

# Command Line Interface Guide

## UPS Network Management Card 4

990-6160D-001

10/ 2020

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# Command Line Interface (CLI)

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## How To Log On

### Overview

To access the command line interface, use a remote connection (SSH over ports 22, 5000 - 32768) 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).

**NOTE:** You will be prompted to enter a new password the first time you connect to the NMC with the Super User account.

**Security Lockout.** If a valid user name is used with an invalid password consecutively for the number of times specified in the NMC web interface under **Configuration > Security > Local Users > Default Settings**, user accounts will be locked until a Super User re-enables the account.

### Remote access to the command line interface

You can access the command line interface through SSH. SSH is enabled by default, on port 22.

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

**SSH for high-security access.** If you use the high security of TLS for the Web interface, use SSH for access to the command line interface. SSH encrypts user names, passwords, and transmitted data. To use SSH, you must have an SSH client program installed on your computer. For example:

```
ssh apc@156.205.14.141
```

**NOTE:** This SSH command is for OpenSSH. The command may differ depending on the SSH tool used.

# 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).

```
Schneider Electric                               Network Management Card 6 x.x.x
(c)Copyright 2020 All Rights Reserved   Galaxy VS 150kW
-----
Name      : Test Lab                               Date : 10/30/2020
Contact   : Don Adams                             Time : 5:58:30
Location  : Building 3                           User  : apc
Up Time   : 0 Days, 21 Hours, 21 Minutes         Type  : super_user
-----
Protocol  | Status   | Protocol  | Status   | Protocol  | Status
-----
IPv6      | disabled | IPv4      | enabled  | Ping      | disabled
HTTP      | disabled | HTTPS     | enabled  | FTP       | disabled
SSH/SFTP  | disabled | SNMPv1    | disabled | SNMPv3    | enabled
Modbus TCP | disabled |           |         |           |
-----
Type help for command listing

apc>
```

## Information and status fields

### Main screen information fields.

- The below field identifies the firmware version of the application.  
Network Management Card 6x.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 management interface 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 : 10/30/2020  
Time : 5:58:30
- The **User** and **Type** fields display the logged in user name and access level.

# 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). Commands, arguments and options are case sensitive.

## 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.

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

- Type `help` 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 DNS configuration options, type:

```
dns ?
```

or

```
dns help
```

- Calling a command without any options provides an overview of the settings associated with the command. For example, type `boot` and press ENTER:

```
Boot Mode: dhcp_only
```

```
DHCP Cookie: disabled
```

```
Vendor Class: APC
```

```
Client ID: 28:29:86:1d:ca:86
```

```
User Class: GVS
```

- 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 for a list of valid commands that match the text you typed in the command line.
- Type `exit`, `quit` or `bye` 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: <code>-p &lt;user password&gt;</code>
[ ]	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.

## Supported Language Codes

The **email** and **snmptrap** commands accept language codes supported by the NMC. For example, `email -i 0 -l German`. The language codes supported by the NMC are:

- English – this is the default language
- German
- Russian
- Chinese
- Japanese
- Korean
- Italian
- Portuguese
- French
- Spanish

## Syntax examples

### A command that supports multiple options:

```
user -n <user name> -p <new password> -c <current password>
```

Here, the `user` command accepts both the option `-n`, which specifies the user name, the option `-p`, which specifies the new password, and `-c`, the current password, to change the password.

For example, to create a testuser user account with “userpass” as the password, and default settings:

```
user -n testuser -p userpass -c userpassthis
```

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

```
boot -b [dhcp | bootp | manual]
```

In this example, the option `-b` accepts only three arguments: `dhcp`, `bootp`, or `manual`. For example, to set the boot mode to manual, type:

```
boot -b manual
```

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

### A command that accepts a string for an option:

```
system -n <system name>
```

In this example, the option `-n` accepts a string for the system name. If there is a space in the provided string, it must be enclosed in quotation marks. For example:

```
system -n "Don Adams"
```

If there is no space in the provided string, it does not need to be enclosed in quotation marks. However, the command will be accepted. For example:

```
system -n DonAdams
```

# 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
E101	Command not found
E102	Parameter error

# Command Descriptions

## about

**Access:** Super User, Administrator, Device, Network Only, Read Only

**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, Read Only

**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.
	informational	View the number of active informational alarms.

**Example:** To view all active warning alarms, type:

```
alarmcount -p warning
```

## boot

**Access:** Super User, Administrator, Network Only

**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.
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`

## bye

**Access:** Super User, Administrator, Device, Network Only, Read Only

**Description:** Exit from the command line interface session. This works the same as the exit or quit commands.

**Example:**

```
bye
```

```
Connection Closed - Bye
```

## date

**Access:** Super User, Administrator

**Description:** Configure the date and time used by the NMC.

**NOTE:** Configuring the NMC's date and time settings via the CLI will revert the date/time mode to manual. If you have a NTP server configured, you must re-configure its settings via the Web UI (**Configuration > General > Date/Time**).

Option	Argument	Description
-d	<date string>	Set the current date. Use the date format YYYY-MM-DD.
-t	<time string>	Configure the current time, in hours, minutes, and seconds. Use the 24-hour clock format, HH:MM:SS.
-z	<utc offset>	Set the system offset from Coordinated Universal Time (UTC). Use the format, +HH:MM. The UTC offset can be set to any value between the range of -12:00 and +14:00.

**Example 1:** To change the UTC offset to 1 hour ahead of UTC time, type:

```
date -z +01:00
```

**Example 2:** To define the date as February 25, 2020, type

```
date -d 2020-02-25
```

**Example 3:** To define the time as 17:21:03, type

```
date -t 17:21:03
```

## email

**Access:** Super User, Administrator, Network Only

**Description:** Use the following commands to configure parameters for email, used by the NMC to send event and alarm notifications.

Option	Argument	Description
-i	1   2   3   4   5   6	Select the recipient instance to add and modify email settings. <b>NOTE:</b> This option must be present in every <code>email</code> command if using other options.
-g	enable   disable	Enable or disable sending emails to the recipient. The default value is <code>disable</code> .
-t	<To Address>	The email address of the recipient.
-o	long   short	Select the format of emails sent by the NMC. The long format contains name, location, contact, IP address, serial number of the device, date and time, event code, and event description. The short format provides only the event description. The default value is <code>long</code> .
-l	<Language Code>	The language in which emails will be sent. The default language is English. See <a href="#">Supported Language Codes</a> for a list of all supported language codes.

Option	Argument	Description
-r	Local   recipient   custom	<p>Set the SMTP server options:</p> <ul style="list-style-type: none"> <li>• <b>Local</b> (recommended): Choose this option if your SMTP server is located on your internal network, or is set up for your email domain. Choose this setting to limit delays and network outages. If you choose this setting, you must also enable forwarding at the SMTP server of the device, and set up a special external email account to receive the forwarded email. <b>NOTE:</b> Check with your SMTP server administrator before making these changes.</li> <li>• <b>Recipient:</b> This setting sends email directly to the recipient's SMTP server, which is determined by an MX record lookup of the domain of the To: Address. The device tries only once to send the email. A network outage or a busy remote SMTP server can cause a timeout and cause the email to be lost. This setting requires no additional administrative tasks on the SMTP server.</li> <li>• <b>Custom:</b> This setting allows each email recipient to have its own server settings.</li> </ul> <p>The default value is <code>Local</code>.</p>
-D		Delete the email recipient for the specified instance. For example, <code>email -i 3 -D</code>
Custom route options:		
-f	<From Address>	The sender email address used by the NMC in the <b>From:</b> field of the email sent.
-s	<SMTP Server>	The IPv4/IPv7 address or DNS name of the local SMTP server.
-p	<Port>	The SMTP port number, with a default of 25. Alternative ports: 465, 587, 2525, 5000 to 32768.
-a	enable   disable	Enable or disable authentication of the SMTP server. Enable this option if your mail server requires authentication. The default value is <code>disable</code> .
-u	<User Name>	If your SMTP server requires authentication, use this option to set the user name.
-w	<Password>	If your SMTP server requires authentication, use this option to set the user password.
-d	<Confirm Password>	Confirm the user password provided in option <code>-w</code> .

**Example 1:** To enable emails to be sent to email recipient 1 with email address `recipient1@se.com`, from address `sender@se.com`, using the local SMTP server, type:

```
email -i 1 -g enable -r local -t recipient1@se.com -f sender@se.com
```

**Example 2:** To delete email recipient 3, type:

```
email -i 3 -D
```

## dns

**Access:** Super User, Administrator, Network Only

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

Option	Argument	Description
-OM	enable   disable	Override the manual DNS.
-y	enable   disable	Synchronizes the system and the hostname.
-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.
-n	<domain name IPv6>	Set the domain name IPv6.
-h	<host name>	Set the hostname.

## eventLog

**Access:** Super User, Administrator, Device, Network Only, Read Only

**Description:** Prints the event log. **NOTE:** The `eventLog` command must be called without arguments.

### Example:

```
eventLog
```

```
---- Event Log -----
```

```
Date: 6/07/2019 Time: 17:42:42
```

```
-----  
Date          Time          User          Event  
2019-07-06 17:42:37 System Network service could not start  
2019-07-06 17:41:32 System Firewall Disabled  
[...]  
2019-07-06 17:41:10 Device The battery temperature is below the Alarm setting  
<E>- Exit, <R>- Refresh, <B>- Back <N>- Next, <D>- Delete
```

### NOTE:

- The return button (`↵`) will go to the next page of the event log, and exit the event log if the end has been reached.
- `E↵` exits the event log and returns to the `apc>` prompt.
- `R↵` refreshes the event log and returns to the first page.
- `N↵` goes to the next page of the event log.
- `B↵` goes to the previous page of the event log.
- `D↵` deletes the event log. This option is only available to the Super User and Administrator user accounts.

## exit

**Access:** Super User, Administrator, Device, Network Only, Read Only

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

## gencert

**Access:** Super User, Administrator, Network Only

**Description:** Generate a new self-signed certificate and key pair. **NOTE:** Ensure that the current self-signed certificate and key pair are not in use before executing this command.

**Example:** To generate a new self-signed certificate and key pair, type:  
gencert

## help

**Access:** Super User, Administrator, Device, Network Only, Read Only

**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

## modbus

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

**Description:** View and configure the Modbus parameters.

Option	Argument	Definition
-a	enable   disable	Enable or disable Modbus Serial. The default value is <code>disable</code> .
-b	baud_9600   baud_19200	Set the baud rate in bits per second. The default value is <code>baud_19200</code> .
-p	parity_even   parity_odd   parity_none	Set the parity bit. The default value is <code>parity_even</code> .
-s	1-247	Set the Modbus slave address. The default value is 1.
-e	enable   disable	Enable or disable Modbus TCP. The default value is <code>disable</code> .
-n	502   5000-32768	Set the Modbus TCP port number. The default value is 502.
-R		Reset the Modbus configuration to defaults.

**Example:**

```
modbus -a enable -b baud_9600 -p parity_odd -s 22 -e enable -n 5555
E000: Success
Slave Address: 22
Status: enabled
Baud Rate: baud_9600
Parity: parity_odd
TCP Status: enabled
TCP Port Number: 5555
```

**netstat****Access:** Super User, Administrator, Network Only**Description:** View the status of the network and all active IPv4 and IPv6 addresses.**Example:**

```
netstat
Active Internet connections (w/o servers)

```

Proto	Recv-Q	Send-Q	Local Address	Foreign Address	State
tcp	0	0	10.125.43.115:22	10.125.43.115: 58252	ESTABLISHED
tcp	0	0	::ffff:10.125.43.115:443	::ffff:10.125.43.115:59569	ESTABLISHED

**perf****Access:** Super User, Administrator, Device, Network Only, Read Only**Description:** Displays the performance information of the NMC.**Example:**

```
Memory Total: 250580 kB
Memory Free: 28176 kB
Memory Available: 91320 kB
Load Average: 0.16 0.23 0.21
CPU Usage:
  cpu0: 6%
  cpu1: 4%
File System Usage: 4%
```

## ping

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

**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
<IP address or DNS name>	Type an IP address with the format <i>xxx.xxx.xxx.xxx</i> , or a DNS name.

**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
```

## quit

**Access:** Super User, Administrator, Device, Network Only, Read Only

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

## session

**Access:** Super User, Administrator

**Description:** List the current user sessions, and delete user sessions.

Option	Arguments	Description
-d	<User Name>	Delete the session for the user specified. <b>NOTE:</b> Using this option without any argument will delete all sessions for the user.
-i	<Interface>	To be used with the -d option, delete the user sessions on the specified interface only.

**Example 1:** To view all active sessions, type:

```
session
```

Example output:

```
Session
```

```
User          Interface      Address          Logged in Time
```

```
-----
```

```
User1         Web            10.216.118.100  00:01:01
```

**Example 2:** To delete the web session of the user with user name "User1", type:

```
session -d User1 -i web
```

## smtp

**Access:** Super User, Administrator, Network Only

**Description:** Configure the settings for the local email server.

Option	Arguments	Description
-f	<From Address>	The sender email address used by the NMC in the <b>From:</b> field of the email sent.
-s	<SMTP Server>	The IPv4/IPv7 address or DNS name of the local SMTP server.
-p	<Port>	The SMTP port number, with a default of 25. Any port in the range of 1-65535 can be specified.
-a	enable   disable	Enable or disable authentication of the SMTP server. Enable this option if your mail server requires authentication. The default value is <code>disable</code> .
-u	<User Name>	If your SMTP server requires authentication, type the user name and password here.
-w	<Password>	
-d	<Confirm Password>	Confirm the user password provided in option <code>-w</code> .

### Example:

From: address@example.com

Server: mail.example.com

Port: 25

Auth: disabled

User: User

## snmp

**Access:** Super User, Administrator, Network Only

**Description:** Enable or disable and configure SNMPv1. These settings are also used for SNMPv2c.

**NOTE:** SNMPv1 is disabled by default. The Community Name (`-c`) must be set before SNMPv1 communications can be established.

**NOTE:** There are two sets of options for this command, indicated below.

### Enable/disable SNMP:

Option	Arguments	Description
-S	enable   disable	Enable or disable SNMPv1. The default value is <code>disable</code> .

### Configure SNMP settings:

Option	Arguments	Description
-i	1   2   3   4	Access control of users. <b>NOTE:</b> This option must be present in every <code>snmp</code> command if using other options.
-c	<Community>	Specify a community name or string.
-a	READ_ACCESS   WRITE_ACCESS   DISABLE	Indicate the usage rights. The default value is <code>DISABLE</code> .
-n	<IP or Domain Name>	Specify the IPv4/IPv6 address or the domain name of the Network Management Station.

**Example:** To change Community Name, Access Type and IP/Domain for user with access control 2, type:

```
snmp -i 2 -c myCommunity -a WRITE_ACCESS -n 10.222.22.22
```

### snmpv3

**Access:** Super User, Administrator, Network Only

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

**NOTE:** SNMPv3 is disabled by default. A valid user profile must be enabled with passphrases (`-a`, `-p`) set before SNMPv3 communications can be established.

**NOTE:** There are three sets of options for this command, indicated below.

#### Enable/disable SNMPv3:

Option	Arguments	Description
-S	enable   disable	Enable or disable SNMPv3. The default value is <code>disable</code> .

### Configure privacy and authentication settings:

Option	Arguments	Description
-i	1   2   3   4	Access control of users. <b>NOTE:</b> This option must be present in every <code>snmpv3</code> command if using other options.
-u	<User Name>	Specify a user name, an authentication phrase and encryption phrase. <b>NOTE:</b> The phrases must of minimum 16 and maximum 31 characters in length.
-a	<Auth Phrase>	
-p	<Crypt Phrase>	
-A	sha   md5   none	Indicate the type of authentication protocol. The default value is <code>none</code> .
-P	aes   des   none	Indicate the privacy (encryption) protocol. The default value is <code>none</code> .

**Example 1:** To set the authentication and encryption phrases and protocols for “JMurphy”, type:

```
snmpv3 -i 3 -u JMurphy -a myAuthPhrase -p myCryptPhrase -A md5 -P aes
```

### Enable/disable individual users' access and NMS IP/domain:

Option	Arguments	Description
-i	1   2   3   4	Access control of users. <b>NOTE:</b> This option must be present in every <code>snmpv3</code> command if using other options.
-e	enable   disable	Enable or disable SNMPv3. The default value is <code>enable</code> .
-u	<User Name>	Give access to a specified user name. <b>NOTE:</b> The default value is <code>apc snmp profile1</code> . The entered value must be in the format <code>apc snmp profile[X]</code> , where X is a number.

**Example 2:** To give access to “apc snmp profile1” with any NMS IP address, type:

```
snmpv3 -i 3 -e enable -u "apc snmp profile1"
```

## snmptrap

**Access:** Super User, Administrator, Network Only

**Description:** Enable or disable SNMP trap generation.

Option	Arguments	Description
-i	1   2   3   4	Select trap instance. <b>NOTE:</b> This option must be present in every <code>snmptrap</code> command if using other options.
-c	<Community>	Specify a community name or string.
-r	<Receiver NMS IP>	The IPv4/IPv6 address or hostname of the trap receiver.
-l	<Language>	The language in which traps will be sent. The default language is English. See <a href="#">Supported Language Codes</a> for a list of all supported language codes.
-t	snmpV1   snmpV3	Specify SNMPv1 or SNMPv3. The default value is <code>snmpV1</code> .
-g	enable   disable	Enable or disable trap generation for this trap receiver. The default value is <code>disable</code> .
-a	enable   disable	Enable or disable authentication of traps for this trap receiver, SNMPv1 only. The default value is <code>disable</code> .
-u	<User Name>	Select the user name for this trap receiver, SNMPv3 only. <b>NOTE:</b> This must match a user name set for <code>snmpv3 -u</code> .
-D		Delete the trap receiver for the specified instance. For example, <code>snmptrap -i 3 -D</code>

**Example:** To enable and configure an SNMPv1 trap for Receiver 1, with a Community Name of myCommunity, receiver 1 IP address of 10.169.118.100, using the default English language, type:

```
snmptrap -i 1 -c myCommunity -r 10.169.118.100 -l english -t snmpV1 -g enable
```

## ssh

**Access:** Super User, Administrator

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

Option	Arguments	Description
-S	enable   disable	Enable or disable SSH. The default value is <i>enable</i> .
-ps	22   5000-32768	Configure the SSH port. The default value is 22.

**Example:** To change the SSH port to 5677, type:

```
ssh -ps 5677
```

## 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. <b>NOTE:</b> If you define a value with more than one word, you must enclose the value in quotation marks. These values are also used by StruxureWare Data Center Expert, or EcoStruxure IT Expert and the NMC's SNMP agent.
-c	<system contact>	
-l	<system location>	
-m	<system-message>	Show a custom message or banner on the logon page of the web UI or the CLI.

**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, Network Only

**Description:** View and manually configure these IPv4 TCP/IP settings for the NMC:

Option	Argument	Description
-S	enable   disable	Enable or disable TCP/IP v4. The default value is <i>enable</i> .
-i	<IP address>	Type the IP address of the NMC, using the format <i>xxx.xxx.xxx.xxx</i>
-s	<subnet mask>	Type the subnet mask for the NMC.
-g	<gateway>	Type the IP address of the default gateway. <i>Do not</i> use the loopback address (127.0.0.1) as the default gateway.

**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, Network Only

**Description:** Enable IPv6 and view and manually configure these IPv6 TCP/IP settings for the NMC. **NOTE:** TCP/IPv6 must be enabled to configure its settings.

Option	Argument	Description
-s	enable   disable	Enable or disable TCP/IP v6. The default value is <code>disable</code> .
-man	enable   disable	Enable manual addressing for the IPv6 address of the NMC. The default value is <code>disable</code> .
-auto	enable   disable	Enable the NMC to automatically configure the IPv6 address. The default value is <code>enable</code> .
-i	<IPv6 address>	Set the IPv6 address of the NMC.
-g	<IPv6 gateway>	Set the IPv6 address of the default gateway.
-d6	statefull   stateless   never	Set the DHCPv6 mode, with parameters of <code>statefull</code> (for address and other information, they maintain their status), <code>stateless</code> (for information other than address, the status is not maintained), <code>never</code> . The default value is <code>stateless</code> .

**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:

```
tcpip6 -i 2001:0:0:0:0:FFD3:0:57ab
```

## uio

**Access:** Super User, Administrator, Device, Read Only, Network Only User

**Description:** View the universal I/O (UIO) status.

**NOTE:** This command is only relevant when a temperature (AP9335T) or temperature/humidity (AP9335TH) sensor is connected to the NMC.

Option	Description
-d	Displays the probe type connected: <ul style="list-style-type: none"> <li>• <code>Not Connected</code> - No probe connected to the NMC</li> <li>• <code>t</code> - Temperature-only probe (AP9335T)</li> <li>• <code>th</code> - Temperature/humidity probe (AP9335TH)</li> </ul>

Option	Description
-s	Displays the probe status: <ul style="list-style-type: none"> <li>• NA - No probe connected to the NMC.</li> <li>• Comm Lost - A probe was connected to the NMC, but is no longer connected, or is no longer communicating with the NMC.</li> <li>• U1.21.3 C:ok - The temperature values and units, and the status of the temperature measurement for a temperature-only probe (AP9335T).</li> <li>• U1:21.3 C:ok:67 %:ok - The temperature and humidity values and units, and the statuses of the temperature and humidity measurements for a temperature/humidity probe (AP9335TH).</li> </ul>

**Example:** To view the status of a connected temperature probe, type `uio -s` and press ENTER.

## user

**Access:** Super User, Administrator

**Description:** Configure the user settings for each account type, and create and delete user accounts. (You cannot edit a user name, you must delete and then create a new user)

**NOTE:** The default values for each option for a new user are defined using the `userdfilt` command. The user name (-n), password (-p), and confirm password (-c) options do not have default values, and must be specified to create a new user.

Option	Argument	Description
-n	<user>	Indicate the user. This option displays the settings for the indicated user if no other options are specified.
-P	<current password>	To edit the Super User settings, you must specify the current password.
-a	Admin   Device   Read_Only   Network_Only	Specify these options for a user. <b>NOTE:</b> User Description must be enclosed in quotation marks.
-d	<user description>	
-e	enable   disable	Enable or disable access for the particular user account.
-t	<session timeout>	Specify how long a session lasts, in minutes, before logging off a user when the keyboard is idle.
-l	tab   csv	Indicate the format for exporting a log file.
-s	us   metric	Indicate the temperature scale, Fahrenheit or Celsius.
-p	<new password>	Specify the new password for a user, and re-enter the new password to confirm. <b>NOTE:</b> These options are required when creating a new user.
-c	<confirm password>	
-D	<user name>	Delete a user. <b>NOTE:</b> You cannot delete the Super User account.

**Example 1:** To change the log off time to 10 minutes for user JMurphy, type:

```
user -n JMurphy -t 10
```

**Example 2:** To create a new Read\_Only user, type:

```
user -n read -p myPassw0rd -c myPassw0rd -a Read_Only
```

**Example 3:** To edit the temperature scale for the Super User account, type:

```
user -n apc -P myPassw0rd -s us
```

## userdfit

**Access:** Super User, Administrator

**Description:** Complimentary function to “user” establishing default user preferences. There are two main features for the default user settings:

- Determine the default values to populate in each of the fields when the Super User or Administrator-level account creates a new user. These values can be changed before the settings are applied to the system.
- For remote users (user accounts not stored in the system that are remotely authenticated) these are the values used for those that are not provided by the authenticating server.

Option	Argument	Definition
-e	enable   disable	By default, user will be enabled or disabled upon creation. The default value is <code>enable</code> .
-a	Administrator   Device   Read_Only   Network_Only	Specify the user's permission level and account type. The default value is <code>Read_Only</code> .
-d	<user description>	Provide a user description. Description must be enclosed in quotation marks.
-t	<session timeout> minute(s)	Provide a default session timeout. The default value is 3.
-b	<bad login attempts>	Number of incorrect login attempts a user has before the system disables their account. Upon reaching this limit, a message is displayed informing the user the account has been locked. The Super User or an Administrator-level account is needed to re-enable the account to allow the user to log back in. The default value is 0 (unlimited attempts).  <b>NOTE:</b> A Super User account cannot be locked out, but can be manually disabled if necessary.
-l	tab   csv	Specify the log export format, tab or CSV. The default value is <code>tab</code> .
-s	us   metric	Specify the user's temperature scale. This setting is also used by the system when a user preference is not available (for example, email notifications). The default value is <code>metric</code> .
-q	enable   disable	Enable/disable strong password. The default value is <code>enable</code> .
-i	<interval in days>	Required password change interval. The default value is 0 (no password change interval).

**Example.** To set the default user's session timeout to 60 minutes:

```
userdfit -t 60
```

```
E000: Success
```

## web

**Access:** Super User, Administrator, Network Only

**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. The default value is <code>disable</code> .
-s	enable   disable	Enable or disable access to the user interface for HTTPS. The default value is <code>enable</code> .  When HTTPS is enabled, data is encrypted during transmission and authenticated by digital certificate using SSL/TLS.
-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, except 8000 and 8883.
-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, except 8000 and 8883.

**Example:** To prevent all access to the user interface for HTTPS, type:

```
web -s disable
```

## whoami

**Access:** Super User, Administrator, Device, Read Only, Network Only User

**Description:** Provides login information on the current user

**Example:**

```
apc> whoami
E000: Success
apc
```

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