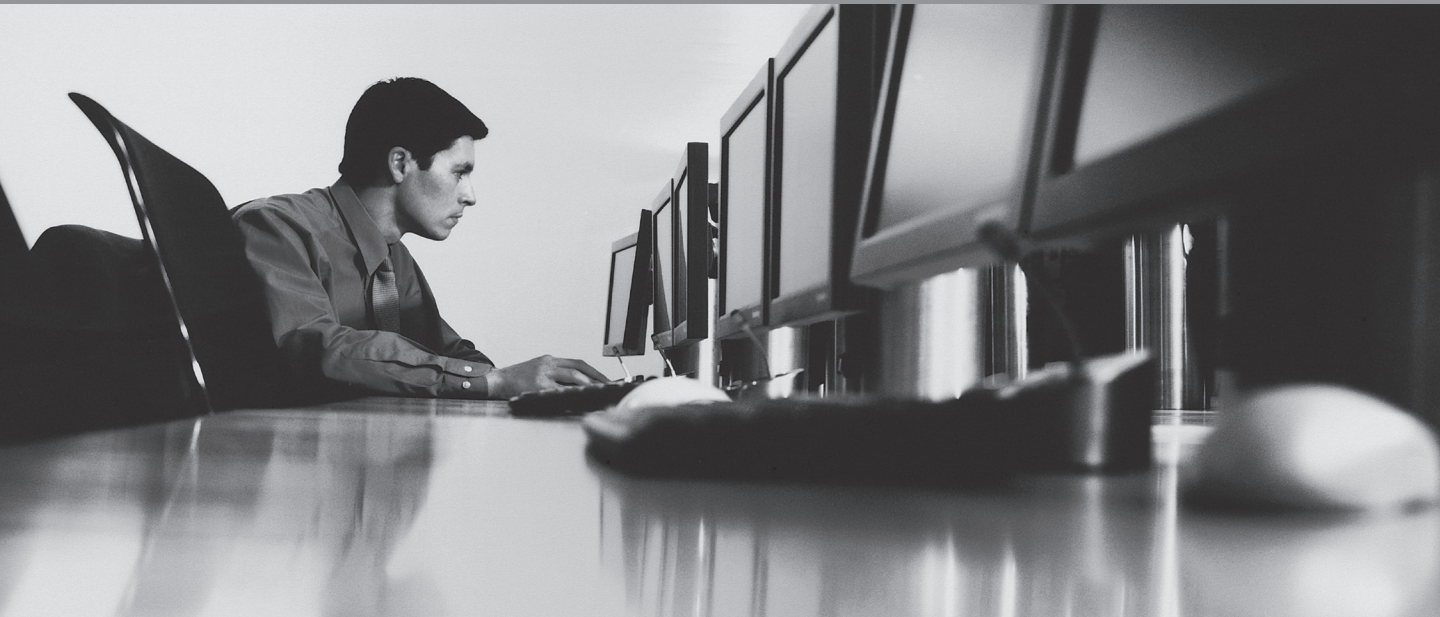
Avocent®

Cyclades® ACS 6000

Command Reference Guide



FCC Warning Statement

The Cyclades ACS advanced console server has been tested and found to comply with the limits for Class A digital devices, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the Installation and Service Manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user is required to correct the problem at his or her own expense.

Notice about FCC Compliance for All Cyclades ACS Advanced Console Server Models

To comply with FCC standards, the Cyclades ACS advanced console server requires the use of a shielded CAT 5 cable for the Ethernet interface. Notice that this cable is not supplied with either of the products and must be provided by the customer.

Canadian DOC Notice

The Cyclades ACS advanced console server does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

L'Cyclades ACS advanced console server n'émete pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le règlement sur le brouillage radioélectrique edicté par le Ministère des Communications du Canada.

Safety and EMC Approvals and Markings

FCC Class A (USA), CE Class A (EU), ICES-003 (Canada), VCCI (Japan), C-Tick (Australia, no internal modem), A-Tick (Australia, with internal modem), UL 60950-1 (USA), cUL (Canada), EN-60950-1 (EU), CB

Cyclades® ACS 6000 Advanced Console Server

Command Reference Guide

Instructions

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Dangerous Voltage

This symbol is intended to alert the user to the presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

Power On

This symbol indicates the principal on/off switch is in the on position.

Power Off

This symbol indicates the principal on/off switch is in the off position.

Protective Grounding Terminal

This symbol indicates a terminal which must be connected to earth ground prior to making any other connections to the equipment.

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CHAPTER 1

Introduction, Navigation and Commands

The Cyclades ACS 6000 advanced console server is a 1U appliance that serves as a single point for access and administration of connected devices, such as target device consoles, modems and power devices. ACS 6000 console servers support secure remote data center management and out-of-band management of IT assets from any location worldwide.

On ACS 6000 advanced console servers, administration can be performed and connected devices can be accessed with the Command Line Interface (CLI) utility, with the Web Manager or with DSView® 3 management software (version 3.5.1 and greater). Multiple users and administrators can be logged into the console server and connected to ports at the same time.

This manual describes how to access and navigate the CLI utility and how to use it after the console server has been installed and assigned an IP address. For required additional information about actions users can perform, configuration options and tasks that an administrator needs to perform, and for how to install the console server and configure the IP address, see the Cyclades ACS 6000 Installation/Administration/User Guide.

Either the consoles of servers, external modems or Power Distribution Units (PDUs) can be connected to serial ports on the ACS 6000 advanced console server. Supported PDUs include Avocent PM1000/2000/3000s, Cyclades PM IPDUs, Avocent SPC power devices and Server Technology CDUs. Either a PDU or an external modem can be connected to the AUX/Modem port if the port is not factory-configured for an internal modem.

The figure that follows shows the console server ports, and Table 1.1 describes how they are numbered (for use during configuration).

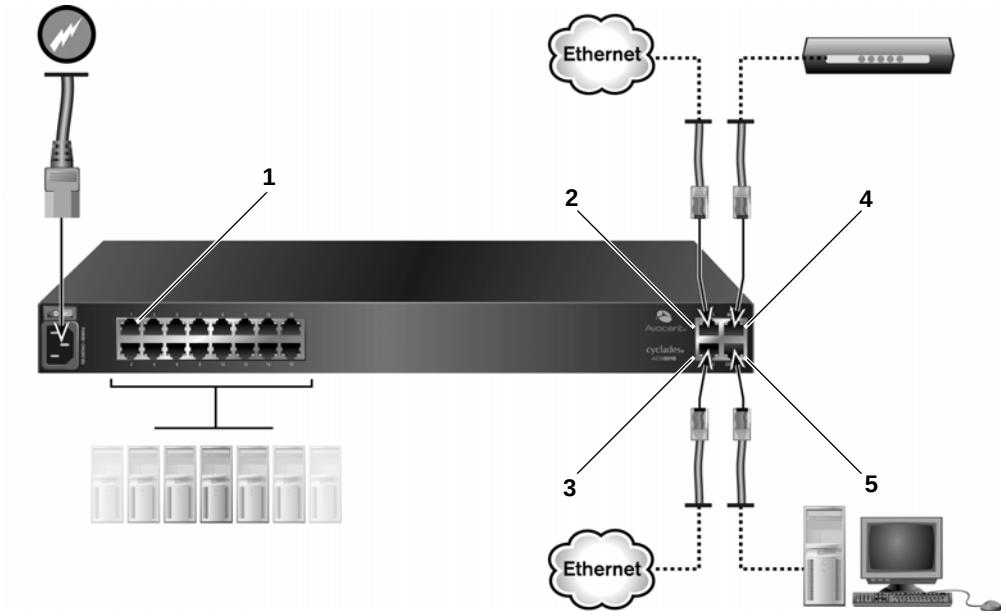

Figure 1.1: ACS 6000 Advanced Console Server Ports

Table 1.1: ACS 6000 Advanced Console Server Port Descriptions

Number	Description
1	Serial Port 1 **NOTE:** Serial ports are also referred to with tty device names, such as ttSy1, ttyS2 and so forth.
2	Eth1 (eth1)
3	Eth0 (eth0)
4	AUX/Modem Port (ttyM1 or ttyA1) **NOTE:** If an internal modem is ordered and factory installed, this port is configured internally as a modem port. If an internal modem is not installed, the port is configured as an auxiliary port, and a PDU or an external modem can be connected to it. The figure shows an external modem connected.
5	Console Port

Access Options and How to Log Into the CLI

The CLI utility can be accessed in the following ways:

- Through a local terminal or a computer that has a terminal emulation program connected to the console port of the console server with session settings of 9600, 8, N and 1, with no flow control.
- After the console server is connected to the network and has an IP address, it can be accessed by either of the following methods:
  - By use of an SSH or Telnet client on a remote computer (if the SSH or Telnet protocol is enabled in the selected Security Profile).
  - With the Web Manager - Overview - Appliance Session button.

NOTE: For details on the remote access methods and IP address configuration options, see the Cyclades ACS 6000 Installation/Administration/User Guide.

Administrators have full access to the CLI and to connected devices. An administrator can authorize regular users to access ports, manage power, manage data buffer storage and use one or more console server administration tools. Users can always change their own passwords.

To start the CLI:

1. Access the CLI through the console port, with Telnet or SSH or through the Web Manager.
2. Enter the username and password at the prompt. The cli-> prompt appears.

```
CLI 2.0 (<build date>)

--:- units cli->
```

NOTE: The default password for admin is **avocent** and for root is **linux**. The password for these users may have been changed during installation of the console server. If not, change the default root and admin passwords to avoid potential security breaches.

Configuration Tasks Performed With the CLI

NOTE: This manual provides some configuration procedures as examples of how to use the CLI; an administrator who wants to use the CLI for configuration should reference the installation/administration/user guide for more information.

The navigation structure of the CLI mirrors that of the Web Manager. Options and parameters are also the same, except that spaces in Web Manager options and parameters are replaced with underscores (_), as in: appliance_settings. Examples that show how to select an option in the Web Manager use a dash surrounded by two spaces (-). In the CLI, two similar options in a path are separated by a forward slash (/).

For example, in the Web Manager, user configuration is done when an administrator selects *Appliance Settings - Users - Local Accounts - User Names* to get to the User Names screen. To navigate to the equivalent configuration level in the CLI, an administrator would navigate in the CLI with the cd command followed by the path: **cd appliance_settings/users/local_accounts/user_names**.

Administrators should log into the CLI in one window and log into the Web Manager in another window to see how the menu options in the Web Manager map to the navigation options in the CLI. Configuration with the CLI also requires mastery of the following information on CLI navigation and of the CLI commands shown in *CLI Command Set* on page 7.

CLI Navigation

The CLI navigation options are in a nested tree configuration.

NOTE: When a command line is shown in an example, and the step starts with "Enter," or when a syntax example is given, the user should type the command as shown and then press **Enter**. The **Enter** key is not shown in command line examples unless needed for clarity.

When a user logs in the CLI, the prompt indicates the user is at the /units level.

```
--:- units cli->
```

No parameters can be set at this level of the navigation tree.

At any CLI prompt at any level, if you type **cd** and press **Tab Tab**, the navigation options (path elements) for that level are listed. Different options appear for administrators and for authorized users.

- When an administrator types the **cd** command and then presses **Tab Tab** at the units prompt, the following Units navigation options (path elements) appear.

  ```
  --:- units cli-> cd<Tab><Tab>
  active_sessions/     monitoring/  topology/
  appliance_settings/  overview/    user_profile/
  information/         power_management/
  ```

- When a regular user types the **cd** command and then presses **Tab Tab** at the units prompt, the following Units navigation options appear.

  ```
  --:- units cli-> cd<Tab><Tab>
  overview/          power_management/      topology/    user_profile/
  ```

Enter **cd** <one_or_more_path_elements> to move down one or more levels of the navigation tree:

```
--:- units cli-> cd appliance_settings
```

A prompt like the following appears at each level:

```
--:- appliance_settings cli->
```

NOTE: CLI commands are case sensitive.

At any level, you can press **Tab Tab** at the prompt to see the commands that can be entered at the current level.

```
---:- appliance_settings cli-><Tab><Tab>
?           del         ls          quit        set
add         exit        opiepasswd  refresh     shell
cd          ftp         passwd      revert      show
commit      help        pwd         scp
```

If you know the path, you can enter multiple path elements in a single command separated with forward slashes (/).

```
--:- units cli-> cd appliance_settings/ports/physical_ports/serial_ports/
--:- serial ports cli->
```

Enter **cd ..** to move up one level of the navigation tree. Enter **cd ../..**[**/..**] to move up multiple levels.

```
--:- serial ports cli-> cd ../..
--:- ports cli->
```

Autocompletion

Autocompletion allows you to type the first few letters of a command or navigation option and then press **Tab**. The rest of the name is filled in automatically if the letters typed are unique to one command or to a navigation option at that level. If the letters match more than one of the commands or navigation options for that level, the matching options are listed.

For example, if you type **cd ov** and press **Tab** at the CLI prompt from the /units level, the overview option will be completed.

```
--:- units cli-> cd ov<Tab>
--:- units cli-> cd overview
```

If you then press **Enter**, you are changed to the overview level, and the overview level prompt appears.

```
--:- overview cli->
```

The following example illustrates a case when more than one command matches the letters typed.

```
--:- units cli-> sh<Tab>
shell  show
```

Parameters

Some CLI commands take parameters. If you press **Tab Tab** after a command that requires a parameter, you are prompted to enter the parameter.

Command Line Syntax

NOTE: Square brackets ([ ]) denote an optional element. Each element is separated by a space. There are no spaces between sub-elements.

Command only (help, pwd):

`--:- <current_level> cli-> <command>`

Commands with paths only (cd, ls, add):

`--:- <current_level> cli-> <command> [Path]`

Commands with targets (del):

`--:- <current_level> cli-> <command> [Path] <Targets>`

Commands that require parameters (set):

`--:- <current_level> cli-> <command> [Path] <Params>`

Commands with values only (sendmsg, ftp...):

`--:- <current_level> cli-> <command> [Path] <Values>`

```
where:
Path         := path_elem[/path_elem]*
path_elem    := . | .. | Section_Label | ^/
Targets      := Row_Label(,Row_Label)
Params       := Param_Names=PValues
Param_Names  := Param_Label(:Param_Label)*
PValues      := Value_text(,Value_text)*
Values       := Value_text Value_text
Section_Label
Param_Label
Value_text   := labels or data from the UIC.
```

Syntax used:

```
 ^  : beginning of the element
 *  : 0 - many
```

```
|  : or
() : group
```

CLI Command Set

NOTE: Most of the commands work from any location when the path to the command parameter is included.

NOTE: The word “node” refers to an entity such as a route, host or user, which can be added, configured or deleted.

help

Generate a help message about how to navigate the CLI.

Syntax:

```
--:- units cli-> help
        - Thank you for using the cli -

This interface allows you to easily modify configurations
to customize and define the functionality of your unit.

Press <tab> <tab> to see the list of available commands.

Please refer to the Reference Guide for a description of
commands, special keys and additional information on how to
use this interface.

Some basic and useful keys are:
 up/down arrow - navigates up/down in the command history
 tab (once/twice) - shows the next possible option(s)

Other hints:
 Use backslash '\' to escape spaces, '\' and other control
 characters when assigning values to parameters.
```

add

Add a node.

Syntax:

```
--:- units cli-> add <Path>
```

Example:

```
--:- units cli-> add appliance_settings/network/hosts
--:#- [hosts] cli->
```

delete

Delete a node.

Syntax:

```
--:- units cli-> delete <Path> <parameter>
```

cd

Change directory (level).

Syntax:

```
--:- units cli-> cd <Path>
```

Example:

```
--:- units cli-> cd topology
```

Displays the following:

```
--:- topology cli->
```

Example:

```
--:- topology cli-> cd ..
-or-
--:- topology cli-> cd ../
```

Moves up one directory level and displays the following:

```
--:- units cli->
```

Example:

```
--:- topology cli-> cd /
```

Moves to the top level and displays the following:

```
--:- / cli->
```

Example:

```
--:- topology cli-> cd /units/overview
```

Displays the following:

```
--:- overview cli->
```

pwd

Display the path to the current level (print working directory).

Syntax:

```
--:- units cli-> pwd
```

connect

Connect to a serial or auxiliary port.

Syntax:

```
--:- topology cli-> connect <port_name>
```

Example:

```
--:- topology cli-> connect 77-77-70-p-2
```

-or-

(Optional) From the default directory:

```
--:- units cli-> connect topology/77-77-70-p-2
```

Displays the following:

```
Password:
```

-or-

Type the hotkey to suspend the connection:

Ctrl + z

NOTE: The connect, sniff and share commands allow you to connect to the serial ports. These commands require authentication when single sign-on is disabled, so the password must be entered to authenticate the user in the authentication type configured for the serial port. If single sign-on is enabled or the user has already been authenticated, the session is opened.

sniff

Connect to a serial or auxiliary port as an additional, view-only user.

Syntax:

```
--:- topology cli-> sniff <port_name>
```

Example:

```
--:- topology cli-> sniff 77-77-70-p-2
```

Displays the following:

```
Password:
```

-or-

Type the hotkey to suspend the connection:

Ctrl + z

share

Connect to a serial or auxiliary port as an additional, read/write user.

Syntax:

```
--:- topology cli-> share <port_name>
```

Example:

```
--:- topology cli-> share 77-77-70-p-2
```

Displays the following:

```
Password:
```

-or-

Type the hotkey to suspend the connection:

Ctrl + z

disconnect

Use this escape sequence to return to the CLI from a connection to a device through a serial port.

Syntax:

Ctrl+z

exit/quit

Exit the CLI and return to the login prompt.

Syntax:

```
--:- units cli-> exit
```

-or-

```
--:- units cli-> quit
```

ftp

Connect to a remote FTP server.

Syntax:

```
--:- units cli-> ftp [<server_IP_address>|<hostname>]
```

NOTE: You must log into the CLI as root to have full control over the local directory path. All normal FTP commands apply.

scp

Perform a secure shell copy.

Syntax:

```
--:- units cli-> scp [[user@]host1:]file1 [...] [[user@]host2:]file2
```

set

Set a parameter.

Syntax:

```
--:- units cli-> set <Path> <Parameter>=<Value>
```

After a parameter has been changed using the set command, a pair of asterisks appear at the beginning of the CLI prompt.

```
**:- units cli->
```

Save the change:

```
**:- units cli-> commit
```

-or-

Undo the change:

```
**:- units cli-> revert
```

NOTE: After a commit or revert command, the asterisks at the beginning of the CLI prompt are replaced by hyphens. Asterisks will not appear after the execution of the set command if using wizard mode, which can be recognized by a prompt that has a pound sign after the colon and the current directory in square brackets (example, --:#- [hosts] cli->).

commit

Save settings.

Syntax:

```
**:- port_settings cli-> commit
```

revert

Undo a previous parameter setting.

Syntax:

```
**:- units cli-> revert
```

show/ls

Show the available directories, commands or parameters at the current location.

Syntax:

```
--:- units cli-> show
```

-or-

```
--:- units cli-> ls
```

Example:

```
--:- units cli-> show user_profile

user_profile
    change_password/
--:- units cli->
```

power_cycle, power_off and power_on

Control power on a server connected to the serial port or outlets on a PDU that is either connected to a serial port or to the AUX/Modem port from the Topology level when the port is enabled and configured with the Power Profile.

NOTE: Only one outlet can be managed with the commands at this level.

Syntax:

```
--:- units cli-> cd topology/<PDU_ID>/outlets/
--:- outlets cli-> [power_cycle|power_off|power_on] <outlet_name>
```

Example:

```
--:- units cli-> cd topology/14-35-60P15_1/outlets
--:- outlets cli-> power_cycle 14-35-60P15_1_8
Selected outlet(s) will be switched ON after this operation. Are you
sure you want to power cycle the selected outlet(s)? y/n : y
```

cycle, on, off, lock and unlock

Control power on outlets on a PDU that is either connected to a serial port or to the AUX/Modem port from the power_management level when the port is enabled and configured with the Power Profile.

NOTE: Lock and unlock commands are only supported on Cyclades PDUs.

NOTE: Enter commas (,) between multiple outlet numbers. Using a hyphen (-) to specify a range is not supported in CLI power management.

```
--:- units cli-> cd power_management/management/<PDU_ID>/outlet_table

--:- outlet_table cli-> [cycle|on|off|lock|unlock]
<outlet_number[,..,outlet_number]>
```

Examples:

```
--:- units cli-> cd power_management/management/myPDU/outlet_table
--:- outlet_table cli-> off 1,2,5,8
Are you sure you want to turn off the outlet(s)? y/n : y
```

The cycle, on and off commands can be used from the units/topology level, where they are enabled and configured with the Power Profile.

```
--:- units cli -> [cycle|on|off] topology/<PDU_ID>
```

These three commands can also be used to configure the CAS profile ports that are configured to control outlets of power devices.

```
--:- units cli -> [cycle|on|off] topology/<PORT_ID>
```

passwd

Configure the password for the current user. The terminal does not echo the password.

Syntax:

```
--:- units cli-> passwd
```

opiepasswd

Configure a one time password (OTP) for the local user. After you type the command, you will be asked for the pass phrase to use for the OTP.

Syntax:

```
--:- units cli-> opiepasswd
```

Example:

```
opiepasswd -f -c teste
Adding teste:
Only use this method from the console; NEVER from remote. If you are
using telnet, xterm, or a dial-in, type ^C now or exit with no
password.
Then run opiepasswd without the -c parameter.
Using MD5 to compute responses.
Enter new secret pass phrase:
Again new secret pass phrase:

ID teste OTP key is 499 AC0241
```

```
FOOD HUGH SKI ALMA LURK BRAD
```

Special Multi-session Commands

The following commands require navigation to an enabled and configured port to which one or more users are simultaneously connected. To get to the port, enter the following command.

```
--:- units cli-> cd topology/<serial_port_ID>
```

listuser

List the users connected to the shared serial port.

Syntax:

```
--:- <serial_port_ID> cli-> listuser
```

killuser

Terminate the connection of a user on the port. The user is returned to the cli-> prompt.

Syntax:

```
--:- <serial_port_ID> cli-> killuser <username>
```

Example:

```
--:- <serial_port_ID> cli-> killuser admin@139
```

sendmsg

Send a message to a user connected to the port.

Syntax:

```
--:- <serial_port_ID> cli-> sendmsg <username> <message>
```

Example:

```
--:- <serial_port_ID> cli-> sendmsg admin@139 You are being
terminated.
```

inspectdbuf

View the data buffer files for the port. Data buffering must be enabled in the CAS Profile for the port and the user must be authorized for data buffer management.

Syntax:

```
--:- <serial_port_ID> cli-> inspectdbuf
```

View the data logging for the appliance. Appliance Session Data logging must be enabled in the global_settings/sessions level.

Syntax:

```
--:- units cli -> inspectdbuf overview/appliance_data_logging
```

The following commands are available for inspectdbuf:

- **Return** - Scroll forward one line.
- **Ctrl + F** - Scroll forward one window.
- **Ctrl + B** - Scroll backward one window.
- **/pattern** - Search foward in the file for the first line containing the pattern.
- **?pattern** - Search backward in the file for the first line containing the pattern.
- **n** - Repeat the search.
- **q** - Quit.

cleandbuf

Clear the data buffer. Data buffering must be enabled in the CAS Profile or the port and the user must be authorized for data buffer management.

Syntax:

```
--:- <serial_port_ID> cli-> cleandbuf
```

Clear the data logging for the appliance. Appliance Session Data logging must be enabled in the global_settings/sessions level.

Syntax:

```
--:- units cli -> cleandbuf overview/appliance_data_logging
```

wiz

Configures the IP parameters for the Eth0 interface. Shows the current configuration and asks for new values for the following parameters:

- Status of the interface (enabled or disabled)
- IPv4 method (dhcp or static)
- IPv6 method (dhcp or static)
- IP address, mask and gateway (if static is chosen for either of the previous parameters)
- DNS Primary Server, Secondary Server, Domain Name and Hostname

After setting all parameters, confirm that all parameters are correct to save them.

CLI Equivalent Actions to Web Manager Checkbox Selection

NOTE: The following example procedure, which configures IPv6, illustrates the actions to use in the CLI to enable or disable an option when a checkbox would be selected or deselected in the Web Manager.

To configure IPv6 (example of how to perform the equivalent of Web Manager checkbox selection/deselection):

1. Log into the CLI and enter **cd appliance_settings/network/ip**.

   ```
   --:- units cli-> cd appliance_settings/network/ipv6
   ```

2. Enter **show** to view the status of IPv6 configuration.

   ```
   --:- ipv6 cli-> show
   IPv6
       [X] enable_IPv6
           [ ] get_dns_from_dhcpv6
           [ ] get_domain_from_dhcpv6
   ```

NOTE: At this location, you can use '=' to change the value or '/' to select a parameter inside the section.

3. Type **set enable_ipv6=** and press **Tab** to view the options for the parameter.

   ```
   --:- ipv6 cli-> set enable_ipv6=<Tab>
   no   yes
   ```

4. Type **set enable_ipv6/** and press **Tab** to view the child parameters.

   ```
   --:- ipv6 cli-> set enable_ipv6/<Tab>
   get_dns_from_dhcpv6=     get_domain_from_dhcpv6=
   ```

5. Enter **set enable_ipv6=no** to disable IPv6.

   ```
   --:- ipv6 cli-> set enable_ipv6=no
   ```

   -or-

   Enter **set enable_ipv6=yes** to enable IPv6.

   ```
   --:- ipv6 cli-> set enable_ipv6=yes
   ```

6. (Optional) Enter either of the following commands to enable subparameters.

   ```
   **:- ipv6 cli-> set enable_ipv6/ get_dns_from_dhcpv6=yes
   **:- ipv6 cli-> set enable_ipv6/ get_domain_from_dhcpv6=yes
   ```

7. Enter **show** to verify the change.

   ```
   **:- ipv6 cli-> show

   ipv6
       [X] enable_ipv6
           [X] get_dns_from_dhcpv6
   ```

```
[X] get_domain_from_dhcpv6
```

8. Enter **commit**.

CHAPTER 2

Port Access and Configuration Examples

By default, all serial ports and the AUX/Modem port are disabled. The administrator must enable and configure the ports before anyone can use them. Configuration of ports differs based on the type of connected device, which can be either a device console, a PDU or modem.

By default, all users can access all enabled and configured ports. The administrator must decide whether to restrict user access to ports by the assignment of authorizations to user groups. A user who is in an authorized group is referred to as an authorized user.

Some port configuration tasks are provided as examples of how to use the CLI. See the Cyclades ACS 6000 Installation/Administration/User Guide for an overview of the tasks the administrator must do to configure restricted access to ports. For more information about how to follow the Web Manager procedures in the CLI, see *Configuration Tasks Performed With the CLI* on page 3.

This section describes the following tasks related to port access, configuration, power management and where the tasks are performed in the CLI.

Table 2.1: Port Access and Configuration Tasks

Task	Where Performed
View information about the console server and the connected devices	topology show
Authorized users access enabled and configured ports	topology connect <port>
Authorized users manage power on outlets	topology/<PDU_ID>/outlets -or- power_management/management/<PDU_ID>/outlet_table
Administrators configure ports connected to the consoles of devices	appliance_settings/ports **NOTE:** See Chapter 3 for all Appliance Settings options.

View Information About the Console Server and Connected Devices

When a regular user or an administrator enters **show** at the Topology level, information about the following appears in the format shown in Table 2.2:

- The console server
- The AUX/Modem port (if it is enabled and configured with the Dial-In Profile)
- The serial ports that user is authorized to access (if they are configured with the CAS or Power Profile)

Table 2.2: Topology Parameters

Field	Description
For Appliance	
Name	Name assigned to the appliance (for example, ACS6048-1357908642)
Port	N/A
Type	N/A
Status	N/A
Action	N/A
For Serial Port	
Name	Either the default name [*XX-XX-XX*-p-*n* (where *n*=port_number)], an administrator-assigned alias or an auto-discovered server name
Port	Number of the serial port
Type	Serial
Status	Idle / In-Use
Action	Connect
For Power	
Name	PDU ID (either the default name in the format *XX-XX-XX*P*XX_n* or an administrator-assigned alias, such as myPDU)
Port	Number of the serial port/position on the chain
Type	PDU model
Status	Number of Outlets ON | Total outlets
Action	None

Table 2.2: Topology Parameters (Continued)

Field	Description
For Outlets	**NOTE:** Enter **cd** <PDU_ID>/outlets and enter **show** to see list of outlets and the actions that can be taken (commands that can be executed) for each outlet as shown below.
Name	Either the default *XX-XX-XX*P*XX_n_n* or an administrator-assigned name
Port	PDU outlet number
Type	Outlet
Status	ON / OFF
Action	None

To view information about the console server and connected devices:

1. Log into the CLI and enter **cd topology** to change to the Topology level.

```
--:- units cli-> cd topology
Please wait -- this could take a while
```

2. Enter **show**. Information about the console server and the ports the current user is authorized to access appears.

```
--:- topology cli-> show
ACS6048-1357908642
    name:  ACS6048-1357908642
    port:
    type:
    status:
    action:
1
    name:  77-77-70-p-1
    port:  1
    type:  Serial
    status:  Idle
    action:  connect
2
    name:  77-77-70-p-2
    port:  2
    type:  Serial
    status:  Idle
    action:  connect
myPDU
```

```
    name:  myPDU
    port:  3/1
    type:  PM20i|30A
    status: 3|20
    action:

    77-77-70-p-1/
    77-77-70-p-2/
    myPDU/

--:- topology cli->
```

Connect to a Device Console Connected to a Serial Port

The following procedure is an example of how an administrator or an authorized user can connect to a device console when the device is connected to a port that is enabled and configured with the CAS Profile.

To connect to a device console connected to a serial port:

NOTE: The serial port must already be configured and enabled prior to this procedure. See *Port Configuration Examples* on page 23.

1. Log into the CLI and enter **cd topology** to navigate to the Topology level.

   ```
   --:- units cli-> cd topology
   Please wait -- this could take a while
   --:- topology cli->
   ```

2. Enter **connect <**serial_port_name**>**. If authentication is configured for the port, the Password prompt appears when single sign-on is disabled.

   ```
   --:- topology cli-> connect 77-77-70-p-2
   password:
   ```

NOTE: The connect command above shows a connection to port 2.

3. If prompted, enter the password for the port. The following prompt appears.

   ```
   Type the hot key to suspend the connection: <CTRL>z
   ```

4. Press **Enter** to continue. You are connected to the device that is connected to the port. The window shows the initial display for the device (usually a console banner and login prompt). An example is shown below.

   ```
   Ubuntu 6.06.1 LTS fremont-techpubs ttyS2

   fremont-techpubs login: fred
   Password:
   ```

```
Last login: Tue Oct  2 13:09:04 2007 on :0
Linux fremont-techpubs 2.6.15-28-386 #1 PREEMPT Wed Jul 18 22:50:32
UTC 2007 i68
6 GNU/Linux
#
```

Manage Power for a Device Connected to an Outlet on a PDU

See *power_cycle, power_off and power_on* on page 12 for how an administrator or any authorized user can manage power on PDU outlets when the PDU is connected to a port that is enabled and configured with the Power Profile.

Port Configuration Examples

The following examples show how an administrator can configure a port when a device console is connected, assign the CAS profile, configure a port that is connected to a PDU and assign the Power Profile.

To set up a console access service (CAS) port:

1. Log onto the CLI as an administrator.

   ```
   --:- units cli->
   ```

2. Enter **cd** followed by the parameters shown to select the port (port 1 is used as an example).

   ```
   --:- units cli-> cd appliance_settings/ports/physical_ports/
   serial_ports/1
   ```

3. Enter **show** to view the status and serial profile of port 1.

   ```
   --:- 1 cli-> show
   1
       port_settings/
   --:- 1 cli->
   ```

4. Type **cd** then press **Tab Tab** to view the port_settings option.

   ```
   --:- 1 cli-> cd<Tab><Tab>
   port_settings/
   ```

5. Enter **cd port_settings** to navigate to the Port_Settings level to configure port 1.

   ```
   --:- 1 cli-> cd port_settings
   ```

6. Type **set** then press **Tab Tab** to view the set options.

   ```
   --:- port_settings cli-> set<Tab><Tab>
   communication_settings/  port_settings/
   ```

7. Type **set port_settings** then press **Tab** to view the options for the Port_Settings level.

   ```
   --:- port_settings cli-> set port_settings/<Tab>
   rj45_pin-out    status
   serial_profile
   ```

8. Enter **set port_settings/serial_profile=cas** then enter **commit** as shown to assign the CAS profile and save the settings.

```
--:- port_settings cli-> set port_settings/ serial_profile=cas
**:- port_settings cli-> commit
--:- port_settings cli->
```

9. Enter **set port_settings/status=enabled**, then enter **commit** and **show** as shown to enable the configured port, save the settings and verify the configuration.

```
--:- port_settings cli-> set port_settings/ status=enabled
**:- port_settings cli-> commit
--:- port_settings cli-> show
```

To enable a power management port:

1. Log onto the CLI as an administrator and enter **cd appliance_settings/ports/physical_ports/** <port_name> to select a port with a PDU connected (port 3 is used as an example).

```
--:- Units cli-> cd appliance_settings/ports/physical_ports/
serial_ports/3
```

2. Enter **show** to view the configuration of port 3.

```
--:- 3 cli-> show
3
    port_settings/
--:-3 cli->
```

3. Enter **cd port_settings** to configure port 3.

```
--:- 3 cli-> cd port_settings
```

4. Type **set** then press **Tab Tab** to view the configuration options.

```
--:- port_settings cli-> set <Tab><Tab>
communication_settings  port_settings
```

5. Enter **show** to view the configuration of port 3.

```
--:-port_settings cli-> show
port_settings
    port:  3
    status = disabled
    rj45_pin-out = cyclades
    serial_profile = unconfigured
communication_settings
    speed = 9600
    parity = None
    data_bits = 8
    stop_bits = 1
    flow_control = none
```

6. Type **set port_settings/** then press **Tab** to view the options for the Port_Settings parameter.

```
--:- port_settings cli-> set port_settings/<Tab>
rj45_pin-out    status
serial_profile
```

7. Enter **set port_settings/ status=enabled serial_profile=power** then enter **commit** to set the Serial_Profile to Power, enable the port and commit the changes.

```
--:- port_settings cli-> set port_settings/ status=enabled
serial_profile=power **:- port_settings cli-> commit
```

8. Enter **show** to verify the configuration.

```
--:- port_settings cli-> show
```

CHAPTER 3

CLI Appliance Settings Options

This chapter describes the Appliance Settings options. Only administrators and authorized users can access the appliance_settings level. These procedures assume you have logged into the CLI as an administrator and are at the --:- units cli-> prompt.

NOTE: In the tables that show output from the **show** command, when an option that is followed by an equal sign (=) is left blank, that option is not assigned a value by default.

To view and access appliance_settings options:

1. Enter **cd appliance_settings** to navigate to the appliance_settings level.

```
--:- units cli-> cd appliance_settings
--:- appliance_settings cli->
```

2. Enter **show** to view the appliance_settings options.

```
--:- appliance_settings cli-> show
appliance_settings
    global_settings/
    network/
    ports/
    pluggable_devices/
    security/
    authentication/
    users/
    syslog/
    event_notifications/
    firewall/
    ipsec(vpn)/
    snmp/
    date_and_time/
    boot_configuration/
    online_help/
```

See Table 3.1 through Table 3.13 for options available at each level and their default settings, where applicable. Parameters with an X beside them were selected, either as the default or from the previous configuration.

Appliance_Settings/Global_Settings

1. Enter **cd appliance_settings/global_settings** to navigate to the Global Settings level.

   ```
   --:- units cli-> cd appliance_settings/global_settings
   ```

2. Enter **show** to view the available options.

   ```
   --:- global_settings cli-> show

   global_settings
       sessions/
       sensors/
       data_buffering/
   ```

3. Enter **show** followed by an option name to view information about each option.

   ```
   --:- global_settings cli-> show sessions
   ```

Table 3.1: Global Settings Options

Global Settings Navigation Tree
sessions
idle_timeout = 300 (default)
[ ] enable_session_logging
destination = local (default)
timestamp = no (default)
[ ] enable_session_logging_alerts (none configured)
string_1 =
string_2 =
string_3 =
string_4 =
string_5=
string_6 =
string_7 =
string_8 =

Table 3.1: Global Settings Options (Continued)

Global Settings Navigation Tree
string_9 =
string_10 =
sensors
current_temperature: (deg_c, display only)
maximum_temperature_(deg_c) =
maximum_temperature_threshold_(deg_c) = (positive integer between 0 and 4)
minimum_temperature_(deg_c) =
minimum_temperature_threshold_(deg_c) = (positive integer between 0 and 4)
data_buffering
local_data_buffering_settings
segment_size_(kbytes) =
spare_segments =
nfs_data_buffering_settings
nfs_server =
nfs_path =
segment_size_(kbytes) =
spare_segments =
syslog_data_buffering_settings
syslog_facility =

Appliance_Settings/Network

1. Enter **cd appliance_settings/network** to navigate to the Network level.

   ```
   --:- units cli-> cd appliance_settings/network
   ```

2. Enter **show** to view the list of available options.

Table 3.2: Network Options

Network Navigation Tree
ipv6

Table 3.2: Network Options (Continued)

Network Navigation Tree
[X] enable_ipv6 (enabled by default)
[ ] get_dns_from_dhcpv6
[ ] get_domain_from_dhcpv6
devices
eth0
settings
status=enabled/disabled
(*) ipv4_method
(*) dhcp
( )static
address: nnn.nnn.nnn.nnn
mask: nnn.nnn.nnn.nnn
( ) ipv4_unconfigured
( )ipv6_method
(*) stateless
( ) dhcpv6
( ) static
( ) address / prefix_length
( ) ipv6_unconfigured
mac address: (information only)
eth1
settings
status=enabled/disabled
(*) ipv4_method
( ) dhcp
( ) static
address: nnn.nnn.nnn.nnn

Table 3.2: Network Options (Continued)

Network Navigation Tree
mask: nnn.nnn.nnn.nnn
( ) ipv4_unconfigured
( ) ipv6_method
(*) stateless
( ) dhcpv6
( ) static
( ) address / prefix_length
( ) ipv6_unconfigured
mac address: (information only)
bonding
bonding with eth0 as primary and eth1 as second mode of access
mii mon (milliseconds) = 100 (default)
up delay (milliseconds) = 200 (default
ipv4_static_routes and ipv6_static_routes
destination
default
gateway_ip_or_interface
route_through
metric
host_ip_or_network
destination_ip/mask
gateway_ip_or_interface
route_through
metric
dns
primary dns = nnn.nnn.nnn.nnn
secondary dns = (null)

Table 3.2: Network Options (Continued)

Network Navigation Tree
domain = corp.avocent.com (default)
hostname = ACS60xx-1357908642 (default)
hosts
127.0.0.1
ip = 127.0.0.1
hostname = localhost
alias = (null)

IPv6

IPv4 addresses are always enabled. An administrator can also enable IPv6 addresses at the appliance_settings/network/ipv6 level. A procedure to enable IPv6 is used as an example in *CLI Equivalent Actions to Web Manager Checkbox Selection* on page 16.

Devices

The procedure to configure a static IP address for the primary Ethernet interface is usually performed during installation so that administrators have a fixed IP address for access to the Web Manager and can finish configuration.

To configure a IPv4 or IPv6 static IP address:

NOTE: This procedure configures either an IPv4 or IPv6 static IP address for the ETH0 (eth0) or the ETH1 (eth1) port. You can configure an IPv6 static IP address only if IPv6 is enabled. See *CLI Equivalent Actions to Web Manager Checkbox Selection* on page 16 for an example of how to enable IPv6.

1. Enter **cd appliance_settings/network/devices/**<eth0|eth1>**/settings** to navigate to the Settings level for the desired interface.

   ```
   --:- units cli-> cd appliance_settings/network/devices/eth0/settings
   ```

2. Enter **set ipv**<**4**|**6**>**_method=static** to set the method to static for IPv4 or IPv6.

   ```
   **:- settings cli-> set ipv4_method=static
   ```

3. Enter **set ipv**<**4**|**6**>**_method/static/ address=**<IP_Address> **mask=**<netmask> to set the IP address and subnet mask then enter **commit** to save the change.

   ```
   --:- settings cli-> set ipv4_method/static/ address=172.26.31.10
   mask=255.255.255.0
   ```

   ```
   **:- settings cli-> commit
   ```

4. Enter **show** to view the changes.

```
--:- settings cli-> show
```

Hosts

The following procedure describes how to add a host to the hosts table.

To add a host to the host table:

1. Enter **cd appliance_settings/network/hosts** to navigate to the Hosts level.

   ```
   --:- units cli-> cd appliance_settings/network/hosts
   ```

2. Enter **show** to view the current host settings.

   ```
   --:- hosts cli-> show
   127.0.0.1
       ip:  127.0.0.1
       hostname:  localhost
       alias:
       127.0.0.1/
   ```

3. Type **add** then press **Return**.

   ```
   --:- hosts cli-> add<Return>
   --:#- [hosts] cli-> ls
   ip =
   hostname =
   alias =
   --:#- [hosts] cli->
   ```

4. Enter **set hostname=**<hostname> **ip=**<IP_address> to add the name of a host and the IP address for the host.

NOTE: Each parameter that follows the add command is separated by a space.

```
--:#- [hosts] cli-> set hostname=sharedacs6000 ip=172.26.31.164
```

5. Enter **commit**.

   ```
   --:#- [hosts] cli-> save
   ```

6. Enter **show** to verify the changes took place and to view the new host entry.

   ```
   --:- hosts cli-> show
   127.0.0.1
       ip:  127.0.0.1
       hostname:  localhost
       alias:
   172.26.31.164
       ip:  172.26.31.164
       hostname:  sharedacs6000
   ```

```
    alias:

    127.0.0.1/add
    172.26.31.164/
```

7. Enter **cd <IP_address>/settings** to navigate to the level where you can perform additional configuration of the host entry.

   ```
   --:- hosts cli-> cd 172.26.31.164/settings
   ```

8. Enter **show** to view the additions to the host table and the Settings option.

   ```
   --:- 172.26.31.164 cli-> show
   ip:  172.26.31.164
   hostname =  sharedacs6000
   alias =
   ```

Wiz command

The wiz command allows administrators to easily and quickly perform the initial network configuration of the eth0.

At the command prompt at the units level, enter **wiz** to view the current IP configuration. To change the IP configuration, press **Tab** to move through the parameters, and press **Esc + Tab** to edit the selected parameter. When you are finished, enter **yes** to confirm that all parameters are correct and to save the new parameters.

```
--:- units cli-> wiz
eth0:
    ipv4 address: 172.26.30.240
    ipv6 address:
    status = enabled
    ipv4_method
        (*) dhcp
        ( ) static
            address = 192.168.160.10
            mask = 255.255.255.0
            gateway =
        ( ) ipv4_address_unconfigured
    ipv6_method
        ( ) stateless
        ( ) dhcpv6
```

```
        ( ) static
            address =
            prefix_length =
            gateway =
        (*) ipv6_address_unconfigured
    mac address: 00:e0:86:0c:49:7a

dns:
    primary = 172.26.29.4
dns:
    primary = 172.26.29.4
    secondary =
    domain = corp.avocent.com
    hostname = ACS6016-0270095142

Some basic and useful keys are:
 - tab (once/twice) - shows the next possible commands/option(s)
 - esc tab - gets the current parameter value for editting
Other hints:
 - Use backslash '\' to escape spaces, '\' and other control
   characters when assigning values to parameters.

eth0:
    ipv4 address: 172.26.30.240
    ipv6 address:
    status :
--:- units cli->
```

Appliance_Settings/Ports

Enter **cd appliance_settings/ports** to navigate to the Ports level.

```
--:- units cli-> cd appliance_settings/ports
```

Table 3.3: Ports Options

Ports Navigation Tree
physical_ports
serial_ports
auxiliary_ports
cas_profile
default_settings
general
alerts
data_buffering
devices
auto_discovery
settings
auto_discovery_timeout_(seconds) =
auto_discovery_timeout = 30
probe_timeout = 2
default_speed_on_auto_discovery_failure =
probe_speed_list =
probe_strings
match_strings
auto_answer
dial-in-profile
settings
log_in_to_appliance =
otp_login_authentication =

Table 3.3: Ports Options (Continued)

Ports Navigation Tree
ppp_connection =
ppp|pap_authentication =
devices
secure_dial-in
callback_users
ppp_otp_users
power_profile
login
devices
outlet_group

To enable and assign the Serial profile to a serial port:

1. Enter **cd appliance_settings/ports/physical_ports/serial_ports/<*n*>/port_settings** to navigate to the ports_settings level. Port 3 is used in the example.

   ```
   --:- units cli-> cd appliance_settings/ports/physical_ports/
   serial_ports/3/port_settings
   ```

2. Enter **show**. A listing similar to the following appears.

   ```
   --:- port_settings cli-> show

   port_settings
       port = 3
       status = disabled
       rj45_pin-out = cyclades
       serial_profile = unconfigured
   communication_settings
       speed = 9600
       parity = none
       data_bits = 8
       stop_bits = 1
       flow_control = none
   ```

NOTE: Serial_Profile choices are cas, dial-in or power.

3. Enter **set port_settings/ status=enabled serial_profile=cas** to enable the port and assign it the CAS Serial Profile. Enter **commit** to save the change.

```
--:- port_settings cli-> set port_settings/ status=enabled
serial_profile=cas
**:- port_settings cli-> commit
--:- port_settings cli->
```

To enable and configure the AUX/Modem port:

1. Enter **cd appliance_settings/ports/physical_ports/auxiliary_ports/ttym1/aux_port_settings** to navigate to the aux_port_settings level.

```
--:- units cli-> cd appliance_settings/ports/physical_ports/
auxiliary_ports/ttym1/aux_port_settings
```

NOTE: When an internal modem is factory installed, the port name is ttym1. If no internal modem is installed, the port name is ttya1.

2. Enter **show**.

```
--:- aux_port_settings cli-> show
port_settings
    port:  ttym1
    status = disabled
    serial_profile = unconfigured

--:- aux_port_settings cli->
```

NOTE: If an internal modem is factory-installed, the two available serial_profile options are unconfigured and dial-in. If an internal modem is not installed, either an external modem or a PDU can be connected to the port, and a third serial_profile option, power, is available.

3. Enter **set port_settings/ status=enabled serial_profile=**<**dial-in**|**power**> to enable the port and assign either the dial-in or Power Profile, and then enter **commit**.

```
--:- aux_port_settings cli-> set status=enabled serial_profile=dial-in
**:- aux_port_settings cli-> commit
```

To configure port profiles:

NOTE: Perform profile configuration before profiles are assigned to ports.

NOTE: To configure ports that are already assigned to a CAS profile enter: **cd appliance settings ports/cas_profile/default_settings/devices**.

Enter **cd appliance_settings/ports/**<**cas_profile**|**dial-in_profile**|**power_profile**> to navigate to the level for the profile.

```
--:- units cli-> cd appliance_settings/ports/cas_profile
```

-or-

```
--:- units cli-> cd appliance_settings/ports/dial-in_profile
```

-or-

```
--:- units cli-> cd appliance_settings/ports/power_profile
```

Appliance_Settings/Pluggable Devices

Enter **cd appliance_settings/pluggable_devices** to navigate to the pluggable_devices level.

```
--:- units cli-> cd appliance_settings/pluggable_devices
```

Table 3.4: Pluggable Devices Options

Pluggable Devices Navigation Tree
device_name
device_type
card
device_info

Appliance_Settings/Security

Enter **cd appliance_settings/security** to navigate to the security level.

```
--:- units cli-> cd appliance_settings/security
```

Table 3.5: Security Options

Security Navigation Tree
security_profile
pc_card_and_usb_device_detection = (yes / no)
enable_services
rpc = (yes / no)
serial_devices
port_access_per_user_group_authorization = (yes / no)
security_profile = (custom / moderate / open / secure)
custom
enabled_services
telnet
ftp

Table 3.5: Security Options (Continued)

Security Navigation Tree
snmp
ipsec
icmp
ssh
version = (1 / 1,2 / 2 / 2,1)
[X] allow_root_access
tcp_port = 22
web
[X] http
http port = 80
[X] https
https_port = 443
https_ssl_version = 2|3
[ ] redirect_http/https
dsview
[X] allow_appliance_to_be_managed_by_dsview (DSView 3 management software)

Appliance_Settings/Authentication

Enter **cd appliance_settings/authentication** to navigate to the authentication level.

```
--:- units cli-> cd appliance_settings/authentication
```

NOTE: Kerberos does not work unless the administrator copies the /etc/krb5.keytab file from the Kerberos server and overwrites the /etc/krb5.keytab file in the console server.

Table 3.6: Authentication Options

Authentication Navigation Tree
appliance_authentication
authentication_servers
radius

Table 3.6: Authentication Options (Continued)

Authentication Navigation Tree
tacacs+
ldap(s)/ad
kerberos
nis
dsview

Appliance_Settings/Users

Enter **cd appliance_settings/users** to navigate to the users level.

```
--:- Units cli-> cd appliance_settings/users
```

Table 3.7: Users Options

Users Navigation Tree
local_accounts
user_names
root
admin
password_rules
password enforcement
default expiration
authorization
groups
admin
appliance-admin
user

To add a user and password:

1. Enter **cd appliance_settings/users/local_accounts/user_names** to navigate to the user_names level.

   ```
   --:- units cli-> cd appliance_settings/users/local_accounts/user_names
   ```

2. Enter **add.** Then enter **set** with the parameters all on one line separated by spaces as shown.

```
--:- user_names cli-> add
--:#- [user_name] cli-> set user_information/ user_name=fred
password=smith123abc confirm_password=smith123abc
--:#- [user_names] cli->
```

3. Enter **save**.

```
--:#- [user_names] cli-> save
```

4. Enter **show** to verify that the new user has been added.

```
--:#- [user_names] cli-> show
```

Appliance_Settings/Syslog

Enter **cd appliance_settings/syslog** to navigate to the syslog level.

```
--:- units cli-> cd appliance_settings/syslog
```

Table 3.8: Syslog Options

Syslog Navigation Tree
remote_server_ipv4
server_ip_or_hostname (to specify multiple servers, separate the entries with commas)
remote_server_ipv6
server_ip_or_hostname (to specify multiple servers, separate the entries with commas)
appliance_console
root_session

Appliance_Settings/Event_Notification

Enter **cd appliance_settings/event_notification** to navigate to the event_notification level.

```
--:- units cli-> cd appliance_settings/event_notification
```

Appliance_Settings/Firewall

Enter **cd appliance_settings/firewall** to navigate to the firewall level.

```
--:- units cli-> cd appliance_settings/firewall
```

NOTE: To set a rule, you must enable the interface, set the rule for the interface and physically connect the interface to the network.

Table 3.9: Firewall Options

Firewall Navigation Tree
ipv4_filter_table
input
forward
output
ipv6_filter_table
input
forward
output

Appliance_Settings/IPSec(VPN)

Enter **cd appliance_settings/ipsec(vpn)** to navigate to the ipsec(vpn) level.

```
--:- units cli-> cd appliance_settings/ipsec(vpn)
```

Table 3.10: IPSec(VPN) Options

IPSec(VPN) Navigation Tree
connection
name =
authentication_protocol = (ah / esp)
boot_action = (add / route / start / ignore)
remote
id =
ip_address =
next_hop =
subnet =
local
id =

Table 3.10: IPSec(VPN) Options (Continued)

IPSec(VPN) Navigation Tree
ip_address =
next_hop =
subnet =
ipsec(vpn)_authentication
authentication_method
( ) rsa_key
remote_side_rsa =
local_side_rsa =
( ) secret
pre-shared_secret =

Appliance_Settings/SNMP

Enter **cd appliance_settings/snmp** to navigate to the snmp level.

```
--:- units cli-> cd appliance_settings/snmp
```

Table 3.11: SNMP Options

SNMP Navigation Tree
system
syscontact = avocent_corporation
syslocation = cyclades_acs6000
snmp_v1/v2/v3
name
oid
permission
read_and_write
read_only
(*) version v1, v2
source

Table 3.11: SNMP Options (Continued)

SNMP Navigation Tree
( ) version v1/v2 ipv6
source
( ) version v3
authentication_type
md5
sha
authentication_pass_phrase
des_pass_phrase
minimum_authentication_level
no_auth
suth
priv

Appliance_Settings/Date and Time

Enter **cd appliance_settings/date_and_time** to navigate to the date_and_time level.

```
--:- units cli-> cd appliance_settings/date_and_time
```

Table 3.12: Date and Time Options

Date_And_Time Navigation Tree
date_&_time
current_time: thu jan 3 14:09:41 utc 2008
settings
( ) enable_network_time_protocol
server = pool.ntp.org
(*) manual
month =
day =
year =

Table 3.12: Date and Time Options (Continued)

Date_And_Time Navigation Tree
hour =
minute =
second =
time_zone
(*) predefined
zone = utc
( ) define
name =
acronym =
gmt_offset =
[ ] enable_daylight_savings_time
daylight_savings_time_acronym =
save_time =
start_month =
start_week =
start_weekday =
start_hour =
end_month =
end_week =
end_weekday =
end_hour =

Appliance_Settings/Boot Configuration

Enter **cd appliance_settings/boot_configuration** to navigate to the boot_configuration level.

```
--:- units cli-> cd appliance_settings/boot_configuration
```

Table 3.13: Boot Configuration Options

Boot_Configuration Navigation Tree
boot_configuration
(*) flash
(*) image_1
( ) image_2
( ) network
appliance_ip_address=
tftp_server_ip=
filename=
watchdog_timer
eth0_mode=
eth1_mode=
console_speed=

Appliance_Settings/Online Help

Enter **cd appliance_settings/online_help** to navigate to the online_help level.

```
--:- units cli-> cd appliance_settings/online_help
```

To set the online help URL:

Perform this procedure if you have downloaded the online help files to a web server that is accessible to the console server.

1. Enter the following command.

   ```
   --:- units cli> cd appliance_settings/online_help
   ```

2. Enter the following command.

   ```
   --:- online_help cli> set url=<online_help_location>
   ```

   A line similar to the following appears.

   ```
   **:- online_help cli>
   ```

3. Save your settings.

   ```
   **:- online_help cli> commit
   ```

CHAPTER 4

CLI Overview, Information, Active Sessions and Power Management Options

This section provides procedures for some tasks that the administrator can perform at the following levels of the CLI.

Table 4.1: Ports Menu Options

Level	Use this option to:
Overview	Reboot, save and restore configuration files.
Information	View information about the console server configuration.
Active Sessions	View information about active sessions.
Power Management	Administrators and users who are authorized for power configuration can enable and assign the Power Profile to ports that are connected to PDUs, and rename a PDU.

Only administrators and authorized users can access the Information, Active Sessions and Power Management levels.

Overview Options

To view and perform configuration with the Overview options:

1. Log onto the CLI as an administrator and change to the overview level.

```
--:- units cli-> cd overview
--:- overview cli->
```

2. Press **Tab Tab** to display the options.

```
--:- overview cli-><Tab><Tab>
reboot          restore_configuration     save_configuration
```

3. Enter your choice from the command list followed by the required parameters.

Table 4.2: Overview Commands

Command	Description or Field
reboot	Reboots the Cyclades ACS 6000 console server.

Table 4.2: Overview Commands (Continued)

Command	Description or Field
save configuration	Save configuration according to the following parameters.
ftp site	FTP site parameters listed below.
ip address	IP address of the FTP site.
username	Username on the FTP site.
password	User password on the FTP site.
path and filename	Path to the storage directory and the filename of the configuration file.
local file	Filename.
restore configuration	Restore configuration according to the following parameters.
ftp site	FTP site parameters listed below.
ip address	IP address of the FTP site.
username	Username on the FTP site.
password	User password on the FTP site.
path and filename	Path to the storage directory and the filename of the configuration file.
local file	Filename.

Information Options

To view and perform Information options:

1. Log onto the CLI as an administrator and change to the information level.

```
--:- units cli-> cd information
--:- information cli->
```

2. Enter **show** to view the Information options

```
--:- information cli-> show.
information
    identity
    versions
    power
    cpu
    memory
    flash_usage
```

3. Enter **cd** <*navigation option from list*> to view any of the options.
4. Enter **show** to view the list of available parameters.

This procedure continues down the hierarchical levels. See Table 4.3 for the options and and their default settings.

Table 4.3: Information Options

Information Options	Description
identity	Console server identity information
serial_number	Console server serial number
type	Physical description of the ACS 6000 console server type
versions	Console server software information
bootcode	Version of the console server's u-boot code
firmware	Version and build information of the firmware
booted_from	Network or Flash
power	Power supply status
power_supply_1	On or Off status
power_supply_2	On, Off or Not Present status
cpu	CPU information
cpu_type	Example: CPU = 440EPx - with Security/Kasumi
revision	Example: Revision = 24.208 (pvr 2162 18d0)
bogomips	Example: Bogomips = 798.72 (approximate mega instructions per second)
memory	Memory information (values below are examples)
active	Size: 46048 kB
anonpages	Size: 25020 kB
bounce	Size: 0 kB
buffers	Size: 71680 kB
cached	Size: 32692 kB
commitlimit	Size: 128716 kB
committed_as	Size: 151960 kB
dirty	Size: 4 kB

Table 4.3: Information Options (Continued)

Information Options	Description
inactive	Size: 83344 kB
mapped	Size: 14844 kB
memfree	Size: 119404 kB
memtotal	Size: 257436 kB
nfs_unstable	Size: 0 kB
pagetables	Size: 1000 kB
slab	Size: 5812 kB
sreclaimable	Size: 2572 kB
sunreclaim	Size: 3240 kB
swapcached	Size: 0 kB
swapfree	Size: 0 kB
swaptotal	Size: 0 kB
vmallocchunk	Size: 735492 kB
vmalloctotal	Size: 737188 kB
vmallocused	Size: 1556 kB
writeback	Size: 0 kB
flash_usage	Displays RAM disk usage, mount points, Flash memory used and Flash memory available
/dev/mtdblock7	Mounted on /mnt/hdUser
/dev/ram0	Mounted on /
/dev/ram0	/dev/.static/dev
tmpfs	/dev

Active Sessions Information

The Active Session information fields are described in Table 4.4. An authorized user can kill an active session with the Kill command.

Table 4.4: Active Sessions Field Descriptions

Field	Description
user	Logged in user
client_ip	Source of the connection
creation_time	Time of the session creation
session_type	Type of session (console, http)
connection_type	Type of connection (cli, wmi - that is, Web Manager)
target_name	Target name or alias if session is an access session
id	Session ID
parent id	Parent ID if session is a subsession

To view and kill Active_Sessions:

1. From the units level CLI prompt, enter **cd active_sessions**.

```
--:- units cli-> cd active_sessions
--:active_sessions cli->
```

2. Enter **show**. Information displays as shown about all active sessions.

```
--:- active_sessions cli-> show

37
    user:  admin
    client_ip:  none
    creation_time:  Tue Dec 18 03:31:01 2007

    session_type:  console
    connection_type:  cli
    target_name:
    id:  37
    parent_id:

--:- active_sessions cli->
```

3. To kill a session (if authorized), enter **kill** followed by the session number.

```
--:- active_sessions cli-> kill 37
```

Power Management Options

The Power Management Options are described in Table 4.5.

Table 4.5: Power Management Options Descriptions

Option	Description
settings	Allows an authorized user to reboot, restore factory default settings or to rename PDU(s). Also allows the authorized user to view information about each PDU, monitor sensors, clear sensor values, set up syslogging of events related to the PDU, configure an alarm and the LED display mode, and to manage outlets on the PDU.
management	Shows a list of PDUs, including PDU ID, Vendor and Model Number of Outlets Position. Allows user to turn on, turn off, cycle or reboot the PDUs.
outlet_groups	Lists all configured outlet groups that the current user is authorized to manage (to manage outlet groups, the user must be in a user group that is authorized to manage all the outlets in the outlet group).

To rename a PDU:

1. Log onto the CLI as an administrator and enter **cd power_management/settings** to navigate to the settings level.

   ```
   --:- units cli-> cd power_management/settings
   ```

2. Type **rename** and press **Tab Tab** to expand the parameters.

   ```
   --:- settings cli-> rename <PDU_ID> <Tab><Tab>
   ```

3. Enter **set newpdu_id=<**new_PDU_ID>.

   ```
   --:#- [settings] cli-> set new_pdu_id=mypdu
   --:#- [settings] save
   ```

NOTE: See the Cyclades ACS 6000 Installation/Administration/User guide for how to perform other authorized PDU configuration options.

To manage power for a selected outlet:

See *cycle, on, off, lock and unlock* on page 12 for how to manage power at the power_management level.

APPENDICES

Appendix A: Enabling Firmware Upgrades When the Boot Image is not in Flash

To enable firmware upgrades when the boot image is not in Flash:

1. Connect to the console of the console server as root.

   ```
   CLI 2.0 (2007-10-04T08:11-0700)
   --:- units cli->
   ```

2. Enter **shell**. A warning appears followed by the root prompt.

   ```
   --:- units cli-> shell
   WARNING: Improper use of shell commands could lead to data loss,
   the deletion of important system files or other unexpected result.
   Please double-check your syntax when typing shell commands.
   [root@ACS6048-3131313131 ~]#
   ```

3. Enter **recover-flash.sh --factory_default --doformat**.

   ```
   [root@ACS6048-3131313131 ~]# recover-flash.sh --factory_default
   --doformat
   [root@ACS6048-3131313131 ~]#
   ```

   The Flash memory is formatted, and the version of firmware in memory is stored in Flash. The command prompt reappears.

4. Enter **reboot**.

   ```
   [root@ACS6048-3131313131 ~]# reboot
   ```

   When the system reboot completes, the Web Manager supports firmware upgrades.

Appendix B: Technical Support

Our Technical Support staff is ready to assist you with any installation or operating issues you encounter with your Avocent product. If an issue should develop, follow the steps below for the fastest possible service.

To resolve an issue:

1. Check the pertinent section of this manual to see if the issue can be resolved by following the procedures outlined.
2. Visit www.avocent.com/support and use one of the following resources:

   Search the knowledge base or use the online service request.

   -or-

   Select *Technical Support Contacts* to find the Avocent Technical Support location nearest you.

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For Technical Support:
www.avocent.com/support

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