HP TippingPoint
Security Management System
CLI Reference
Version 4.0

Abstract

This information describes HP TippingPoint Security Management System (SMS) high and low level commands, and contains information for using the SMS command line interface. This information is for system administrators, technicians, and maintenance personnel responsible for installing, configuring, and maintaining HP TippingPoint SMS appliances and associated devices.

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About This Guide

The *Security Management System CLI Reference* provides information about using the SMS command line interface to configure the HP TippingPoint Security Management System (SMS). This guide includes an SMS command reference as well as reference information about attributes and objects used by the SMS.

This section covers the following topics:

Target Audience

The intended audience includes technicians and maintenance personnel responsible for installing, configuring, and maintaining HP TippingPoint security systems and associated hardware. Users should be familiar with networking concepts as well as the following standards and protocols:

- TCP/IP
- UDP
- ICMP
- Ethernet
- Simple Network Time Protocol (SNTP)
- Simple Mail Transport Protocol (SMTP)
- Simple Network management Protocol (SNMP)

Related Documentation

Access the documentation at http://www.hp.com/support/manuals . For the most recent updates for your products, check the HP Networking Support web site at http://www.hp.com/networking/support.

Document Conventions

This guide uses the following document conventions.

Typefaces

HP TippingPoint publications use the following typographic conventions for structuring information:

Document Typographic Conventions

Convention	Element
Medium blue text	Cross-reference links and e-mail addresses.
Medium blue, underlined text	Website addresses.
Bold font	• Key names. • Text typed into a GUI element, such as into a box. • GUI elements that are clicked or selected, such as menu and list items, buttons, and check boxes. Example: Click **OK** to accept.
Italics font	Text emphasis, important terms, variables, and publication titles.
`Monospace font`	• File and directory names. • System output. • Code. • Text typed at the command-line.
`Monospace, italic font`	• Code variables. • Command-line variables.
`Monospace, bold font`	Emphasis of file and directory names, system output, code, and text typed at the command line.

Document Messages

Document messages are special text that is emphasized by format and typeface. This guide contains the following types of messages:

- Warning
- Caution
- Note
- Tip

WARNING! Warning notes alert you to potential danger of bodily harm or other potential harmful consequences.

CAUTION: Caution notes provide information to help minimize risk, for example, when a failure to follow directions could result in damage to equipment or loss of data.

NOTE: Notes provide additional information to explain a concept or complete a task. Notes of specific importance in clarifying information or instructions are denoted as such.

IMPORTANT: Another type of note that provides clarifying information or specific instructions.

TIP: Tips provide helpful hints and shortcuts, such as suggestions about how you can perform a task more easily or more efficiently.

Customer Support

HP TippingPoint is committed to providing quality customer support to all customers. Each customer receives a customized support agreement that provides detailed support contact information. When you need technical support, refer to your support agreement or use the following information to contact Customer Support.

Before You Contact Support

For a quick and efficient resolution of your problem, take a moment to gather some basic information from before you contact HP TippingPoint customer support:

Information	**Find It Here...**
Your customer number	Customer Support Agreement or the shipping invoice that came with the appliance.
SMS serial number	Bottom of the SMS server chassis, or use SMS CLI `key` command.
SMS version number	In the SMS client, on the Admin screen, or in the Updates area of the SMS dashboard.
TOS version number	In the SMS client, on the Devices screen (an entry for each device).
DV Toolkit version number	In the SMS client, on the Profiles (DV Toolkit Packages) screen.
Managed device serial numbers	Local Security Manager Dashboard or the shipping invoice that came with the appliance.

Contact Information

For additional information or assistance, contact the HP Networking Support:

http://www.hp.com/networking/support

Before contacting HP, collect the following information:

- Product model names and numbers
- Technical support registration number (if applicable)
- Product serial numbers
- Error messages
- Operating system type and revision level
- Detailed questions

Contact an HP Authorized Reseller

For the name of the nearest HP authorized reseller, see the contact HP worldwide website:

http://www.hp.com/country/us/en/wwcontact.html

1 Using the Command Line Interface

The command line interface (CLI) can be used to configure many aspects of the SMS. It includes wizards, high level commands, and low level commands.

Overview

This chapter explains how to use the SMS CLI.

NOTE: To use the SMS CLI, you must be logged in with an account that has **SuperUser** rights.

This section includes the following topics:

Usage

Most SMS commands consist of the following elements:

- *command* — the name of the command you want to issue
- *object* — the name of a collection of related attributes (*attribs)*
- *attrib* — the name of a data variable or parameter on which you want to run the command

  [=value] — optional syntax you can use with the **set** command and other writable commands to define the value of the attrib you specify. If you do not use this syntax, the system goes into *interactive mode* and prompts you for the value. See "Command Types" on page 1 for more information about interactive commands.

NOTE: To clear the value of any attribute type a period (.) after the equal sign (=) or when prompted.

These elements are case-sensitive. You can use any of the following syntax to run an SMS command:

```
command
command object
command object.attrib
command object.attrib=value
```

Other SMS commands use a syntax similar to standard UNIX commands, as shown in the following example:

```
command -option value
```

Command Types

SMS commands are either read, write, or read and write. In addition, commands are either interactive, non-interactive, or might support both options.

- **Interactive commands** — automatically prompt you for attribute values if you use the appropriate syntax. Interactive commands also provide you with the current values of their attributes.
- **Non-interactive commands** — are either read-only or require you to specify the values you want to set. For example, the **get** command is non-interactive because it is read-only. As another example, the **date** command is non-interactive. If you want to set the date, you must type `date value`.

Interactive Mode Syntax

You can use any of the following syntax options to initiate an interactive CLI command:

- `command` – If you type the command name, the CLI prompts you to set values for all attribs associated with that command.
- `command object` – If you specify the object of a particular command, the CLI prompts you to set values for all attribs associated with that object.
- `command object.attrib` – If you specify an object and attribute of a particular command, the CLI prompts you to set the value of the attribute you specified.

Example

Following is an example of the **set** command in interactive mode. Items in bold are typed by the user. Items in brackets ([ ]) indicate the current value of the attribute specified.

Set All System Information Using Interactive Mode

1. Type the following command:

   ```
   set sys
   ```

   The system returns prompts for information. Default values are listed in brackets. To use the default value, press Enter.
2. The system prompts you to set the value for the **contact** attribute:

   ```
   System contact (sys.contact=[Customer Contact]) = Brit
   ```
3. Type a value for the **location** attribute and press Enter:

   ```
   System location (sys.location=[First floor lab]) =
   ```
4. Type a value for name attribute and press Enter:

   ```
   System name (sys.name=[sms25]) =
   ```
5. The system returns the following confirmation message:

   ```
   Result: Success

   System contact       (sys.contact  ) = Brit
   System location      (sys.location ) = First floor lab
   System name          (sys.name     ) = sms25
   System serial number (sys.serialNum) = X-SMA-ST-SMS25-0001
   ```

Remote Paths

Several commands accept remote paths as input. The remote paths specify a resource on an external server that can be accessed by the SMS server. Remote files that can be specified as input to an operation may be accessed using the HTTP, HTTPS, FTP, NFS, or SMB (Samba) protocols.

Remote directories that are used for saving SMS-based files to a remote server can be accessed through the NFS or SMB protocols. Files are always mounted with read-only access. Directories are mounted read-only when possible.

Remote paths are specified as a single string value. The details for each protocol are listed in the following sections. In each example, items in italics are variables. When using the path syntax, you must replace them with the appropriate values for your paths. Items in brackets ([ ]) are optional.

FTP

You can use the following formats for the FTP protocol:

- Complete specification: `ftp://[username:password@]server[:port]/directory/filename`
- Anonymous FTP: `ftp://server/directory/filename`
- Specifying a user name and password: `ftp://username:password@server/directory/filename`
- FTP Examples:

  ```
  ftp://10.11.12.13/pub/sms-0.0-0.500.pkg
  ftp://steve:password@10.11.12.13/pub/sms-0.0-0.500.pkg
  ```

HTTP and HTTPS

You can use the following format for the HTTP and HTTPS protocols:

- Complete specification: `http://[username:password@]server[:port]/directory/filename` or `https://[username:password@]server[:port]/directory/filename`
- HTTP Example:

```
http://www.servername.com:8000/files/sms-0.0-0.500.pkg
```

NFS

You can use the following formats for the NFS protocol:

- Remote directory specification—*server:/exportedDirectory*
- Remote file specification—*server:/exportedDirectory/filename*
- NFS Example:

```
nfsserver.domain.com:/public/upgrades/sms-0.0-0.500.pkg
```

SMB (Samba)

You can use the following formats for the SMB protocol:

- Remote file specification: `//server/sharename/directory/filename`
- Complete specification: `//server/sharename[/directory][/filename] [-o option-list]`

Options can be provided to the SMB mount operation by appending them to the end of the mount point value, and using a space character to separate the values. Options might include the username, password, and workgroup. Options can be joined together using a comma as a separator.

- SMB Example:

```
//winbox/pub/sms.pkg -o workgroup=mydomn,username=steve,password=ps111
```

The help Command

The **help** command returns documentation about the specified command, object, or attribute.

Syntax

```
help
help --full
help --attribs
help object.attrib
help --cmds
help cmd
help --objs
help object
help --background
help background
help --topic
help topic
```

Description

The **help** command is a non-interactive, read command that returns documentation about a command, object, or attribute that you specify.

NOTE: In the **help** command syntax, you can use the question mark (?) interchangeably with the word "help." For example, you could type the following to view documentation about all commands: `? --cmds`

Objects and Attributes

The following objects and attributes can be used with the **help** command:

Table 1-1 Help Commands

Command	Description
`help --full`	Lists all commands, objects, and attributes
`help -- attribs`	Lists all attributes
`help --objs`	Lists all objects, or collections of attributes
`help --cmds`	Lists all commands
`help --background`	Lists background topics

Example

To see documentation about the **sys** object, type **help sys**. The system returns the following results:

```
sys: System information
System information can be viewed and updates using the "sys" object.

Read-write:
name, contact, location

Read-only:
serialNum
```

2 SMS Command Reference

This chapter describes the SMS commands and the options available for each command.

NOTE: To use the SMS CLI, you must be logged in with an account that has **SuperUser** rights.

clear

Clears the screen.

Usage

`clear`

Aliases

`cls`

cls

Clears the screen.

Usage

`cls`

Aliases

`clear`

console

The **console** command shows a list of messages that have been sent to the console since the last reboot.

Usage

`console`

date

Displays and sets the system time. Without a parameter, **date** will return the current system date and time. The parameter allows a new date to be specified.

Usage

`date [MMDDhhmm[[CC]YY][.ss]]`

Related Objects

`time`

delete

Deletes user files. User files are archived and exported files generated from the database contents.

Usage

`delete file [...]`

Related Commands

`dir, view, vi`

diags

Runs diagnostics tests and checks system health. The --force option will run diagnostics without prompting for confirmation. Runs tests for the system, database, network, tmc, and password and provides status. For tmc, tests the connection to the tmc and the package server.

Usage

```
diags [--force]
```

dir

Returns a listing of files contained in the user directory.

Usage

```
dir
```

Related Commands

```
delete, view, vi
```

dns

The **dns** command interactively prompts for DNS (Domain Name Service) settings used to resolve host names to IP address values. To clear server values, use a period (.). The *dns* object contains default domain name, DNS search list, and DNS server information.

Usage

```
dns
```

Related Commands

```
nic, ntp
```

Related Objects

```
dns
```

exit

Closes the session.

Usage

```
exit
```

Aliases

```
quit, Ctrl-D
```

factoryreset

This command is an interactive command that resets the system to the factory defaults. The SMS version is not changed, however, all other system settings are restored to the factory defaults and all data is lost. You MUST reboot the SMS for this command to complete.

The factory reset command also resets this system network settings. You CAN NOT access the system via networking after the reboot is completed. A VGA console, or serial port access is required to reconfigure networking.

Usage

```
factoryreset
```

Related Command

```
setup
```

fips-mode

Used to configure the SMS into one of three levels of FIPS operation:

- **Disabled** – When placed into this mode, no additional FIPS compliance actions/restrictions are activated in the SMS.
- **Crypto** – When the SMS is placed into *Crypto* mode, the SSH terminal negotiates connections using only FIPS 140-2 approved algorithm. This mode affects only the SSH terminal connections for the SMS.

- **Full** – When placed into this mode, the SMS functions in a manner compliant with the FIPS 140-2 publication specified by the National Institute of Standards and Technology. The SMS automatically reboots when placed into full FIPS mode or when full FIPS mode is disabled.

Usage

```
fips-mode
```

Caveats

Full FIPS mode is not available for vSMS. Transitioning the SMS to operate in Full FIPS mode implements changes to core elements of the SMS server, reboots the SMS, and requires you to upload a new SMS key package. A transition to Full FIPS mode does the following:

- Deletes all SMS users.
- Removes all SMS backup and device snapshots stored on the SMS server.
- Deletes all custom responder actions.
- Regenerates SSH server and HTTPS web security keys.

For more information about FIPS mode, see the *SMS User Guide*.

ftp

The FTP (File Transfer Protocol) client is used to move files to and from the user directory for the SMS server. The contents of the user directory can be listed with the **dir** command. Files can be viewed with the **view** command, and deleted with the **delete** command.

Usage

`ftp [hostName|hostAddress]`

After starting the ftp client, issue the command **lcd /tmp**.

Caveats

The **dir**/**delete**/**view** commands all operate over the contents of the user directory (**/tmp**). The **cd** or change-directory command is disabled from the shell for reasons of security. In order for the **ftp** program to see, and have access to the contents of the user directory, it is important to first change the local directory with the command **lcd /tmp**. After this point, files can be copied both to and from the SMS server.

Related Commands

`dir, view, delete, vi`

get

Retrieves the value of one or more attribs or a list of attribs contained within an object.

Usage

`get <attrib|object> [...]`

The **get** command can use any read-write or read-only attribute. See "SMS Attributes and Objects" on page 21 for a list of attribs.

Related Commands

`list, set`

help

Returns background information on various topics and command syntax.

Usage

`help [--full | --attribs | --cmds | --objs | --background | topic]`

Alias

`?`

Table 2-1 Help Options

Option	Description
`--full`	Lists all commands, objects and attribs.
`--attribs`	Lists all attribs.
`--objs`	Lists all objects (collections of attribs).
`--cmds`	Lists all commands (default).
`--background`	Lists background topics.

ifconfig

Displays the network settings for the box. **ifconfig** is an alias for the command **get net**, which displays the values of the attribs contained in the net object. To change the values, use the **set net** command. See "net" on page 30.

Usage

`ifconfig`

Aliases

`get net, ipconfig`

Related Objects

`net`

ipconfig

Displays the network settings for the box. **ipconfig** is an alias for the command **get net**, which displays the values of the attribs contained in the net object. To change the values, use the **set net** command. See "net" on page 30.

Usage

`ipconfig`

Aliases

`get net, ifconfig`

Related Objects

`net`

kbdcfg

Loads the kernel keymap for the console. This is useful if the console is using a non-QWERTY keyboard. This command leads you through the configuration of a new keyboard layout.

WARNING! Do not use this option if you are using a standard QWERTY keyboard. Setting your keyboard layout to a value with which you are not familiar could render your system inaccessible.

See Also

`kbd.layout (attrib)`

key

The **key** command is used to update the license key for the server.

Usage

`key`

Aliases

`license`

Related Objects

`license`

list

Lists the objects or the attribs contained in an object.

Usage

`list [object | object.attrib] [...]`

If no arguments are specified, **list** will return all defined objects. If an object is specified, **list** will return all attribs contained within the object. If an attribute is specified, **list** will confirm the attribute by listing the attribute in the response.

Related Objects

See "SMS Attributes and Objects" on page 21 for a list of objects and attribs you can use with the **list** command.

See Also

`get, set`

mgmtsettings

The host management options provide prompts to configure IPv4 and IPv6 management addresses, along with the DNS server.

Usage

`mgmtsettings`

Related Objects

`net`

monitor

Shows utilization and uptime information every 5 seconds (by default).

Usage

`monitor [delay]`

where *delay* is the number of seconds between polls.

Related Objects

`health`

more

Command to list output one screen at a time.

nic

Ethernet 10/100/1000Mbps interface management. Interactively prompts for configuration of the SMS server network settings. The bottom-most (NIC1) is enabled by default and is the recommended connection to the management network.

Usage

```
nic
```

Related Commands

```
dns, ntp
```

nicsettings

Interactive command that prompts you for the SMS NIC configuration settings and is available through the CLI and OBE If you want to make changes individually to any of the NIC settings, the SMS provides options for setting auto negotiation, port speed, and duplex mode.

Example

```
sms110 SMS=> nicsettings
The Ethernet NIC used for the network management interface is configurable. Please
verify the port configuration of the network device that this SMS is connected to
before making changes. These values may be changed at a later time with the 'set
net' command.
Host autoneg: yes
Host speed: 1000
System duplex: full
Enter: [A]ccept, [C]hange, or [E]xit without saving? <[A],C,E>:
```

Related Objects

```
net
```

notify

The **notify** command is used to manage the SMS notification service. The command interactively prompts for SMTP e-mail addresses and SNMPv1 traps to a remote trap server.

Usage

```
notify
```

Related Objects

```
smtp, snmp
```

Related Commands

```
snmp
```

ntp

The **ntp** command is used to manage the NTP (Network Time Protocol) client that synchronizes the SMS server time with a list of specified servers. NTP is enabled by default and is configured with a list of Stratum 1 servers available on the internet. The list of servers can be customized to installation requirements. The SMS server can also act as a NTP server for your devices. The agent can be disabled, but the server cannot. To clear server values, use a period (.).

Usage

```
ntp
```

Related Objects

```
svc
```

Related Commands

```
snmp
```

password

Changes the password for the current user.

The security level and restrictions for entering user names and passwords. The default setting is 2 from the following options:

Table 2-2 Security Levels

Level	Description
Level 0	User names cannot have spaces in it. Passwords are unrestricted.
Level 1	User names must be at least 6 characters long without spaces. Passwords must be at least 8.
Level 2	Passwords must meet Level 1 restrictions and the following: • Must contain at least two alphabetic characters. • Must contain at least one numeric character. • Must contain at least one non-alphanumeric character (examples include ! ? $ * #). **NOTE:** Do not use spaces in the password.

Usage

`password`

ping

Checks network connectivity by sending a ICMP request to the specified destination, and then checking on an echoed response.

Usage

`ping [-options] hostNameOrAddress`

Table 2-3 ping Options

Option	Description
`-c count`	Stop after sending *count* packets.
`-i wait`	Wait *wait* seconds between sending each packet. The default is to wait for one second between each packet.
`-n`	Numeric output only. No attempt will be made to lookup symbolic names for host addresses.
`-q`	Quiet output. Nothing is displayed except the summary lines at startup time and when finished.
`-r`	Bypass the normal routing tables and send directly to a host on an attached network. If the host is not on a directly-attached network, an error is returned. This option can be used to ping a local host through an interface that has no route through it.
`-s packetsize`	Specifies the number of data bytes to be sent. The default is 56, which translates into 64 ICMP data bytes when combined with the 8 bytes of ICMP header data.
`-v`	Verbose output.

ping6

Checks network connectivity by sending a ICMP request to the specified IPv6 destination, and then checking on an echoed response.

Usage

`ping6 [-options] hostNameOrAddress`

Table 2-4 ping6 Options

Option	Description
`-c count`	Stop after sending *count* packets.
-I	Specifies the interface; for example `eth0`.
`-i wait`	Wait *wait* seconds between sending each packet. The default is to wait for one second between each packet.
`-n`	Numeric output only. No attempt will be made to lookup symbolic names for host addresses.
`-q`	Quiet output. Nothing is displayed except the summary lines at startup time and when finished.
`-r`	Bypass the normal routing tables and send directly to a host on an attached network. If the host is not on a directly-attached network, an error is returned. This option can be used to ping a local host through an interface that has no route through it.
`-s packetsize`	Specifies the number of data bytes to be sent. The default is 56, which translates into 64 ICMP data bytes when combined with the 8 bytes of ICMP header data.
`-v`	Verbose output.

quit

Closes the session.

Usage

`quit`

Aliases

```
exit
Ctrl-D
```

reboot

Reboot the system. The **--force** option will reboot the system without prompting for confirmation. The cancel option aborts an in-progress reboot.

Usage

`reboot [--force] [cancel]`

resolve

Resolves a hostname to an IP address using the DNS settings. If the name cannot be resolved, it is returned **as-is**.

Usage

`resolve <hostname>`

See Also

`reverse`

restart

Restarts the network stack. The **--force** option restarts the network stack without a confirmation prompt.

Usage

`restart [--force]`

reverse

Performs a reverse-lookup on an IP address or a relative hostname using the DNS settings. If the value cannot be resolved, it is returned **as-is**.

Usage

`reverse <ip-address|hostname>`

See Also

`resolve`

routes

Route options allow static routes to be added or deleted for the network management interface.

Usage

`routes`

See Also

`nic (cmd), net (object)`

NOTE: Whether or not static route entries are included in routing tables depends on several topology factors. These include network specificity, metrics, and whether the next hop IP is on the associated interface. Other routing types, redistributions, and firewall rules also impact static route entries in the routing tables.

scp

Secure Copy is a remote file copy program that allows a file to be securely copied to or from the SMS CLI. The **scp** command is only supported when run from the CLI.

Usage

`scp`

To copy a file using **scp**, you must supply values to the following prompts:

```
Enter file transfer mode [G]et or [P]ut  <G,[P]>:
Enter scp server IP address or host name:
Enter fully qualified remote file name:
Enter local directory or file name: [/]:
Enter login id:
Enter password:
```

See Also

`logs (object), delete (cmd), dir (cmd)`

service-access

Enables or disables service access to the SMS. The SMS version serial number and salt is displayed when enabling.

Usage

`service-access`

See Also

`pwd (object)`

set

Assigns values to one or more attribs or to a list of attribs contained within an object. The list may be a one or more attribute names, object names, or attrib/object pairs. To accept the current or default value, type the return key. To clear a String or IP Address value, enter a period (.), and then the return key.

The **set** command can use any read-write or write-only attribute. See "SMS Attributes and Objects" on page 21 for more information.

Usage

`set <attrib|object|attrib=value> [...]`

Related Commands

`list, get`

setup

Initial setup wizard for providing essential configuration settings for the SMS server. Non-essential values can be configured with other commands.

The **setup** command is automatically invoked with the first CLI login session. It is repeated with each new login session until the entire setup procedure is finally completed. To repeat the procedure, execute the **setup** command at any time. The setup procedure prompts you to enter the following information:

- Network type (IPv4 default): IPv[4], IPv[6], or [B]oth <4,6,B>
- Management IPv4 Address
- Network Mask
- IPv4 Default Gateway (optional)
- Management IPv6 Address
- IPv6 Default Route (optional)
- DNS Server-1 (optional)

Usage

`setup`

shutdown

Shutdown and power-off the system. To restart the system, physically press the **POWER** button on the front of the unit. The **--force** option will reboot the system without prompting for confirmation. The **cancel** option aborts an in-progress shutdown operation.

Usage

`shutdown [--force] [cancel]`

snmp

The **snmp** command is used to manage the SNMP (Simple Network Management Protocol) values.

Usage

`snmp`

snmp-request

The **snmp-request** command is used to manage the SNMP (Simple Network Management Protocol) request agent. When enabled, the SMS agent responds to the SNMP system request. This command prompts you to enable the SNMP request agent and enter the following information:

```
Enter the SNMP version: V[2], V[3], or [B]oth <2,3,[B]>:
Enter community string []:
Enter User Name []:
Enter Auth Protocol (None, MD5, or SHA): []:
Enter Auth Key:  ******************************
Confirm Key:     ******************************
Enter Privacy Protocol (None, AES-128, AES-192, AES-256, DES or Triple_DES): []:
Enter Priv Key:  ******************************
Confirm Key:     ******************************

               Version: Both
      Community String:
             User Name:
          Auth Protocol:
      Privacy Protocol:
```

Usage

```
snmp-request
```

See Also

```
snmp, snmp-trap
```

snmp-trap

The **snmp-trap** command is used to manage the SNMP (Simple Network Management Protocol) traps. The SMS sends SNMP traps to NMS destinations. This command prompts you to enable configuration for an NMS trap destination and enter the following information:

```
Commands: [A]dd  [D]elete  [V]ersion  [C]ommunity  [P]ort  [E]ngine
          [U]ser  Au[T]hProto  Auth[K]ey  P[R]ivProto  Pr[I]vKey
          [L]ist  [?]help  [Q]uit

Command? <A,D,V,C,P,E,U,T,K,R,I,[L],?,Q>: a

Add=> Enter trap destination address []: 192.168.1.1
Add=> Enter SNMP version: v[2] or v[3] <2,3>: 3
Add=> Enter port number [162]:
Add=> Enter Engine ID []:
Add=> Enter User Name []:
Enter Auth Protocol (None, MD5, or SHA): []:
Enter Auth Key:  ******************************
Add=> Confirm Key:     ******************************
Enter Privacy Protocol (None, AES-128, AES-192, AES-256, DES or Triple_DES): []:
Enter Priv Key:  ******************************
Add=> Confirm Key:     ******************************

            IP Address: 192.168.1.1
               Version: v3
                  Port: 162
             Engine ID:
             User Name:
          Auth Protocol:
      Privacy Protocol:
```

Usage

```
snmp-trap
```

See Also

snmp, snmp-request

snmpget

snmpget will request a single OID from the specified agent.

Usage

snmpget *hostNameOrAddress communityName OID*

Example (IPv6)

```
snmpget -v 2c -c public udp6:[fc01:a63:1:0:214:22ff:fe1e:1d87] system.sysName.0
```

Example (IPv4)

```
snmpget -v 2c -c public 10.99.1.110 system.sysName.0
```

See Also

snmpwalk

snmpwalk

snmpwalk will traverse the SNMP MIB of the agent running at the specified address. If the address OID is not provided, the walk will begin at the first OID, if the community name is not provided, walk with use **public** and if the *hostNameOrAddress* is not provided, walk will use localhost.

Usage

snmpwalk [*hostNameOrAddress* [*communityName* [*OID*]]]

Example (IPv6)

```
snmpwalk -v 2c -c public udp6:[fc01:a63:1:0:214:22ff:fe1e:1d87] system
```

Example (IPv4)

```
snmpwalk -v 2c -c public 10.99.1.110 system
```

Example (SNMPv3)

```
snmpwalk -v 3 -u user -l authPriv -a SHA -A authKey -x AES -X privKey 192.168.1.1
system
```

See Also

snmpget

ssh

The **ssh** command enables the user to log into a remote machine and execute remote commands from within the SMS CLI. The communications between two hosts is encrypted and secure.

For more information, refer to external **ssh** documentation, such as the UNIX man pages.

Usage

```
ssh [-1246AaCfgKkMNnqsTtVvXxYyZ] [-b bind_address] [-c cipher_spec]
[-D [bind_address:]port] [-e escape_char] [-F configfile] [-i identity_file]
[-L [bind_address:]port:host:hostport] [-l login_name] [-m mac_spec] [-O ctl_cmd]
[-o option] [-p port] [-R [bind_address:]port:host:hostport] [-S ctl_path]
[-w local_tun[:remote_tun]] [user@]hostname [command]
```

time

The **time** command runs the specified program command with the given arguments. When the command finishes, **time** writes a message to standard output giving timing statistics about this program run. These statistics consist of the elapsed real time between invocation and termination, the user CPU time, and the system CPU time.

For information about the **time** object, see "time" on page 46.

Usage

time <*command*> [*arguments*...]

touch

Creates user files, which are archived files generated from database content.

Usage

```
touch file [...]
```

See Also

```
delete, dir, view, vi
```

traceroute

This program attempts to trace the route an IP packet would follow to a remote host by launching UDP probe packets with a small **ttl** (time to live) then listening for an ICMP **time exceeded** reply from a gateway.

Probes start with a **ttl** of one and increase by one until we get an ICMP **port unreachable** (which means we got to *host*) or hit a **max** (which defaults to 30 hops and can be changed with the **-m** flag). Three probes (change with **-q** flag) are sent at each **ttl** setting and a line is printed showing the **ttl**, address of the gateway and round trip time of each probe. If the probe answers come from different gateways, the address of each responding system is printed. If there is no response within a five second timeout interval (changed with the **-w** flag), an asterisk (*) is printed for that probe.

For IPv4 (**-4** flag) or IPv6 (**-6** flag) tracerouting can be forced using the appropriate flag. By default, the program tries to resolve the name given and automatically choose the appropriate protocol. If resolving a host name returns both IPv4 and IPv6 addresses, traceroute uses IPv4.

Usage

```
traceroute [-dFInrvx] [-f first_ttl] [-g gateway][-i iface] [-m max_ttl] [-p port]
[-q queries]
[-s src_addr] [-t tos] [-w waittime] [-z pausemsecs] host
```

Table 2-5 traceroute Options

Option	Description
-4	Force IPv4 tracerouting.
-6	Force IPv6 tracerouting.
-f	Set the initial time-to-live used in the first outgoing probe packet.
-F	Set the **don't fragment** bit.
-d	Enable socket level debugging.
-g	Specify a loose source route gateway (8 maximum).
-i	Specify a network interface to obtain the source IP address for outgoing probe packets. This is normally only useful on a multi-homed host. (See the **-s** flag for another way to do this).
-I	Use ICMP ECHO instead of UDP datagrams.
-m	Set the max time-to-live (max number of hops) used in outgoing probe packets. The default is 30 hops (the same default used for TCP connections).
-n	Print hop addresses numerically rather than symbolically and numerically (saves a nameserver address-to-name lookup for each gateway found on the path).

Table 2-5 traceroute Options

Option	Description
-p	Set the base UDP port number used in probes (default is 33434). Traceroute hopes that nothing is listening on UDP ports base to base + nhops - 1 at the destination host (so an ICMP PORT_UNREACHABLE message will be returned to terminate the route tracing). If something is listening on a port in the default range, this option can be used to pick an unused port range.
-r	Bypass the normal routing tables and send directly to a host on an attached network. If the host is not on a directly-attached network, an error is returned. This option can be used to ping a local host through an interface that has no route through it (e.g., after the interface was dropped by routed).
-s	Use the specified IP address as the source address in outgoing probe packets. This is usually given as an IP address, not a hostname. On multi-homed hosts with more than one IP address, this option can force the source address to be a different IP address than the interface from which the probe packet is sent. If the IP address is not one of the host's interface addresses, an error is returned and nothing is sent.
-t	Set the type-of-service in probe packets to the following value (default zero). The value must be a decimal integer in the range 0 to 255. This option can be used to see if different types-of-service result in different paths. (If you are not running 4.4bsd, this may be academic since the normal network services like telnet and ftp don't let you control the TOS). Not all values of TOS are legal or meaningful - see the IP spec for definitions. Useful values are probably '-t 16' (low delay) and '-t 8' (high throughput).
-v	Use Verbose output. Received ICMP packets other than TIME_EXCEEDED and UNREACHABLE values are listed.
-w	Set the time (in seconds) to wait for a response to a probe (default five seconds).
-z	Set the time (in seconds) to pause for a response to a probe.

update

This command leads you through upgrading SMS server software:

1. Acquire the latest upgrade package from the TMC website.
2. Save it to a local HTTP or FTP server that can be accessed by the SMS server.
3. Provide the URL to this downloaded file.

After the package is transferred and installed, the **update** procedure prompts for a reboot.

Usage

```
update
```

Aliases

```
ctl.upgrade-source
```

users

Lists and manages the SMS user accounts. You can create new users and assign or change passwords, roles, disable settings, and force password changes.

Usage

```
users
```

Related Object

`pwd`

version

Displays the system and component versions.

Usage

`version`

Related Objects

`sw`

vi

vi is a text editor that is comparable to Vi. It can be used to edit all kinds of plain text. It is especially useful for editing programs. While running **vi**, a lot of help can be obtained from the on-line help system, with the **:help** command.

Usage

`vi [options] [file ...]`

Caveats

/tmp and its contents are the only files and directories that the SuperUser account has permission to modify. When accessing files you must specify the complete path name (for example: **vi /tmp/FileName.txt**). After seven days without modification, files in this directory are removed.

Options

The options may be given in any order, before or after filenames. Options without an argument can be combined after a single dash.

Table 2-6 vi Options

Options	Descriptions
`+[num]`	For the first file the cursor will be positioned on line *num*. If *num* is missing, the cursor will be positioned on the last line.
`+/{pat}`	For the first file the cursor will be positioned on the first occurrence of {*pat*}. See ":help search-pattern" for the available search patterns.
`-h`	Give a bit of help about the command line arguments and options. After this, Vi exits.
`-m`	Modifying files is disabled. Resets the **write** option, so that writing files is not possible.
`-n`	No swap file will be used. Recovery after a crash will be impossible. Handy if you want to edit a file on a very slow medium (e.g. floppy). Can also be done with **:set uc=0**.Can be undone with **:set uc=200**.
`-R`	Read-only mode. The read-only option will be set. You can still edit the buffer, but will be prevented from accidently overwriting a file. If you do want to overwrite a file, add an exclamation mark to the Ex command, as in **:w!**. The -R option also implies the -n option (see below). The read-only option can be reset with **:set noro**. See **:help 'read-only'**.
`-r {file}`	Recovery mode. The swap file is used to recover a crashed editing session. The swap file is a file with the same filename as the text file with **.swp** appended. See **:help recovery**.

Table 2-6 vi Options

Options	Descriptions
`--`	Denotes the end of the options. Arguments after this will be handled as a file name. This can be used to edit a filename that starts with a dash (-).
`--help`	Give a help message and exit, just like **-h**.
`--version`	Print version information and exit.

See Also

`ftp, dir, delete, view`

view

Command to view the contents of the directory. Internal help is available by typing a question mark (?).

See Also

`delete, dir, ftp, vi`

web

HTTP/HTTPS (Hyper-Text Transfer Protocol) management.

Interactively prompts for configuration of web server settings. The HTTP and HTTPS services can be separately enabled through the **web** command. Additionally, a single password can be assigned to the content to limit access to reports, archived data, documentation and client downloads. The user name used for access is **web** and the password is assigned with the **web** command.

The HTTP protocol is not secure and transmits data and passwords in the clear. It is recommended that HTTP be disabled.

Usage

`web`

See Also

`snmp`

who

Displays a list of CLI users, where and when the users originated.

Usage

`who`

See Also

`health.who`

3 SMS Attributes and Objects

This chapter describes each object and attribute used by the SMS CLI. For more detailed information about each element, see the individual commands described in "SMS Command Reference" on page 5.

NOTE: To use the SMS CLI, you must be logged in with an account that has **SuperUser** rights.

Attribute Types

The following table describes each type of attribute (attrib) that you can view or edit in the CLI.

Table 3-1 CLI Attribute Types

Type	Definition
`Bool`	Boolean. Value can be **true** or **false**.
`String [#]`	String. Can have a maximum size of #.
`Password`	String. Uses asterisk (*) to mask out the value as it is entered.
`IPaddr`	IP address. Uses dotted notation.
`Name [#]`	String. Can contain alpha-numeric characters with a maximum size of #.

cli

Collection of CLI-related attribs. The attribs are used to adjust CLI behavior, including the inactivity timeout value.

Table 3-2 cli Attributes

Attribute	Description	Type	Access	Range
`cli.sessionTimeout`	Attribute used to control the auto-logout time. By adjusting the value, you can control the number of minutes before the CLI will automatically log out due to inactivity. Set the value to 0 to disable the timeout function. **Example:** `set cli.sessionTimeout=30`	Int	read-write	0-32000

ctl

Collection of system control operations. The attribs contained in **ctl** can be used to reboot or shutdown the system, or access the upgrade capability. See "Remote Paths" on page 2 for more information about entering path names for attribs that require them.

Table 3-3 ctl Attributes

Attribute	Description	Type	Access	Range
`ctl.power-off`	Setting the **ctl.power-off** attrib to the value of **true** will cause the system to shutdown and power-off. To restart the system, it is necessary to physically press the **Power** button on the front panel of the box.	Bool	write-only	0
`ctl.reboot`	Setting the **ctl.reboot** attrib to the value of **true** will cause the system to reboot. The operation will be immediate with no warning given to other users using the client or the CLI.	Bool	write-only	0
`ctl.reboot-needed`	Returns the state of the system, indicating whether there are pending configuration settings that require a reboot to apply those changes.	Bool	read-only	0
`ctl.pre-upgrade-cleanup`	Performs any system cleanup necessary for an SMS upgrade. Updates that the upgrade can occur. This command is also run automatically when an SMS upgrade is requested. The upgrade will fail if this command fails.	Bool	write-only	0
`ctl.upgrade-source`	Setting the **ctl.upgrade-source** attrib to a string representing a URL will cause the system to retrieve and apply the update package to the system. Normally, a reboot will be required for the update to become effective. The URL can reference the http, https or ftp protocols. **Example:** `set ctl.upgrade-source=http://www.tippingpoint.com/SMS-UPDATE-1.0.pkg`	String	write-only	5-128
`ctl.patch-releasenotes`	Used to display the release notes for currently installed Patch. **NOTE**: This attribute is used by the UI to retrieve release notes and is of little interest to general cli users.	String	read-only	5-128
`ctl.patch-restart`	Used to display restart flag for currently installed Patch. **NOTE**: This attribute is used by the UI to retrieve restart flag and is of little interest to general cli users.	String	read-only	5-128

Table 3-3 ctl Attributes

Attribute	Description	Type	Access	Range
ctl.patch-rollback	Used to roll back to previous patch version. Displays **true** if the currently installed Patch can be rolled back, else false. If set to the version of the currently installed Patch, it rolls it back, to either the previously installed Patch or no Patch if it was the first Patch installed. **NOTE**: This attribute is used by the UI to retrieve this value and is of little interest to general cli users.	String	read-write	5-128
ctl.patch-source	Used by the UI for installing Patches. Similar to `set ctl.upgrade-source`, this takes a path or url to the Patch package file, then validates and installs that Patch.	String	write-only	5-128
ctl.previous-patch-version	Used to display the version of the Patch previous to this, for example the Patch a rollback would install, or *None* if there is no previous Patch.	String	read-only	5-128
sw.patch-version	Used to display the version number of the currently installed Patch, or **None** if no patch is installed.	String	read-only	5-128

db

Collection of database control operations. The attribs contained in **db** can be used to backup, restore or re-initialize the system database. See "Remote Paths" on page 2 for more information about entering path names for attribs that require them.

On startup, the sequence performed is (1) if requested, backup the database, (2) if requested, restore the database, (3) if requested, reinit the database, (4) if needed, migrate the database. Therefore, within a single restart, a current database can be saved to a remote system, and a new database can replace the old one. To clear a current value, set the attribute to a period (.).

Related Commands

`database`

Table 3-4 db Attributes

Attribute	Description	Type	Access	Range
db.attackCount	Displays the number of attack records stored in the database.	Int	read-only	0
db.backup	Setting the **db.backup** attrib to **yes** creates a local database backup with default options. This file can be downloaded from the **Exports and Archives** link from the SMS Server home page.	Bool	write-only	
db.check	Verifies the integrity of the database.	Bool	read-write	
db.clear-export	Deletes files in the export directory.	Bool	read-write	

Table 3-4 db Attributes

Attribute	Description	Type	Access	Range
db.export-files	Files to be saved and transported to a remote system can be stored in the export directory. To transfer the entire contents of the export directory this attrib must be provided with the name of a Samba (SMB) mount point. The destination mount point must be writable by the SMS server. SMB can be secured by providing an access list on the server that prevents all machines *except* for the SMS server to access it. The export directory can be cleared by setting the **db.clear-export** attrib. **Example:** `set db.export-files=server:/export/directory`	String	write-only	4-132
db.initTime	The time that the database was re-initialized.	String	read-only	0-32
db.reinit	Setting the **db.reinit** attrib to **true** will schedule the database to be cleared upon system startup the next time the system is rebooted.	Bool	read-write	0

dns

The **dns** object contains default domain name, DNS search list and DNS server information.

Related Objects

`nic, ntp`

Table 3-5 dns Attributes

Attribute	Description	Type	Access	Range
dns.domain	Default DNS domain used to resolve hostnames. If a fully-qualified hostname is not provided, the domain is appended to the hostname and the result is passed for resolution.	Name	read-write	2-64
dns.search	DNS domain search list used to resolve hostnames. If a fully-qualified hostname is not provided, each member of the search list is appended to the hostname and the result is passed for resolution.	String	read-write	2-128
dns.server1 dns.server2 dns.server3	Attribs used to specify name resolution servers. The value must be a dotted IP address, and the first entry (**dns.server1**) will be assigned a preferred role. To clear this value, use a period (.).	IPaddr	read-write	7-15

high availability

Collection of system High Availability (HA) attribs. The attribs are used to retrieve HA information.

Table 3-6 HA Attributes

Attribute	Description	Type	Access	Range
`ha.status`	Attribute returning the status of HA. The status messages include the following: • Disabled: High Availability is not configured. • Enabled. • Error: The system could not determine local status. • Error: Unable to communicate with peer. • Error: Peer system state is invalid. • Error: Configuration out of sync with peer. • Error: Peer system failure. • Configured: Synchronization required. • Configured: Attempting synchronization. • Configured: Synchronizing. • Degraded: Peer takeover pending. • Degraded: Unable to communicate with peer. • Degraded: Synchronization required. • Degraded: Peer system failure.	String	read-only	
`ha.disable`	Attribute that disables HA.	String	write-only	1-1024
`ha.configured`	Attribute returning the status of the HA configuration.		read-only	
`ha.ports-enabled`	Attribute returning the status of the HA ports. By default, HA ports are open. To disable, use **set ha.ports-enable = no**. **NOTE**: If any of your SMS devices are currently configured for HA, the HA ports on those systems cannot be disabled. If the HA ports are disabled, that SMS can not be used in an HA configuration.	String	read-write	
`ha.cluster-info`	Attribute returning the detailed status for the Passive and Active systems in the SMS HA cluster.		read-only	

health

Collection of system health-related attribs. The attribs are used to retrieve system health information, including utilization values, and system uptime statistics.

Table 3-7 health Attributes

Attribute	Description	Type	Access	Range
`health.cpu-util`	Attribute returning the CPU (Processor) utilization. 0% represents a near-idle system, and 100% is fully-utilized.	String	read-only	2-4
`health.db-valid`	Attribute reporting the status of the database. If **true**, then the database is considered valid and fully operational, if **false**, the system should be restarted, and other corrective steps taken.	String	read-only	1-32
`health.diskIo`	Disk I/O statistics. • blocks-read • blocks-written	String	read-only	0-128
`health.disk-util`	Attribute returning the disk system utilization. As disk utilization approaches 100%, database management operations should be performed to reduce disk usage.	String	read-only	2-4
`health.loadAvg`	CPU load statistics. • load-avg-1min • load-avg-5min • load-avg-15min • runnable-processes/total-processes • current-pid	String	read-only	0-128
`health.memInfo`	Physical memory statistics. • total • used • free • shared • buffers • cached	String	read-only	0-128
`health.mem-util`	Attribute returning the memory (RAM) utilization. 0% represents a near-idle system, and 100% is fully-utilized.	String	read-only	2-4
`health.RAID`	Attribute returns the status of the physical disks in your RAID configuration. Only SMS platforms that have RAID configured will show output.	String	read-only	0-128
`health.net-valid`	Attribute reporting the status of the communication paths. Checks to see if network is configured and enabled. If enabled, checks the status of the gateway, DNS, and NTP.		read-only	

Table 3-7 health Attributes

Attribute	Description	Type	Access	Range
`health.port-health`	Attribute returning Port Statistics of the SMS. This information corresponds to the Ports Statistics table on the Port Health screen (SMS Health) in the UI with all 12 numbers printed in a single line. The six numbers are for the primary port and the second six numbers are for the secondary port. Each set of numbers corresponds to the following table headings: • total input bytes • total output bytes • total input discards • total output discards • total input errors • total output errors	String	read-only	
`health.swapInfo`	Swap memory statistics. • total • used • free	String	read-only	0-128
`health.swapIo`	Swap I/O statistics. • blocks-read • blocks-written	String	read-only	0-128
`health.sys-valid`	Attribute reporting the status of the SMS server application. If **true**, then the system is considered valid and fully operational, if **false**, the system should be restarted, and other corrective steps taken.	String	read-only	1-32
`health.temperature`	Attribute returning the temperature of the SMS (in degrees Celsius). This information corresponds to the SMS Health Statistics table in the UI. **NOTE**: *The number is displayed with no indication for Celsius.*	String	read-only	1-3
`health.tmc-valid`	Attribute reporting the status of the communication paths to the TMC and each of the configured devices. The message will indicate the nature of the problem. Usually, the problem can be addressed by confirming that the network settings permit the SMS to communicate with https://tmc.tippingpoint.com, available through the internet. See also `diags`. If the SMS cannot establish a TMC connection, see error messages in the *SMS User Guide*.		read-only	

Table 3-7 health Attributes

Attribute	Description	Type	Access	Range
`health.uptime`	Attribute reporting the amount of time since the last system boot.	String	read-only	2-56
`health.who`	Attribute reporting a list of currently logged-in users. Pipe (|) characters are used in place of carriage-return characters.	String	read-only	0-1024

kbd

Keyboard related attribute.

WARNING! Do not use this option if you are using a standard QWERTY keyboard. Setting your keyboard layout to a value with which you are not familiar could render your system inaccessible.

Related Command

`kbdcfg`

Table 3-8 kbd Attributes

Attribute	Description	Type	Access	Range
`kbd.layout`	Specifies the console keyboard layout. Usage: `set kbd.layout=`<*keyboard designation*> Example setting: `fr` for French keyboard layout. The default setting is `kbd.layout=us`	String	read-write	0-64

The following console keyboard layouts are available:

```
This procedure will lead you through setting the
layout for your keyboard.  The following layouts
are available:

ANSI-dvorak             dvorak-l          it-ibm        se-fi-lat6
applkey                 dvorak-r          it2           se-ir209
azerty                  emacs             jp106         se-lat6
backspace               emacs2            keypad        se-latin1
be-latin1               es                la-latin1     sg
bg-cp1251               es-cp850          lt            sg-latin1
bg-cp855                et                lt.baltic     sg-latin1-lk450
bg_bds-cp1251           et-nodeadkeys     lt.l4         sk-prog-qwerty
bg_bds-utf8             euro              mk            sk-prog-qwertz
bg_pho-cp1251           euro1             mk-cp1251     sk-qwerty
bg_pho-utf8             euro2             mk-utf        sk-qwertz
br-abnt                 fi                mk0           slovene
br-abnt2                fi-latin1         nl            sr-cy
br-latin1-abnt2         fi-latin9         nl2           sv-latin1
br-latin1-us            fi-old            no            tr_f-latin5
by                      fr                no-latin1     tr_q-latin5
cf                      fr-latin0         pc110         tralt
croat                   fr-latin1         pl            trf
ctrl                    fr-latin9         pl2           trq
cz                      fr-old            pt            ua
cz-cp1250               fr-pc             pt-latin1     ua-utf
cz-lat2                 fr_CH             pt-latin9     ua-utf-ws
cz-lat2-prog            fr_CH-latin1      ro_win        ua-ws
cz-us-qwertz            gr                ru            uk
de                      gr-pc             ru-cp1251     unicode
de-latin1               hu                ru-ms         us
de-latin1-nodeadkeys    hu101             ru-yawerty    us-acentos
de_CH-latin1            il                ru1           wangbe
defkeymap               il-heb            ru2           wangbe2
defkeymap_V1.0          il-phonetic       ru3           windowkeys
dk                      is-latin1         ru4
```

license

License information for the SMS server. The license is used to control the number of managed devices supported by the server.

Related Command

`key`

Table 3-9 license Attributes

Attribute	Description	Type	Access	Range
`license.count`	Returns the number of devices that the license key permits for this server.	Int	read-only	0-1000
`license.date`	Returns the date that the current license key was installed.	String	read-only	0-32
`license.desc`	Returns the license key description.	String	read-only	0-64
`license.key`	Sets or returns the current SMS server license key.	String	read-write	32
`license.reset`	Resets the current SMS server license key.			

logs

Collection of log-related attribs. The attribs are used to manage log files that are used for troubleshooting.

The logs zip file, **sms_logs.zip**, is managed in the /mgmt/client/tmp directory. This is the standard location for cli data files and also allows access from the **Exports and Archives** link on the SMS web page. Creating a new logs zip file overwrites the old one.

Related Objects

`scp`

Table 3-10 logs Attributes

Attribute	Description	Type	Access	Range
`set logs.create=yes`	Creates the logs zip file sms_logs.zip.	Bool	write-only	0
`set logs.del=yes`	Deletes the zip file.	Bool	write-only	0
`set logs.create-peer=yes`	Attribute used to create a compressed file containing the HA peer SMS log files. This file can be downloaded from the **Exports and Archives** link from the SMS server home page. Only the latest compressed file are retained. **NOTE**: This attribute can be used only when HA has been configured.	String	write-only	0
`get logs.info`	If the zip file exists, lists name, size, date and time of creation.	String	read-only	0-1024

net

Collection of network-related attribs. The attribs are used to configure the two Ethernet 10/100/1000 interfaces for access to the local network.

Unless identified as a net-only attrib, each attrib listed as **net.*** below can use the prefix **net** to specify the correct Ethernet10/100/1000 interface.

Example

To change the IP address and gateway for the SMS server, you must complete the following:

1. Change the IP address by entering the command:

   ```
   set net.ipaddr = smsip4addr
         OR
   set net.ipaddr6 = smsip6addr
   ```

   where *smsip4addr* is the new IPv4 address, *smsip6addr* is the new IPv6 address.
2. Change the gateway by entering the command:

   ```
   set net.gateway = ipv4gateway
         OR
   set net.gateway6 = ipv6gateway
   ```

   where *ipv4gateway* is the IP address of the new gateway, *ipv6gateway* is the IPv6 address of the new IPv6 gateway.
3. Restart the network stack by entering the command:

   ```
   set net.restart = yes
   ```

The system prompts you to confirm that you want to restart the network stack. Your changes are applied when the network stack is restarted.

NOTE: You must issue the **set net.restart=yes** command when you modify the IP address or gateway using the set net command. Changes to these attributes do not take effect until you issue this command. A reboot (**reboot** command) should be done after you issue the above command.

For information on **set net**, see "set" on page 14.

Related Commands

`ifconfig, ipconfig, mgmtsettings`

Related Objects

`dns`

Table 3-11 net Attributes

Attribute	Description	Type	Access	Range
`net.autoneg`	Attribute used to view, and enable/disable auto-negotiation for the Ethernet 10/100/1000 interface. Valid values are: `yes` or `no`.	Bool	read-write	0
`net.duplex`	Attribute used to view and change the duplex setting for the Ethernet 10/100/1000 interface. Valid values are: `half` or `full`.	String	read-write	4
`net.gateway`	Attribute used to provide the gateway (default route) value. To clear this value, use a period (.). Applies only the net object. The network interface must be restarted (net.restart) for setting to take effect. See "Example" on page 30.	IPaddr	read-write	0
`net.gateway6`	Attribute used to provide the IPv6 gateway value. To clear this value, use a period (.). Applies only the net object. The network interface must be restarted (net.restart) for setting to take effect. See "Example" on page 30.	IPaddr	read-write	0
`net.hwaddr`	Attribute used to return the Hardware / MAC (Media Access Control) address for the Ethernet10/100/1000 interface.	String	read-only	17
`net.ifc-enable`	Attrib used to enable/disable the NIC. Normally, this should not be done. To enable the NIC set the value to **true**, to disable the value should be set to **false**.	Bool	read-write	0
`net.ipaddr`	Attribute used to view and change the IP address for the Ethernet10/100/1000 interface. To clear this value, use a period (.). Applies only the net object. The network interface must be restarted (net.restart) for setting to take effect. When you employ this command, the CLI may not reflect the change with a confirmation message. See "Example" on page 30.	IPaddr	read-write	0

Table 3-11 net Attributes

Attribute	Description	Type	Access	Range
`net.ipaddr6`	Attribute used to view and change the IPv6 address. To clear this value, use a period (.). Applies only the net object. The network interface must be restarted (net.restart) for setting to take effect. When you employ this command, the CLI may not reflect the change with a confirmation message. See "Example" on page 30. **NOTE**: The IP address uses IPv6 notation.	IPaddr	read-write	0
`net.mask`	Attribute used to provide the subnet mask value. To clear this value, use a period (.).	IPaddr	read-write	0
`net.mtu`	Attribute used to view the MTU (Maximum Transmission Unit) for the SMS Ethernet 10/100/1000 interface.	Bool	read-only	0
`net.ready`	Returns "true" if the primary network interface is configured and ready.	Bool	read-only	0
`net.restart`	Attribute used restart the Ethernet10/100/1000 interface with the current network settings. Set to **true** to restart immediately. (**false** has no effect.) Warning: restarting the network interface may cause connections to be lost, including SMS client sessions, and remote CLI sessions. Applies only the net object.	Bool	write-only	0
`net.scope-link`	Attribute used to return the IPv6 Scope Link address for the Ethernet 10/100/1000 interface. See "net" on page 30 and the associated **net.ipaddr6** attribute). See also "ifconfig" on page 8 and "ipconfig" on page 8.	String	read-only	0
`net.autoneg`	Attribute used to view, and enable/disable auto-negotiation for the Ethernet 10/100/1000 interface. Valid values are: `yes` or `no`.	Bool	read-write	0

ntp

Collection of NTP (Network Time Protocol) settings used to synchronize the system time with a remote time server. NTP allows machines within a network to be synchronized on a common time.

Related Objects

`svc, snmp`

Table 3-12 ntp Attributes

Attribute	Description	Type	Access	Range

`ntp.server1`
`ntp.server2`
`ntp.server3`
	Attribs used to specify a list of NTP time servers. The value may be a dotted IP address or a hostname. The first entry (**ntp.server1**) will be assigned the preferred time server role. The preferred time server is also used as a step ticker, which adjusts the time immediately upon system boot.
	To clear this value, use a period (.).
		IPaddr	read-write	0

`ntp.auth-enable`	Attrib used to enable/disable the NTP authentication. It allows the NTP client to verify that the server is known and trusted and not an intruder intending to masquerade as that server. We only support NTP V3 (symmetric key) authentication. To enable the NTP authentication, set the value to `yes`, and a key id and key value should be provided with the ntp.auth-keyId and ntp.auth-keyValue attribs. To disable the value, set it to `no`. **Example:** `set ntp.auth-enable=yes`	Bool	read-write	0
`ntp.auth-keyId`	The ID of key which is used to authenticate NTP server if the NTP authentication is enabled. The ID has to exist in `/etc/ntp/keys` before you set this value. To clear this value, use a period (.). **Example:** `set ntp.auth-keyId=1`	Int	read-write	1-65535
`ntp.auth-keyValue`	The value of key which is used to authenticate NTP server if the NTP authentication is enabled. The key has to exist in `/etc/ntp/keys` before you set this value. To clear this value, use a period (.). **Example:** `set ntp.auth-keyValue=test`	String	read-write	1-255

pkg

Collection of attribs used to control package management.

Related Object

`tmc (object)`

Table 3-13 pkg Attributes

Attribute	Description	Type	Access	Range
auto-download	Attrib used to control whether new packages available at the TMC are automatically downloaded. Email will be generated to notify the administrator of the action (if configured).	Bool	read-write	0
auto-install	Attrib used to control whether the SMS database is updated with the newly downloaded package.	Bool	read-write	0
dv-activate	Attrib used to activate a DV package.	String	write-only	
dv-delete	Attrib used to delete a DV package.	String	write-only	
dv-import	Attrib used to import a DV package to the SMS using a URL.	String	write-only	
dv-info	Attrib used to list all of the DV packages installed on the SMS.	String	read-only	
auto-distrib	Attrib used to control whether the new package will be distributed to the managed devices.	Bool	read-write	0
tmc-poll-rate	Attrib used to control the frequency of the check for new TMC packages. The SMS polls the Threat Management Center (TMC) at regular intervals (factory default is 30 minutes). Communication is attempted over TCP port 4043 to the host **tmc.tippingpoint.com**. A follow-up request that pulls the file may be made to another server using port 443. The poll rate can be adjusted by providing the **pkg.tmc-poll-rate** attrib with a new value and then rebooting the SMS. Assigning the attrib the value of '0' disables polling. (This setting may be desirable when the SMS is behind a firewall which prevents outbound communication with the TMC.)	Int	read-write	0-9999
proxy-tmc	Attrib used to control whether an HTTP proxy server is used to make TMC connections.	Bool	read-write	0
tmc-proxy-host	Attrib used to control which proxy server to use to make TMC connections.	String	read-write	1-128
tmc-proxy-port	Attrib used to control which proxy server port to use to make TMC connections.	Int	read-write	1-65535
proxy-tmc-authenticate	Attrib used to control whether authentication is required with the HTTP proxy server.	Bool	read-write	0

pwd

Collection of password-related attribs. The attribs are used to confirm the **SuperUser** password and enable the service mode used by support personnel. For information about managing users including user groups, passwords, and security levels, see the "Administration" chapter in the *SMS User Guide*.

Related Command

`users`

Table 3-14 pwd Attributes

Attribute	Description	Type	Access	Range
`pwd.group-adduser`	Used to add a user to a user group.	String	write-only	
`pwd.group-deluser`	Used to remove a user from a user group.	String	write-only	
`pwd.group-list`	Used to list all groups, or groups with users.	String	read-only	
`pwd.level`	Attribute used to set the security level for the password.	Int	read-write	
`pwd.service-enable`	Used to enable/disable the service mode password for the system. To protect customer security, the service mode is deactivated at the factory. To enable the service mode account, the customer must log in with an account that has **SuperUser** rights and set this attrib to **yes**. After service mode is enabled, a service professional can log in to the system with a secret one-time password. To disable service mode, set the attrib to **no**. To clear this value, use a period (.). **Example:** `set pwd.service-enable=false`	Bool	read-write	0
`pwd.user-add`	Used to add a user and specify the user's default user group. User names must comply with the rules defined by **pwd.level**. You must also specify a user group in the form of `?usergroup=username`. **Example:** `set pwd.user-add?superuser= johnsmith`	String	write-only	
`pwd.user-age`	Attribute used to set the maximum age for a password.	Int	read-write	
`pwd.user-del`	Used to delete a user.	String	write-only	
`pwd.user-desc`	Attribute used to describe the user account.	String	read-write	
`pwd.user-email`	Attribute used for the user account email address.	Email	read-write	

Table 3-14 pwd Attributes

Attribute	Description	Type	Access	Range
pwd.user-expires	Attribute used to enable password expiration.	Bool	read-write	
pwd.user-expiredays	Attribute used to set the amount of days to check the account for expiration.	String	read-only	
pwd.user-force-pwd	Attribute used to force a user to change their password at next login	Bool	read-write	
pwd.user-pager	Attribute used to include the user account pager number.	String	read-write	
pwd.user-phone	Attribute used to include the user account phone number.	String	read-write	
pwd.user-pwd	Attribute used for the user account password.	String	read-only	
pwd.user-state	Attribute for the state for the user ID.	String	read-only	
pwd.user-verify	Attribute used to identify the user	String	read-write	
pwd.web	Used to assign a password to the HTTP/HTTPS-accessible content. This single password allows access to the user manuals, the client software, reports, and archived attack data. The default is pwd.web=yes. To permit unrestricted access to the web server, set the value to "no".	Password	write-only	8-32

radius

Collection of radius-related attribs. The attribs are used to enable and configure RADIUS for the SMS. For more information on RADIUS, see the "Administration" chapter in the *SMS User Guide*.

Table 3-15 radius Attributes

Attribute	Description	Type	Access	Range
radius.enable	Attribute used to enable/disable the RADIUS.	Bool	read-write	
Primary RADIUS Server				
radius1.secret	Attrib used to enter the RADIUS secret set by the RADIUS server administrator. This entry is used by each RADIUS client, including the SMS server.	String	read-write	
radius1.server	Attrib used to set the IP address of the RADIUS server.	IPaddr	read-write	0
radius1.port	Attrib used to set the port on the RADIUS server that listens for authentication requests	Int	read-write	1-65535
radius1.timeout	Attrib used to set the maximum timeout period in seconds.	Int	read-write	1-300

Table 3-15 radius Attributes

Attribute	Description	Type	Access	Range
radius1.auth	Attrib to set the authentication method (PAP, CHAP, MSCHAP, MSCHAP2, EAPMD5)	String	read-write	
Backup RADIUS Server				
radius2.secret	Attrib used to enter the RADIUS secret set by the RADIUS server administrator. This entry is used by each RADIUS client, including the SMS server.	String	read-write	
radius2.server	Attrib used to set the IP address of the RADIUS server.	IPaddr	read-write	0
radius2.port	Attrib used to set the port on the RADIUS server that listens for authentication requests	Int	read-write	1-65535
radius2.timeout	Attrib used to set the maximum timeout period in seconds.	Int	read-write	1-300
radius2.auth	Attrib to set the authentication method (PAP, CHAP, MSCHAP, MSCHAP2, EAPMD5)	String	read-write	

route

Collection of network-related attribs. The attribs are used to configure the Ethernet 10/100/1000 interface for access to the local network.

Usage

```
route.add
route.add <destination> <mask> <gateway>
route.del <destination> <mask> <gateway>
```

Related Objects

`route6, net`

Related Commands

`ifconfig, ipconfig, routes`

Table 3-16 route Attributes

Attribute	Description	Type	Access	Range
route.add	Attribute used to add a static route to the IP routing table. Usage: `route.add` *<destination> <mask> <gateway>*	IPaddrs	write only	0
route.del	Attribute used to delete a static route from the IP routing table. Usage: `route.del` *<destination> <mask> <gateway>*	IPaddrs	write only	0
route.info	Attribute used to list all routes in the IP routing table.	String	read-only	0-1024

route6

Collection of attribs used to add, delete and display IPv6 static routes for the management interface

Usage

```
route6.add
route6.add <destination> <next hop>
route6.del <destination> <next hop>
```

Related Objects

`route, net`

Related Commands

`ifconfig, ipconfig`

Table 3-17 route6 Attributes

Attribute	Description	Type	Access	Range
`route6.add`	Attribute used to add a static route to the IP routing table. Usage: `route6.add` *<destination><next hop>*	IPaddrs	write only	0
`route6.del`	Attribute used to delete a static route from the IP routing table. Usage: `route6.del` *<destination> <next hop>*	IPaddrs	write only	0
`route6.info`	Attribute used to list all routes in the IP routing table.	String	read-only	0-1024

smtp

Collection of SMTP (Simple Mail Transfer Protocol) -related attribs. The attribs are used to configure the smtp service.

Table 3-18 smtp Attributes

Attribute	Description	Type	Access	Range
`smtp.send-mail`	Sends a mail message from the SMS. Other SMTP configuration settings are required to successfully send mail.	String	write-only	
`smtp.notify-list`	List of e-mail addresses used to deliver notification messages when a notifiable event occurs. The list should be one or more e-mail addresses separated by comma or semicolons.	Email	read-write	

snmp

Collection of SNMP (Simple Network Management Procotol) related attribs. The attribs are used to configure the SNMP trap service and SMS SNMPrequest agent. For SNMP requests, see "snmp-request Attributes" on page 39. For SNMP traps, see "snmp-trap Attributes" on page 40.

Related Objects

`svc`

Related Commands

`snmp-request, snmp-trap`

Table 3-19 snmp-request Attributes

Attribute	Description	Type	Access	Range
snmp.request-auth-key	Attrib used to specify the authentication key for the SNMP request agent. When enabled, the SMS responds to the SNMP system request. **Example:** `set snmp.request-auth-key=mykey`	String	write-only	
snmp.request-auth-proto	Attrib used to specify the authentication protocol for the SNMP request agent. When enabled, the SMS responds to the SNMP system request. Valid protocol values are: None, MD5, and SHA. **Example:** `set snmp.request-auth-proto=MD5`	String	read-write	
snmp.request-community	Attrib used to specify the community string for the SNMP request agent. When enabled, the SMS responds to the SNMP system request. **Example:** `set snmp.request-community=public`	String	read-write	
snmp.request-enable	Attrib used to enable/disable the SMS SNMP request agent. When enabled, the SMS responds to SNMP system requests. **Example:** `set snmp.request-enable=true`	Bool	read-write	
snmp.request-engine	Attrib used to specify the engine ID for the SNMP request agent. When enabled, the SMS responds to the SNMP system request. **Example:** `set snmp.request-engine=012345`	String	read-write	
snmp.request-priv-key	Attrib used to specify the privacy key for the SNMP request agent. When enabled, the SMS responds to the SNMP system request. **Example:** `set snmp.request-priv-key=mykey`	String	write-only	

Table 3-19 snmp-request Attributes

Attribute	Description	Type	Access	Range
snmp.request-priv-proto	Attrib used to specify the privacy protocol for the SNMP request agent. When enabled, the SMS responds to the SNMP system request. Valid protocol values are: • None • AES-128 • AES-192 • AES-256 • DES • Triple_DES **Example:** `set snmp.request-priv-proto=AES-128`	String	read-write	
snmp.request-user	Attrib used to specify the user name for the SNMP request agent. When enabled, the SMS responds to the SNMP system request. **Example:** `set snmp.request-user=myuser`	String	read-write	
snmp.request-version	Attrib used to change the version for the SNMP request agent. When enabled, the SMS responds to the SNMP system request. Valid version values are: v2 or v3. **Example:** `set snmp.request-version=v2`	String	write-only	

Table 3-20 snmp-trap Attributes

Attribute	Description	Type	Access	Range

snmp.trap-add	Attrib used to add a new SNMP trap destination. An IP address and SNMP version uniquely identify a destination. The IP address must be specified. The SNMP version is optional and can be specified when separated by a comma.
	Examples:
	`set snmp.trap-add=1.1.1.1`
	`set snmp.trap-add=1.1.1.1,v3`
		String	write-only	

snmp.trap-auth-key	Attrib used to specifiy the authentication protocol for an SNMP trap destination. The IP address must be specified. The SNMP version is optional and can be specified when separated by a comma.
	Examples:
	`set snmp.trap-auth-key?1.1.1.1=mkey`
	`set snmp.trap-auth-key?1.1.1.1,v3=mykey`
		String	write-only	

Table 3-20 snmp-trap Attributes

Attribute	Description	Type	Access	Range

snmp.trap-auth-proto	Attrib used to specifiy the authentication key for an SNMP trap destination. The IP address must be specified. The SNMP version is optional and can be specified when separated by a comma.
	Valid protocol values are: None, MD5, and SHA.
	Examples:
	`set snmp.trap-auth-proto?1.1.1.1=MD5`
	`set snmp.trap-auth-proto?1.1.1.1,v3=MD5`
		String	read-write	

snmp.trap-community	Attrib used to specifiy the community string for an SNMP trap destination. The IP address must be specified. The SNMP version is optional and can be specified when separated by a comma.
	Examples:
	`set snmp.trap-community?1.1.1.1=public`
	`set snmp.trap-community?1.1.1.1,v2=public`
		String	read-write	

snmp.trap-del	Attrib used to remove an SNMP trap destination. The IP address must be specified. The SNMP version is optional and can be specified when separated by a comma.
	Examples:
	`set snmp.trap-del=1.1.1.1`
	`set snmp.trap-del=1.1.1.1,v3`
		String	write-only	

snmp.trap-engine	Attrib used to specify the engine ID for an SNMP trap destination. The IP address must be specified. The SNMP version is optional and can be specified when separated by a comma.
	Examples:
	`set snmp.trap-engine?1.1.1.1=012345`
	`set snmp.trap-engine?1.1.1.1,v3=012345`
		String	read-write	

snmp.trap-info	Attrib used to list the SNMP trap destination **Example:** `get snmp.trap-info`	String	read-only	

Table 3-20 snmp-trap Attributes

Attribute	Description	Type	Access	Range

`snmp.trap-port`	Attrib used to specify the port for an SNMP trap destination. The IP address must be specified. The SNMP version is optional and can be specified when separated by a comma.
	Examples:
	`set snmp.trap-port?1.1.1.1=162`
	`set snmp.trap-port?1.1.1.1,v2=162`
		Int	read-write	

`snmp.trap-priv-key`	Attrib used to specify the privacy key for an SNMP trap destination. The IP address must be specified. The SNMP version is optional and can be specified when separated by a comma.
	Examples:
	`set snmp.trap-priv-key?1.1.1.1=mkey`
	`set snmp.trap-priv-key?1.1.1.1,v3=mykey`
		String	write-only	

`snmp.trap-priv-proto`	Attrib used to specify the privacy protocol for an SNMP trap destination. The IP address must be specified. The SNMP version is optional and can be specified when separated by a comma. Valid protocol values are:
	• None
	• AES-128
	• AES-192
	• AES-256
	• DES
	• Triple_DES
	Examples:
	`set snmp.trap-priv-proto?1.1.1.1=AES-128`
	`set snmp.trap-priv-proto?1.1.1.1,v3=AES-128`
		String	read-write	

Table 3-20 snmp-trap Attributes

Attribute	Description	Type	Access	Range

snmp.trap-user	Attrib used to specify the user name for an SNMP trap destination. The IP address must be specified. The SNMP version is optional and can be specified when separated by a comma.
	Examples:
	`set snmp.trap-user?1.1.1.1=testuser`
	`set snmp.trap-user?1.1.1.1,v3=testuser`
		String	read-write	

snmp.trap-version	Attrib used to change the version for an SNMP trap destination. The IP address must be specified. The SNMP version is optional and can be specified when separated by a comma. Valid version values are: v2 or v3.
	Examples:
	`set snmp.trap-version?1.1.1.1=v3`
	`set snmp.trap-version?1.1.1.1,v2=v3`
		String	write-only	

svc

Collection of attribs used to enable various services that execute within the system. While the system implements an internal firewall to protect against attacks, further security can be implemented by disabling unneeded services.

Related Commands

`ntp, snmp, pwd`

Table 3-21 svc Attributes

Attribute	Description	Type	Access	Range
`svc.fips-enable`	Attribute used to enable/disable SMS FIPS mode. In this mode, only FIPS 140-2 approved cryptographic algorithms are used when allowing SSH connections. **NOTE**: FIPS mode cannot be enabled if SSH has not been enabled. Also, disabling SSH automatically disables FIPS mode. **Example:** `set svc.fips-enable=yes`	Bool	read-write	0
`svc.http-enable`	Attribute used to enable/disable the HTTP (HTTP protocol) service. The HTTP service is used to download the SMS client during the installation process and download other files. The service is configured to prevent CGI and other active server processing. Once the client is downloaded, the service can be disabled until an updated client is available. HTTP and HTTPS can be enabled separately. To enable HTTP, set the **svc.http-enable** attrib to **true**. To disable, set to **false**. **Example:** `set svc.http-enable=true`	Bool	read-write	0
`svc.https-enable`	Attribute used to enable/disable the HTTPS (Secure HTTP protocol) service. The HTTPS service is used to download the SMS client during the installation process. The service is configured to prevent CGI and other active server processing. Once the client is downloaded, the service can be disabled until an updated client is available. To enable HTTPS, set the **svc.https-enable** attrib to **true**. To disable, set to **false**.	Bool	read-write	0
`svc.ping-enable`	Attribute used to enable/disable incoming ping support. Responding to pings can be considered a security weakness for systems. When disabled, the SMS will not respond to ICMP Echo Requests. **Example:** `set svc.ping-enable=true`	Bool	read-write	0

Table 3-21 svc Attributes

Attribute	Description	Type	Access	Range
`svc.ntp-enable`	Attrib used to enable/disable the NTP (Network Time Protocol) client. The NTP client can be used to synchronize system time with a list of remote time servers. To enable the NTP client, set the value to **true**, and a list of servers should be provided with the **ntp.server1** (...) attribs. To disable the value should be set to **false**. **Example:** `set svc.ntp-enable=true`	Bool	read-write	0
`svc.snmp-enable`	Attribute used to enable/disable the SNMP (Simple Network Management Protocol) agent. The SNMP service provides limited, read-only management support to a remote SNMP manager. To enable SNMP, set the **svc.snmp-enable** attrib to **true**. To disable, set to **false**. The community name for get requests can be set with the **snmp.get-community** attrib. **Example:** `set svc.snmp-enable=true`	Bool	read-write	0
`svc.ssh-enable`	Attribute used to enable/disable the SSH (Secure Shell) service. The SSH service is used to provide secured, remote CLI (Command Line Interface) access to the system. If SSH is disabled, the CLI can still be accessed by connecting a terminal or a keyboard/monitor to the chassis. The SMS server supports SSH protocol version 2. To enable SSH, set the **svc.ssh-enable** attrib to **true**. To disable, set to **false**. **Example:** `set svc.ssh-enable=true`	Bool	read-write	0
`svc.telnet-enable`	Attribute used to enable/disable the Telnet service. The Telnet service is used to provide remote CLI (Command Line Interface) access to the system. If Telnet is disabled, the CLI can still be accessed by connecting a terminal or a keyboard monitor to the chassis, or by using the SSH service. To enable Telnet, set the **svc.telnet-enable** attrib to **true**. To disable, set to **false**. **Example:** `set svc.telnet-enable=true`	Bool	read-write	0

sw

Collection of software versioning attribs. The attribs are used to report the system software version, and to list the software packages and their individual versions.

Table 3-22 sw Attributes

Attribute	Description	Type	Access	Range
sw.components	Returns a list of installed software packages and their versions.	String	read-only	0-1024
sw.version	Attribute returning the system software version.	String	read-only	1-32

sys

Collection of system-related attribs. The attribs retain system values, including the system name, location and contact.

Table 3-23 sys Attributes

Attribute	Description	Type	Access	Range
sys.contact	Attribute holding the system contact. Normally, this file contains the name and/or address of the administrator of this system.	String	read-write	0-64
sys.location	Attribute holding the system location. Normally, this field contains the physical location of the system.	String	read-write	0-64
sys.model	Attribute returning the model of the SMS. Provide this model in interactions with support staff.	String	read-only	1-32
sys.name	Attribute holding the system name. The system name must be set. It will be used in system prompts.	Name	read-write	1-32
sys.platform	Attribute returning the platform name. Provide this model number in interactions with support professionals.	String	read-only	1-32
sys.serialNum	Attribute returning the unique ${PRODUCT} system serial number. Provide this serial number in interactions with support professionals.	String	read-only	20

time

Collection of system time attribs. The attribs are used to configure the local time zone and the current system time.

See Also

ntp

Table 3-24 time Attributes

Attribute	Description	Type	Access	Range
`time.dateTime`	Displays the current system time in a readable format.	String	read-only	32
`time.setTime`	Displays and sets the current system time. The date and time is specified in the format: [MMDDhhmm[[CC]YY][.ss]]	String	read-write	32

`time.setTimeZone`	Displays and sets the current local time zone. Time zones can be represented in several forms. For example, US Eastern Time can be represented as either of the following:
	• `EST5EDT`
	• `America/Newark`
	The first format is the preferred format: a three-letter zone, followed by a time offset from GMT, and another three-letter zone for the daylight savings time.
	Examples:
	`set time.setTimeZone= America/New_York`
	`set time.setTimeZone=CST6CDT`
		String	read-write	2-48