on the server. |

dir

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

dir [*word*]/[recursive]

Syntax Description

| | |
|------------------|--|
| <i>word</i> | Directory name. Up to 80 alphanumeric characters. Requires disk:/ preceding the directory name. |
| recursive | Lists a local directory or filename recursively. |

Command Default

No default behavior or values.

Command Modes

EXEC

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/
2996022 Aug 05 2010 19:11:16 mybackup-100805-1910.tar.gz
   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
2996022 Aug 05 2010 19:11:16 mybackup-100805-1910.tar.gz
   4096 Aug 04 2010 23:14:53 logs/
   4096 Aug 05 2010 12:25:55 temp/
   4096 Jun 10 2010 02:34:03 activemq-data/
   4096 Aug 04 2010 23:15:20 target/
 16384 Jun 09 2010 02:59:34 lost+found/
```

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 19:12:45 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

ncs/admin#
```

Related Commands

| Command | Description |
|------------------------|---------------------------------|
| delete | Deletes a file from the server. |

exit

To close an active terminal session by logging out of the 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

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

Examples

```
ncs/admin# exit
```

Related Commands

| Command | Description |
|----------------------|--|
| end | Exits configuration mode. |
| exit | Exits configuration mode or EXEC mode. |
| Ctrl-z | Exits configuration mode. |

forceout

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

forceout *username*

Syntax Description

| | |
|-----------------|---|
| <i>username</i> | The name of the user. Up to 31 alphanumeric characters. |
|-----------------|---|

Command Default

No default behavior or values.

Command Modes

EXEC

Examples

```
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

Usage Guidelines

Before you enter the **halt** command, ensure that the is not performing any backup, restore, installation, upgrade, or remove operation. If you enter the **halt** command while the 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 asks you to respond to the following option:

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

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

```
Saved the running configuration to startup successfully
```

Examples

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

Related Commands

| Command | Description |
|------------------------|---------------------|
| reload | Reboots the system. |

mkdir

To create a new directory on the server, use the **mkdir** command in EXEC mode.

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

Syntax Description

| | |
|-----------------------|--|
| <i>directory-name</i> | The name of the directory to create. Up to 80 alphanumeric characters. |
| <i>disk:/path</i> | Use <i>disk:/path</i> with the directory name. |

Command Default

No default behavior or values.

Command Modes

EXEC

Usage Guidelines

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

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#
```

Related Commands

| Command | Description |
|-----------------------|---|
| dir | Displays a list of files on the server. |
| rmdir | Removes an existing directory. |

ncs start

To start the server, use the **ncs start** 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

Usage Guidelines

To see the messages in the console, use the **ncs start verbose** command.

Examples

This example shows how to start the 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 Montior 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

| Command | Description |
|----------------------------|--|
| ncs stop | Stops the server. |
| ncs status | Displays the current status of the server. |

ncs stop

To stop the server, use the **ncs stop** command in EXEC mode. 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

Usage Guidelines

To see the detailed messages, use the **ncs stop verbose** command.

Examples

This example shows how to stop the server:

```
> 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(XMP) ..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

| Command | Description |
|----------------------------|--|
| ncs start | Starts the server. |
| ncs status | Displays the current status of the server. |

ncs status

To display the server status, use the **ncs status** command in EXEC mode.

ncs status

This command has no arguments or keywords.

Command Default

No default behavior or values.

Command Modes

EXEC

Examples

This example shows how to display the status of the 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

| Command | Description |
|---------------------------|--------------------|
| ncs start | Starts the server. |
| ncs stop | Stops the server. |

ncs password ftpuser password

To change the FTP username and password, use the **ncs password ftpuser password** command in EXEC mode.

ncs password ftpuser *username password password*

Syntax Description

| | |
|-----------------|---|
| <i>username</i> | The FTP user name |
| <i>password</i> | The modified password. The password cannot contain 'cisco' or 'ocsic', or any variant obtained by changing the capitalization of letters therein or by substituting 'l', ' ', or '!' for i, '0' for 'o', or '\$' for 's'. |

Command Default

No default behavior or values.

Command Modes

EXEC

Examples

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

```
> ncs password ftpuser
```

Related Commands

| Command | Description |
|--|--|
| ncs start | Starts sever. |
| ncs stop | Stops server. |
| ncs status | Displays the current status of server. |
| ncs password root password | Changes the root password. |

ncs password root password

To change the root password, use the **ncs password root password** command in EXEC mode.

ncs password root password *password*

Syntax Description

password

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

Command Default

No default behavior or values.

Command Modes

EXEC

Examples

This example shows how to migrate archived files to server:

```
> ncs password root password Privatel23
Loading USER - root
Validating new password..
Resetting password ..
Resetting password COMPLETED.
EXECUTION STATUS : Success
```

Related Commands

| Command | Description |
|---|--|
| ncs start | Start the sever. |
| ncs stop | Stops the server. |
| ncs status | Displays the current status of the server. |
| ncs password ftpuser password | Changes the FTP username and password. |

ncs ha authkey

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

ncs ha authkey *authorization key*

Syntax Description

| | |
|--------------------------|---|
| <i>authorization key</i> | The authorization key for high availability. Up to 255 alphanumeric characters. |
|--------------------------|---|

Command Default

No default behavior or values.

Command Modes

EXEC

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

| Command | Description |
|-------------------------------|---|
| ncs ha remove | Removes the high availability configuration settings from . |
| ncs ha status | Provides the current status of high availability. |

ncs ha remove

To remove the high availability configuration settings from , use the **ncs ha remove** command in EXEC mode.

ncs ha remove

Syntax Description This command has no arguments or keywords.

Command Default No default behavior or values.

Command Modes EXEC

Usage Guidelines The **ncs ha remove** command removes the high availability configuration settings from . 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

| Command | Description |
|--------------------------------|---|
| ncs ha authkey | Allows you to enter the authentication key for high availability in . This command also changes the authorization for the health monitor. |
| ncs ha status | Provides the current status of high availability. |

ncs ha status

To display the current status of high availability (HA), use the **ncs ha status** command in EXEC mode.

ncs ha status

Syntax Description This command has no arguments or keywords.

Command Default No default behavior or values.

Command Modes EXEC

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

| Command | Description |
|--------------------------------|---|
| ncs ha authkey | Allows you to enter the authentication key for high availability in . This command also changes the authorization for the health monitor. |
| ncs ha remove | Removes the high availability configuration. |

ncs key genkey

To generate a new RSA key and self-signed certificate, use the **ncs key genkey** command. You can use this command in the following ways:

ncs key genkey

ncs key genkey -newdn

ncs key genkey -csr *csrfilename*

ncs key genkey -csr *csrfilename* **repository** *repositoryname*

Syntax Description

| | |
|-----------------------|--|
| genkey | Generates a new RSA key and self-signed certificate. You can use the following options with this command: - csr : Generate Certificate Signing Request(CSR) file - newdn : Generate new RSA key and self-signed certificate with domain information < cr >: Carriage return. |
| -newdn | Generates a new RSA key and self-signed cert with domain information. You can use the following options with this command: - csr : Generate Certificate Signing Request(CSR) file < cr >: Carriage return. |
| -csr | Generates new CSR certificate file. You can use the following option with this command: < WORD >: Type in certificate file name (Max Size - 80) |
| <i>csrfilename</i> | CSR filename. |
| repository | Repository command. This option is available when you use the -csr option. |
| <i>repositoryname</i> | Location where the files should be backed up to. Up to 80 alphanumeric characters. |

Command Default

No default behavior or values.

Command Modes

EXEC

Examples

This example shows how to generate new rsa key and certificate files in the 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

| Command | Description |
|--|--|
| ncs key importcacert | Applies a CA certificate to the trust store in Prime Infrastructure. |
| ncs key listcacerts | Lists all of the CA certificates that exist in the Prime Infrastructure trust store. |
| ncs key deletecacert | Deletes a CA certificates that exist in the Prime Infrastructure trust store. |
| ncs key importsigncert | Applies an RSA key and signed certificate to Prime Infrastructure. |
| ncs key importkey | Applies an RSA key and certificate to Prime Infrastructure. |



Note

After entering this command, enter the **ncs stop** and **ncs start** command to restart the Prime Infrastructure server to make changes take effect.

ncs key importcacert

To apply a CA certificate to a trust store in , use the **ncs key importcacert** command in the EXEC mode.

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

Syntax Description

| | |
|-------------------------|---|
| <i>aliasname</i> | A short name given for this CA certificate. |
| <i>ca-cert-filename</i> | CA certificate file name. |
| repository | Repository command. |
| <i>repositoryname</i> | The repository name configured in where the ca-cert-filename is hosted. |

Command Default

No default behavior or values.

Command Modes

EXEC

Examples

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

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



Note

After applying this command, enter the **ncs stop** and **ncs start** command to restart the server to make the changes take effect.

Related Commands

| Command | Description |
|--|---|
| ncs key genkey | Generates a new RSA key and self-signed certificate. |
| ncs key listcacerts | Lists all of the CA certificates that exist in the trust store. |
| ncs key deletcacert | Deletes a CA certificates that exist in the trust store. |
| ncs key importsigncert | Applies an RSA key and signed certificate to . |
| ncs key importkey | Applies an RSA key and certificate to . |

ncs key importkey

To apply an RSA key and signed certificate to the Prime Infrastructure, use the **ncs key importkey** command in EXEC mode.

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

Syntax Description

| | |
|-----------------------|--|
| <i>key-filename</i> | RSA private key file name. |
| <i>cert-filename</i> | Certificate file name. |
| repository | Repository command |
| <i>repositoryname</i> | The repository name configured in the Prime Infrastructure where the key-file and cert-file is hosted. |

Command Default

No default behavior or values.

Command Modes

EXEC

Examples

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

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



Note

After applying this command, enter the **ncs stop** and **ncs start** command to restart the server to make the changes take effect.

Related Commands

| Command | Description |
|--|--|
| ncs key genkey | Generates a new RSA key and self-signed certificate. |
| ncs key listcacerts | Lists all of the CA certificates that exist in the Prime Infrastructure trust store. |
| ncs key deletcacert | Deletes a CA certificates that exist in the Prime Infrastructure trust store. |
| ncs key importsigncert | Applies an RSA key and signed certificate to Prime Infrastructure. |
| ncs key importcacert | Applies an CA certificate to trust store in the Prime Infrastructure. |

ncs key listcacerts

To list all of the CA certificates that exist in the trust store, use the **ncs key listcacerts** command EXEC mode.

ncs key listcacerts

Syntax Description This command has no arguments or keywords.

Command Default No default behavior or values.

Command Modes EXEC

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

```
> 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 equifaxsecureebusinessca 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 swissignsilverg2ca from CN=SwissSign Silver CA - G2, O=SwissSign AG, C=CH
```

Related Commands

| Command | Description |
|--|--|
| ncs key genkey | Generates a new RSA key and self-signed certificate. |
| ncs key importkey | Applies an RSA key and signed certificate to the . |
| ncs key deletcacert | Deletes CA certificates that exist in the trust store. |
| ncs key importsigncert | Applies an RSA key and signed certificate to the . |
| ncs key importcacert | Applies a CA certificate to the trust store in . |

ncs key deletecacert

To delete CA certificates that exist in trust store, use the **ncs key deletecacert** command in the EXEC mode.

ncs key deletecacert *aliasname*

Syntax Description

| | |
|------------------|---|
| <i>aliasname</i> | The short or alias name of the CA certificate which needs to be deleted from the trust store. |
|------------------|---|

Command Default

No default behavior or values.

Command Modes

EXEC

Examples

This example shows how to delete CA certificates that exist in the trust store:

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

Related Commands

| Command | Description |
|---|---|
| ncs key genkey | Generates a new RSA key and self-signed certificate. |
| ncs key importkey | Applies an RSA key and signed certificate to . |
| ncs key listcacerts | Lists all of the CA certificates that exist in the trust store. |
| ncs key importsigndcert | Applies an RSA key and signed certificate to . |
| ncs key importcacert | Applies a CA certificate to the trust store in . |

ncs key importsigndcert

To apply an RSA key and signed certificate, use the **ncs key importsigndcert** command EXEC mode.

ncs key importsigndcert *signed-cert-filename* **repository** *repositoryname*

Syntax Description

| | |
|-----------------------------|---|
| <i>signed-cert-filename</i> | Signed certificate filename. |
| repository | Repository command |
| <i>repositoryname</i> | The repository name configured in where the key-file and cert-file is hosted. |

Command Default

No default behavior or values.

Command Modes

EXEC

Examples

This example shows how to apply signed certificate files to the server:

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



Note

After applying this command, enter the **ncs stop** and the **ncs start** command to restart the server to make changes take effect.

Related Commands

| Command | Description |
|--------------------------------------|---|
| ncs key genkey | Generates a new RSA key and self-signed certificate. |
| ncs key importkey | Applies an RSA key and signed certificate to . |
| ncs key deletcacert | Deletes CA certificates that exist in the trust store. |
| ncs key listcacerts | Lists all of the CA certificates that exist in the trust store. |
| ncs key importcacert | Applies a CA certificate to the trust store in . |

ncs cleanup

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

ncs cleanup

Syntax Description

This command has no arguments or keywords.

Command Default

No default behavior or values.

Command Modes

EXEC

Usage Guidelines

When 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 the terminal, use the **ncs db sql** command in EXEC mode.

ncs db sql *query_string*

Syntax Description

| | |
|---------------------|---|
| <i>query_string</i> | Enter the sql query string enclosed in double quotes. |
|---------------------|---|

Command Default

No default behavior or values.

Command Modes

EXEC

Usage Guidelines

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

Examples

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

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

ncs db reinitdb

To reinitialize the Prime Infrastructure database, use the **ncs db reinitdb** command in EXEC mode. This command removes all data present in the database.

ncs db reinitdb

Syntax Description

This command has no arguments or keywords.

Command Default

No default behavior or values.

Command Modes

EXEC

Usage Guidelines

You can use this command if the 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 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 server, use the **nslookup** command in EXEC mode.

nslookup *word*

Syntax Description

| | |
|-------------|--|
| <i>word</i> | IPv4 address or hostname of a remote system. Up to 64 alphanumeric characters. |
|-------------|--|

Command Default

No default behavior or values.

Command Modes

EXEC

Examples

```

ncs/admin# nslookup 209.165.200.225
Trying "209.165.200.225.in-addr.arpa"
Received 127 bytes from 172.16.168.183#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 172.16.168.183#53 in 1 ms

ncs/admin#

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:
225.200.165.209.in-addr.arpa. 86400 IN    PTR      209-165-200-225.got.net.

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

Received 119 bytes from 172.16.168.183#53 in 28 ms

ncs/admin#

```

patch install

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

patch install *patch-bundle repository*

Syntax Description

| | |
|---------------------|--|
| <i>patch-bundle</i> | The patch bundle file name. Up to 255 alphanumeric characters. |
| <i>repository</i> | Repository name. Up to 255 alphanumeric characters. |

Command Default

No default behavior or values.

Command Modes

EXEC

Usage Guidelines

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.

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.
```



Note

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

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.i386.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

| | Description |
|------------------------------|---|
| patch remove | Removes a specific patch bundle version of the application. |
| show version | Displays information about the currently loaded software version, along with hardware and device information. |

patch remove

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

patch remove *word word*

Syntax Description

| | |
|-------------|--|
| <i>word</i> | The name of the application for which the patch is to be removed. Up to 255 alphanumeric characters. |
| <i>word</i> | The patch version number to be removed. Up to 255 alphanumeric characters. |

Command Default

No default behavior or values.

Command Modes

EXEC

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:



Note

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

```
% 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

| Command | Description |
|-------------------------------|---|
| patch install | Installs a specific patch bundle of the application. |
| show version | Displays information about the currently loaded software version, along with hardware and device information. |

ping

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

ping *{ip-address | hostname}* [**Df***df*]/**[packet***size***packet***size*]/**[ping***count***ping***count*]

Syntax Description

| | |
|---|---|
| <i>ip-address</i> | IP address of the system to ping. Up to 32 alphanumeric characters. |
| <i>hostname</i> | Hostname of the system to ping. Up to 32 alphanumeric characters. |
| df | Specification for packet fragmentation. |
| <i>df</i> | Specifies the value as 1 to prohibit packet fragmentation, or 2 to fragment the packets locally, or 3 to not set df. |
| packet <i>size</i> packet <i>size</i> | Size of the ping packet. |
| <i>packet</i> <i>size</i> | Specifies the size of the ping packet; the value can be between 0 and 65507. |
| ping <i>count</i> ping <i>count</i> | Number of ping echo requests. |
| <i>ping</i> <i>count</i> | 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

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

```
ncs/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
ncs/admin#
```

Related Commands

| Command | Description |
|-----------------------|------------------------------|
| ping6 | Pings a remote IPv6 address. |

ping6

To diagnose the basic IPv6 network connectivity to a remote system, use the **ping6** command in EXEC mode.

ping6 {*ip-address* | *hostname*} [**GigabitEthernet***packetsize**packetsize*]/[**pingcount***pingcount*]

Syntax Description

| | |
|------------------------|--|
| <i>ip-address</i> | IP address of the system to ping. Up to 64 alphanumeric characters. |
| <i>hostname</i> | Hostname of the system to ping. Up to 64 alphanumeric characters. |
| GigabitEthernet | Selects the ethernet interface. |
| packetsize | Size of the ping packet. |
| <i>packetsize</i> | Specifies the size of the ping packet; the value can be between 0 and 65507. |
| pingcount | Number of ping echo requests. |
| <i>pingcount</i> | 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

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
PING 3ffe:302:11:2:20c:29ff:feaf:da05(3ffe:302:11:2:20c:29ff:feaf:da05) from
3ffe:302:11:2:20c:29ff:feaf:da05 eth0: 56 data bytes
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

--- 3ffe:302:11:2:20c:29ff:feaf:da05 ping statistics ---
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

```

```
PING 3ffe:302:11:2:20c:29ff:feaf:da05(3ffe:302:11:2:20c:29ff:feaf:da05) from
3ffe:302:11:2:20c:29ff:feaf:da05 eth0: 10 data bytes
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

--- 3ffe:302:11:2:20c:29ff:feaf:da05 ping statistics ---
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

| | Description |
|----------------------|----------------------------|
| ping | Pings a remote IP address. |

reload

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

reload

Syntax Description

This command has no arguments or keywords.

Command Default

The command has no default behavior or values.

Command Modes

EXEC

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 is not performing any backup, restore, installation, upgrade, or remove operation. If the 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 asks you to respond to the following option:

```
Do you want to save the current configuration ?  
Enter YES to save the existing configuration. The 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

| Command | Description |
|----------------------|----------------------|
| halt | Disables the system. |

restore

To perform a restore of a previous backup, use the **restore** command in EXEC mode.

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

restore filename **repository** repository-name

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

restore filename **repository** repository-name **application** application

Syntax Description

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

Command Default

No default behavior or values.

Command Modes

EXEC

Usage Guidelines

A restore operation restores data related to the as well as the Cisco ADE OS. To perform a restore of a previous backup of the application data of the only, add the **application** command to the **restore** command in EXEC mode. To remove this function, use the **no** form of this command.

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

Examples

```
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...
Stopping 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):
```

```
The system is going down for reboot NOW!
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
```

```
ncs/admin#
```

Related Commands

| Command | Description |
|-------------------------------------|--|
| backup | Performs a backup (and Cisco ADE OS) and places the backup in a repository. |
| backup-logs | Backs up system logs. |
| repository | Enters the repository submode for configuration of backups. |
| show repository | Displays the available backup files located on a specific repository. |
| show backup history | Displays the backup history of the system. |

rmdir

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

rmdir *word*

Syntax Description

| | |
|-------------|---|
| <i>word</i> | Directory name. Up to 80 alphanumeric characters. |
|-------------|---|

Command Default

No default behavior or values.

Command Modes

EXEC

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

| Command | Description |
|-----------------------|---|
| dir | Displays a list of files on the server. |
| mkdir | Creates a new directory. |

root

This command has no arguments or keywords.

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



Note

For developer use only, not for end users.

root

Syntax Description

This command has no arguments or keywords.

Command Default

No default behavior or values.

Command Modes

EXEC

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.
```



Note

This command and the **root_enable** command can only be used on the 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.

Examples

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

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

Related Commands

| Command | Description |
|-----------------------------|------------------------------------|
| root_enable | Activates the root command. |

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.

root_disable

Syntax Description

This command has no arguments or keywords.

Command Default

No default behavior or values.

Command Modes

EXEC

Usage Guidelines**Note**

This command and the **root_enable** command can only be used on the 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.

Examples

The following example illustrates the use of the **root_disable** command:

```
ncs/admin# root_disable
```

Related Commands

| Command | Description |
|-----------------------------|--------------------------|
| root_enable | Executes the root shell. |

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.

root_enable

Syntax Description

This command has no arguments or keywords.

Command Default

No default behavior or values.

Command Modes

EXEC

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
```



Note

This command and the **root** command can only be used on the 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.
```

Examples

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

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

Related Commands

| Command | Description |
|----------------------|--------------------------|
| root | Executes the root shell. |

show

To show the running system information, use the **show** command in EXEC mode. The **show** commands are used to display the 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 of the **show** commands, see [show Commands](#).

show keyword

Syntax Description

Table 5: Summary of show Commands

| Command(1) | Description |
|---|---|
| application (requires keyword)(2) | Displays information about the installed application; for example, status or version. |
| backup (requires keyword) | Displays information about the backup. |
| cdp (requires keyword) | Displays information about the enabled Cisco Discovery Protocol interfaces. |
| clock | Displays the day, date, time, time zone, and year of the system clock. |
| cpu | Displays CPU information. |
| disks | Displays file-system information of the disks. |
| interface | Displays statistics for all of the interfaces configured on the Cisco ADE OS. |
| logging (requires keyword) | Displays system logging information. |
| logins (requires keyword) | Displays login history. |
| memory | Displays memory usage by all running processes. |
| ntp | Displays the status of the Network Time Protocol (NTP). |
| ports | Displays all of the processes listening on the active ports. |
| process | Displays information about the active processes of the server. |

| Command ⁽¹⁾ | Description |
|----------------------------------|--|
| repository (requires keyword) | Displays the file contents of a specific repository. |
| restore (requires keyword) | Displays restore history on the server. |
| running-config | Displays the contents of the currently running configuration file on the server. |
| startup-config | Displays the contents of the startup configuration on the server. |
| tech-support | Displays system and configuration information that you can provide to the TAC when you report a problem. |
| terminal | Displays information about the terminal configuration parameter settings for the current terminal line. |
| timezone | Displays the time zone of the server. |
| timezones | Displays all of the time zones available for use on the server. |
| udi | Displays information about the unique device identifier (UDI) of the . |
| uptime | Displays how long the system you are logged in to has been up and running. |
| users | Displays information for currently logged in users. |
| version | Displays information about the installed application version. |

[12](#)

¹ (1) The commands in this table require that the show command precedes a keyword; for example, show application.

² (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 No default behavior or values.

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#
```


ssh

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 1-1](#)).

ssh [*ip-address* | *hostname*] *username***port**[*number*]**version**[1|2] **delete host***keyword*

Syntax Description

| | |
|-------------------------------|--|
| <i>ip-address</i> | IP address of the remote system. Up to 64 alphanumeric characters. |
| <i>hostname</i> | Hostname of the remote system. Up to 64 alphanumeric characters. |
| <i>username</i> | Username of the user logging in through SSH. |
| port [<i>number</i>] | (Optional) Indicates the port number of the remote host. From 0 to 65,535. Default 22. |
| version [1 2] | (Optional) Indicates the version number. Default 2. |
| delete host <i>key</i> | Deletes the SSH fingerprint of a specific host. |
| <i>word</i> | IPv4 address or hostname of a remote system. Up to 64 alphanumeric characters. |

Command Default

Disabled.

Command Modes

EXEC (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 ncs1 admin
admin@ncs1's password:
Last login: Wed Jul 11 05:53:20 2008 from ncs.cisco.com

ncs1/admin#

ncs/admin# ssh delete host ncs
ncs/admin#
```

tech dumptcp

To dump a Transmission Control Protocol (TCP) package to the console, use the **tech dumptcp** command in EXEC mode.

tech dumptcp *gigabit-ethernet*

Syntax Description

| | |
|-------------------------|---|
| <i>gigabit-ethernet</i> | Gigabit Ethernet interface number 0 to 1. |
|-------------------------|---|

Command Default

Disabled.

Command Modes

EXEC

Examples

```
ncs/admin# tech dumptcp 0
140816:141088(272) ack 1921 win 14144
08:26:12.034630 IP NCS.cisco.com.ssh > dhcp-64-102-82-153.cisco.com.2221: P 141088:141248(160)
  ack 1921 win 14144
08:26:12.034635 IP dhcp-64-102-82-153.cisco.com.2221 > NCS.cisco.com.ssh: . ack 139632 win
  64656
08:26:12.034677 IP NCS.cisco.com.ssh > dhcp-64-102-82-153.cisco.com.2221: P 141248:141520(272)
  ack 1921 win 14144
08:26:12.034713 IP NCS.cisco.com.ssh > dhcp-64-102-82-153.cisco.com.2221: P 141520:141680(160)
  ack 1921 win 14144
08:26:12.034754 IP NCS.cisco.com.ssh > dhcp-64-102-82-153.cisco.com.2221: P 141680:141952(272)
  ack 1921 win 14144
08:26:12.034756 IP dhcp-64-102-82-153.cisco.com.2221 > NCS.cisco.com.ssh: . ack 140064 win
  65520
08:26:12.034796 IP NCS.cisco.com.ssh > dhcp-64-102-82-153.cisco.com.2221: P 141952:142112(160)
  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

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

Command Default

No default behavior or values.

Command Modes

EXEC

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

integer

Number of lines on the screen. Contains between 0 to 511 lines, inclusive. A value of zero (0) disables pausing between screens of output.

Command Default

24 lines.

Command Modes

EXEC

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

| | |
|----------------|--|
| <i>minutes</i> | 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

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

| Command | Description |
|--|--|
| terminal session-welcome | Sets a welcome message on the system for all users who log in to the system. |

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*

Syntax Description

| | |
|---------------|---|
| <i>string</i> | Welcome message. Up to 2,048 alphanumeric characters. |
|---------------|---|

Command Default

No default behavior or values.

Command Modes

EXEC

Usage Guidelines

Specify a message using up to 2048 characters.

Examples

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

Related Commands

| Command | Description |
|--|---|
| terminal session-timeout | Sets the inactivity timeout for all sessions. |

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 | <i>type</i> | 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 | |
| Usage Guidelines | Indicate the terminal type if it is different from the default of VT100. | |
| Examples | <pre>ncs/admin# terminal terminal-type vt220 ncs/admin#</pre> | |

traceroute

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

traceroute [*ip-address* | *hostname*]

Syntax Description

| | |
|-------------------|--|
| <i>ip-address</i> | IP address of the remote system. Up to 32 alphanumeric characters. |
| <i>hostname</i> | Hostname of the remote system. Up to 32 alphanumeric characters. |

Command Default

No default behavior or values.

Command Modes

EXEC

Examples

```
ncs/admin# traceroute 172.16.0.11
traceroute 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

| | |
|-----------------------|---|
| <i>all</i> | Disables all debugging. |
| <i>application</i> | Application files. <ul style="list-style-type: none"> • <i>all</i>—Disables all application debug output. • <i>install</i>—Disables application install debug output. • <i>operation</i>—Disables application operation debug output. • <i>uninstall</i>—Disables application uninstall debug output. |
| <i>backup-restore</i> | Backs up and restores files. <ul style="list-style-type: none"> • <i>all</i>—Disables all debug output for backup-restore. • <i>backup</i>—Disables backup debug output for backup-restore. • <i>backup-logs</i>—Disables backup-logs debug output for backup-restore. • <i>history</i>—Disables history debug output for backup-restore. • <i>restore</i>—Disables restore debug output for backup-restore. |
| <i>cdp</i> | Cisco Discovery Protocol configuration files. <ul style="list-style-type: none"> • <i>all</i>—Disables all Cisco Discovery Protocol configuration debug output. • <i>config</i>—Disables configuration debug output for Cisco Discovery Protocol. • <i>infra</i>—Disables infrastructure debug output for Cisco Discovery Protocol. |

| | |
|-----------------|--|
| <i>config</i> | <p>Configuration files.</p> <ul style="list-style-type: none"> • <i>all</i>—Disables all configuration debug output. • <i>backup</i>—Disables backup configuration debug output. • <i>clock</i>—Disables clock configuration debug output. • <i>infra</i>—Disables configuration infrastructure debug output. • <i>kron</i>—Disables command scheduler configuration debug output. • <i>network</i>—Disables network configuration debug output. • <i>repository</i>—Disables repository configuration debug output. • <i>service</i>—Disables service configuration debug output. |
| <i>copy</i> | Copy commands. |
| <i>icmp</i> | <p>ICMP echo response configuration.</p> <p><i>all</i>—Disable all debug output for ICMP echo response configuration. Set level between 0 and 7, with 0 being severe and 7 being all.</p> |
| <i>locks</i> | <p>Resource locking.</p> <ul style="list-style-type: none"> • <i>all</i>—Disables all resource locking debug output. • <i>file</i>—Disables file locking debug output. |
| <i>logging</i> | <p>Logging configuration files.</p> <p><i>all</i>—Disables all debug output for logging configuration.</p> |
| <i>snmp</i> | <p>SNMP configuration files.</p> <p><i>all</i>—Disables all debug output for SNMP configuration.</p> |
| <i>system</i> | <p>System files.</p> <ul style="list-style-type: none"> • <i>all</i>—Disables all system files debug output. • <i>id</i>—Disables system ID debug output. • <i>info</i>—Disables system info debug output. • <i>init</i>—Disables system init debug output. |
| <i>transfer</i> | File transfer. |
| <i>user</i> | <p>User management.</p> <ul style="list-style-type: none"> • <i>all</i>—Disables all user management debug output. • <i>password-policy</i>—Disables user management debug output for password-policy. |

| | |
|--------------|--|
| <i>utils</i> | Utilities configuration files. |
| <i>all</i> | Disables all utilities configuration debug output. |

Command Default No default behavior or values.

Command Modes EXEC

Examples

```
ncs/admin# undebug all
ncs/admin#
```

Related Commands

| Command | Description |
|-----------------------|---|
| debug | Displays errors or events for command situations. |

write

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

write {*erase* | *memory* | *terminal*}

Syntax Description

| | |
|-----------------|--|
| <i>erase</i> | Erases the startup configuration. |
| <i>memory</i> | Copies the running configuration to the startup configuration. |
| <i>terminal</i> | Copies the running configuration to console. |

Command Default

No default behavior or values.

Command Modes

EXEC

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 172.16.226.120
!
ip default-gateway 10.201.2.1
!
clock timezone UTC
!
ntp server clock.cisco.com
!
```

```
username admin password hash $1$6yQQaFXM$UBgbp7ggD1bG3kpExywwZ0 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#
```

Cisco Plug and Play Gateway Commands

This section lists the **pnp** commands along with a brief description of their use, command defaults, command modes, command syntax, usage guidelines, command examples, and related commands, where applicable.

Prime Infrastructure Integrated Server Commands

This section lists the **ncs pnp gateway commands** along with a brief description of its use, command defaults, command modes, command syntax, usage guidelines, command examples, and related commands, where applicable.

ncs pnp-gateway

To enable or disable the local Cisco Plug and Play Gateway on the Prime Infrastructure Integrated Server and modify or view the properties of the software image on the Cisco Plug and Play Gateway, use the **ncs pnp-gateway** command in privileged EXEC mode.

ncs pnp-gateway {enable | disable | modify | property}

Syntax Description

| | |
|-----------------|--|
| enable | Enables the Cisco Plug and Play Gateway. |
| disable | Disables the Cisco Plug and Play Gateway. |
| modify | Enables the modification of the Cisco Plug and Play Gateway image's properties. The properties that can be modified are: activation timeout value, distribution timeout value, and transfer timeout value. |
| property | Enables viewing of the properties pertaining to the software image on the Cisco Plug and Play Gateway. |

Command Modes

Privileged EXEC

Command History

| Release | Modification |
|--------------------------------|------------------------------|
| Cisco Prime Infrastructure 2.0 | This command was introduced. |

Examples

The following is sample output from the **ncs pnp-gateway** command:

```
admin# ncs pnp-gateway?
  disable  PNP Gateway Disable Command
  enable   PNP Gateway Enable command
  modify   Modify PnP Gateway properties and variables
  property Show PnP properties and configuration
```

Examples

The following is sample output from the **ncs pnp-gateway disable** command:

```
ncs pnp-gateway disable
```

```
Disabling Plug and Play Gateway.....
Plug and Play Gateway is successfully disabled. Please restart Prime Infrastructure on this
server
```

Examples

The following is a sample output of the **ncs pnp-gateway enable** command:

```
ncs pnp-gateway enable
```

```
Enabling Plug and Play Gateway.....
```

Plug and Play Gateway is successfully enabled. Please restart Prime Infrastructure on this server.

Examples

The following is a sample output of the **ncs pnp-gateway modify** command:

```
ncs pnp-gateway modify
```

```
bgl-dt-ncs-vm6-70/ayyanna# ncs pnp-gateway modify image ?
  activation-timeout      Activation timeout for PnP image upgrade job
  distribution-timeout    Distribution timeout for PnP image upgrade job
  transfer-timeout        Transfer timeout for PnP image upgrade job
bgl-dt-ncs-vm6-70/ayyanna# ncs pnp-gateway modify image
  activation-timeout ? <60-1048576> Type the image activation timeout value (seconds)
```

Examples

The following is a sample output of the **ncs pnp-gateway property image** command:

```
admin# ncs pnp-gateway property image

PnP Gateway Image Transfer Timeout = 2400
PnP Gateway Image Distribution Timeout = 2200
PnP Gateway Image Activation Timeout = 1600
```

Prime Infrastructure PnP Gateway Standalone Server Command

This section lists the **pnp gateway standalone server commands** along with a brief description of their use, command defaults, command modes, command syntax, usage guidelines, command examples, and related commands, where applicable.

pnp backup

To create a backup of the Cisco Plug and Play Gateway configuration, use the **pnp backup** command in privileged EXEC mode.

pnp backup**Command Modes**

Privileged EXEC

Command History

| Release | Modification |
|--------------------------------|------------------------------|
| Cisco Prime Infrastructure 1.2 | This command was introduced. |
| Cisco Prime Infrastructure 2.0 | This command was modified. |

Usage Guidelines

The backup file is usually created in a compressed tar file format in the *disk:/ directory* that corresponds to the */localdisk/ directory* on the Linux file system.

Examples

The following is sample output from the **pnp backup** command:

```
admin# pnp backup
```

```
The backup file created : /localdisk/20130130220403.pnp_backup.tar.gz
```

The following table describes the significant field shown in the display.

Table 6: pnp backup Field Description

| Field | Description |
|----------------------------------|---|
| 20130130220403.pnp_backup.tar.gz | The backup file created in the above example, where <i>2013</i> is the year, <i>01</i> is the month, <i>30</i> is the date, <i>22</i> is the hour, <i>04</i> is the minute, and <i>03</i> is the second at which the backup file was created. |

pnp modify image

To modify the properties of the Cisco Plug and Play Gateway software image in the Prime Infrastructure Plug and Play Standalone Gateway, use the **pnp modify image** command in privileged EXEC mode.

pnp modify image {activation-timeout | distribution-timeout | transfer-timeout | transfer-timeout} timeout-value

Syntax Description

| | |
|-----------------------------------|---|
| <i>activation timeout value</i> | Activation timeout value, in seconds, for the Cisco Plug and Play Gateway software image upgrade job. The range is from 60 to 1048576. The default is 600. |
| <i>distribution timeout value</i> | Distribution timeout value, in seconds, for the Cisco Plug and Play Gateway software image upgrade job. The valid range is from 60 to 1048576. The default is 1200. |
| <i>transfer timeout value</i> | Transfer timeout value, in seconds, for the Cisco Plug and Play Gateway software image upgrade job. The valid range is from 60 to 1048576. The default is 1200. |

Command Modes

Privileged EXEC

Command History

| Release | Modification |
|--------------------------------|------------------------------|
| Cisco Prime Infrastructure 1.2 | This command was introduced. |
| Cisco Prime Infrastructure 2.0 | This command was modified. |

Usage Guidelines

The Cisco Plug and Play Gateway does not have to be restarted for the timeout value to take effect. The timeout value that you specify will take effect for the next software image.

Examples

The following is sample output from the **pnp modify image** command:

```
admin# pnp modify image ?
  activation-timeout  Activation timeout for PnP image upgrade job
  distribution-timeout Distribution timeout for PnP image upgrade job
  transfer-timeout    Transfer timeout for PnP image upgrade job

admin# pnp modify image activation-timeout 1200
Done

admin# pnp modify image distribution-timeout 2400
Done
```

```
admin# pnp modify image transfer-timeout 2200
Done
```

pnpp modify log-level

To modify the log-level settings of the Cisco Plug and Play Gateway, use the **pnpp modify log-level** command in privileged EXEC mode.

The Cisco Plug and Play Gateway supports these log levels: **debug**, **error**, **fatal**, **info**, **trace**, and **warn**.

pnpp modify log-level {fatal | error | warn | info | debug | trace}

Syntax Description

| | |
|--------------|---|
| fatal | Enables the collection of fatal-level log messages. |
| error | Enables the collection of fatal-level and error-level log messages. |
| warn | Enables the collection of fatal-level, error-level, and warn-level log messages. |
| info | Enables the collection of fatal-level, error-level, warn-level, and information-level log messages. |
| debug | Enables the collection of fatal-level, error-level, warn-level, information-level, and debug-level log messages. |
| trace | Enables the collection of fatal-level, error-level, warn-level, information-level, debug-level, and trace-level log messages. |

Command Default

By default, the Cisco Plug and Play Gateway logs the error-level log messages.

Command Modes

Privileged EXEC

Command History

| Release | Modification |
|--------------------------------|------------------------------|
| Cisco Prime Infrastructure 1.2 | This command was introduced. |
| Cisco Prime Infrastructure 2.0 | This command was modified. |

Usage Guidelines

The **pnpp modify log-level** command can be used to dynamically change the log level at run time. However, when you restart the Cisco Plug and Play Gateway, it will reset to the error-log level, which is the default.

Examples

The following is sample output from the **pnpp modify log-level** command:

```
admin# pnpp modify log-level ?
      debug  Log level: Debug
      error  Log level: Error
      fatal  Log level: Fatal
```

```
info    Log level: Info
trace   Log level: Trace
warn    Log level: Warn
```

```
admin# pnp modify log-level debug
admin# pnp modify log-level error
admin# pnp modify log-level fatal
admin# pnp modify log-level info
admin# pnp modify log-level trace
admin# pnp modify log-level warn
```

pnpp restore

To restore the configuration settings from an existing backup of the Cisco Plug and Play Gateway, use the **pnpp restore** command in privileged EXEC mode.

To force a restore of the Cisco Plug and Play Gateway settings either when the **pnpp setup** command is in operation or another instance of the **pnpp restore** command is already running, use the **pnpp restore force** command in privileged EXEC mode.

pnpp restore *backup filename*

pnpp restore force

Syntax Description

| | |
|------------------------|---|
| <i>backup filename</i> | Name of the Cisco Plug and Play Gateway backup file whose server settings must be restored. |
| force | Forces a restore of the Cisco Plug and Play Gateway settings. |

Command Modes

Privileged EXEC

Command History

| Release | Modification |
|--------------------------------|------------------------------|
| Cisco Prime Infrastructure 1.2 | This command was introduced. |
| Cisco Prime Infrastructure 2.0 | This command was modified. |

Usage Guidelines

When you run the **pnpp restore** command, the server reads the backup files from the */localdisk/ directory*. If there is more than one backup file in the */localdisk/ directory*, a list of the available backup files is displayed. You must provide the name of the backup file that is to be used for restoring the configuration settings.

After the Cisco Plug and Play Gateway settings have been restored, you are prompted to commit the changes. Press **y** to commit the changes or **n** to cancel the restore operation.

**Note**

You must restart the Cisco Plug and Play Gateway for changes to take effect.

**Note**

For information on how to copy files to the local disk, see [copy, on page 19](#) command.

Use the **pnpp restore force** command when you have to force a restore operation. This condition is normally seen when different instances of the **restore** command is already running or when the **pnpp setup** command is in operation. The **pnpp restore force** command forces the restore operation using an existing backup file.

Examples

The following is a sample output of the **pnp restore** command:

```
admin# pnp restore

-----
Tue Oct 2 23:05:53 UTC 2012
Restore operation started
-----
Please copy the backup required for restoration.
20121002230546.pnp_backup.tar.gz
20121002224919.pnp_backup.tar.gz
Please provide the backup file name [20121002230546.pnp_backup.tar.gz]:
Backup Filename used is /localdisk/20121002230546.pnp_backup.tar.gz

Commit changes and restart (y/n): y
```

pnp setup

To set up the Cisco Plug and Play Gateway information, use the **pnp setup** command in privileged EXEC mode.

To forcefully execute a setup operation of the Cisco Plug and Play Gateway when other commands are running and the **pnp setup** command cannot be used for setting up the server, use the **pnp setup force** command in privileged EXEC mode.

**Note**

The **pnp setup** command can be executed only if Prime Infrastructure and the Cisco Plug and Play Gateway are running on different servers.

pnp setup**pnp setup force****Syntax Description**

| | |
|--------------|---|
| force | Executes a setup operation of the Cisco Plug and Play Gateway forcefully. |
|--------------|---|

Command Modes

Privileged EXEC

Command History

| Release | Modification |
|--------------------------------|------------------------------|
| Cisco Prime Infrastructure 1.2 | This command was introduced. |
| Cisco Prime Infrastructure 2.0 | This command was modified. |

Usage Guidelines

The setup.log file is available in the *var/KickStart/install/* directory.

Examples

The following is sample output from the **pnp setup** command:

```
admin# pnp setup
#####
Enter Plug and Play Gateway Setup (setup log /var/KickStart/install/setup.log)
For detail information about the parameters in this setup,
refer to Plug and Play Gateway Admin Guide.
#####
Enter Prime Infrastructure IP Address: [10.104.105.70]
Enable self certificate for server bgl-dt-ncs-vm64-228 (y/n) [y]
Self Signed Certificate already available do you want to recreate (y/n)? [n]

Automatic download of SSL Certificate is possible if
Prime Infrastructure Server is up and running.

Automatically download the certificate for server 10.104.105.70 (y/n) [y]
```


The maximum number of Event Gateways allowed is '10' for both plain text and ssl combined. The Event Gateway ports 11011 and 11012 are reserved for port automatic allocation. These ports are not counted while taking the maximum number of ports.

Each Event Gateway can serves up to a maximum of 1000 devices.

Enter number of Event Gateways that will be started with crypto operation: [5]

The maximum number of plain text event gateways ports possible is 5.

Enter number of Event Gateways that will be started with plaintext operation: [5]

The CNS Event command configures how the managed devices should connect to this particular Plug and Play Gateway. The command entered in the following

line should match what's configured on the devices WITHOUT the port number and keyword 'encrypt' if cryptographic is enabled.

For example, if the following CLI is configured on devices
 "cns event bgl-dt-ncs-vm64-228 encrypt 11012 keepalive 120 2 reconnect 10",
 then 'encrypt 11012' should be removed and the below line should be entered :
 "cns event bgl-dt-ncs-vm64-228 keepalive 120 2 reconnect 10"

is Another example, if this is a backup Plug and Play Gateway and the following CLI

configured on devices
 "cns event bgl-dt-ncs-vm64-228 11011 source Vlan1 backup", then '11011'
 should be removed and the below line should be entered :
 "cns event bgl-dt-ncs-vm64-228 source Vlan1 backup"

Unable to enter a correct CLI could cause the managed devices not be able to connect to this Plug and Play Gateway. For details, please refer to Installation and Configuration Guide.

Enter CNS Event command: [cns event bgl-dt-ncs-vm64-228 keepalive 120 2 reconnect 10]

Commit changes (y/n): y

Attempting to disable the local Plug and Play Gateway in Prime Infrastructure Machine 10.104.105.70

Enter the username to login to the Prime Infrastructure Machine: [admin] ayyanna

Enter the password to login to the Prime Infrastructure Machine:

Operation Successful. Plug and Play Gateway is successfully disabled.

Setup is in progress.....

Stop Plug and Play Gateway server

Done. Plug and Play Gateway setup completed

Start Plug and Play Gateway server....

Done. Plug and Play Gateway server started!

```
#####
Disabling the local Plug and Play Gateway on Prime Infrastructure server is successful.
Please restart the Prime Infrastructure server.
#####
bgl-dt-ncs-vm64-228/admin#
```



Note

For more information on how to copy files from the local disk, see [copy](#), on [page 19](#) command.

pnpp setup advanced

To change port level settings, use the **pnpp setup advanced** command in the privileged EXEC mode.

To forcefully execute a setup operation of the Cisco Plug and Play Gateway when other commands are running and the **pnpp setup advanced** command cannot be used for setting up the server, use the **pnpp setup advanced force** command in privileged EXEC mode.

pnpp setup advanced**pnpp setup advanced force****Syntax Description**

| | |
|--------------|---|
| force | Executes a setup operation of the Cisco Plug and Play Gateway forcefully. |
|--------------|---|

Command Modes

Privileged EXEC (#)

Command History

| Release | Modification |
|--------------------------------|------------------------------|
| Cisco Prime Infrastructure 2.0 | This command was introduced. |

Usage Guidelines

The setup.log file is available in the *var/KickStart/install/* directory.

Examples

The following is a sample output of the **pnpp setup advanced** command:

```
pnpp setup advanced
#####
Enter Plug and Play Gateway Setup (setup log /var/KickStart/install/setup.log)
For detail information about the parameters in this setup,
refer to Plug and Play Gateway Admin Guide.
#####

Enter IP Address of Plug and Play Gateway server [10.104.105.228]
Enter the fully qualified host name of Plug and Play Gateway server [bgl-dt-ncs-vm64-228]
Enter Prime Infrastructure IP Address: [10.104.105.70]
Enter Prime Infrastructure Event Port Parameter: [61617]
Enable self certificate for server bgl-dt-ncs-vm64-228 (y/n) [y]
Self Signed Certificate already available do you want to recreate (y/n)? [n]

Automatic download of SSL Certificate is possible if
Prime Infrastructure Server is up and running.

Automatically download the certificate for server 10.104.105.70 (y/n) [y]
Enable secure HTTPS/SSL encryption to secure Plug and Play Gateway Web GUI (y/n) [y]
Enter port number for https web access: [443]

Enabling clear text operation
between Plug and Play Gateway and device(s) increases security risk.

Enable clear text operation between device CNS Agent and Plug and Play Gateway (y/n) [y]
Enter Tomcat internal port number: [8009]
Enter Tomcat shutdown port number: [8005]
```

The maximum number of Event Gateways allowed is '10' for both plain text and ssl combined. The Event Gateway ports 11011 and 11012 are reserved for port automatic allocation. These ports are not counted while taking the maximum number of ports.

Each Event Gateway can serves up to a maximum of 1000 devices.

Enter number of Event Gateways that will be started with crypto operation: [5]
Enter port number for http web access: [80]

The maximum number of plain text event gateways ports possible is 5.

Enter number of Event Gateways that will be started with plaintext operation: [5]

The CNS Event command configures how the managed devices should connect to this particular Plug and Play Gateway. The command entered in the following

line should match what's configured on the devices WITHOUT the port number and keyword 'encrypt' if cryptographic is enabled.

For example, if the following CLI is configured on devices
"cns event bgl-dt-ncs-vm64-228 encrypt 11012 keepalive 120 2 reconnect 10",
then `encrypt 11012` should be removed and the below line should be entered :
"cns event bgl-dt-ncs-vm64-228 keepalive 120 2 reconnect 10"

Another example, if this is a backup Plug and Play Gateway and the following CLI is

configured on devices
"cns event bgl-dt-ncs-vm64-228 11011 source Vlan1 backup", then `11011`
should be removed and the below line should be entered :
"cns event bgl-dt-ncs-vm64-228 source Vlan1 backup"

Unable to enter a correct CLI could cause the managed devices not be able to connect to this Plug and Play Gateway. For details, please refer to Installation and Configuration Guide.

Enter CNS Event command: [cns event bgl-dt-ncs-vm64-228 keepalive 120 2 reconnect 10]

Enter IP address for CNS Gateway to listen to.

Enter 1 to have CNSGateway listens to all IP addresses.

IP addresses:[1]

Enter Plug and Play Gateway Event Port Parameter: [62616]

Enter base directory for Plug and Play Gateway log : [/var/log]

Data directory contains Template and Image files

Enter data directory for Plug and Play Gateway : [/var/KickStart]

Commit changes (y/n): y

Attempting to disable the local Plug and Play Gateway in Prime Infrastructure Machine 10.104.105.70

Enter the username to login to the Prime Infrastructure Machine: [admin] ayyanna

Enter the password to login to the Prime Infrastructure Machine:

Plug and Play Gateway is already disabled

Setup is in progress.....

Stop Plug and Play Gateway server

Done. Plug and Play Gateway setup completed

Start Plug and Play Gateway server....

Done. Plug and Play Gateway server started!

admin#

pnpp start

To start the Cisco Plug and Play Gateway and display the status messages in detail during the startup process, use the **pnpp start** command in privileged EXEC mode.

pnpp start**Command Modes**

Privileged EXEC

Command History

| Release | Modification |
|--------------------------------|------------------------------|
| Cisco Prime Infrastructure 1.2 | This command was introduced. |
| Cisco Prime Infrastructure 2.0 | This command was modified. |

Usage Guidelines

Before you execute the **pnpp start** command, stop the Cisco Plug and Play gateway. For more information on stopping the Cisco Plug and Play gateway, refer to the section [pnpp stop, on page 102](#).

Examples

The following is sample output from the **pnpp start** command:

```
admin# pnpp start

httpd is stopped
Monitoring process started.
Plug and Play Gateway start.....
Started Event Manager process
Starting tomcat...
Starting httpd:

Starting CNS Gateway:
Start of Plug and Play Gateway Completed!!
admin#
```

[OK]

pnpp status

To determine the status of the individual tasks and services that are currently running on the Cisco Plug and Play Gateway, use the **pnppstatus** command in privileged EXEC mode.

pnpp status**Command Modes**

Privileged EXEC

Command History

| Release | Modification |
|--------------------------------|------------------------------|
| Cisco Prime Infrastructure 1.2 | This command was introduced. |
| Cisco Prime Infrastructure 2.0 | This command was modified. |

Usage Guidelines

This command can also be used to determine whether the tasks that are running on the Cisco Plug and Play Gateway are secure or nonsecure, and whether the services are up and running or down, along with their port and PID number, where applicable.

Examples

The following is sample output from the **pnpp status** command:

```
admin# pnpp status
SERVICE                                |  MODE      |  STATUS  |  ADDITIONAL INFO
-----|-----|-----|-----
System                                  |             |  UP      |
-----|-----|-----|-----
Event Messaging Bus                    |  PLAIN TEXT |  UP      |  pid: 3839
CNS Gateway Dispatcher                 |  PLAIN TEXT |  UP      |  pid: 4216, port: 11011
CNS Gateway                            |  PLAIN TEXT |  UP      |  pid: 4245, port: 11013
CNS Gateway                            |  PLAIN TEXT |  UP      |  pid: 4279, port: 11015
CNS Gateway                            |  PLAIN TEXT |  UP      |  pid: 4313, port: 11017
CNS Gateway                            |  PLAIN TEXT |  UP      |  pid: 4404, port: 11019
CNS Gateway                            |  PLAIN TEXT |  UP      |  pid: 4442, port: 11021
CNS Gateway Dispatcher                 |  SSL        |  UP      |  pid: 4645, port: 11014
CNS Gateway                            |  SSL        |  UP      |  pid: 4645, port: 11014
CNS Gateway                            |  SSL        |  UP      |  pid: 4706, port: 11016
CNS Gateway                            |  SSL        |  UP      |  pid: 4881, port: 11018
CNS Gateway                            |  SSL        |  UP      |  pid: 4921, port: 11020
CNS Gateway                            |  SSL        |  UP      |  pid: 4955, port: 11022
HTTPD                                  |             |  UP      |
Image Web Service                      |  SSL        |  UP      |
Config Web Service                     |  SSL        |  UP      |
Resource Web Service                   |  SSL        |  UP      |
Image Web Service                      |  PLAIN TEXT |  UP      |
Config Web Service                     |  PLAIN TEXT |  UP      |
Resource Web Service                   |  PLAIN TEXT |  UP      |
Prime Infrastructure Broker              |  SSL        |  UP      |  port: 61617,connection:1
```

pnp stop

To stop the Cisco Plug and Play Gateway and display detailed messages during the stop process, use the **pnp stop** command in privileged EXEC mode.

pnp stop**Command Modes**

Privileged EXEC

Command History

| Release | Modification |
|--------------------------------|------------------------------|
| Cisco Prime Infrastructure 1.2 | This command was introduced. |
| Cisco Prime Infrastructure 2.0 | This command was modified. |

Examples

The following is sample output from the **pnp stop** command:

```
admin# pnp stop

start   status  stop
bgl-dt-ncs-vm64-228/admin# pnp stop
Plug and Play Gateway is being shut down..... Please wait!!!
Stopping monitoring process ...
Stopping CNS Gateway Processes:
Stopping tomcat...
Stopping httpd:
OK
Stopping Event Manager Processes :
Stop of Plug and Play Gateway Completed!!
admin#
```

pnp tech

To view the environment variables of the Cisco Plug and Play Gateway process, use the **pnp tech** command in privileged EXEC mode.

pnp tech**Command Modes**

Privileged EXEC

Command History

| Release | Modification |
|--------------------------------|------------------------------|
| Cisco Prime Infrastructure 1.2 | This command was introduced. |
| Cisco Prime Infrastructure 2.0 | This command was modified. |

Examples

The following is sample output from the **pnp tech** command:

```
admin# pnp tech

-----
Cisco Prime Network Control System
Plug and Play
-----
Environment variables
-----
LOGMANAGER_OPTS=-DPNP_LOG_DIR=/var/log/KickStart -Dlog4j.configuration=log4j.properties
-DPNP_PROCESS_LOG=logmanager
MONITOR_PROCESS=com.cisco.pnp.ks.monitor.Monitor
NCS_PNP_WEB_DIR=/opt/CSColumos/tomcat/webapps/
PNP_VAR_INSTALL=/var/KickStart/install
GREP=grep
SETUP_FLAG_FILE=/var/KickStart/install/.setupRunning
PNP_ENABLE_AUTH=n
GREP_CMD=/bin/grep
SED_CMD=/bin/sed
KILL_CMD=/bin/kill
CNS_ENABLE_AUTO_PASS=y
TOMCAT_HOME=/opt/CSColumos/KickStart/tomcat
NCS_SERVER_CERTIFICATE=/root/server.crt
HTTPD_MODULES=/etc/httpd/modules
PNP_NCS_MOM_HOST_NAME=127.0.0.1
INIT_DIR=/etc/init.d
RPM_CMD=/bin/rpm
CNS_ENCRYPT_SERVER_TRUST_STORE=/var/KickStart/install/kickstart.truststore
PNP_DATA_BASE=/var
LN_CMD=/bin/ln -sf
CNS_MAX_NO_DEVICE_PER_PORT=500
PNP_ENABLE_DMZ=y
PNP_VAR_TOMCAT_LOG=/var/KickStart/tomcat/logs
MKDIR_CMD=/bin/mkdir -p
PNP_DEFAULT_NO_OF_PORT=5
PNP_CNS_EVENT_CMD=cns event bgl-pnp-dev1-ovf keepalive 120 2 reconnect 10
TOMCAT_SHUTDOWN_PORT=8005
NCS_PNP_WEBAPP_DIR=/opt/CSColumos/tomcat/conf/Catalina/localhost
PNP_HTTP_PORT=80
NCS_PROJECT_DISPLAY_NAME=Prime Infrastructure
DATE_CMD=/bin/date
PNP_LOG_FILE=/var/KickStart/install/pnp_start_stop.log
```

```

RM_CMD=/bin/rm -f
ECHO_CMD=/bin/echo -e
TERM=xterm
SHELL=NONE
PNP_NCS_LIB_DIR=/opt/CSColumos/lib/lib_pnp_ks
CNS_ENCRYPT_SERVER_KEY_STORE=/var/KickStart/install/kickstart.keystore
GREP_ENHANCED_CMD=/bin/grep -E
TAR_CMD=/bin/tar
ENV_CMD=/bin/env
SSH_CLIENT=10.21.84.117 54389 22
PNP_DATE_FORMAT=%Y%m%d%H%M%S
PNP_ENABLE_HTTPS=Y
CNS_GATEWAY_IP=
PNP_LOG_BASE=/var/log
PNP_MODJK_PACKAGE=mod_jk-ap20
CATALINA_BASE=/var/KickStart/tomcat
TOMCAT_VAR_DIR=/var/KickStart/tomcat
SE_ENABLED=0
HOST_NAME_SHORT_CMD=/bin/hostname -s
SSH_TTY=/dev/pts/1
PNP_WEBAPP_FILE=/var/KickStart/tomcat/conf/Catalina/localhost/cns.xml
PNP_VAR_TOMCAT=/var/KickStart/tomcat
PNP_CARSCLI_PACKAGE=PNPCARSCli
PNP_BIN=/opt/CSColumos/KickStart/bin
PNP_JAVA_VERSION=1.6
TOUCH_CMD=/bin/touch
CD_CMD=cd
USER=admin
PNP_IMAGE_TRANSFER_TIMEOUT=1200
CNS_NO_OF_PLAINTEXT_EVENTGW=5
CNS_NO_OF_CRYPTO_EVENTGW=5
PNP_DATA_IMAGE=/var/KickStart/image
PNP_ENABLE_SELF_SIGNED=y
PNP_ENABLE=Y
CPUFILE=/proc/cpuinfo
EVT_NCS_EVENT_PROTOCOL=ssl
PNP_VAR_HTTPD_CONF=/var/KickStart/httpd/conf
MORE_CMD=/bin/more
WGET_CMD_SSL=/usr/bin/wget --no-check-certificate
HEAD_CMD=/usr/bin/head
PNP_PROJECT_RPM_NAME=Lumos_PNP_Server
PNP_LOG_DIR=/var/log/KickStart
PNP_INSTALL_PREFIX=/opt/CSColumos
USERNAME_CMD=/usr/bin/id -un
IPTABLE=iptables
CNS_GATEWAY_OPTS=-DNP_LOG_DIR=/var/log/KickStart -Dlog4j.configuration=cnslog4j.properties
PNP_ENABLE_EMBEDDED_FT=y
PNP_HTTPS_PORT=443
PNP_HTTPD_PACKAGE=httpd
PNP_IMAGE_ACTIVATION_TIMEOUT=600
PNP_ENABLE_AUTO_NCS=n
PNP_ENABLE_SSL=y
PNP_BACKUP_NAME=pnp_backup
SE_ENABLE_HTTPD_DIR=/usr/bin/chcon -Rv --type=httpd_sys_content_t
LOCAL_DISK_DIR=/localdisk
COREFILE=unlimited
PWD_CMD=pwd
MV_CMD=/bin/mv -f
PNP_STARTUP_FILE=/var/KickStart/install/cnsGatewayStartup.txt
MEMFILE=/proc/meminfo
PNP_CE_NG=n
MAIL=/var/mail/admin
PATH=/bin:/usr/bin:/sbin:/usr/sbin:/usr/local/bin:/usr/local/sbin:/opt/system/bin:/opt/system/lib:/opt/system/etc/carscli
IPTABLE_SAVE_CMD=service iptables save
IPTABLE_FILE=/etc/sysconfig/iptables
EVT_NCS_EVENT_PORT=61617
PNP_NCS=n
PNP_SETUP_LOG=/var/KickStart/install/setup.log
PNP_HTTPD_INIT_DIR=/opt/CSColumos/KickStart/httpd/etc/init.d
PNP_HOME=/opt/CSColumos/KickStart
IPTABLE_RESTART_CMD=service iptables restart
PNP_PRIMARY=y
EVT_MANAGER_PROCESS=com.cisco.pnp.ks.eventmanager.server.StartPNPKSMOMServer

```



```

EVT_MGR_EVENT_PORT=62616
PNP_VAR_HTTPD=/var/KickStart/httpd
PNP_SYSTEM_MONITOR_NAME=pnp_systemmonitor
PWD=/localdisk
JAVA_HOME=/usr/lib/jvm/java-1.6.0-sun-1.6.0.21.x86_64/jre
HTTP_SERVER_KEY=/var/KickStart/install/pnp_selfsigned_server.key
RPM_INSTALL_CMD=/bin/rpm -ivh
DF_CMD=/bin/df
CP_CMD=/bin/cp -f
NCS_TRUST_STORE=/opt/CSColumos/conf/truststore
DISKSIZE_CMD=/bin/df -lk
IPTABLE_ENABLE_TCP_PORT=/sbin/iptables -I INPUT -p tcp -j ACCEPT --dport
CAT_CMD=/bin/cat
NCS_KEY_STORE=/opt/CSColumos/conf/keystore
NETSTAT_CMD=/bin/netstat
PNP_SERVER_SSL_KEY=/var/KickStart/conf/server.key
PNP_HOST_NAME=bgl-pnp-dev1-ovf
RPM_REMOVE_CMD=/bin/rpm -e
TAIL_CMD=/bin/tail
PNP_SERVER_SSL_CERT=/var/KickStart/conf/server.crt
CATALINA_OPTS=-DPNP_LOG_DIR=/var/log/KickStart -DPNP_PROCESS_LOG=tomcat
CNS_ENABLE_PLAINTEXT=Y
HOST_NAME_FULL_CMD=/bin/hostname -f
NCS_PNP_WEBAPP_FILE=/opt/CSColumos/tomcat/conf/Catalina/localhost/cns.xml
PNP_FT_USERNAME=ciscopnp
PNP_PROJECT_NAME=KickStart
NETCONF_CMD=/sbin/ifconfig
AWK_CMD=/bin/awk
PNP_ENABLE_PORT_ALLOCATION=y
PNP_VAR_HTTPD_HTML=/var/KickStart/httpd/html
IPTABLE_STATUS_CMD=service iptables status
PNP_SHUTDOWN_FILE=/var/KickStart/install/cnsGatewayShutdown.txt
PNP_SERVER_IP=10.104.105.167
PNP_VAR_SERVICE=/var/KickStart/services
PNP_DEPLOYMENT_WEBAPP_FILE=/var/KickStart/tomcat/webapps/pnp-deployment-service.war
NCS_LOG_BASE=/opt/CSColumos/logs
PNP_VAR_CONF=/var/KickStart/conf
SHLVL=3
HOME=/home/admin
PNP_JAVA_OPTS=-DPNP_LOG_DIR=/var/log/KickStart -DPNP_PROCESS_LOG=tomcat
PNP_LIB=/opt/CSColumos/KickStart/lib
PS_CMD=/bin/ps
WGET_CMD=/usr/bin/wget
DIFF_CMD=/usr/bin/diff
EVT_MGR_OPTS=-DPNP_LOG_DIR=/var/log/KickStart -DPNP_PROCESS_LOG=evtmgr
HTTPD_CONF=/var/KickStart/httpd/conf
PNP_DATA_DIR=/var/KickStart
CUT_CMD=/bin/cut
PNP_DATA_TEMPLATE=/var/KickStart/template
PNP_PROJECT_RELEASE=1
MONITOR_OPTS=-DPNP_LOG_DIR=/var/log/KickStart -Dlog4j.configuration=monitorlog4j.properties
-DNP_PROCESS_LOG=monitor
TOMCAT_LOG_DIR=/var/log/KickStart/tomcat
SESTATUS_CMD=/usr/sbin/sestatus
OPENSSL_CMD=/usr/bin/openssl
LOGNAME=admin
PNP_NCS_CONTEXT_FILE=/opt/CSColumos/conf/pnp-ks-bean-context.xml
EVT_MGR_EVENT_PROTOCOL=tcp
PNP_END_PORT_STANDALONE=12010
DU_CMD=/usr/bin/du
CLASSPATH=./var/KickStart/conf
NCS_PNP_DEPLOYMENT_WEBAPP_DIR=/opt/CSColumos/tomcat/webapps/pnp-deployment-service
IPTABLE_STOP_CMD=service iptables stop
PNP_PROJECT_VERSION=2.0.0.0
SSH_CONNECTION=10.21.84.117 54389 10.104.105.167 22
PNP_FT_PORT=21
PNP_PLAINTEXT_HTTPD=y
PNP_PROJECT_DISPLAY_NAME=PnP Gateway
PNP_START_PORT=11011
PNP_SETUP_COUNT=1
TOMCAT_AJP13_PORT=8009
MAXOPENFILE=4096
RPM_QUERY_PKG_CMD=/bin/rpm -qi

```

```
NCS_PROJECT_NAME=NCS
PNP_DATA=/var/KickStart
PNP_HOME_HTTPD=/opt/CSColumos/KickStart/httpd
CNS_TOTAL_EVENTGW=10
HTTP_SERVER_CERTIFICATE=/var/KickStart/install/pnp_self_signedserver.crt
EVT_MGR_EVENT_FAILOVER=y
LS_CMD=/bin/ls
NCS_INSTALL_PREFIX=/opt/CSColumos
NCS_PKG_NAME=LumosApp
PNP_LOG4J_OPTS=-DPNP_LOG_DIR=/var/log/KickStart
PNP_VAR_TOMCAT_CONF=/var/KickStart/tomcat/conf
PNP_VAR_DIR=/var/KickStart
SLEEP_CMD=/bin/sleep
PNP_IMAGE_DISTRIBUTION_TIMEOUT=1200
EVT_MGR_NETWORK_IP=10.104.105.167
RPM_FORCED_REMOVE_CMD=/bin/rpm -e --force --noscripts
PNP_LOG_LEVEL=warn
HTTPD_HOME=/usr
PNP_FT_PROTOCOL=ftp
CNS_GATEWAY_PROCESS=com.cisco.pnp.ks.cnsgateway.connection.ConnectionManagerBean
SE_DEL_HTTPD_MUTEX=/bin/rm -f -r /etc/httpd/logs/ssl_mutex*
PNP_END_PORT_NCS=11014
_=/bin/env
-----
admin#
```

pnp tech log

To create a system-monitoring log file for the Cisco Plug and Play Gateway, use the **pnp tech log** command in privileged EXEC mode.

pnp tech log

Command Modes

Privileged EXEC

Command History

| Release | Modification |
|--------------------------------|------------------------------|
| Cisco Prime Infrastructure 1.2 | This command was introduced. |
| Cisco Prime Infrastructure 2.0 | This command was modified. |

Usage Guidelines

The **pnp tech log** command creates a system-monitoring log file in a compressed tar format with the extension .pnp_systemmonitor.tar.gz.

Examples

The following is sample output from the **pnp tech log** command:

```
admin# pnp tech log
The System Status file created : /localdisk/20121003032209.pnp_systemmonitor.tar.gz
admin#
```



Note

For more information on how to copy files from the local disk, see [copy, on page 19](#) command.

show Commands

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

show application

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

show application [**status** | **version** [app_name]]

Syntax Description

| | |
|-----------------|---|
| status | Displays the status of the installed application. |
| version | Displays the application version for an installed application—the . |
| <i>app_name</i> | Name of the installed application. |

Table 7: Output Modifier Variables for Count or Last

| | |
|--|--|
| | <p>Output modifier variables:</p> <ul style="list-style-type: none">• <i>begin</i>—Matched pattern. Up to 80 alphanumeric characters.• <i>count</i>—Counts the number of lines in the output. Add number after the word <i>count</i>. <p> —Output modifier variables.</p> <ul style="list-style-type: none">• <i>end</i>—Ends with line that matches. Up to 80 alphanumeric characters.• <i>exclude</i>—Excludes lines that match. Up to 80 alphanumeric characters.• <i>include</i>—Includes lines that match. Up to 80 alphanumeric characters.• <i>last</i>—Displays last few lines of output. Add number after the word <i>last</i>. Up to 80 lines to display. Default 10. <p> —Output modifier variables (see Table A-8).</p> |
|--|--|

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

| | Description |
|-------------------------------------|---------------------------------------|
| application install | Installs an application bundle. |
| application remove | Removes or uninstalls an application. |
| application start | Starts or enables an application. |
| application stop | Stops or disables an application. |
| application upgrade | Upgrades an application bundle. |

show backup history

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

show backup history

Syntax Description This command has no arguments or keywords.

Command Default No default behavior or values.

Command Modes EXEC

Examples

Example 1

```
ncs/admin# show backup history
Wed Aug 18 12:55:21 UTC 2010: backup logs logs-0718.tar.gz to repository fileserver007:
success
Wed Aug 18 12:55:53 UTC 2010: backup full-0718.tar.gpg to repository fileserver007: success
ncs/admin#
```

Example 2

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

Related Commands

| Command | Description |
|---------------------------------|--|
| backup | Performs a backup (and Cisco ADE OS) and places the backup in a repository. |
| restore | Restores from backup the file contents of a specific repository. |
| repository | Enters the repository submode for configuration of backups. |
| show repository | Displays the available backup files located on a specific repository. |

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

| | |
|------------------|---|
| all | Shows all of the enabled Cisco Discovery Protocol interfaces. |
| neighbors | Shows the Cisco Discovery Protocol neighbors. |

Command Default

No default behavior or values.

Command Modes

EXEC

Examples

Example 1

```
ncs/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.
ncs/admin#
```

Example 2

```
ncs/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 : isexp-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

ncs/admin#
```


Related Commands

| Command | Description |
|------------------------------|---|
| cdp holdtime | Specifies the length of time that the receiving device should hold a Cisco Discovery Protocol packet from your router before discarding it. |
| cdp run | Enables the Cisco Discovery Protocol. |
| cdp timer | Specifies how often the server sends Cisco Discovery Protocol updates. |

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 This command has 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 10: Common Time Zones](#), [Table 11: Australia Time Zones](#), and [Table 12: Asia Time Zones](#) on pages A-84 and A-85 for sample time zones).

Related Commands

| Command | Description |
|-----------------------|---|
| clock | Sets the system clock for display purposes. |

show cpu

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

show cpu [statistics] [[] []]

Syntax Description

| | |
|------------|---|
| statistics | Displays CPU statistics. |
| | Output modifier variables: <ul style="list-style-type: none"> • <i>begin</i>—Matched pattern. Up to 80 alphanumeric characters. • <i>count</i>—Counts the number of lines in the output. Add number after the word <i>count</i>. —Output modifier variables (see Table A-9). • <i>end</i>—Ends with line that matches. Up to 80 alphanumeric characters. • <i>exclude</i>—Excludes lines that match. Up to 80 alphanumeric characters. • <i>include</i>—Includes lines that match. Up to 80 alphanumeric characters. • <i>last</i>—Displays last few lines of output. Add number after the word <i>last</i>. Up to 80 lines to display. Default 10. —Output modifier variables (see Table A-9). |

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

| Command | Description |
|-----------------------------|---|
| show disks | Displays the system information of all disks. |
| show memory | Displays the amount of system memory that each system process uses. |

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*—Counts the number of lines in the output. Add number after the word *count*.
|—Output modifier variables (see [Table A-10](#)).
- *end*—Ends with line that matches. Up to 80 alphanumeric characters.
- *exclude*—Excludes lines that match. Up to 80 alphanumeric characters.
- *include*—Includes lines that match. Up to 80 alphanumeric characters.
- *last*—Displays 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-10](#)).

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#
```

Related Commands

| Command | Description |
|-----------------------------|---|
| show cpu | Displays CPU information. |
| show memory | Displays the amount of system memory that each system process uses. |

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

| | |
|-------------|--|
| > | Output direction. |
| <i>file</i> | Name of file to redirect standard output (stdout). |
| | Output modifier commands: <ul style="list-style-type: none"> • <i>begin</i>—Matched pattern. Up to 80 alphanumeric characters. • <i>count</i>—Counts the number of lines in the output. Add number after the word count. <ul style="list-style-type: none"> ◦ —Output modifier commands (see Table A-11). • <i>end</i>—Ends with line that matches. Up to 80 alphanumeric characters. • <i>exclude</i>—Excludes lines that match. Up to 80 alphanumeric characters. • <i>include</i>—Includes lines that match. Up to 80 alphanumeric characters. • <i>last</i>—Displays last few lines of output. Add number after the word last. Up to 80 lines to display. Default 10. <ul style="list-style-type: none"> ◦ —Output modifier commands (see Table A-11). |

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 2

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

Related Commands

| Command | Description |
|---------------------------|--|
| icmp echo | Configures the Internet Control Message Protocol (ICMP) echo requests. |

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

| | |
|-----------------|---|
| GigabitEthernet | Shows the Gigabit Ethernet interface. Either 0 or 1. |
| | <p>Output modifier variables:</p> <ul style="list-style-type: none"> • <i>begin</i>—Matched pattern. Up to 80 alphanumeric characters. • <i>count</i>—Counts the number of lines in the interface. Add number after the word <i>count</i>. • <i>end</i>—Ends with line that matches. Up to 80 alphanumeric characters. • <i>exclude</i>—Excludse lines that match. Up to 80 alphanumeric characters. • <i>include</i>—Includes lines that match. Up to 80 alphanumeric characters. • <i>last</i>—Displays last few lines of output. Add number after the word <i>last</i>. Up to 80 lines to display. Default 10. |

Command Default

No default behavior or values.

Command Modes

EXEC

Usage Guidelines

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

```

show interface

```

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)

```

ncs/admin#

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
            inet6 addr: 2001:558:ff10:870:8000:29ff:fe36:200/64 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

| Command | Description |
|---|--|
| interface | Configures an interface type and enters the interface configuration submode. |
| ipv6 address autoconfig | Enables IPv6 stateless autoconfiguration on an interface. |
| ipv6 address dhcp | Enables IPv6 address DHCP on an interface. |

show inventory

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

show inventory |

Syntax Description

Output modifier variables:

- *begin*—Matched pattern. Up to 80 alphanumeric characters.
- *count*—Counts the number of lines in the interface. Add number after the word *count*.
- *end*—Ends with line that matches. Up to 80 alphanumeric characters.
- *exclude*—Excludse lines that match. Up to 80 alphanumeric characters.
- *include*—Includes lines that match. Up to 80 alphanumeric characters.
- *last*—Displays last few lines of output. Add number after the word *last*. Up to 80 lines to display. Default 10.

Command Default

No default behavior or values.

Command Modes

EXEC

Examples

```
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: H8JESGOFHGG
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

| | |
|-------------------------|--|
| application | Displays application logs. |
| <i>application-name</i> | Application name. Up to 255 alphanumeric characters. <ul style="list-style-type: none"> • <i>tail</i>—Tail system syslog messages. • <i>count</i>—Tail last count messages. From 0 to 4,294,967,295. —Output modifier variables (see below). |
| internal | Displays the syslogs configuration. |
| system | Displays the system syslogs. |
| | Output modifier variables: <ul style="list-style-type: none"> • <i>begin</i>—Matched pattern. Up to 80 alphanumeric characters. • <i>count</i>—Counts the number of lines in the interface. Add number after the word <i>count</i>. • <i>end</i>—Ends with line that matches. Up to 80 alphanumeric characters. • <i>exclude</i>—Excludes lines that match. Up to 80 alphanumeric characters. • <i>include</i>—Includes lines that match. Up to 80 alphanumeric characters. • <i>last</i>—Displays last few lines of output. Add number after the word <i>last</i>. Up to 80 lines to display. Default 10. |

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/.1281030
302
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/.1281
030302/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 10:47:07 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 cars_install.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: 13028 kB
Aug  5 10:47:09 localhost debugd[1943]: [17291]: application:install ci_util.c[390] [setup]:
Found MemFree value = 13028
Aug  5 10:47:09 localhost debugd[1943]: [17291]: application:install ci_util.c[393] [setup]:
Found Inactive = Inactive: 948148 kB
Aug  5 10:47:09 localhost debugd[1943]: [17291]: application:install ci_util.c[399] [setup]:
Found Inactive MemFree value = 948148
Aug  5 10:47:09 localhost debugd[1943]: [17291]: application:install ci_util.c[409] [setup]:
Sufficient mem found
Aug  5 10:47:09 localhost debugd[1943]: [17291]: application:install ci_util.c[415] [setup]:
Done checking memory...
Aug  5 10:47:09 localhost debugd[1943]: [17291]: application:install cars_install.c[461]
[setup]: Verifying RPM's...
--More--
(prompt Spacebar to continue)
```

Example 2

```
ncs/admin# show logging internal

log server:          localhost
Global loglevel:     6
Status:              Enabled
ncs/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 of the running processes, use the **show memory** command in EXEC mode.

show memory

| | |
|---------------------------|--|
| Syntax Description | This command has 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 This command has 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 l   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

| Command | Description |
|----------------------------|--|
| ntp server | Allows synchronization of the software clock by the NTP server for the system. |

show ports

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

show ports [*pattern*] [*count*]

Syntax Description

Output modifier variables:

- *begin*—Matched pattern. Up to 80 alphanumeric characters.
- *count*—Counts the number of lines in the interface. Add number after the word *count*.
|—Output modifier variables (see [Table A-12](#)).
- *end*—Ends with line that matches. Up to 80 alphanumeric characters.
- *exclude*—Excludes lines that match. Up to 80 alphanumeric characters.
- *include*—Includes lines that match. Up to 80 alphanumeric characters.
- *last*—Displays 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](#)).

Command Default

No default behavior or values.

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: ::1:28314, ::1:59055, ::1:45113, ::1:49082, ::1:64737, ::1:62570, ::1:19577,
::1:29821
Process : ttcserver (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: 0.0.0.0:873
      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: 0.0.0.0:9993
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, :::60628, :::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 : tnslnsr (21096)
  tcp: :::1521
Process : ora_d000_ncsl (21222)
  tcp: :::26456
  udp: ::1:63198
Process : ntpd (2715)
  udp: 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_ncsl (21190)
  udp: ::1:51994
Process : ora_mmon_ncsl (21218)
  udp: :::38941
Process : ora_s000_ncsl (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 |

Syntax Description

(Optional) Output modifier variables:

- *begin*—Matched pattern. Up to 80 alphanumeric characters.
- *count*—Counts the number of lines in the interface. Add number after the word *count*.
- *end*—Ends with line that matches. Up to 80 alphanumeric characters.
- *exclude*—Excludes lines that match. Up to 80 alphanumeric characters.
- *include*—Includes lines that match. Up to 80 alphanumeric characters.
- *last*—Displays last few lines of output. Add number after the word *last*. Up to 80 lines to display. Default 10.

Command Default

No default behavior or values.

Command Modes

EXEC

Examples

```
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_ah_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 ? kauditd
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--
ncs/admin#

```

Table 8: Show Process Field Descriptions

| Field | Description |
|---------|--|
| USER | Logged-in user. |
| PID | Process ID. |
| TIME | The time that the command was last used. |
| TT | Terminal that controls the process. |
| COMMAND | Type of process or command used. |

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

| Command | Description |
|-------------------------------------|--|
| backup | Performs a backup (and Cisco ADE OS) and places the backup in a repository. |
| restore | Restores from backup the file contents of a specific repository. |
| repository | Enters the repository submode for configuration of backups. |
| show backup history | Displays the backup history of the system. |

show restore

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

show restore {history}

Syntax Description

| history | Displays the restore history. |
|---------|-------------------------------|
|---------|-------------------------------|

Command Default

No default behavior or values.

Command Modes

EXEC

Examples

Example 1

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

```
ncs/admin#
```

Example 2

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

Related Commands

| Command | Description |
|-------------------------------------|--|
| backup | Performs a backup (and Cisco ADE OS) and places the backup in a repository. |
| restore | Restores from backup the file contents of a specific repository. |
| repository | Enters the repository submode for configuration of backups. |
| show backup history | Displays the backup history of the system. |

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.

showrunning-config

Syntax Description This command has 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 172.16.168.183
!
ip default-gateway 172.23.90.1
!
clock timezone UTC
!
ntp server time.nist.gov
!
username admin password hash $1$JbbHvKVG$xMZ/XL4tH15Knf.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
!
cdp timer 60
cdp holdtime 180
cdp run GigabitEthernet 0
!
icmp echo on
!

ncs/admin#
```


Related Commands

| Command | Description |
|-------------------------------------|---|
| configure | Enters configuration mode. |
| show startup-config | Displays the contents of the startup configuration file or the configuration. |

show startup-config

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

showstartup-config

Syntax Description This command has 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 172.16.168.183
!
ip default-gateway 172.23.90.1
!
clock timezone UTC
!
ntp server time.nist.gov
!
username admin password hash $1$JbbHvKVG$xMZ/XL4tH15Knf.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
!
cdp timer 60
cdp holdtime 180
cdp run GigabitEthernet 0
!
icmp echo on
!
ncs/admin#
```

Related Commands

| Command | Description |
|-------------------------------------|---|
| configure | Enters configuration mode. |
| show running-config | Displays the contents of the currently running configuration file or the configuration. |

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

| | |
|------|---|
| file | Saves any technical support data as a file in the local disk. |
| word | Filename to save. Up to 80 alphanumeric characters. |

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 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)
*****
              total        used        free      shared    buffers    cached
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]
```

```
      5 ?          S<      0:00 [events/0]
--More--
      (press Spacebar to continue)

ncs/admin#
```

Related Commands

| Command | Description |
|-------------------------------------|---|
| show interface | Displays the usability status of the interfaces. |
| show process | Displays information about active processes. |
| show running-config | Displays the contents of the current running configuration. |

show terminal

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

show terminal

Syntax Description This command has 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#
```

[show terminal](#), on page 142 describes the fields of the **show terminal** output.

Table 9: Show Terminal Field Descriptions

| Field | Description |
|-----------------------------|---|
| TTY: /dev/pts/0 | Displays standard output to type of terminal. |
| Type: "vt100" | Type of current terminal used. |
| Length: 24 lines | Length of the terminal display. |
| Width: 80 columns | Width of the terminal display, in character columns. |
| Session Timeout: 30 minutes | Length of time, in minutes, for a session, after which the connection closes. |

show timezone

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

show timezone

Syntax Description This command has no arguments or keywords.

Command Default No default behavior or values.

Command Modes EXEC

Examples

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

Related Commands

| Command | Description |
|--------------------------------|--|
| clock timezone | Sets the time zone on the system. |
| show timezones | Displays the time zones available on the system. |

show timezones

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

show timezones

Syntax Description

This command has no arguments or keywords.

Command Default

No default behavior or values.

Command Modes

EXEC

Usage Guidelines

See the [clock timezone](#) command, for examples of the time zones available for the server.

Examples

```
ncs/admin# show timezones
Africa/Blantyre
Africa/Dar_es_Salaam
Africa/Dakar
Africa/Asmara
Africa/Timbaktu
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

| Command | Description |
|--------------------------------|---|
| show timezone | Displays the time zone set on the system. |
| clock timezone | Sets the time zone on the system. |

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 | This command has 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 server, use the **show uptime** command in EXEC mode.

show uptime |

Syntax Description

(Optional) Output modifier variables:

- *begin*—Matched pattern. Up to 80 alphanumeric characters.
- *count*—Counts the number of lines in the output. Add number after the word *count*.
- *end*—Ends with line that matches. Up to 80 alphanumeric characters.
- *exclude*—Excludes lines that match. Up to 80 alphanumeric characters.
- *include*—Include lines that match. Up to 80 alphanumeric characters.
- *last*—Displays last few lines of output. Add number after the word *last*. Up to 80 lines to display. Default 10.

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 server, use the **show users** command in EXEC mode.

show users

Syntax Description This command has 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

This command has 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 server, and displays the 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 lists the **configuration commands** along with a brief description of their use, command defaults, command syntax, command modes, usage guidelines, command examples, and related commands, where applicable.

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.

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

| | |
|-------------|---|
| <i>word</i> | NFS URL for staging area. Up to 2048 alphanumeric characters. Use nfs://server:path(1) . |
|-------------|---|

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 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 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.

[no] cdp holdtime *seconds*

Syntax Description

| | |
|----------------|--|
| <i>seconds</i> | 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

```
ncs/admin(config)# cdp holdtime 60
ncs/admin(config)#
```

Related Commands

| | Description |
|---------------------------|--|
| cdp timer | Specifies how often the server sends Cisco Discovery Protocol updates. |
| cdp run | Enables the Cisco Discovery Protocol. |

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.

[no] cdp run [*GigabitEthernet*]

Syntax Description

| | |
|------------------------|---|
| <i>GigabitEthernet</i> | Specifies the Gigabit Ethernet interface on which to enable the Cisco Discovery Protocol. |
|------------------------|---|

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

| | Description |
|------------------------------|--|
| cdp holdtime | Specifies the length of time that the receiving device should hold a Cisco Discovery Protocol packet from the server before discarding it. |
| cdp timer | Specifies how often the server sends Cisco Discovery Protocol updates. |

cdp timer

To specify how often the 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.

[no] cdp timer *seconds*

Syntax Description

| | |
|----------------|--|
| <i>seconds</i> | Specifies how often, in seconds, the 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

| | Description |
|------------------------------|--|
| cdp holdtime | Specifies the amount of time that the receiving device should hold a Cisco Discovery Protocol packet from the server before discarding it. |
| cdp run | Enables the Cisco Discovery Protocol. |

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

| | |
|-----------------|--|
| <i>timezone</i> | 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 Coordinated Universal Time (UTC). If you do not know your specific time zone, you can enter the region, country, and city (see Tables [clock timezone](#), [Table 11: Australia Time Zones](#), and [Table 12: Asia Time Zones](#) for sample time zones to enter on your system).

Table 10: Common Time Zones

| Acronym or name | Time Zone Name |
|--|--|
| Europe | |
| GMT, GMT0, GMT-0, GMT+0, UTC, Greenwich, Universal, Zulu | Greenwich Mean Time, as UTC |
| GB | British |
| GB-Eire, Eire | Irish |
| WET | Western Europe Time, as UTC |
| CET | Central Europe Time, as UTC + 1 hour |
| EET | Eastern Europe Time, as UTC + 2 hours |
| United States and Canada | |
| EST, EST5EDT | Eastern Standard Time, as UTC -5 hours |
| CST, CST6CDT | Central Standard Time, as UTC -6 hours |

| Acronym or name | Time Zone Name |
|-----------------|--|
| MST, MST7MDT | Mountain Standard Time, as UTC -7 hours |
| PST, PST8PDT | Pacific Standard Time, as UTC -8 hours |
| HST | Hawaiian Standard Time, as UTC -10 hours |

Table 11: Australia Time Zones

| AustraliaFootnote. | | | |
|--------------------|--------------|--------------|-------------|
| ACTFootnote. | Adelaide | Brisbane | Broken_Hill |
| Canberra | Currie | Darwin | Hobart |
| Lord_Howe | Lindeman | LHIFootnote. | Melbourne |
| North | NSWFootnote. | Perth | Queensland |
| South | Sydney | Tasmania | Victoria |
| West | Yancowinna | | |

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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

Table 12: Asia Time Zones

| AsiaFootnote. | | | |
|---------------|-----------|----------|-----------|
| AdenFootnote. | Almaty | Amman | Anadyr |
| Aqtau | Aqtobe | Ashgabat | Ashkhabad |
| Baghdad | Bahrain | Baku | Bangkok |
| Beirut | Bishkek | Brunei | Calcutta |
| Choibalsan | Chongqing | Columbo | Damascus |
| Dhakar | Dili | Dubai | Dushanbe |

Asia[Footnote.](#)

| | | | |
|-----------|-------------|--------------|----------|
| Gaza | Harbin | Hong_Kong | Hovd |
| Irkutsk | Istanbul | Jakarta | Jayapura |
| Jerusalem | Kabul | Kamchatka | Karachi |
| Kashgar | Katmandu | Kuala_Lumpur | Kuching |
| Kuwait | Krasnoyarsk | | |

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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 server, enter the **show timezones** command. A list of all of the time zones available in the 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

| | Description |
|--------------------------------|--|
| show timezones | Displays a list of available time zones on the system. |
| show timezone | Displays the current time zone set on the system. |

do

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

do

Syntax Description

This command has no arguments or keywords.

Table 13: Command Options for the Do Command

| | Description |
|----------------------------|---|
| application install | Installs a specific application. |
| application remove | Removes a specific application. |
| application start | Starts or enables a specific application |
| application stop | Stops or disables a specific application. |
| application upgrade | Upgrades a specific application. |
| backup | Performs a backup (and Cisco ADE OS) and places the backup in a repository. |
| backup-logs | Performs a backup of all of the logs on the server to a remote location. |
| clock | Sets the system clock on the server. |
| configure | Enters configuration mode. |
| copy | Copies any file from a source to a destination. |
| debug | Displays any errors or events for various command situations; for example, backup and restore, configuration, copy, resource locking, file transfer, and user management. |
| delete | Deletes a file on the server. |
| dir | Lists files on the server. |
| forceout | Forces the logout of all of the sessions of a specific node user. |
| halt | Disables or shuts down the server. |
| help | Describes the help utility and how to use it on the server. |
| mkdir | Creates a new directory. |

| | Description |
|---------------------------------|--|
| nslookup | Queries the IPv4 address or hostname of a remote system. |
| patch | Install System or Application patch. |
| pep | Configures the Inline PEP node. |
| ping | Determines the IPv4 network activity on a remote system. |
| ping6 | Determines the IPv6 network activity on a IPv6 remote system. |
| reload | Reboots the server. |
| restore | Performs a restore and retrieves the backup out of a repository. |
| rmdir | Removes an existing directory. |
| show | Provides information about the server. |
| ssh | Starts an encrypted session with a remote system. |
| tech | Provides Technical Assistance Center (TAC) commands. |
| telnet | Establishes a Telnet connection to a remote system. |
| terminal length | Sets terminal line parameters. |
| terminal session-timeout | Sets the inactivity timeout for all terminal sessions. |
| terminal session-welcome | Sets the welcome message on the system for all terminal sessions. |
| terminal terminal-type | Specifies the type of terminal connected to the current line of the current session. |
| traceroute | Traces the route of a remote IP address. |
| undebug | 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. |
| write | Erases the startup configuration that forces the setup utility to run and prompts the network configuration, copies the running configuration to the startup configuration, and displays the running configuration on the console. |

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 the configuration mode that you were using.

Examples

```

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 172.16.168.183
!
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 This command has 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.

Examples

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

Related Commands

| Command | Description |
|-----------------------------|--|
| exit | Exits configuration mode. |
| exit (EXEC) | Closes the active terminal session by logging out of the server. |

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 This command has no arguments or keywords.

Command Default No default behavior or values.

Command Modes Configuration

Usage Guidelines The **exit** command is used in the 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 server (see [exit](#), for a description of the **exit** (EXEC) command).

Examples

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

Related Commands

| Command | Description |
|-----------------------------|--|
| end | Exits configuration mode. |
| exit (EXEC) | Closes the active terminal session by logging out of the server. |

hostname

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.

[no] hostname word

Syntax Description

| | |
|-------------|--|
| <i>word</i> | 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. |
|-------------|--|

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

| | |
|-----|------------------------------|
| off | Disables ICMP echo response. |
| on | Enables ICMP echo response. |

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

| Command | Description |
|----------------------------------|---|
| show icmp-status | Display ICMP echo response configuration information. |

interface

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


Note

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

interface GigabitEthernet ip-address

Syntax Description

| | |
|------------------------|---|
| GigabitEthernet | Configures the Gigabit Ethernet interface. |
| 0 - 3 | Number of the Gigabit Ethernet port to configure. |


Note

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

| | |
|----------|---|
| do | EXEC command. Allows you to perform any EXEC commands in this mode (see do). |
| end | Exits config-GigabitEthernet submode and returns you to EXEC mode. |
| exit | Exits the config-GigabitEthernet configuration submode. |
| ip | Sets IP address and netmask for the Ethernet interface (see ip address). |
| ipv6 | Configures the IPv6 autoconfiguration address and IPv6 address from DHCPv6 server. (see ipv6 address autoconfig and ipv6 address dhcp). |
| no | Negates the command in this mode. Two keywords are available: <ul style="list-style-type: none"> • ip—Sets the IP address and netmask for the interface. • shutdown—Shuts down the interface. |
| shutdown | Shuts down the interface (see shutdown). |

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

| Command | Description |
|---|---|
| show interface | Displays information about the system interfaces. |
| ip address (interface configuration mode) | Sets the IP address and netmask for the interface. |
| shutdown (interface configuration mode) | Shuts down the interface (see shutdown). |

ipv6 address autoconfig

To enable IPv6 stateless autoconfiguration, use the **ipv6 address autoconfig** command in configuration mode. To remove the address from the interface, use the **no** form of this command.

[no] ipv6 address autoconfig [default]0

Syntax Description

| | |
|----------------|---|
| default | (Optional) If a default router is selected on this interface, the default keyword causes a default route to be installed using that default router. The default keyword can be specified only on one interface. |
|----------------|---|

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.

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.

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
          inet6 addr: 2001:558:ff10:870:8000:29ff:fe36:200/64 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

```

ncs/admin#

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:302:11:2:9d65:e608:59a9:d4b9/64 Scope:Global
          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

```

ncs/admin#

Related Commands

| Command | Description |
|---|---|
| show interface | Displays information about the system interfaces. |
| ip address (interface configuration mode) | Sets the IP address and netmask for the interface. |
| shutdown (interface configuration mode) | Shuts down the interface (see shutdown). |
| ipv6 address dhcp | Enables IPv6 address DHCP on an interface. |
| show running-config | Displays the contents of the currently running configuration file or the configuration. |

ipv6 address dhcp

To enable IPv6 address DHCP, use the **ipv6 address dhcp** command in configuration mode. To remove the address from the interface, use the **no** form of this command.

[no] ipv6 address dhcp [rapid-commit] 0

Syntax Description

| | |
|-----------------------|---|
| [rapid-commit] | (Optional) Allows the two-message exchange method for address assignment. |
| 0 | Gigabit Ethernet port number to be configured. |

Command Default

No default behavior or values.

Command Modes

Configuration

Usage Guidelines

None.

Examples

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

| Command | Description |
|---|---|
| show interface | Displays information about the system interfaces. |
| ip address (interface configuration mode) | Sets the IP address and netmask for the interface. |
| shutdown (interface configuration mode) | Shuts down the interface (see shutdown). |
| ipv6 address autoconfig | Enables IPv6 stateless autoconfiguration on an interface. |
| show running-config | Displays the contents of the currently running configuration file or the configuration. |

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.

[no] 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

| | |
|------------|-----------------------------------|
| ip-address | IPv4 version IP address. |
| netmask | Mask of the associated IP subnet. |

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

| Command | Description |
|---|---|
| shutdown (interface configuration mode) | Disables an interface (see shutdown). |
| ip default-gateway | Sets the IP address of the default gateway of an interface. |
| show interface | Displays information about the system IP interfaces. |
| interface | Configures an interface type and enters the interface mode. |

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.

[no] 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

| Command | Description |
|---|---|
| ip address (interface configuration mode) | Sets the IP address and netmask for the Ethernet interface. |

ip domain-name

To define a default domain name that the 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.

[no] 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

| | Description |
|--------------------------------|--|
| ip name-server | Sets the DNS servers for use during a DNS query. |

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.



Note

Using the **no** form of this command removes all of 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.

[no] ip name-server *ip-address* [*ip-address**]}

Syntax Description

| | |
|---------------------|---|
| <i>ip-address</i> | Address of a name server. |
| <i>ip-address</i> * | (Optional) IP addresses of additional name servers. |
| Note | You can configure a maximum of three name servers. |

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.

Examples

```
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 server; nevertheless, the changes will take effect.

Related Commands

| Command | Description |
|--------------------------------|---|
| ip domain-name | Defines a default domain name that the server uses to complete hostnames. |

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.

ip route prefix mask **gateway** ip-address

no ip route prefix mask

Syntax Description

| | |
|----------------|--|
| prefix | IP route prefix for the destination. |
| mask | Prefix mask for the destination. |
| gateway | Route-specific gateway |
| ip-address | IP address of the next hop that can be used to reach that network. |

Command Default

No default behavior or values.

Configuration.

Usage Guidelines

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.

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.

[no] kron {occurrence} occurrence-name

Syntax Description

| | |
|------------------------|--|
| <i>occurrence-name</i> | 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 [<i>hh:mm</i>] [<i>day-of-week</i> <i>day-of-month</i> <i>month day-of-month</i>]. |
| 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: <ul style="list-style-type: none"> • at—Usage: at [<i>hh:mm</i>] [<i>day-of-week</i> <i>day-of-month</i> <i>month day-of-month</i>]. • 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 server at a specified time. See the [kron policy-list](#) command.

Examples



Note

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 | Description |
|----------------------------------|--|
| kron policy-list | Specifies a name for a Command Scheduler policy. |

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.

[no] kron {policy-list} list-name

Syntax Description

| | |
|--------------------------|--|
| <code>policy-list</code> | Specifies a name for Command Scheduler policies. |
| <code>list-name</code> | Name of the policy list. Up to 80 alphanumeric characters. |



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).

| | |
|-------------------|---|
| <code>cli</code> | Command to be executed by the scheduler. Up to 80 alphanumeric characters. |
| <code>do</code> | EXEC command. Allows you to perform any EXEC commands in this mode (see the do command). |
| <code>end</code> | Exits from the config-policy list configuration submode and returns you to EXEC mode. |
| <code>exit</code> | Exits this submode. |
| <code>no</code> | Negates the command in this mode. One keyword is available: <ul style="list-style-type: none">• <code>cli</code>—Command to be executed by the scheduler. |

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 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 the [ip route](#) command.

Examples

```
ncs/admin(config)# kron policy-list SchedBackupMonday
```

```
ncs/admin(config-Policy List)# cli backup SchedBackupMonday repository SchedBackupRepo
ncs/admin(config-Policy List)# exit
ncs/admin(config)#
```

Related Commands

| Command | Description |
|--------------------------|---|
| ip route | Specifies schedule parameters for a Command Scheduler occurrence and enters config-Occurrence configuration mode. |

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.

[no] logging *{ip-address | hostname}* **{loglevel level}**

Syntax Description

| | |
|-------------------|--|
| <i>ip-address</i> | IP address of remote system to which you forward logs. Up to 32 alphanumeric characters. |
| <i>hostname</i> | 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. |
| <i>level</i> | Number of the desired priority level at which you set the log messages. Priority levels are (enter the number for the keyword): <ul style="list-style-type: none">• 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

```
ncs/admin(config)# logging loglevel 0
ncs/admin(config)#
```

Related Commands

| Command | Description |
|------------------------------|---|
| show logging | Displays the list of logs for the system. |

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.

[no] ntp server {*ip-address* | *hostname*} [*ip-address* | *hostname*] [*ip-address* | *hostname*]

Syntax Description

| | |
|-------------------------------------|---|
| <i>ip-address</i> <i>hostname</i> | 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
```

| remote | refid | st | t | when | poll | reach | delay | offset | jitter |
|---------------|--------|----|---|------|------|-------|-------|--------|--------|
| *127.127.1.0 | .LOCL. | 10 | l | 22 | 64 | 377 | 0.000 | 0.000 | 0.001 |
| 172.23.90.113 | .INIT. | 16 | u | - | 1024 | 0 | 0.000 | 0.000 | 0.000 |
| 172.23.90.114 | .INIT. | 16 | u | - | 1024 | 0 | 0.000 | 0.000 | 0.000 |
| 172.23.90.115 | .INIT. | 16 | u | - | 1024 | 0 | 0.000 | 0.000 | 0.000 |

Warning: Output results may conflict during periods of changing synchronization.
ncs admin#

Related Commands

| Command | Description |
|--------------------------|---|
| show ntp | Displays the status information about the NTP associations. |

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.

[no] **password-policy** option



Note

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. |
|--------|----------------------------|



Note

After you enter the **password-policy** command, you can enter config-password-policy configuration submode.

| | |
|---------------------------|--|
| digit-required | Requires a digit in the password. |
| disable-repeat-characters | Disables the ability of the password to contain more than four identical characters. |
| disable-cisco-password | Disables the ability to use the word Cisco or any combination as the password. |
| do | EXEC command. |
| end | Exits from configure mode. |
| exit | Exits from this submode. |
| lower-case-required | Requires a lowercase letter in the password. |
| min-password-length | Specifies a minimum number of characters for a valid password. Integer length from 0 to 4,294,967,295. |
| no | Negates a command or set its defaults. |
| no-previous-password | Prevents users from reusing a part of their previous password. |
| no-username | Prohibits users from reusing their username as a part of a password. |
| password-expiration-days | Number of days until a password expires. Integer length from 0 to 80. |

| | |
|-----------------------------|--|
| password-expiration-enabled | Enables password expiration. Note You must enter the password-expiration-enabled command before the other password-expiration commands. |
| password-expiration-warning | Number of days before expiration that warnings of impending expiration begin. Integer length from 0 to 4,294,967,295. |
| password-lock-enabled | Locks a password after several failures. |
| password-lock-retry-count | Number of failed attempts before password locks. Integer length from 0 to 4,294,967,295. |
| upper-case-required | Requires an uppercase letter in the password. |
| special-required | Requires a special character in the password. |

Command Default No default behavior or values.

Command Modes Configuration

Examples

```

ncs/admin(config)# password-policy
ncs/admin(config-password-policy)# password-expiration-days 30
ncs/admin(config-password-policy)# exit
ncs/admin(config)#

```

repository

To enter the repository submode for configuration of backups, use the **repository** command in configuration mode.

repository *repository-name*

Syntax Description

| | |
|------------------------|---|
| <i>repository-name</i> | Name of repository. Up to 80 alphanumeric characters. |
|------------------------|---|



Note

After you enter the name of the repository in the **repository** command, you enter repository configuration submode.

| | |
|------|---|
| do | EXEC command. |
| end | Exits repository config submode and returns you to EXEC mode. |
| exit | Exits this mode. |
| no | Negates the command in this mode. Two keywords are available: <ul style="list-style-type: none"> • url—Repository URL. • user—Repository username and password for access. |
| url | URL of the repository. Up to 80 alphanumeric characters (see Table A-20). |
| user | Configure the username and password for access. Up to 30 alphanumeric characters. |

Table 14: URL Keywords

| Keyword | Source of Destination |
|---------------|---|
| <i>word</i> | Enter the repository URL, including server and path info. Up to 80 alphanumeric characters. |
| cdrom: | Local CD-ROM drive (read only). |

| Keyword | Source of Destination |
|--------------|--|
| disk: | Local storage. You can enter the show repository repository_name command to view all of the files in the local repository. Note All local repositories are created on the /localdisk partition. When you specify disk:/ in the repository URL, the system creates directories in a path that is relative to /localdisk. For example, if you entered disk:/backup , the directory is created at /localdisk/backup. |
| ftp: | Source or destination URL for an FTP network server. Use url ftp://server/path(1) . |
| nfs: | Source or destination URL for an NFS network server. Use url nfs://server:path1. |
| sftp: | Source or destination URL for an SFTP network server. Use url sftp://server/path1. |
| tftp: | Source or destination URL for a TFTP network server. Use url tftp://server/path1. Note You cannot use a TFTP repository for performing a upgrade. |

Command Default

No default behavior or values.

Command Modes

Configuration

Examples**Example 1**

```

ncs/admin# configure terminal
ncs/admin(config)# repository myrepository
ncs/admin(config-Repository)# url sftp://example.com/repository/system1
ncs/admin(config-Repository)# user abcd password example
ncs/admin(config-Repository)# exit
ncs/admin(config)# exit
ncs/admin#

```

Example 2

```

ncs/admin# configure terminal
ncs/admin(config)# repository myrepository
ncs/admin(config-Repository)# url disk:/
ncs/admin(config-Repository)# user xyz password plain example
ncs/admin(config-Repository)# exit
ncs/admin(config)# exit
ncs/admin#

```

Related Commands

| Command | Description |
|------------------------|--|
| backup | Performs a backup (and Cisco ADE OS) and places the backup in a repository. |

| Command | Description |
|-------------------------------------|---|
| restore | Performs a restore and takes the backup out of a repository. |
| show backup history | Displays the backup history of the system. |
| show repository | Displays the available backup files located on a specific repository. |

service

To specify a service to manage, use the **service** command in configuration mode. To disable this function, use the **no** form of this command.

[no] service sshd

Syntax Description

| | |
|------|--|
| sshd | Secure Shell Daemon. The daemon program for SSH. |
|------|--|

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 interface configuration mode. To disable this function, use the **no** form of this command.

[no] shutdown

Syntax Description This command has no arguments or keywords.

Command Default No default behavior or values.

Command Modes Interface

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

| Command | Description |
|---|---|
| interface | Configures an interface type and enters interface mode. |
| ip address (interface configuration mode) | Sets the IP address and netmask for the Ethernet interface. |
| show interface | Displays information about the system IP interfaces. |
| ip default-gateway | Sets the IP address of the default gateway of an interface. |

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.

[no] snmp-server community *word* **ro**

Syntax Description

| | |
|-------------|---|
| <i>word</i> | 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

| Command | Description |
|--------------------------------------|---|
| snmp-server host | Sends traps to a remote system. |
| snmp-server location | Configures the SNMP location MIB value on the system. |
| snmp-server contact | Configures the SNMP contact MIB value on the system. |

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.

[no] snmp-server contact *word*

Syntax Description

| | |
|-------------|--|
| <i>word</i> | String that describes the system contact information of the node. Up to 255 alphanumeric characters. |
|-------------|--|

Command Default

No default behavior or values.

Command Modes

Configuration

Usage Guidelines

None.

Examples

```
ncs/admin(config)# snmp-server contact Abcd
ncs/admin(config)#
```

Related Commands

| Command | Description |
|---------------------------------------|---|
| snmp-server host | Sends traps to a remote system. |
| snmp-server community | Sets up the community access string to permit access to the SNMP. |
| snmp-server location | Configures the SNMP location MIB value on the system. |

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.

[no] snmp-server host {*ip-address* | *hostname*} **version** {1 | 2c} *community*

Syntax Description

| | |
|-------------------------|--|
| <i>ip-address</i> | IP address of the SNMP notification host. Up to 32 alphanumeric characters. |
| <i>hostname</i> | Name of the SNMP notification host. Up to 32 alphanumeric characters. |
| 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: <ul style="list-style-type: none"> 1—SNMPv1. 2c—SNMPv2C. |
| <i>community</i> | 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

```
ncs/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

| Command | Description |
|---------------------------------------|---|
| snmp-server community | Sets up the community access string to permit access to SNMP. |
| snmp-server location | Configures the SNMP location MIB value on the system. |
| snmp-server contact | Configures the SNMP contact MIB value on the system. |

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.

[no] snmp-server location *word*

Syntax Description

| | |
|-------------|---|
| <i>word</i> | 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
ncs/admin(config) #
```

Example 2

```
ncs/admin(config) # snmp-server location "Building 3/Room 214"
ncs/admin(config) #
```

Related Commands

| Command | Description |
|---------------------------------------|---|
| snmp-server host | Sends traps to a remote system. |
| snmp-server community | Sets up the community access string to permit access to SNMP. |
| snmp-server contact | Configures the SNMP location MIB value on the system. |

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.

[no] username username password {hash | plain} password role {admin | user} [disabled [email email-address]] [email email-address]

For an existing user, use the following command option:

username username password role {admin | user} password

Syntax Description

| | |
|----------------------------|--|
| <i>username</i> | You should enter only one word which can include hyphen (-), underscore (_) and period (.). |
| | Note Only alphanumeric characters are allowed at an initial setup. |
| password | The command to use specify password and user role. |
| <i>password</i> | Password character length up to 40 alphanumeric characters. You must specify the password for all new users. |
| hash plain | Type of password. Up to 34 alphanumeric characters. |
| role admin user | Sets the privilege level for the user. |
| disabled | Disables the user according to the user's email address. |
| email email-address | The user's email address. For example, user1@example.com. |

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  
admin123@example.com  
ncs/admin(config)#
```

Related Commands

| | Description |
|---------------------------------|---|
| password-policy | Enables and configures the password policy. |
| show users | Displays a list of users and their privilege level. It also displays a list of logged-in users. |

