# Schneider Electric

# Command Line Interface

## UPS Network Management Card 2

**AP9630, AP9631**

This manual is available in English on the APC Web site (www.apc.com).

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# Command Line Interface (CLI)

## How To Log On

### Overview

To access the command line interface, you can use either a local, serial connection, or a remote connection (Telnet or SSH) with a computer on the same network as the Network Management Card (NMC).

Use case-sensitive user name and password entries to log on (by default, **apc** and **apc** for a Super User, or **device** and **apc** for a Device User). A Read-Only User cannot access the command line interface.

See the UPS Network Management Card 2 *User's Guide* (for AP9630, AP9631) for more information on these options.

> If you cannot remember your user name or password, see "How to Recover from a Lost Password" in the *User's Guide*.

### Remote access to the command line interface

You can access the command line interface through Telnet or SSH. Telnet is enabled by default. Enabling SSH disables Telnet.

To enable or disable these access methods, use the Web interface. On the **Configuration** menu, select **Network** - **Console**.

**Telnet for basic access.** Telnet provides the basic security of authentication by user name and password, but not the high-security benefits of encryption.

To use Telnet to access the command line interface:

1. From a computer that has access to network on which the NMC is installed, at a command prompt, type `telnet` and the IP address for the NMC (for example, `telnet 139.225.6.133`, when the NMC uses the default Telnet port of 23), and press ENTER.

   If the NMC uses a non-default port number (from 5000 to 32768), you must include a colon or a space, depending on your Telnet client, between the IP address (or DNS name) and the port number. (These are commands for general usage: some clients don't allow you to specify the port as an argument and some types of Linux might want extra commands).

2. Enter the user name and password (by default, **apc** and **apc** for a Super User, or **device** and **apc** for a Device User).

**SSH for high-security access.** If you use the high security of SSL for the Web interface, use SSH for access to the command line interface. SSH encrypts user names, passwords, and transmitted data. The interface, user accounts, and user access rights are the same whether you access the command line interface through SSH or Telnet, but to use SSH, you must first configure SSH and have an SSH client program installed on your computer.

## Local access to the command line interface

For local access, use a computer that connects to the Network Management Card through the serial port to access the command line interface:

1. Select a serial port at the computer and disable any service that uses the port.

2. Connect the provided serial cable (part number 940-0299) from the selected port on the computer to the configuration port at the NMC.

3. Run a terminal program (e.g., HyperTerminal), and configure the selected port for 9600 bps, 8 data bits, no parity, 1 stop bit, and no flow control.

4. Press ENTER. At the prompts, enter your user name and password.

# Main Screen

## Sample main screen

Following is an example of the screen displayed when you log on to the command line interface at the Network Management Card (NMC).

```
 American Power Conversion          Network Management Card AOS   vx.x.x
(c)Copyright 2013 All Rights Reserved Symmetra APP                vx.x.x
-----------------------------------------------------------------------
Name     : Test Lab                          Date : 10/30/2010
Contact  : Don Adams                         Time : 5:58:30
Location : Building 3                        User : Super User
Up Time  : 0 Days, 21 Hours, 21 Minutes      Stat : P+ N+ A+


APC>

```

## Information and status fields

**Main screen information fields.**

- Two fields identify the American Power Conversion operating system (AOS) and application (APP) firmware versions. The application firmware name identifies the device that connects to the network through this NMC. In the example above, the NMC uses the application firmware for a Symmetra UPS.

```
Network Management Card AOS     vx.x.x
Symmetra APP                    vx.x.x
```

- Three fields identify the system name, contact person, and location of the NMC.

```
Name   : Test Lab
Contact: Don Adams
Location: Building 3
```

- The **Up Time** field reports how long the NMC has been running since it was last turned on or reset.

  ```
  Up Time: 0 Days 21 Hours 21 Minutes
  ```

- Two fields report when you logged in, by date and time.

  ```
  Date : 10/30/2009
  Time : 5:58:30
  ```

- The **User** field reports whether you logged in through the **Super User** or **Device Manager** account. (The **Read Only User** account cannot access the command line interface.)
  When you log on as Device Manager (equivalent to Device User in the user interface), you can access the event log, configure some UPS settings, and view the number of active alarms.

  ```
  User : Super User
  ```

**Main screen status fields.**

- The **Stat** field reports the NMC status. The middle status varies according to whether you are running IPv4, IPv6, or both, as indicated in the second table below.

  ```
  Stat : P+ N+ A+
  ```

| | |
|---|---|
| P+ | The operating system (AOS) is functioning properly. |

| IPv4 only | IPv6 only | IPv4 and IPv6* | Description |
|---|---|---|---|
| N+ | N6+ | N4+ N6+ | The network is functioning properly. |
| N? | N6? | N4? N6? | A BOOTP request cycle is in progress. |
| N– | N6– | N4– N6– | The NMC did not connect to the network. |
| N! | N6! | N4! N6! | Another device is using the IP address of the NMC. |
| * The N4 and N6 values can be different from one another: you could, for example, have N4– N6+. | | | |

| | |
|---|---|
| A+ | The application is functioning properly. |
| A– | The application has a bad checksum. |
| A? | The application is initializing. |
| A! | The application is not compatible with the AOS. |

If P+ is not displayed, see customer support at **http://www.apc.com/site/support/**.

# How to Use the Command Line Interface

## Overview

The command line interface provides options to configure the network settings and manage the UPS and its Network Management Card (NMC).

## How to enter commands

At the command line interface, use commands to configure the NMC. To use a command, type the command and press ENTER. Commands and arguments are valid in lowercase, uppercase, or mixed case. Options are case-sensitive.

While using the command line interface, you can also do the following:

- Type ? and press ENTER to view a list of available commands, based on your account type.

  To obtain information about the purpose and syntax of a specified command, type the command, a space, and ? or the word `help`. For example, to view RADIUS configuration options, type:
  ```
  radius ?
  ```
  or
  ```
  radius help
  ```

- Press the UP arrow key to view the command that was entered most recently in the session. Use the UP and DOWN arrow keys to scroll through a list of up to ten previous commands.

- Type at least one letter of a command and press the TAB key to scroll through a list of valid commands that match the text you typed in the command line.

- Type `ups -st` to view the status of the UPS.

- Type `exit` or `quit` to close the connection to the command line interface.

## Command syntax

| Item | Description |
|------|-------------|
| - | Options are preceded by a hyphen. |
| < > | The definitions of options are enclosed in angle brackets. For example: <br>`-pw <user password>` |
| [ ] | If a command accepts multiple options or an option accepts mutually exclusive arguments, the values may be enclosed in brackets. |
| \| | A vertical line between items enclosed in brackets or angle brackets indicates that the items are mutually exclusive. You must use one of the items. |

## Syntax examples

**A command that supports multiple options:**

```
user -n <user name> -pw <user password>
```

Here, the `user` command accepts both the option `-n`, which specifies the user name, and the option `-pw`, which changes the password.

For example, to change the Super User password to XYZ:

```
user -n apc -pw XYZ
```

**A command that accepts mutually exclusive arguments for an option:**

```
alarmcount -p [all | warning | critical]
```

In this example, the option `-p` accepts only three arguments: `all`, `warning`, or `critical`. For example, to view the number of active critical alarms, type:

```
alarmcount -p critical
```

The command will not work if you type an argument that is not specified.

# Command Response Codes

The command response codes enable scripted operations to detect error conditions reliably without having to match error message text.

The CLI reports all command operations with the following format:

```
E [0-9][0-9][0-9]: Error message
```

| Code | Error message |
|------|---------------|
| E000 | Success |
| E001 | Successfully Issued |
| E002 | Reboot required for change to take effect |
| E100 | Command failed |
| E101 | Command not found |
| E102 | Parameter Error |
| E103 | Command Line Error |
| E104 | User Level Denial |
| E105 | Command Prefill |
| E106 | Data Not Available |
| E107 | Serial communication with the UPS has been lost |

# Command Descriptions

⚠ The availability of the commands and options below can vary between UPS devices.

## ?

**Access:** Super User, Administrator, Device User

**Description:** View a list of all the CLI commands available to your account type. To view help text for a specific command, type the command followed by a question mark.

**Example:** To view a list of options that are accepted by the `alarmcount` command, type:
`alarmcount ?`

## about

**Access:** Super User, Administrator, Device User

**Description:** View hardware and firmware information. This information is useful in troubleshooting and enables you to determine if updated firmware is available at the website.

## alarmcount

**Access:** Super User, Administrator, Device User

**Description:**

| Option | Arguments | Description |
|--------|-----------|-------------|
| -p | all | View the number of active alarms reported by the NMC. Information about the alarms is provided in the event log. |
| | warning | View the number of active warning alarms. |
| | critical | View the number of active critical alarms. |

**Example:** To view all active warning alarms, type:
`alarmcount -p warning`

## boot

**Access:** Super User, Administrator

**Description:** Define how the NMC will obtain its network settings, including the IP address, subnet mask, and default gateway. Then configure the BOOTP or DHCP server settings.

| Option | Argument | Description |
|--------|----------|-------------|
| -b <boot mode> | dhcp \| bootp \| manual | Define how the TCP/IP settings will be configured when the NMC turns on, resets, or restarts. |
| -c | enable \| disable | `dhcp` boot modes only. Enable or disable the requirement that the DHCP server provide the APC cookie. |

| Option | Argument | Description |
|--------|----------|-------------|
| The default values for these three settings generally do not need to be changed: -v <vendor class>: APC -i <client id>: The MAC address of the NMC, which uniquely identifies it on the network -u <user class>: The name of the application firmware module | | |

**Example:** To use a DHCP server to obtain network settings:

1. Type `boot -b dhcp`

2. Enable the requirement that the DHCP server provide the APC cookie:
   `boot -c enable`

## cd

**Access:** Super User, Administrator, Device User

**Description:** Navigate to a folder in the directory structure of the NMC.

**Example 1:** To change to the `ssh` folder and confirm that an SSH security certificate was uploaded to the NMC:

1. Type `cd ssh` and press ENTER.

2. Type `dir` and press ENTER to list the files stored in the SSH folder.

**Example 2:** To return to the main directory folder, type:
`cd ..`

## cfgshutdn

**Access:** Super User, Administrator, Device User

**Description:** Configure the shutdown parameters: this enables you to show and configure UPS Shutdown Delay, UPS Return Delay, UPS Low Battery Duration, UPS Sleep Time, and UPS Min Return Runtime.

These options are not available with all UPS devices.

| Option | Argument | Description |
|--------|----------|-------------|
| -all | | Show all applicable shutdown parameters for this UPS. |
| -sd | 000 \| 090 \| 180 \| 270 \| 360 \| 450 \| 540 \| 630 | Set the shutdown delay in seconds. |
| -lo | 02 \| 05 \| 08 \| 11 \| 14 \| 17 \| 20 \| 23 | Set the low battery duration in minutes. |
| -rd | 000 \| 060 \| 120 \| 180 \| 240 \| 300 \| 360 \| 420 | Set the UPS return delay in seconds, that is, the delay time before the UPS turns on again. |
| -rrt | 0–3600 | Set the minimum return runtime in seconds, that is, the battery runtime to support the load must reach this value before the UPS turns on again. |
| -sl | 0.0–359.9 | Set the sleep time, in hours. The argument can have any number between 0.0 and 359.9. |

| Option | Argument | Description |
|---|---|---|
| -rsc | 00 \| 15 \| 30 \| 45 \| 60 \| 75 \| 90 | Set the minimum battery charge, as a percentage of the total capacity. |

## cfgpower

**Access:** Super User, Administrator, Device User

**Description:** Configure the power parameters: this enables you to show and configure transfer points, sensitivity and output voltage.

These options are not available with all UPS devices.

| Option | Argument<br>These values can vary with different devices. | Description |
|---|---|---|
| -all | | Show all applicable power parameters for this UPS. |
| -l | 97–106 | Set the low transfer point, in VAC. |
| -h | 127–136 | Set the high transfer point, in VAC. |
| -ov | 100 \| 120 \| 110 \| | Set the outlet voltage, in VAC. |
| -s | Normal \| Reduced \| Low | Set the sensitivity, using one of the three arguments. |
| -bu | 127 \| 130 \| 133 \| 136 \| 139 \| 142 \| 145 \| 148 | Set the bypass upper voltage in VAC; when the voltage rises above this value, the device goes into bypass. |
| -bl | 086 \| 088 \| 090 \| 092 \| 094 \| 096 \| 098 \| 100 | Set the bypass lower voltage in VAC; when the voltage drops below this value, the device goes into bypass. |

## console

**Access:** Super User, Administrator

**Description:** Define whether users can access the command line interface using Telnet, which is enabled by default, or Secure SHell (SSH), which provides protection by transmitting user names, passwords, and data in encrypted form. You can change the Telnet or SSH port setting for additional security. Alternately, disable network access to the command line interface.

| Option | Argument | Description |
|---|---|---|
| -s | enable \| disable | Enable or disable SSH. Enabling SSH enables SCP and disables Telnet. |
| -t | enable \| disable | Enable or disable Telnet. |
| -pt | <telnet port number> | Specify the Telnet port number used to communicate with the NMC (23 by default). The other range is 5000–32768. |
| -ps | <SSH port number> | Specify the SSH port number used to communicate with the NMC (22 by default). The other range is 5000–32768 |

| Option | Argument | Description |
|--------|----------|-------------|
| -b | 2400 \| 9600 \| 19200 \| 38400 | Configure the serial baud rate (9600 by default). |

**Example 1:** To enable SSH access to the command line interface, type:
```
console -s
```

**Example 2:** To change the Telnet port to 5000, type:
```
console -pt 5000
```

## date

**Access:** Super User, Administrator

**Definition:** Configure the date used by the NMC.

To configure an NTP server to define the date and time for the NMC, see the *User's Guide*.

| Option | Argument | Description |
|--------|----------|-------------|
| -d | <"datestring"> | Set the current date. Use the date format specified by the `date -f` command. |
| -t | <00:00:00> | Configure the current time, in hours, minutes, and seconds. Use the 24-hour clock format. |
| -f | mm/dd/yy \| dd.mm.yyyy \| mmm-dd-yy \| dd-mmm-yy \| yyyy-mm-dd | Select the numerical format in which to display all dates in this user interface. Each letter m (for month), d (for day), and y (for year) represents one digit. Single-digit days and months are displayed with a leading zero. |
| -z | <time zone offset> | Set the difference with GMT in order to specify your time zone. This enables you to synchronize with other people in different time zones. |

**Example 1:** To display the date using the format yyyy-mm-dd, type:
```
date -f yyyy-mm-dd
```

**Example 2:** To define the date as October 30, 2009, using the format configured in the preceding example, type:
```
date -d "2009-10-30"
```

**Example 3:** To define the time as 5:21:03 p.m., type:
```
date -t 17:21:03
```

## delete

**Access:** Super User, Administrator

**Description:** Delete a file in the file system. (To delete the event log, see the *User's Guide*).

| Argument | Description |
|----------|-------------|
| <file name> | Type the name of the file to delete. |

**Example:** To delete a file:

1. Navigate to the folder that contains the file. For example, to navigate to the `logs` folder, type:
   `cd logs`

2. To view the files in the `logs` folder, type:
   `dir`

3. Type
   `delete <file name>.`

## detstatus

**Access:** Super User, Administrator, Device User

**Description:** View the detailed status of the UPS. See also the -st option in "ups" on page 18.

| Option | Arguments | Description |
|--------|-----------|-------------|
| -all | | Show all applicable status information for this UPS. |
| -rt | | Runtime remaining, in hours and minutes. |
| -ss | | UPS status summary: on line, on battery, etc. |
| -soc | | UPS battery charge, as a percentage of the total capacity. |
| -om | | Output measurements: voltage, frequency, watts percentage, VA percentage, current. |
| -im | | Input measurements: voltage and frequency. |
| -bat | | Battery voltage |
| -tmp | | Internal temperature of the UPS |
| -dg | | Diagnostic test results: self-test result and date, calibration result and date. |

## dir

**Access:**  Super User, Administrator, Device User

**Description:** View the files and folders stored on the NMC.

## dns

**Access:**  Super User, Administrator

**Description:** Configure and display the manual Domain Name System (DNS) settings.

| Parameter | Argument | Description |
|-----------|----------|-------------|
| -OM | enable \| disable | Override the manual DNS. |
| -y | enable \| disable | Synchronizes the system and the hostname. This is the same as using "system -s". |
| -p | <primary DNS server> | Set the primary DNS server. |
| -s | <secondary DNS server> | Set the secondary DNS server. |
| -d | <domain name> | Set the domain name. |

| Parameter | Argument | Description |
|---|---|---|
| -n | <domain name IPv6> | Set the domain name IPv6. |
| -h | <host name> | Set the hostname. |

## energyWise

**Access:** Super User, Administrator, Device User

**Description:** These options facilitate the use of a Cisco EnergyWise switch to monitor and control your UPS and its devices. This includes turning off the UPS and individual Switched Outlets (if your UPS has them).

| Parameter | Argument | Description |
|---|---|---|
| -e | enable \| disable | Enable or disable EnergyWise. |
| -p | <Port> | Specify a port. |
| -d | <Domain> | Specify a domain. |
| -m | enable \| disable | Enable or disable secure mode. |
| -s | <Shared Secret> | Specify the shared secret. |
| -v | | Specify the toolkit version. |
| -n [outlet group #] | <Name> | For an outlet group, specify the name, the role, any keywords. Specify 0 for the outlet group number for a Parent. |
| -r [outlet group #] | <Role> | |
| -k [outlet group #] | <Keywords> | |
| -i [outlet group #] | <1-100> | Indicate the importance for this outlet #. Specify 0 for the outlet # for a Parent. |

**Example:** To enable secure-mode EnergyWise, type:
```
energyWise -m enable
```

## eventlog

**Access:** Super User, Administrator, Device User

**Description:** View the date and time you retrieved the event log, the status of the UPS, and the status of sensors connected to the NMC. View the most recent device events, and the date and time they occurred. Use the following keys to navigate the event log:

| Key | Description |
|---|---|
| ESC | Close the event log and return to the command line interface. |
| ENTER | Update the log display. Use this command to view events that were recorded after you last retrieved and displayed the log. |
| SPACEBAR | View the next page of the event log. |
| B | View the preceding page of the event log. This command is not available at the main page of the event log. |
| D | Delete the event log. Follow the prompts to confirm or deny the deletion. Deleted events cannot be retrieved. |

## exit

**Access:** Super User, Administrator, Device User

**Description:** Exit from the command line interface session.

## format

**Access:** Super User, Administrator

**Description:** Reformat the file system of the NMC and erase all security certificates, encryption keys, configuration settings, and the event and data logs. Be careful with this command.

To reset the NMC to its default configuration, use the `resetToDef` command.

## ftp

**Access:** Super User, Administrator

**Description:** Enable or disable access to the FTP server. Optionally, change the port setting to the number of any unused port from 5001 to 32768 for added security.

| Option | Argument | Definition |
|--------|----------|------------|
| -p | <port number> | Define the TCP/IP port that the FTP server uses to communicate with the NMC (21 by default). The FTP server uses both the specified port and the port one number lower than the specified port. |
| -S | enable \| disable | Configure access to the FTP server. |

**Example:** To change the TCP/IP port to 5001, type:
```
ftp -p 5001
```

## help

**Access:** Super User, Administrator, Device User

**Description:** View a list of all the CLI commands available to your account type. To view help text for a specific command, type the command followed by `help`.

**Example 1:** To view a list of commands available to someone logged on as a Device User, type:
```
help
```
**Example 2:** To view a list of options that are accepted by the `alarmcount` command, type:
```
alarmcount help
```

## netstat

**Access:** Super User, Administrator, Device User

**Description:** View the status of the network and all active IPv4 and IPv6 addresses.

## ntp

**Access:** Super User, Administrator, Device User

**Description:** View and configure the network time protocol parameters.

| Option | Argument | Definition |
|--------|----------|------------|
| -OM | enable \| disable | Override the manual settings. |
| -p | &lt;primary NTP server&gt; | Specify the primary server. |
| -s | &lt;secondary NTP server&gt; | Specify the secondary server. |

**Example 1:** To enable the override of manual setting, type:

```
ntp -OM enable
```

**Example 2:** To specify the primary NTP server, type:

```
ntp -p 150.250.6.10
```

## ping

**Access:** Super User, Administrator, Device User

**Description.** Determine whether the device with the IP address or DNS name you specify is connected to the network. Four inquiries are sent to the address.

| Argument | Description |
|----------|-------------|
| &lt;IP address or DNS name&gt; | Type an IP address with the format *xxx.xxx.xxx.xxx*, or the DNS name configured by the DNS server. |

**Example:** To determine whether a device with an IP address of 150.250.6.10 is connected to the network, type:

```
ping 150.250.6.10
```

## portspeed

**Access:** Super User, Administrator

**Description:**

| Option | Arguments | Description |
|--------|-----------|-------------|
| -s | auto \| 10H \| 10F \| 100H \| 100F | Define the communication speed of the Ethernet port. The `auto` command enables the Ethernet devices to negotiate to transmit at the highest possible speed. |

**Example:** To configure the TCP/IP port to communicate using 100 Mbps with half-duplex communication (communication in only one direction at a time), type:

```
portspeed -s 100H
```

## prompt

**Access:** Super User, Administrator, Device User

**Description:** Configure the command line interface prompt to include or exclude the account type of the currently logged-in user. Any user can change this setting; all user accounts will be updated to use the new setting.

| Option | Argument | Description |
|--------|----------|-------------|
| -s | long | The prompt includes the account type of the currently logged-in user. |
| | short | The default setting. The prompt is four characters long: `APC>` |

**Example:** To include the account type of the currently logged-in user in the command prompt, type:
```
prompt -s long
```

## quit

**Access:** Super User, Administrator, Device User

**Description:** Exit from the command line interface session (this works the same as the exit command).

## radius

**Access:** Super User, Administrator

**Description:** View the existing RADIUS settings, enable or disable RADIUS authentication, and configure basic authentication parameters for up to two RADIUS servers.

> For a summary of RADIUS server configuration and a list of supported RADIUS servers, see the *User's Guide*.
>
> Additional authentication parameters for RADIUS servers are available at the user interface of the NMC.
>
> For detailed information about configuring your RADIUS server, see the *Security Handbook*, available on the Network Management Card *Utility* CD and at the website, **www.apc.com**.

| Option | Argument | Description |
|--------|----------|-------------|
| -a | local \| radiusLocal \| radius | Configure RADIUS authentication:<br>`local` — RADIUS is disabled. Local authentication is enabled.<br>`radiusLocal` — RADIUS, then Local Authentication. RADIUS and local authentication are enabled. Authentication is requested from the RADIUS server first. If the RADIUS server does not respond, local authentication is used.<br>`radius` — RADIUS is enabled. Local authentication is disabled. |
| -p1<br>-p2 | <server IP> | The server name or IP address of the primary or secondary RADIUS server.<br>Note: RADIUS servers use port 1812 by default to authenticate users. This can't be changed. |
| -s1<br>-s2 | <server secret> | The shared secret between the primary or secondary RADIUS server and the NMC. |
| -t1<br>-t2 | <server timeout> | The time in seconds that the NMC waits for a response from the primary or secondary RADIUS server. |

**Example 1:**

To view the existing RADIUS settings for the NMC, type `radius` and press ENTER.

**Example 2:** To enable RADIUS and local authentication, type:
```
radius -a radiusLocal
```

**Example 3:** To configure a 10-second timeout for a secondary RADIUS server, type:
```
radius -t2 10
```

## reboot

**Access:** Super User, Administrator

**Description:** Restart the interface of the NMC.

## resetToDef

**Access:** Super User, Administrator

**Description:** Reset all parameters to their default.

| Option | Arguments | Description |
|--------|-----------|-------------|
| -p | all \| keepip | Reset all configuration changes, including event actions, device settings, and, optionally, TCP/IP configuration settings. |

**Example:** To reset all of the configuration changes *except* the TCP/IP settings for the NMC, type:
```
resetToDef -p keepip
```

## snmp

**Access:** Super User, Administrator

**Description:** Enable or disable and configure SNMP 1.

In the table below, n is the access control number: 1,2,3, or 4.

| Option | Arguments | Description |
|--------|-----------|-------------|
| -S | enable \| disable | Enable or disable SNMP 1. |
| -c[n] | Community | Specify a community. |
| -a[n] | read \| write \| writeplus \| disable | Indicate the usage rights. |
| -n[n] | IP or Domain Name | Specify the IP address or the domain name. |

**Example:** To enable SNMP version 1, type:
```
snmp -S enable
```

## snmpv3

**Access:** Super User, Administrator

**Description:** Enable or disable and configure SNMPv3.

In the table below, n is the access control number: 1,2,3, or 4.

| Option | Arguments | Description |
|--------|-----------|-------------|
| -S | enable \| disable | Enable or disable SNMPv3. |
| -u[n] | <User Name> | Specify a user name, an authentication phrase and encryption phrase. |
| -a[n] | <Authentication Phrase> | |
| -c[n] | <Crypt Phrase> | |
| -ap[n] | sha \| md5 \| none | Indicate the type of authentication protocol. |
| -pp[n] | aes \| des \| none | Indicate the privacy protocol. |
| -ac[n] | enable \| disable | Enable or disable access. |
| -au[n] | <User Profile Name> | Give access to a specified user profile. |
| -n[n] | <IP or hostname for NMS> | Specify the IP or the hostname for the Network Management System. |

**Example:** To give access level 2 to user "JMurphy", type:

```
snmpv3 –au2 "JMurphy"
```

## system

**Access:** Super User, Administrator

**Description:** View and set the system name, the contact, the location and view up time as well as the date and time, the logged-on user, and the high-level system status P, N, A (see "Main screen status fields").

| Option | Argument | Description |
|--------|----------|-------------|
| -n | <system name> | Define the device name, the name of the person responsible for the device, and the physical location of the device. |
| -c | <system contact> | Note: If you define a value with more than one word, you must enclose the value in quotation marks. |
| -l | <system location> | These values are also used by InfraStruxure Central and the NMC's SNMP agent. |
| -m | <system-message> | Show a custom message on the logon page of the web UI or the CLI. |
| -s | enable \| disable | Synchronize the system and the hostname. This is the same as using "dns -y". |

**Example 1:** To set the device location as `Test Lab`, type:

```
system –l "Test Lab"
```

**Example 2:** To set the system name as `Don Adams`, type:

```
system –n "Don Adams"
```

## tcpip

**Access:** Super User, Administrator

**Description:** View and manually configure these network settings for the NMC:

| Option | Argument | Description |
|--------|----------|-------------|
| -S | enable \| disable | Enable or disable TCP/IP. |

| Option | Argument | Description |
|--------|----------|-------------|
| -i | \<IP address\> | Type the IP address of the NMC, using the format *xxx.xxx.xxx.xxx* |
| -s | \<subnet mask\> | Type the subnet mask for the NMC. |
| -g | \<gateway\> | Type the IP address of the default gateway. *Do not* use the loopback address (127.0.0.1) as the default gateway. |
| -d | \<domain name\> | Type the DNS name configured by the DNS server. |
| -h | \<host name\> | Type the host name that the NMC will use. |

**Example 1:** To view the network settings of the NMC, type `tcpip` and press ENTER.

**Example 2:** To manually configure an IP address of `150.250.6.10` for the NMC, type:
`tcpip -i 150.250.6.10`

## tcpip6

**Access:** Super User, Administrator

**Description:** Enable IPv6 and view and manually configure these network settings for the NMC (NMC):

| Option | Argument | Description |
|--------|----------|-------------|
| -S | enable \| disable | Enable or disable IPv6. |
| -man | enable \| disable | Enable manual addressing for the IPv6 address of the NMC. |
| -auto | enable \| disable | Enable the NMC to automatically configure the IPv6 address. |
| -i | \<IPv6 address\> | Set the IPv6 address of the NMC. |
| -g | \<IPv6 gateway\> | Set the IPv6 address of the default gateway. |
| -d6 | router \| statefull \| stateless \| never | Set the DHCPv6 mode, with parameters of router controlled, statefull (for address and other information, they maintain their status), stateless (for information other than address, the status is not maintained), never. |

**Example 1:** To view the network settings of the NMC, type `tcpip6` and press ENTER.

**Example 2:** To manually configure an IPv6 address of 2001:0:0:0:0:FFD3:0:57ab for the NMC, type:
`tcpip -i 2001:0:0:0:0:FFD3:0:57ab`

## uio

**Access:**  Super User, Administrator, Device User

**Description:** This command is available for an AP9631 Network Management Card 2 with a connected Dry Contact I/O Accessory (AP9810).

| Option | Argument | Description |
|--------|----------|-------------|
| -rc \<UIO port #\> | open \| close | Change the state of a connected output, and specify the UIO (universal input/ output) port number. |
| -st | \<UIO port #\> \| \<UIO port #\>, \<UIO port #\> \| \<UIO port #\>–\<UIO port #\> | View the status of the sensors connected to the Dry Contact I/O Accessory. To view the status of a specific sensor or several sensors, type their UIO port numbers. |

| Option | Argument | Description |
|---|---|---|
| -disc | \<UIO port #\> \| <br> \<UIO port #\>, <br> \<UIO port #\> \| <br> \<UIO port #\>–\<UIO port #\> | Identify new input contact or output relay connections. |

**Example 1:** To open the output, type:
```
uio -rc 2 open
```

**Example 2:** To view the status of the devices connected to a Dry Contact I/O Accessory that is installed in universal input/ output port 2, type:
```
uio -st 2
```

## ups

Some **ups** options are dependant on the UPS model. Not all configurations may support all options of the **ups** command.

**Access:** Super User, Administrator, Device User

**Description:** Control the UPS and view status information. See the *User's Guide* for information on how these options relate to that screen.

| Option | Arguments | Description |
|---|---|---|
| -c | off \| graceoff \| on \| reboot \| gracereboot \| sleep \| gracesleep | Configure UPS actions. |
| -r | start \| stop | Initiate or end a runtime calibration. A calibration recalculates remaining runtime and requires the following: <br> • Because a calibration temporarily depletes the UPS batteries, you can perform a calibration only if battery capacity is at 100%. <br> • The load must be at least 15% to guarantee that a calibration will be accepted. |
| -s | start | Initiate a UPS self-test. |
| -b | enter \| exit | Control the use of bypass mode. This command is model-specific and may not apply to your UPS. |

| Option | Arguments | Description |
|---|---|---|
| -o# | Off \| DelayOff \| On \| DelayOn \| Reboot \| DelayReboot\| Shutdown \| DelayShutdown \| Cancel | Control any of three outlet groups at a Smart-UPS XLM. Specify the outlet group with #.<br><br>When the state of the outlet group is **on**, the option accepts three arguments:<br><br>• Off — Turn off the group immediately.<br>• DelayOff — Turn off the group after the number of seconds configured as **Power Off Delay**.<br>• Reboot — Turn off the group immediately, then turn it on after the number of seconds configured as **Reboot Duration** and **Power On Delay**.<br>• DelayReboot — Turn the outlet group off after the number of seconds configured as **Power Off Delay**, then turn it on after the number of seconds configured as **Reboot Duration** and **Power On Delay**.<br>• Shutdown — If the UPS is online, this reboots the outlet group. If the UPS is on battery, this shuts down the group and waits for AC utility power before turning on the group again.<br>• DelayShutdown — Shut down the outlet group after the number of seconds configured as **Power Off Delay**.<br>• Cancel — Cancel your previous commands, e.g. turning off.<br><br>When the state of the outlet group is **off**, the option accepts two arguments:<br><br>• On — Turn on the group immediately.<br>• DelayOn — Turn on the group after the number of seconds configured as **Power On Delay**.<br><br>The **Power On Delay**, **Power Off Delay**, and **Reboot Duration** must be configured at the user interface. |
| -os# | | View the status (on, off, or rebooting) of all the outlet groups.<br><br>To view the status of a specific outlet group, specify its number. For example, type ups -os1 to view the status of outlet group 1.<br>But:<br>a) When you use this option on a UPS with a Main Outlet Group:<br>1 identifies the Main Outlet Group, 2 identifies Switched Outlet Group 1, 3 identifies Switched Group 2, etc.<br>b) On a UPS with NO main outlet group:<br>1 identifies Switched Outlet Group 1, etc. |
| -st | | View the status of the UPS. |
| -a | start | Test the UPS audible alarm. |

**The ups command options for MGE Galaxy-specific UPS devices:**

These commands are only available on the MGE Galaxy 300 and MGE Galaxy 7000 UPS. Some options may only be available based on the individual UPS model.

| Option | Argument | Description |
|---|---|---|
| -input | <phase#> \| all | Display the input measurements for the chosen phase of the UPS. Typing "all" displays the information for all phases of the UPS. |
| | voltage \| current \| frequency \| all | Specify the input measurement for the ups command. **Example:** ups -input 2 frequency Displays the frequency for phase 2 of the UPS. |
| -bypass | <phase#> \| all | Display the input measurements for the chosen phase of the bypass main. Typing "all" displays all phases of the bypass main. |
| | voltage \| current \| frequency \| all | Specify the input measurement for the ups command. **Example:** ups -bypass 2 current Displays the current for phase 2 of the bypass main. |
| -output | <phase#> \| all | Display the output measurements for the chosen phase of the UPS. Typing "all" displays the information for all phases of the UPS. |
| | voltage \| current \| load \| power \| percload \| pf \| frequency \| all | Specify the output measurement for the ups command. **Example:** ups -output 2 percload Displays the percentage of load for phase 2 of the UPS. |
| -batt | | Display the battery status of the UPS |
| -about | | Displays information about the UPS. |
| -al | c \| w | Display all existing alarms. Specifying "c" or "w" limits the display to either Critical (c) or Warning (w) alarms. |

**Example 1:** To initiate a runtime calibration, type:
```
ups -r start
```

**Example 2:** To immediately turn off outlet group 2 at a Smart-UPS XLM, type:
```
ups -o2 off
```

## upsfwupdate

This command might not be available for all UPS devices.

**Access.** Super User, Administrator, Device User.

**Description:** Initiate an update of the UPS firmware. The firmware update file must have been previously sent using FTP to the NMC and stored in the /upsfw/ directory.

| Option | Argument | Description |
|---|---|---|
| -apply | | Start the firmware update. |
| -status | | Check the status of a firmware update that is already initiated. |
| -lastresult | | View the result of the last attempted firmware update. |

| Option | Argument | Description |
|--------|----------|-------------|
| -fileinfo | | View information about the firmware update file present on your NMC, including its name, whether it is compatible with the UPS, and its version. |

## user

**Access:** Super User, Administrator

**Description:** Configure the user name and password for each account type, and configure the inactivity timeout. (You can't edit a user name, you must delete and then create a new user).

For information on the permissions granted to each account type (Super User, Administrator, Device User, Read-Only, Network-only), see the *User's Guide*.

| Option | Argument | Description |
|--------|----------|-------------|
| -n | <user> | Specify these options for a user. |
| -pw | <user password> | |
| -pe | <user permission> | |
| -d | <user description> | |
| -e | enable \| disable | Enable overall access. |
| -te | enable \| disable | Enable touch screen access. |
| -tp | <touch screen access pin> | Not yet available. |
| -tr | enable \| disable | Enable the touch screen remote authorization override. If you enable this override, the NMC will allow a local user to log on using the password for the NMC that is stored locally on the NMC. |
| -st | <session timout> | Specify how long a session lasts waits before logging off a user when the keyboard is idle. |
| -sr | enable \| disable | Bypass RADIUS by using the serial console (CLI) connection, also known as Serial Remote Authentication Override |
| -el | enable \| disable | Indicate the Event Log color coding. |
| -lf | tab \| csv | Indicate the format for exporting a log file. |
| -ts | us \| metric | Indicate the temperature scale, fahrenheit or celsius. |
| -df | <mm/dd/yyyy \| dd.mm.yyyy \| mmm-dd-yy \| dd-mmm-yy \| yyyy-mm-dd> | Specify a date format. |
| -lg | <language code (e.g. enUs)> | Specify a user language. |
| -del | <user name> | Delete a user. |
| -l | | Display the current user list. |

**Example 1:** To change the log off time to 10 minutes for user "JMurphy", type:
```
user -n "JMurphy" -st 10
```

## web

**Access:** Super User, Administrator

**Description:** Enable access to the user interface using HTTP or HTTPS.

For additional security, you can change the port setting for HTTP and HTTPS to any unused port from 5000 – 32768. Users must then use a colon (:) in the address field of the browser to specify the port number. For example, for a port number of 5000 and an IP address of 152.214.12.114:
`http://152.214.12.114:5000`

| Option | Argument | Definition |
|--------|----------|------------|
| -h | enable \| disable | Enable or disable access to the user interface for HTTP. |
| -s | enable \| disable | Enable or disable access to the user interface for HTTPS. When HTTPS is enabled, data is encrypted during transmission and authenticated by digital certificate. |
| -ph | \<http port #\> | Specify the TCP/IP port used by HTTP to communicate with the NMC (80 by default). The other available range is 5000–32768. |
| -ps | \<https port #\> | Specify the TCP/IP port used by HTTPS to communicate with the NMC (443 by default). The other available range is 5000–32768. |

**Example:** To prevent all access to the user interface for HTTPS, type:
`web -s disable`

## xferINI

**Access:** Super User, Administrator. This command only works through serial CLI.

**Description:** Use XMODEM to upload an .ini file while you are accessing the command line interface through a serial connection. After the upload completes:

- If there are any system or network changes, the command line interface restarts, and you must log on again.

- If you selected a baud rate for the file transfer that is not the same as the default baud rate for the NMC, you must reset the baud rate to the default to re-establish communication with the NMC.

## xferStatus

**Access:** Super User, Administrator

**Description:** View the result of the last file transfer.

See the *User's Guide* for descriptions of the transfer result codes.