Dell™ Chassis Management Controller Firmware Version 2.0 Administrator Reference Guide

Notes, Cautions and Warnings

NOTE: A NOTE indicates important information that helps you make better use of your computer.

CAUTION: A CAUTION indicates a potential for property damage, personal injury, or death.

WARNING: A WARNING indicates a potential for property damage, personal injury, or death.

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March 2009

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1

Administrator Reference Guide Overview

The Dell™ Chassis Management Controller (CMC) is a hot-pluggable systems management hardware and software solution designed to provide remote management capabilities and power control functions for Dell M1000e chassis systems.

This guide is a CMC administrator reference for the following items:

- RACADM subcommands — includes descriptions, usage, and examples of all commands
- CMC property database group and object definitions
- LCD panel overview

All other CMC functions are detailed in the *Dell Chassis Management Controller User's Guide* that is available at the Dell Support Web site: **support.dell.com**.

Other Documents You May Need

In addition to this *Reference Guide*, the following documents provide additional information about the setup and operation of the CMC. All documents oustide of the online help are available at the Dell Support Web site: **support.dell.com**.

- The CMC online help provides information about using the Web interface.
- The *Chassis Management Controller (CMC) Secure Digital (SD) Card Technical Specification* provides minimum BIOS and firmware version, installation and usage information.
- The *Integrated Dell Remote Access Controller 6 (iDRAC6) Enterprise for Blade Servers Version 2.0 User Guide* provides information about installation, configuration and maintenance of the iDRAC6 on managed systems.

- The *Dell OpenManage™ IT Assistant User's Guide* provides information about IT Assistant.
- Documentation specific to your third-party management console application.
- The *Dell OpenManage Server Administrator's User's Guide* provides information about installing and using Server Administrator.
- The *Dell Update Packages User's Guide* provides information about obtaining and using Dell Update Packages as part of your system update strategy.

The following system documents are also available to provide more information about the system in which your CMC is installed:

WARNING: See the safety and regulatory information that shipped with your system. Warranty information may be included within this document or as a separate document.

- The *Rack Installation Guide* and *Rack Installation Instructions* included with your rack solution describe how to install your system into a rack.
- The *Hardware Owner's Manual* provides information about system features and describes how to troubleshoot the system and install or replace system components.
- Systems management software documentation describes the features, requirements, installation, and basic operation of the software.
- Documentation for any components you purchased separately provides information to configure and install these options.
- Updates are sometimes included with the system to describe changes to the system, software, and/or documentation.

  NOTE: Always read the updates first because they often supersede information in other documents.
- Release notes or readme files may be included to provide last-minute updates to the system or documentation or advanced technical reference material intended for experienced users or technicians.
- For more information on IOM network settings, refer to the *Dell™ PowerConnect™ M6220 Switch Important Information* document and the *Dell™ PowerConnect™ 6220 Series Port Aggregator White Paper*.

2

RACADM Subcommands

"?" and "? <command>"

NOTE: To use this subcommand, you must have **CMC Login User** privilege.

Description

? lists all of the subcommands you can use with the **racadm** command and a one-line description of each subcommand.

? <*command*> displays the syntax for the specified command.

NOTE: You can also use the **help** and **help** <*command*> commands to obtain the same information.

Usage

```
racadm ?

racadm ? <command>
```

Examples

NOTE: The following output example shows only part of the actual output for the **racadm ?** command. Descriptions shown in this example may vary slightly from the descriptions in your racadm session.

- `racadm ?`

```
help            -- list racadm subcommand
description
help <subcommand> -- display usage summary for a
subcommand
?               -- list racadm subcommand
description
? <subcommand>  -- display usage summary for a
subcommand
arp            -- display the networking arp table
chassisaction   -- execute chassis or switch
power-up/down/cycle or KVM powercycle
```

```
clrraclog       -- clear the CMC log
clrsel          -- clear the System Event Log (SEL)
cmcchangeover   -- Changes the redundant state of
the CMC from active to standby and vice versa
config          -- modify CMC configuration
properties
LEDs on a module
...
setniccfg       -- modify network configuration
properties
setractime      -- set the time on the CMC
setslotname     -- sets the name of the slot in the
chassis
setsysinfo      -- set the chassis name and chassis
location
sslcertview     -- display a CA/server certificate
in the CMC
sslcsrgen       -- generate a certificate CSR from
the CMC
testemail       -- test CMC email notifications
testtrap        -- test CMC SNMP trap notifications
```

- `racadm ? getsysinfo`

```
getsysinfo -- display general CMC and system
information
Usage:
getsysinfo [-d] [-c] [-A]
-d : show cmc information
-c : show chassis information
-A : do not show headers or labels
```

arp

NOTE: To use this subcommand you must have **Administrator** privilege.

Description

Display the Address Resolution Protocol (ARP) table. This table stores the mapping of IP numbers to MAC addresses of the NICs in the chassis.

Example

- `racadm arp`

```
Address          HWtype  HWaddress          Flags
Mask    Iface
143.166.152.3    ether  00:07:84:A7:CE:BC  C
  eth0
143.166.152.2    ether  00:07:84:7B:9F:FC C
  eth0
143.166.152.1    ether   00:00:0C:07:AC:0A
C             eth0
143.166.152.113 ether  00:15:C5:48:9C:1D C
eth0
```

chassisaction

NOTE: To use this subcommand, you must have **Chassis Control Administrator** privilege.

Description

Executes a power action on the chassis, iKVM, or a server.

Usage

```
racadm chassisaction [-m <module>] <action>
```

Options

Table 2-1 describes chassisaction subcommand options.

Table 2-1. chassisaction Subcommand Options

Option	Description
-m <*module*>	Specifies the module on which you want the action carried out. <*module*> may be one of the following: • `chassis` • `switch-`*n* where *n*=1–6 • `kvm`

Table 2-1. chassisaction Subcommand Options *(continued)*

Option	Description
<*action*>	Specifies the action you want to execute on the specified module. <*action*> may be one of the following: • `powerdown` — (Chassis only) Powers down the chassis. • `powerup` — (Chassis only) Powers up the chassis. • `powercycle` — Power cycles the module. • `nongraceshutdown` — (Chassis only) Shutdown the chassis non-gracefully. • `reset` — Performs a hard reset of the module.

Example

```
• racadm chassisaction -m switch-3 reset
  Module power operation successful.
```

clrraclog

NOTE: To use this subcommand, you must have **Clear Logs Administrator** privilege.

Description

Removes all existing records from the CMC log. A new log entry is added to record the date and time when the log was cleared, and the user who cleared the log.

NOTE: To view the CMC log, use **getraclog**. For information about the CMC log, see the "Viewing the CMC Log" section of the *CMC User's Guide*.

Usage

```
racadm clrraclog
```

NOTE: The -A option is ignored and is supported to provide backward compatibility for existing scripts.

Output

The CMC log was cleared successfully.

clrsel

NOTE: To use this subcommand, you must have **Clear Logs Administrator** privilege.

Description

Removes all existing records from the system events log (SEL, or hardware log). A new log entry is added to record the date and time when the log was cleared, and the user who cleared the log.

NOTE: To view the hardware log, use **getsel**. For information about the hardware log, see the "Viewing the Hardware Log" section of the *CMC User's Guide*.

Usage

```
racadm clrsel
```

NOTE: The -A and -o options do not generate additional output and are supported to provide backward compatibility for existing scripts.

Output

```
The SEL was cleared successfully.
```

cmcchangeover

NOTE: To use this subcommand, you must have **Administrator** privilege.

Description

Changes the state of the CMC from active to standby, or vice versa, in a redundant CMC configuration. This subcommand is useful for remote debugging or testing purposes.

NOTE: This command is valid only in redundant CMC environments. For more information, see the "Understanding the Redundant CMC Environment" section of the *CMC User's Guide*.

Usage

```
racadm cmcchangeover
```

Output

```
CMC failover initiated successfully.
```

connect

NOTE: To use this subcommand, you must have **Administrator** privilege.

Description

The connect command is used to redirect the serial console of server or I/O modules.

NOTE: The **connect** command is only available from the serial/Telnet/SSH console, and not through the remote racadm.

NOTE: If an IOM switch does not support console redirection, the connect command displays an empty console. To return to the CMC console, enter the escape sequence; the default console escape sequence is `<Ctrl>\`.

NOTE: Only one IOM switch connection is allowed for each chassis at a time.

NOTE: You cannot connect to pass-through switches.

Usage

```
connect [-b] server-<n> (n=1-16)
connect [-b] switch-<n> (n=1-6)
connect [-b] switch-[a|b|c]<n> (n=1-2)
```

Options

Table 2-2 describes **connect** subcommand options.

Table 2-2. connect Subcommand Options

Option	Description
-b	The -b (binary) option passes raw binary data, and the `cfgSerialConsoleQuitKey` is not used. Additionally, when connecting to a system using the CMC serial console, transitions in the DTR signal (for example, if the serial cable is removed to connect to an opeating system debugger) do not cause a logout. This option is primarily provided for operating system debugging.

Examples

- `racadm connect server-1`
- `racadm connect -b server-1`

- `racadm connect switch-a1`
- `racadm connect switch-1`

config

NOTE: To use this subcommand, you must have **Chassis Configuration Administrator** privilege.

Description

Sets the CMC configuration parameters individually or in a batch as part of a configuration file. If the data is different, that CMC object is written with the new value.

Usage

```
racadm config -g <group> -o <object> <value>

racadm config -g <group> -o <object> -i <index>
<value>

racadm config -f <filename>
```

Options

Table 2-3 describes the **config** subcommand options.

Table 2-3. config Subcommand Options

Option	Description
`-g` <*group*>	Specifies the group containing the object that is to be set. Must be used with the **-o** option. Table 2-4 lists the group names that may be specified with this option.
`-o` <*object*>	Specifies the object name that is written with the string <*value*>. Must be used with the **-g** option.
`-i` <*index*>	Specifies a unique group name. Only valid for indexed groups. The index is specified here by the index value (a decimal integer from 1–16).
<*value*>	Indicates the value to which you want the specified object set.
`-f` <*filename*>	Specifies the file name to use as a configuration source.

Property Groups

NOTE: Appendix B, "CMC Property Database Group and Object Definitions" on page 93, provides details about the property groups. See also "getconfig" on page 34.

Table 2-4 lists the property groups that can be specified with the **-g** option.

Table 2-4. RACADM Property Groups

Group	Description
cfgLanNetworking	Configures network related properties
cfgRemoteHosts	Enables/disables and configures firmware update, SMTP email alerting, and NTP servers
cfgUserAdmin	Configures CMC users
cfgEmailAlert	Configures CMC email alerting
cfgSessionManagement	Sets the maximum number of remote sessions allowed to connect to CMC at a time
cfgSerial	Enables/disables and configures serial console
cfgNetTuning	Configures CMC network tuning
cfgOobSnmp	Enables/disables and configures the SNMP agent for the CMC
cfgTraps	Displays information for and configures delivery of SNMP traps for a specific user
cfgAlerting	Enables or disables SNMP event trap alerting and sets the event filter
cfgRacTuning	Configures CMC tuning parameters
cfgRacSecurity	Configures settings related to the CMC SSL certificate signing request (CSR) feature
cfgActiveDirectory	Configures Microsoft® Active Directory® properties
cfgStandardSchema	Configures the Standard Schema settings for Active Directory
cfgChassisPower	Configures power for the chassis
cfgServerInfo	Configures a server in the chassis
cfgKVMInfo	Displays information for and configures the iKVM

Output

The **config** subcommand generates error output when it encounters any of the following:

- Invalid syntax, group name, object name, index, or other invalid database members
- Insufficient user privileges
- RACADM CLI failures
- The **config** subcommand returns an indication of how many configuration objects were written out of how many total objects were in the .cfg file.

Examples

- `racadm config -g cfgLanNetworking -o cfgNicIpAddress 10.35.10.100`

  Sets the **cfgNicIpAddress** configuration parameter (object) to the value 10.35.10.110. This IP address object is contained in the group **cfgLanNetworking** (see "cfgLanNetworking" on page 95).

- `racadm config -f myrac.cfg`

  Configures or reconfigures the CMC. You can create the **myrac.cfg** file using the **getconfig** command. You can also manually edit the **myrac.cfg** file, as long as you adhere to the parsing rules (see the "Parsing Rules" section of the *CMC User's Guide*).

NOTE: The **myrac.cfg** file does not contain password information. To include this password information in the file, you must input it manually.

deploy

NOTE: To use this subcommand, you must have **Server Administrator** privilege.

Description

Configures the static IP address, subnet mask, gateway, and password for the root user on the iDRAC for the specified server.

NOTE: You can also use **setniccfg** to configure a static IP address, subnet mask, and gateway, as well as DHCP, speed, and duplex properties. For more information, see "setniccfg" on page 80.

Usage

```
racadm deploy [-b <device> -o <no|yes>} -m <module>
-a -u root -p <password> [-s <ipaddress> <subnet>
<gateway>] [-d]

racadm deploy -m <module> -u root -p <password>
[-s <ipaddress> <subnet> <gateway>] [-b <device>
-o <no|yes>]

racadm deploy -m <module> -u root -p <password> [-d]
[-b <device> -o <no|yes>]

racadm deploy -a -u root -p <password> [-b <device>
-o <no|yes>]
```

Options

Table 2-5 describes the **deploy** subcommand options.

Table 2-5. deploy Subcommand Options

Option	Description
`-b` <*device*>	Specifies the first boot device; must be used with `-o`.
	Use with `-m` <*module*> to specify for a individual server, or with `-a` for all servers
	Legal values: *device*=None, PXE, HDD, CD-DVD, vFDD, vCD-DVD, iSCSI, SD, FDD
`-o` <*no*|*yes*>	Indicates if the server should boot from the device once; must be used with `-o`.
	Use with `-m` <*module*> to specify for a individual server, or with `-a` for all servers
`-a`	Creates and enables an iDRAC root user if it does not already exist, and is executed on all the existing servers in the chassis
`-u root`	Indicates that the <*password*> will be supplied for the root user on the server. `root` is a constant parameter, the only value that is valid with the -u option.

Table 2-5. deploy Subcommand Options

Option	Description
`-m <module>`	Specifies the server you want to configure. **Legal values:** `server-n`, where *n*=1–16
`-p <password>`	Specifies the password for the root user on the server.
`-s <ipaddress subnet gateway>`	Sets the IP address, subnet mask, and gateway for the specified server, separated by single spaces. • **ipaddress —** A string representing a valid IP address. For example, 192.168.0.20. • **subnet —** A string representing a valid subnet mask. For example, 255.255.255.0. • **gateway —** A string representing a valid subnet mask. For example, 192.168.0.1.
-d	Enables DHCP for the specified server.

Example

- `racadm deploy server-8 -s 192.168.0.20 255.255.255.0 192.168.0.1`

  `The server was deployed successfully.`

NOTE: The `deploy` command generates an error when used on the extension slot of a multi-slot server.

- `racadm deploy -m server-9 192.168.0.11 255.255.255.0 192.168.0.1`

  `ERROR: Server in slot 9 is an extension of the server in slot 1.`

feature

NOTE: To use this subcommand to deactivate FlexAddress™, you must have **Chassis Configuration Administrator** privilege. A user with login privileges can view status only.

Description

Displays all active chassis features. The information displayed includes feature name, date activated, and the serial number of the SD card used to activate the feature.

NOTE: The **feature** subcommand must be run while the chassis is powered off to deactivate FlexAddress or the command will return an error.

Usage

```
racadm feature [-s] [-d -c <featurename>]

<featurename>  = FlexAddress
```

Options

Table 2-6 describes the **feature** subcommand options.

Table 2-6. feature Subcommand Options

Option	Description
`-d -c` *<featurename>*	Deactivates feature.
`-s`	Lists active features.

Example

- `racadm feature -d -c flexaddress`

  `feature FlexAddress is deactivated on the chassis successfully`

- `racadm feature -s`

  `Feature = FlexAddress`

  `Date Activated = 8 April 2008 - 10:39:40`

  `Feature installed from SD card SN = 01122334455`

featurecard

NOTE: To use this subcommand, you must have **Chassis Configuration Administrator** privilege.

Description

Verifies proper SD card installation and displays SD card status. The table below lists the status messages returned by the command.

Table 2-7. Status Messages Returned by featurecard -s Command

Status Message	Actions
No feature card inserted.	Check the CMC to verify that the SD card was properly inserted. In a redundant CMC configuration, make sure the CMC with the SD feature card installed is the active CMC and not the standby CMC.
The feature card inserted is valid and contains the following feature(s) FlexAddress: The feature card is bound to this chassis	No action required.
The feature card inserted is valid and contains the following feature(s) FlexAddress: The feature card is bound to another chassis, svctag = ABC1234, SD card SN = 01122334455	Remove the SD card; locate and install the SD card for the current chassis.
The feature card inserted is valid and contains the following feature(s) FlexAddress: The feature card is not bound to any chassis	The feature card can be moved to another chassis, or can be reactivated on the current chassis. To reactivate on the current chassis, enter *racadm racreset* until the CMC module with the feature card installed becomes active.

Usage

```
racadm featurecard -s
```

Options

Table 2-8 describes the **featurecard** subcommand options.

Table 2-8. featurecard Subcommand Options

Option	Description
-s	Lists active SD card features and SD card status.

Example

```
racadm featurecard -s
```

- `racadm featurecard -s`

  ```
  The feature card inserted is valid and contains
  the following feature(s) FlexAddress: The feature
  card is bound to this chassis
  ```

fwupdate

NOTE: To use this subcommand, you must have **Chassis Configuration Administrator** privilege.

Description

Updates the firmware on the iKVM, primary CMC, the standby CMC if present, the server iDRACs, and the IOM infrastructure device. Also performs updates to iDRAC firmware when the existing firmware is corrupted.

NOTE: Running the **fwupdate** subcommand to update the firmware on the primary CMC causes all Telnet and Web connections to be dropped. To monitor the progress of the update, use the **-s** option. During update of all other modules, including the standby CMC, the primary CMC continues to run normally without resetting.

Usage

```
racadm fwupdate -g -u -a <tftp server ip address> {-f
<ftp server ip address> <username> <password>} -d
<path> -m <target>
```

```
racadm fwupdate -s
```

```
racadm fwupdate -c
```

Options

Table 2-9 describes the **fwupdate** subcommand options.

Table 2-9. fwupdate Subcommand Options

Option	Description
`-d` <*path*>	Specifies the source path where the firmware image resides. If you do not use the **-g** option, CMC uses the TFTP default directory path on the host for the file. If the **-g** option is used, defaults to the directory configured on the TFTP server
`-g`	Downloads the firmware update using the TFTP server.
`-u`	Performs firmware update operation (used with **-g**).
`-a` <*tftp server ip address*>	Specifies the TFTP server IP address used for the firmware image (used with **-g**).
`-f` <*ftp server ip address*> <*username*> <*password*>	Specifies the FTP server IP address used for the firmware image, along with the username and password. Can only be used with CMC, iKVM, and server iDRAC target devices.

Table 2-9. fwupdate Subcommand Options *(continued)*

Option	Description
`-m <target>`	Specifies the target, or device, to be updated. <*target*> is one of the following values: • `cmc-active` (default) • `cmc-standby` • `kvm` • `server-`*n* where *n* = 1–16 • `server-generation` where `generation` = iDRAC or iDRAC6 • `iominf-`*n* where *n* = 1–6 **NOTE:** The `cmc-active` and `cmc-standby` targets, as well as one or more `server-n` targets, can be entered together so that those devices can be updated together. **NOTE:** See "Updating the IOM Infrastructure Device Firmware" section of the "Using the CMC Web Interface" chapter of the *Chassis Management Controller 2.0 User's Guide* for additional information on the IOM infrastructure device firmware update process. **NOTE:** When the `server-generation` option is used, the CMC updates all updateable iDRAC's of that particular generation. **NOTE:** Verify that the update applied to servers for a particular generation has been validated for all affected server models.
`-s`	Displays the current status of the firmware update.
`-c`	Cancels the current firmware update.

NOTE: When using FTP, if the full path to the image file is provided on the CLI, then that path is used to locate that file on the host. If a path is not provided, then the home directory of the specified user is searched for the file if the host system is running Linux or some other variant of UNIX. If the host system is running Windows, the a default folder (like **ftproot**) is searched.

Example

- `racadm fwupdate -g -u -a 192.168.0.100 -d firmimg.cmc -m cmc-active`

  ```
  TFTP firmware update has been initiated. This update process may take several minutes to complete.
  ```

- `racadm fwupdate -g -u -a 192.168.0.100 -d firmimg.cmc -m server-iDRAC6`

  ```
  TFTP firmware update has been initiated. This update process may take several minutes to complete.
  ```

- `racadm fwupdate -g -u -a 192.168.0.100 -d firmimg.cmc -m server-iDRAC`

  ```
  TFTP firmware update has been initiated. This update process may take several minutes to complete.
  ```

- `racadm fwupdate -s -m cmc-active`

  ```
  Firmware update in progress.
  ```

NOTE: The `fwupdate` command generates an error when used on the extension slot of a multi-slot server.

- `racadm fwupdate -g -u -a 192.168.0.100 -d update -m server-9`

  ```
  ERROR: Server in slot 9 is an extension of the server in slot 1.
  ```

getassettag

NOTE: To use this subcommand, you must have **CMC Login User** privilege.

Description

Displays the asset tag for the chassis.

Usage

```
racadm getassettag [-m <module>]
```

Options

Table 2-10 describes the **getassettag** subcommand options.

Table 2-10. getassettag Subcommand Options

Option	Description
-m <*module*>	Specifies the module whose asset tag you want to view. **Legal value:** `chassis` Because there is only one legal value, you can obtain the same output if you do not include this option.

Example

- `racadm getassettag -m chassis`

  or

  `racadm getassettag`

  `chassis 78373839-33`

getchassisname

NOTE: To use this subcommand, you must have **CMC Login User** privilege.

Description

Displays the name of the chassis.

Usage

`racadm getchassisname`

Example

- `racadm getchassisname`

  `PowerEdge 2955`

getconfig

NOTE: To use this subcommand, you must have **Chassis Configuration Administrator** privilege.

Description

Displays CMC configuration parameters and allows you to save CMC configuration groups to a .cfg file.

Usage

```
racadm getconfig -g <groupName>

racadm getconfig -g <groupName> -o <object>

racadm getconfig -g <groupName> -i <index>

racadm getconfig -u <username>

racadm getconfig -h

racadm getconfig -f <filename>
```

Options

Table 2-11 describes the **getconfig** subcommand options.

Table 2-11. getconfig Subcommand Options

Option	Description
-g <*groupName*>	Specifies the group containing the object that is to be set. Must be used with the **-o** option.Table 2-12 lists the groups you can specify.
-o <*objectName*>	Specifies the object name that is written with the string <*value*>. Must be used with the **-g** option.
-i <*index*>	Specifies a unique group name. Only valid for indexed groups. The index is specified by the index value (a decimal integer from 1–16).
-u	Displays the group associated with a specific user.
-h	Displays a list of available configuration groups.
-f <*filename*>	Saves CMC configuration in a .cfg. file using the specified file name.

Property Groups

NOTE: "CMC Property Database Group and Object Definitions" on page 93, provides details about these property groups. See also "config" on page 23.

Table 2-12 lists the property groups that can be specified with the **getconfig** subcommand -g option.

Table 2-12. Property Groups for the getconfig Subcommand

Property Group	Description
idRacInfo (read only)	Displays version, build number, and product information for the CMC.
cfgLanNetworking	Configures network related properties.
cfgCurrentLanNetworking (read only)	Displays the current CMC NIC properties.
cfgRemoteHosts	Enables/disables and configures firmware updates and SMTP email alerting.
cfgUserAdmin	Configures CMC users.
cfgEmailAlert	Configures SMTP email alerts.
cfgSessionManagement	Sets the maximum number of remote sessions allowed to connect to CMC at a time.
cfgSerial	Enables/disables and configures serial console.
cfgNetTuning	Configures CMC network tuning.
cfgOobSnmp	Enables/disables and configures the SNMP agent for the CMC.
cfgTraps	Configures delivery of SNMP traps for a specific user.
cfgAlerting	Enables or disables SNMP event trap alerting and sets the event filter.
cfgRacTuning	Configures CMC tuning parameters.
cfgRacSecurity	Configures settings related to the CMC SSL certificate signing request (CSR).
cfgActiveDirectory	Configures Microsoft Active Directory properties.
cfgStandardSchema	Configures the Standard Schema settings for Active Directory.
cfgChassisPower	Configures power for the chassis
cfgServerInfo	Configures a server in the chassis
cfgKVMInfo	Displays information for and configures the iKVM

Output

This subcommand generates error output upon encountering either of the following:

- Invalid syntax, group name, object name, index, or other invalid database members
- RACADM CLI transport failures

If errors are not encountered, this subcommand displays the contents of the specified configuration.

Examples:

- `racadm getconfig -g cfgLanNetworking`

  Displays all of the configuration properties (objects) that are contained in the group **cfgLanNetworking** (see "cfgLanNetworking" on page 95).

- `racadm getconfig -g cfgserverinfo -o cfgservername 123456789012345`

  Saves the server slotname; the slotname can have a maximum of 15 characters (see "cfgServerName" on page 127).

- `racadm getconfig -f myrac.cfg`

  Saves all group configuration objects from the CMC to **myrac.cfg**.

- `racadm getconfig -h`

  Displays a list of the available configuration groups on the CMC.

- `racadm getconfig -u root`

  Displays the configuration properties for the user named root.

getdcinfo

NOTE: To use this subcommand, you must have **CMC Login User** privilege.

Description

Displays general I/O module and daughter card configuration information.

NOTE: Fabric verification for server DCs is performed only when the chassis is powered on. When the chassis is on standby power, the iDRACs on the server modules remain powered off and thus are unable to report the server's DC fabric type. The DC fabric type may not be reported in the CMC user interface until the iDRAC on the server is powered on.

Usage

```
racadm getdcinfo
```

NOTE: The example output below is for a system with multi-slot servers.

Example

- `racadm getdcinfo`

```
Group 1 I/O Type : Gigabit Ethernet
Group 2 I/O Type : FibreChannel 8
Group 3 I/O Type : Infiniband DDR

<IO#>                   <Type>                  <State>
switch-1                Gigabit Ethernet        OK
switch-2                Gigabit Ethernet        OK
switch-3                FibreChannel 8          OK
switch-4                FibreChannel 8          OK
switch-5                Infiniband DDR          OK
switch-6                Infiniband DDR          OK

<Server#>    <Presence>           <DC1 Type>        <DC1 State>
        <DC2 Type>       <DC2 State>

server-1       Present            FibreChannel 8       OK
       Infiniband DDR     OK
server-2       Not Present        None                 N/A
       None               N/A
server-3       Present            FibreChannel 8       OK
       Infiniband DDR     OK
server-4       Not Present        None                 N/A
       None               N/A
server-5       Not Present        None                 N/A
       None               N/A
server-6       Not Present        None                 N/A
       None               N/A
server-7       Not Present        None                 N/A
       None               N/A
```

```
server-8       Not Present        None                N/A
       None               N/A
server-9       Extension(1)       FibreChannel 8      OK
       Infiniband DDR     OK
server-10       Not Present        None                N/A
       None               N/A
server-11       Not Present        None                N/A
       None               N/A
server-12       Not Present        None                N/A
       None               N/A
server-13       Not Present        None                N/A
       None               N/A
server-14       Not Present        None                N/A
       None               N/A
server-15       Not Present        None                N/A
       None               N/A
server-16       Not Present        None                N/A
       None               N/A
```

getflexaddr

NOTE: To use this subcommand, you must have **CMC Login User** privilege.

Description

Displays enabled/disabled status for the entire chassis. If used with **-i**, the command displays MACs/WWN on a per slot basis.

NOTE: If FlexAddress is not activated on the chassis, the command displays server-assigned MAC/WWN addresses. If the slot is empty, the command will return an error message.

Usage

```
racadm getflexaddr [-i <slot#>]

<slot#>  = 1 to 16
```

Options

Table 2-13 describes the **getflexaddr** subcommand options.

Table 2-13. getflexaddr Subcommand Options

Option	Description
-i	Specifies the slot information to be displayed.

Example

- `racadm getflexaddr`

```
<Slot#>  <SlotName>    <Status>
  1       slot-1        enabled
  2       slot-2        enabled
  3       slot-3        disabled
  4       slot-4        disabled
  5       slot-5        disabled
  6       slot-6        disabled
  7       slot-7        disabled
  8       slot-8        disabled
  9       slot-9        disabled
  10      slot-10       disabled
  11      slot-11       disabled
  12      slot-12       disabled
  13      slot-13       disabled
  14      slot-14       disabled
  15      slot-15       disabled
  16      slot-16       disabled

<Fabric>   <Type>        <Status>
 Fabric-A  ethernet      disabled
```

```
     Fabric-B  iSCSI          enabled
     Fabric-C  fiber channel enabled
```

- `racadm getflexaddr -i 1`

  `Slot-1 flexaddress enabled = 1`

```
<Fabric>        <Type>                  <Server-Assigned>
   <Chassis-Assigned>
slot1-A1        Gigabit Ethernet        00:1C:23:CD:AC:D2(active)
   00:1E:C9:FF:E3:21
                iSCSI                   00:1C:23:CD:AC:D3(active)
   00:1E:C9:FF:E3:22
slot1-A2        Gigabit Ethernet        00:1C:23:CD:AC:D4(active)
   00:1E:C9:FF:E3:23
                iSCSI                   00:1C:23:CD:AC:D5(active)
   00:1E:C9:FF:E3:24
slot1-B1        Gigabit Ethernet        00:1D:09:71:B3:60
   00:1E:C9:FF:E3:25(active)
                iSCSI                   00:1D:09:71:B3:61
   00:1E:C9:FF:E3:26(active)
slot1-B2        Gigabit Ethernet        00:1D:09:71:B3:62
   00:1E:C9:FF:E3:27(active)
                iSCSI                   00:1D:09:71:B3:63
   00:1E:C9:FF:E3:28(active)
slot1-C1        Fiber Channel 4         10:00:00:00:C9:63:51:0E
   20:01:00:1E:C9:FF:E3:29(active)
slot1-C2        Fiber Channel 4         10:00:00:00:C9:63:51:0D
   20:02:00:1E:C9:FF:E3:29(active)
```

getioinfo

NOTE: To use this subcommand, you must have **CMC Login User** privilege.

Description

Displays general information about the I/O modules on the chassis.

NOTE: The fabric type may be any supported I/O fabric type, such as Ethernet, Fiber Channel, and Infiniband.

Usage

```
racadm getioinfo
```

Example

```
racadm getioinfo

<IO>       <Name>                 <Type>             <presence>
<POST>           <Power>
switch-1    Ethernet Passthrough     Gigabit Ethernet     Present
OK               ON
switch-2    N/A                      None                 Not Present
N/A              N/A
switch-3   N/A                       None                 Not Present
N/A              N/A
switch-4   N/A                       None                 Not Present
N/A              N/A
switch-5   N/A                       None                 Not Present
N/A              N/A
switch-6   N/A                       None                 Not Present
N/A                N/A
```

getkvminfo

NOTE: To use this subcommand, you must have **CMC Login User** privilege.

Description

Displays iKVM module information.

Usage

```
racadm getkvminfo
```

Example

```
racadm getkvminfo

<module>  <presence>    <model>             <FW Version>  <status>
KVM         Present      Avocent iKVM Switch     00.05.00.04   Ready
```

getled

NOTE: To use this subcommand, you must have **CMC Login User** privilege.

Description

Displays the LED settings on a module: blinking, not blinking, or unknown (for empty slots).

Usage

```
racadm getled -m <module>
```

Table 2-14 describes the **getled** subcommand options.

Table 2-14. getled Subcommand Options

Option	Description
-m <*module*>	Specifies the module whose LED settings you want to view. <*module*> can be one of the following: • `server-`*n* where *n*=1–16 • `switch-`*n* where *n*=1–6 • `chassis` • `cmc-active`

Examples

- `racadm getled -m server-10`

```
<module>      <state>
server-10     Blinking
```

- `racadm getled -m chassis`

```
<module>      <state>
server-10     Not blinking
```

- `racadm getled -m server-1`

```
<module>      <state>
server-1        ON
```

```
racadm getled -m server-9
```

```
<module>      <state>
server-9       Extension(1)
```

getmacaddress

NOTE: To use this subcommand, you must have **CMC Login User** privilege.

Description

Displays the MAC/WWN addresses for all modules or for a specified module.

Usage

```
racadm getmacaddress [-m <module>] [<-t iscsi]
racadm getmacaddress [-a]
```

Options

Table 2-15 describes the **getmacaddress** subcommand options.

Table 2-15. getmacaddress Subcommand Options

Option	Description
-m <*module*>	Specifies the module whose MAC address you want to view. <*module*> can be one of the following: • `chassis` • `server-`*n* where *n*=1–16 • `switch-`*n* where *n*=1–6
-t	Displays the iSCSI MAC addresses for all servers or the specified server if used with **-m** option.
-a	Displays the Ethernet and iSCSI MAC/WWN addresses for all iDRAC/LOMs/mezzanine cards. When FlexAddress is enabled for a particular slot, then the chassis-assigned MAC/WWN address is displayed.

Example

- `racadm getmacaddress -m server-1`

```
<Name>    <Presence>     <BMC MAC Address>
<NIC1 MAC Address>  <NIC2 MAC Address>
server-1  Present        00:11:43:FD:B7:2A
00:11:43:FD:B7:2A 00:11:43:FD:B7:2B
server-9  Extension(1)   N/A
00:11:43:FD:B7:2C 00:11:43:FD:B7:2D
```

- racadm getmacaddress

```
<Name>       <Presence>                    <BMC MAC Address>
<NIC1 MAC Address>       <NIC2 MAC Address>
CMC               Present                         N/A
00:1E:4F:1F:3C:58           N/A
Server-1          Present                    00:1E:4F:2A:AF:7B
00:1E:4F:2A:D3:97       00:1E:4F:2A:D3:99
Server-2          Present                    00:22:19:D2:1E:84
N/A                         N/A
Server-3          Not Present                     N/A
N/A                         N/A
Server-4          Present                    00:18:8B:FF:45:2A
00:18:8B:FF:AA:02       00:18:8B:FF:AA:04
Server-5          Present                    00:19:B9:FF:FE:E2
00:19:B9:FF:FC:0C       00:19:B9:FF:FC:0E
Server-6          Present                    00:22:19:D2:1D:D4
N/A                         N/A
Server-7          Present                    00:1E:4F:FF:FC:DC
00:1E:4F:FF:F0:B0       00:1E:4F:FF:F0:B2
Server-8          Not Present                     N/A
N/A                         N/A
Server-9          Not Present                     N/A
N/A                            N/A

Server-10         Not Present                     N/A
N/A                         N/A
Server-11         Not Present                     N/A
N/A                            N/A

Server-12         Not Present                     N/A
N/A                         N/A
Server-13         Present                    00:18:8B:FF:45:26
00:18:8B:FF:A9:F2       00:18:8B:FF:A9:F4
Server-14         Present                    00:22:19:D2:1E:A2
N/A                         N/A
Server-15         Extension(7)                    N/A
00:1E:4F:FF:F0:B4       00:1E:4F:FF:F0:B6
Server-16         Not Present                     N/A
N/A                         N/A
Switch-1          Present                         N/A
00:00:00:00:00:00           N/A
Switch-2          Present                         N/A
00:00:00:00:00:00           N/A
Switch-3          Present                         N/A
00:00:00:00:00:00           N/A
Switch-4          Present                         N/A
00:00:00:00:00:00           N/A
```

```
Switch-5          Present                          N/A
00:05:1E:08:EB:0B            N/A
Switch-6          Not Present                      N/A
N/A                              N/A
```

- `racadm getmacaddress -a`

```
<Name>         <Type>           <Presence>   <BMC MAC Address>
<NIC1 MAC Address>                 <NIC2 MAC Address>
CMC            N/A               Present         N/A
00:1E:4F:1F:3C:58                    N/A
Server-1-A     Gigabit Ethernet  Present     00:1E:4F:2A:AF:7B
00:1E:4F:2A:D3:97                    00:1E:4F:2A:D3:99
               iSCSI             Present
00:1E:4F:2A:D3:98                    00:1E:4F:2A:D3:9A
Server-1-B     Gigabit Ethernet  Present
Not Installed                        Not Installed
               iSCSI             Present
Not Installed                        Not Installed
Server-1-C     Fibre Channel 4   Present
Not Installed                        Not Installed
Server-2-A     Gigabit Ethernet  Present     00:22:19:D2:1E:84
N/A                                  N/A
               iSCSI             Present
N/A                                  N/A
Server-2-B     Gigabit Ethernet  Present
Not Installed                        Not Installed
               iSCSI             Present
Not Installed                        Not Installed
Server-2-C     Fibre Channel 4   Present
Not Installed                        Not Installed
Server-3       N/A               Not Present      N/A
N/A                                  N/A
Server-4-A     Gigabit Ethernet  Present     00:18:8B:FF:45:2A
00:18:8B:FF:AA:02                    00:18:8B:FF:AA:04
               iSCSI             Present
00:18:8B:FF:AA:03                    00:18:8B:FF:AA:05
Server-4-B     Gigabit Ethernet  Present
Not Installed                        Not Installed
               iSCSI             Present
Not Installed                        Not Installed
Server-4-C     Fibre Channel 4   Present
Not Installed                        Not Installed
Server-5-A     Gigabit Ethernet  Present     00:19:B9:FF:FE:E2
00:19:B9:FF:FC:0C                    00:19:B9:FF:FC:0E
               iSCSI             Present
00:19:B9:FF:FC:0D                    00:19:B9:FF:FC:0F
```

```
Server-5-B     Gigabit Ethernet  Present
Not Installed                       Not Installed
               iSCSI             Present
Not Installed                       Not Installed
Server-5-C     Fibre Channel 4   Present
Not Installed                       Not Installed
Server-6-A     Gigabit Ethernet  Present     00:22:19:D2:1D:D4
N/A                                 N/A
               iSCSI             Present
N/A                                 N/A
Server-6-B     Gigabit Ethernet  Present
Not Installed                       Not Installed
               iSCSI             Present
Not Installed                       Not Installed
Server-6-C     Fibre Channel 4   Present
Not Installed                       Not Installed
Server-7-A     Gigabit Ethernet  Present     00:1E:4F:FF:FC:DC
00:1E:4F:FF:F0:B0                   00:1E:4F:FF:F0:B2
               iSCSI             Present
00:1E:4F:FF:F0:B1                   00:1E:4F:FF:F0:B3
Server-7-B     Gigabit Ethernet  Present
00:1D:09:72:01:C8                   00:1D:09:72:01:CA
               iSCSI             Present
00:1D:09:72:01:C9                   00:1D:09:72:01:CB
Server-7-C     Fibre Channel 4   Present
21:00:00:1B:32:0E:CF:34             21:01:00:1B:32:2E:CF:34
Server-8       N/A               Not Present          N/A
N/A                                 N/A
Server-9       N/A               Not Present          N/A
N/A                                 N/A
Server-10      N/A               Not Present          N/A
N/A                                 N/A
Server-11      N/A               Not Present          N/A
N/A                                 N/A
Server-12      N/A               Not Present          N/A
N/A                                 N/A
Server-13-A    Gigabit Ethernet  Present     00:18:8B:FF:45:26
00:18:8B:FF:A9:F2                   00:18:8B:FF:A9:F4
               iSCSI             Present
00:18:8B:FF:A9:F3                   00:18:8B:FF:A9:F5
Server-13-B    Gigabit Ethernet  Present
00:1D:09:71:E0:78                   00:1D:09:71:E0:7A
               iSCSI             Present
00:1D:09:71:E0:79                   00:1D:09:71:E0:7B
Server-13-C    Fibre Channel 4   Present
21:00:00:1B:32:0E:EF:30             21:01:00:1B:32:2E:EF:30
```

```
Server-14-A    Gigabit Ethernet  Present    00:22:19:D2:1E:A2
N/A                                 N/A
               iSCSI             Present
N/A                                 N/A
Server-14-B    Gigabit Ethernet  Present
Not Installed                       Not Installed
               iSCSI             Present
Not Installed                       Not Installed
Server-14-C    Fibre Channel 4   Present
Not Installed                       Not Installed
Server-15-A    Gigabit Ethernet  Extension(7)          N/A
00:1E:4F:FF:F0:B4                   00:1E:4F:FF:F0:B6
                 iSCSI           Extension(7)          N/A
00:1E:4F:FF:F0:B5                   00:1E:4F:FF:F0:B7
Server-15-B    Gigabit Ethernet  Extension(7)          N/A
00:1D:09:71:E1:20                   00:1D:09:71:E1:22
               iSCSI             Extension(7)          N/A
00:1D:09:71:E1:21                   00:1D:09:71:E1:23
Server-15-C    Fibre Channel 4   Extension(7)          N/A
21:00:00:1B:32:17:3A:66             21:01:00:1B:32:37:3A:66
Server-16      N/A               Not Present           N/A
N/A                                 N/A
Switch-1       None              Present               N/A
00:00:00:00:00:00                   N/A
Switch-2       None              Present               N/A
00:00:00:00:00:00                   N/A
Switch-3       None              Present               N/A
00:00:00:00:00:00                   N/A
Switch-4       None              Present               N/A
00:00:00:00:00:00                   N/A
Switch-5       None              Present               N/A
00:05:1E:08:EB:0B                   N/A
Switch-6       N/A               Not Present           N/A
N/A                                 N/A
```

getmodinfo

NOTE: To use this subcommand, you must have **CMC Login User** privilege.

The service tag field is blank for modules that do not have service tags.

Description

Displays configuration and status information for all modules or a specified module (server, switch, CMC, fan unit, or power supply unit) in the chassis.

Usage

```
racadm getmodinfo [-m <module>] [-A]
```

Options

Table 2-16 describes the **getmodinfo** subcommand options.

Table 2-16. getmodinfo Subcommand Options

Option	Description
-m <*module*>	Specifies the module whose configuration and status information you want to view. The default command (no options) displays information about all major components in the chassis. <*module*> may be any of the following values: • `server-`*n* where *n*=1–16 • `switch-`*n* where *n*=1–6 • `CMC-`*n* where *n*=1 (primary), 2 (standby) • `fan-`*n* where *n*=1–9 • `ps-`*n* where *n*=1–6 • `kvm` • `chassis`
-A	Suppresses headers and labels in the output.

Example

- `racadm getmodinfo -m switch-1`

```
<module>      <presence>    <pwrState>    <health>       <svcTag>
Switch-1       Present          ON           OK            ABC1234
```

- `racadm getmodinfo`

```
<module>      <presence>    <pwrState>    <health>       <svcTag>
Chassis         Present       ON           Not OK        ABC1234
Fan-1           Present       ON            OK
Fan-2           Present       ON            OK
Fan-3           Present       ON            OK
Fan-4           Present       ON            OK
Fan-5           Present       ON            OK
Fan-6           Present       ON            OK
Fan-7           Present       ON            OK
Fan-8           Present       ON            OK
```

```
Fan-9           Present       ON            OK
PS-1            Present       Online        OK
PS-2            Not Present   N/A           N/A          N/A
PS-3            Present       Online        OK
PS-4            Not Present   N/A           N/A          N/A
PS-5            Not Present   N/A           N/A          N/A
PS-6            Not Present   N/A           N/A          N/A
CMC-1           Present       Primary       OK           N/A
CMC-2           Not Present   N/A           N/A          N/A
Switch-1        Not Present   N/A           N/A          N/A
Switch-2        Not Present   N/A           N/A          N/A
Switch-3        Not Present   N/A           N/A          N/A
Switch-4        Not Present   N/A           N/A          N/A
Switch-5        Not Present   N/A           N/A          N/A
Switch-6        Not Present   N/A           N/A          N/A
Server-1        Not Present   N/A           N/A          N/A
Server-2        Present       OFF           OK
Server-3        Present       ON            OK           S YW
Server-4        Present       ON            OK
Server-5        Present       ON            OK
Server-6        Present       ON            OK           1234567
Server-7        Present       ON            OK
Server-8        Not Present   N/A           N/A          N/A
Server-9        Not Present   N/A           N/A          N/A
Server-10       Extension(2)  N/A           N/A          N/A
Server-11       Not Present   N/A           N/A          N/A
Server-12       Present       ON            OK
Server-13       Not Present   N/A           N/A          N/A
Server-14       Present       ON            OK           0000015
Server-15       Present       ON            OK
Server-16       Present       ON            OK
KVM             Present       ON            OK
```

getniccfg

NOTE: To use this subcommand, you must have **CMC Login User** privilege.

Description

Displays network settings for a server, switch, or the chassis.

NOTE: The **getniccfg** subcommand will display an error message if the operation is not successful.

Usage

```
racadm getniccfg [-m <module>]
```

Options

Table 2-17 describes the **getniccfg** subcommand options.

Table 2-17. getniccfg Subcommand Options

Option	Description
-m <*module*>	Specifies the module whose network settings you want to view. <*module*> may be any of the following: • `chassis` • `server-`*n* where *n*=1–16 • `switch-`*n* where *n*=1–6 Default: `chassis`

Examples

```
racadm getniccfg
    NIC Enabled             = 1
    DHCP Enabled            = 1
    Static IP Address       = 192.168.0.120
    Static Subnet Mask      = 255.255.255.0
    Static Gateway          = 192.168.0.1
    Current IP Address      = 10.35.155.160
    Current Subnet Mask     = 255.255.255.0
    Current Gateway         = 10.35.155.1
    Speed                   = Autonegotiate
    Duplex                  = Autonegotiate
```

- `racadm getniccfg -m server-1`

```
    DHCP Enabled            = 0
    IP Address              = 192.168.0.135
    Subnet Mask             = 255.255.255.0
    Gateway                 = 192.168.0.1
```

- `racadm getniccfg -m server-9`

```
ERROR: Server in slot 9 is an extension of the
server in slot 1.
```

getpbinfo

NOTE: To use this subcommand, you must have **CMC Login User** privilege.

Description

Displays power budget status information.

Usage

```
racadm getpbinfo
```

Example

```
racadm getpbinfo

[Power Budget Status]
System Input Power               = 700 W
Peak System Power                = 0 W
Peak System Power Timestamp      = 01:08:23 01/27/2009
Minimum System Power             = 0 W
Minimum System Power Timestamp   = 20:18:30 01/27/2000
Overall Power Health             = Not OK
Redundancy                       = No
System Input Power Cap           = 7928 W
Redundancy Policy                = None
Dynamic PSU Engagement Enabled   = No
System Input Max Power Capacity = 0 W
Input Redundancy Reserve         = 0 W
Input Power Allocated to Servers = 0 W
Input Power Allocated to Chassis Infrastructure =
 51 watts
Total Input Power Available for Allocation     = 0 W
Standby Input Power Capacity                    = 0 W
```

```
[Chassis Power Supply Status Table]
<Name> <Presence> <Power State> <Input Current> <Input Volts>
<Output Rating>
PS1    Online        On           16.1 A          32 V
  2360 W
PS2    Not Present   Slot Empty   N/A             N/A
  N/A
PS3    Not Present   Slot Empty   N/A             N/A
  N/A
PS4    Not Present   Slot Empty   N/A             N/A
  N/A
PS5    Not Present   Slot Empty   N/A             N/A
  N/A
PS6    Not Present   Slot Empty   N/A             N/A
  N/A
[Server Module Power Allocation Table]
<Slot#><Server Name><PowerState><Allocation><Priority><Blade Type>
  1    SLOT-01        N/A       N/A          5         N/A
  2    SLOT-02        OFF       0 W          5       PowerEdgeM805
  3    SLOT-03        ON        164 W        5         N/A
  4    SLOT-04        ON        155 W        5
  5    SLOT-05        ON        180 W        5
  6    SLOT-06        ON        180 W        5       PowerEdgeM600
  7    SLOT-07        ON        170 W        5
  8    SLOT-08        N/A       N/A          5         N/A
  9    SLOT-09        N/A       N/A          5         N/A
  10   SLOT-10     Extension(2) N/A          5         N/A
  11   SLOT-11        N/A       N/A          5         N/A
  12   SLOT-12        ON        125 W        5      PowerEdgeM600
  13   SLOT-13        N/A       N/A          5         N/A
  14   SLOT-14        ON        342 W        5         N/A
  15   SLOT-15        ON        140 W        5
  16   SLOT-16        ON        125 W        5         N/A
```

getpminfo

NOTE: To use this subcommand, you must have **CMC Login User** privilege.

Description

Displays power management status information.

Usage

```
racadm getpminfo
```

Example

```
racadm getpminfo
[Real-Time Power Statistics]
System Input Power               = 600 W (188 BTU/hr)
Peak System Power                = 600 W (188 BTU/hr
Peak System Power Start Time     = 16:02:10 01/16/2008
Peak System Power Timestamp      = 06:32:55 01/26/2009
Minimum System Power             = 400 W (177 BTU/hr)
Minimum System Power Start Time = 22:43:21 01/21/2008
Minimum System Power Timestamp  = 06:32:55 01/26/2009
System Idle Power                = 68 W (188 BTU/hr)
System Potential Power           = 68 W (188 BTU/hr)
System Input Current Reading     = 31.2 A

[Real-Time Energy Statistics]
System Energy Consumption                = 6.4 kWh
System Energy Consumption Start Time     = 16:02:10
01/16/2008
System Energy Consumption Timestamp      = 16:02:10
01/16/2008

[System Power Status]
Chassis Power State                     = ON
Overall Power Health                    = OK
Redundancy                              = No

[System Power Policy Configuration]
System Input Power Cap                  = 7928 W (7928
BTU/hr | 10%)
Surplus for Peak Performance            = 7000 W (6130
BTU/hr)
Redundancy Policy                       = None
Dynamic PSU Engagement Enabled          = No

[Power Budgeting]
```

```
System Input Max Power Capacity                  = 0 W
Input Redundancy Reserve                         = 0 W
Input Power Allocated to Servers                 = 0 W
Input Power Allocated to Chassis Infrastructure = 51W
Total Input Power Available for Allocation       = 0 W
Standby Input Power Capacity                     = 0 W
```

getraclog

NOTE: To use this subcommand, you must have **CMC Login User** privilege.

Description

Displays the CMC log entries. The timestamp begins at midnight, January 1 and increases until the system boots. After the system boots, the system's timestamp is used.

Usage

```
racadm getraclog [-i]

racadm getraclog [-s <start record>] [-c <count>]
[-m]
```

Options

Table 2-18 describes the **getraclog** subcommand options.

Table 2-18. getraclog Subcommand Options

Open	Description
(none)	Displays the entire CMC log, including the record number, time stamp, source, and description of each event.
`-s` <*start record*>	Specifies the starting record used for the display
`-c` <*count*>	Specifies the maximum number of entries to be returned.
`-i`	Displays the number of entries in the CMC log.
-m	Displays one screen of information at a time and prompts the user to continue to next screen (similar to the UNIX **more** command).

NOTE: The -A and -o options do not generate additional output and are supported to provide backward compatibility for existing scripts.

Examples

- `racadm getraclog -c 5`

```
Apr 21 10:17:46 cmc : CMC1: active
Apr 21 10:17:46 cmc : CMC1: AC power up
Apr 21 10:17:48 cmc : CMC1: non redundant
Apr 21 12:17:48 cmc : Login success (username =
root)
Apr 23 23:59:11 cmc : session close PID 3291
succeeds
```

- `racadm getraclog -i`

```
Total Records: 171
```

getractime

NOTE: To use this subcommand, you must have **CMC Login User** privilege.

Description

Displays the date and time as currently set on the CMC.

Usage

```
racadm getractime [-d] [-z]
```

Options

Table 2-19 describes the **getractime** subcommand options.

Table 2-19. getractime Subcommand Options

Option	Description
(None)	Displays the date and time using the same format as the UNIX® date command.
`-d`	Displays the date and time as a sequence of numeric digits, in the following format: YYYYMMDDhhmmss.

Table 2-19. getractime Subcommand Options

Option	Description
-z	Appends the current active time zone name to the display. For example, PST8PDT (Western United States), 279 (Seoul), 329 (Sydney). For a listing of all time zones supported by CMC, type: `racadm setractime -z *`

Examples

- `racadm getractime`

  `Thu Dec  8 20:15:26 2005`
- `racadm getractime -z`

  `Thu Dec  8 20:15:29 2006 CST6CDT`
- `racadm getractime -d`

  `0051208201542.000000`

getredundancymode

NOTE: To use this subcommand, you must have **CMC Login User** privilege.

Description

Displays the redundancy status (Redundant or Non-Redundant) of the CMC.

Usage

```
racadm getredundancymode
```

Example

```
racadm getredundancymode
Redundant
```

getsel

NOTE: To use this subcommand, you must have **CMC Login User** privilege.

Description

Displays the system event log (SEL, also called the hardware log) entries. The default output display shows the record number, timestamp, severity, and description of each event.

Usage

```
racadm getsel [-i]

racadm getsel [-s <start record>] [-c <count>] [-m]
```

NOTE: The -A and -o options do not generate additional output and are supported to provide backward compatibility for existing scripts.

Options

Table 2-20 describes the getsel subcommand options.

Table 2-20. getsel Subcommand Options

Option	Description
`-s` <*start record*>	Specifies the starting record used for the display
`-c` <*count*>	Provides the maximum count of entries to be returned.
`-i`	Displays the number of entries in the CMC log.
-m	Displays one screen of information at a time and prompts the user to continue to next screen (similar to the UNIX **more** command).

Example

- `racadm getsel -i`

  `Total Records: 28`

- `racadm getsel -s 1 -c 1`

  ```
  Sun Sep 16 02:51:11 2007 normal Server Blade 12
  Presence module sensor for Server Blade, device
  inserted was asserted
  ```

getsensorinfo

NOTE: To use this subcommand, you must have **CMC Login User** privilege.

Description

Displays status for the specified sensors.

Usage

```
racadm getsensorinfo
```

Examples

```
racadm getsensorinfo
```

```
<senType> <Num> <sensorName> <status> <reading> <units> <lc> <uc>
FanSpeed   1     Fan-1         OK      4768      rpm    2344 14500
FanSpeed   2     Fan-2         OK      4873      rpm    2344 14500
FanSpeed   3     Fan-3         OK      4832      rpm    2344 14500
FanSpeed   4     Fan-4         OK      4704      rpm    2344 14500
FanSpeed   5     Fan-5         OK      4833      rpm    2344 14500
FanSpeed   6     Fan-6         OK      4829      rpm    2344 14500
FanSpeed   7     Fan-7         OK      4719      rpm    2344 14500
FanSpeed   8     Fan-8        Not OK   1         rpm    2344 14500
FanSpeed   9     Fan-9         OK      4815      rpm    2344 14500

<senType> <Num> <sensorName> <status> <reading> <units> <lc> <uc>
Temp        1   Ambient_Temp  OK        22      celcius  N/A  40

<senType>    <Num>      <sensorName>      <status> <AC-OK status>
PWR            1             PS-1         Online         OK
PWR            2             PS-2         Online         OK
PWR            3             PS-3         Online         OK
PWR            4             PS-4         Slot Empty     N/A
PWR            5             PS-5         Failed         OK
PWR             6               PS-6           Slot Empty       N/A
```

getslotname

NOTE: To use this subcommand, you must have **CMC Login User** privilege.

Description

Displays the name of all 16 slots, or of a specified slot (indicated by slot number) in the chassis.

Usage

```
racadm getslotname
racadm getslotname -i <slot ID>
```

Options

Table 2-21 describes the **getslotname** subcommand options.

Table 2-21. getslotname Subcommand Options

Option	Description
(None)	Displays the slot name for all 16 slots in the chassis.
`-i <`*slot ID*`>`	Specifies the ID of the slot. **Legal values:** 1–16

Example

- `racadm getslotname`

```
<Slot #> <Slot Name>
   1       SLOT-01
   2       Webserver01
   3       WebServer3
   4       SLOT-04
   5       SLOT-05
   6       SLOT-06
   7       SLOT-07
   8       SLOT-08
   9       SLOT-09
  10       SLOT-10
  11       SLOT-11
  12       SLOT-12
  13       SLOT-13
  14       SLOT-14
  15       SLOT-15
  16       SLOT-16
```

- `racadm getslotname -i 1`

```
Webserver-1
```

getssninfo

NOTE: To use this subcommand, you must have **CMC Login User** privilege.

Description

Displays information about an active user session, including user name, IP address (if applicable), and session type (for example, serial, SSH, or Telnet), and login date and time. Options allow you to view a list of currently active or pending users and summary session table information. The summary information provides the total number of sessions in each defined Session Manager state:

- Valid
- Available

Usage

```
racadm getssninfo [-u <username> | *] [-A]
```

Options

Table 2-22 describes the getssninfo subcommand options.

Table 2-22. getssninfo Subcommand Options

Option	Description
-u <*username*> -u *	Limits the printed output to detailed session records for the specified user. If an asterisk (*) is given as the user name, all users are listed. Summary information is not displayed when this option is specified.
-A	Suppresses headers and labels in the output.

Examples

- `racadm getssninfo`

```
Type             User             IP Address
  Login Date/Time
SSH              root             10.9.72.252
  11/28/2007 23:13:32
KVM              root             169.254.31.30
  11/28/2007 18:44:51
SSH              root             10.9.72.252
  11/28/2007 23:22:37
```

- `racadm getssninfo -A`

```
\Telnet\root\143.166.174.19\05/01/2007 02:13:59
```

- `racadm getssninfo -A -u *`

```
\KVM\root\169.254.31.30\11/28/2007 18:44:51
\SSH\root\10.9.72.252\11/28/2007 23:22:37
```

getsvctag

NOTE: To use this subcommand, you must have **CMC Login User** privilege.

Description

Displays the service tag information, if present, for one or all modules on the chassis.

Usage

```
racadm getsvctag [-m <module>]
```

Options

Table 2-23 describes the **getsvctag** subcommand options.

Table 2-23. getsvctag Subcommand Options

Option	Description
(none)	Displays service tags for all modules on the chassis (including the chassis).

Table 2-23. getsvctag Subcommand Options *(continued)*

Option	Description
`-m <`*module*`>`	Displays the service tag for the specified module. <*module*> may be one of the following: • `server-`*n* where *n*=1–16 • `switch-`*n* where *n*=1–6 • `chassis`

Examples

- `racadm getsvctag`

```
<module>        <Servicetag>
Chassis
switch-1        ABC1234
switch-2
switch-3
switch-4
switch-5
switch-6
server-1        abc123
server-2
server-3        N/A
server-4
server-5
server-6        N/A
server-7        0000014
server-8
server-9        Extension(1)
server-10       N/A
server-11       N/A
server-12
server-13       N/A
server-14
server-15       1234567
server-16       N/A
```

- `racadm getsvctag -m switch-1`

```
<module>        <Servicetag>
switch-1        ABC1234
```

getsysinfo

NOTE: To use this subcommand, you must have **CMC Login User** privilege.

Description

Displays information related to the CMC.

Usage

```
racadm getsysinfo [-d] [-c] [-A]
```

Options

Table 2-24. getsysinfo Subcommand Options

Option	Description
`-d`	Displays CMC information.
`-c`	Displays chassis information.
`-A`	Suppresses headers and labels in the output.

Example

- `racadm getsysinfo -c`

```
CMC Information:
CMC Date/Time               = Tue, 01 May 2007 02:33:47
Primary CMC Location        = CMC-2
Primary CMC Version         = 1.3 (Build 06.12)
Standby CMC Version         =
Last Firmware Update        = Thu, 01 May 2007 02:12:43
Hardware Version            = 15
Current IP Address          = 143.166.152.39
Current IP Gateway          = 143.166.152.1
Current IP Netmask          = 255.255.255.0
DHCP enabled                = 1
MAC Address                 = 00:11:43:FD:B4:39
Current DNS Server 1        = 0.0.0.0
Current DNS Server 2        = 0.0.0.0
DNS Servers from DHCP       = 0
```

```
Register DNS CMC Name       = 1
DNS CMC Name                = cmc-51186
Current DNS Domain          =
```

- `racadm getsysinfo -A`

```
"CMC Information:"
"Tue, 01 May 2007 02:33:47 AM
"1.3 (Build 06.12)" "" "Thu, 01 May 2007 02:12:43" "15"
"143.166.152.39" "143.166.152.1" "255.255.255.0" "1"
"00:11:43:FD:B4:39" "0.0.0.0" "0.0.0.0" "0" "1" "cmc-51186" ""
```

gettracelog

NOTE: This command is for Dell internal use only.

NOTE: To use this subcommand, you must have **CMC Login User** privilege.

Description

Displays the diagnostic trace log for the CMC. The default output display shows the record number, timestamp, source, and description. The timestamp begins at midnight, January 1 and increases until the system boots. During system boot, the timestamp displays as `<system boot>`. After the system boots, the system's timestamp is used.

Usage

```
racadm gettracelog [-i]

racadm gettracelog [-s <start record>] [-c <count>]
[-m]
```

Options

Table 2-25 describes the gettracelog subcommand options.

Table 2-25. gettracelog Subcommand Options

Option	Description
(none)	Displays the CMC trace log.
`-s`	Specifies the starting record to display.
`-c`	Specifies the number of records to display.
`-i`	Displays the number of entries in the CMC trace log.

Table 2-25. gettracelog Subcommand Options

Option	Description
-m	Displays one screen of information at a time and prompts the user to continue to next screen (similar to the UNIX **more** command).

Example

- `racadm gettracelog -c 5`

  ```
  Nov 28 04:40:41 cmc syslogd 1.4.1: restart.
  Nov 28 04:40:41 cmc fupmuxd[150]: Start Status Op:
  priv=0x00000000 ID:[01 01 0x00]
  Nov 28 04:40:41 cmc fupmuxd[150]: Active-CMC
  Status: 0x04000000
  Nov 28 04:40:52 cmc webcgi[28776]: postFWUpload:
  rc = 10, file size = 0
  Nov 28 04:40:52 cmc fupmuxd[150]: Start Status Op:
  priv=0x00000000 ID:[01 01 0x00]
  ```

- `racadm gettracelog -i`

  ```
  Total Records: 275
  ```

getversion

NOTE: To use this subcommand, you must have **Login** privilege.

Description

Displays the current software version, model and generation information, and whether or not the target device can be updated.

Usage

```
racadm getversion -m <target>

racadm getversion
```

Options

Table 2-25 describes the getversion subcommand options.

Table 2-26. getversion Subcommand Options

Option	Description
(none)	Displays the version information for all targets or devices.
-m <*target*>	Specifies the target, or device, for which to retrieve the version information. <*target*> is one of the following: `server-`*n* where *n* = 1-16

Example

- `racadm getversion -m server-15`

```
<server>  <iDRAC version>  <model name>  <Gen>  <Updatable>
server-15   2.00(Build 10)  PowerEdgeM605 iDRAC      N
```

- `racadm getversion`

```
<server>  <iDRAC version>  <model name>  <Gen>  <Updatable>
server-1   1.11            PowerEdgeM600  iDRAC      N
server-2   1.4             M905           iDRAC      Y
server-15   1.4               M605             iDRAC       Y
```

help and help <command>

NOTE: To use this subcommand, you must have **CMC Login User** privilege.

Description

The **help** command lists all of the subcommands you can use with the racadm command and a one-line description of each subcommand.

help <*command*> displays the syntax for the specified command.

NOTE: You can also use the **?** and **?** <*command*> commands to obtain the same information.

Usage

```
racadm help
```

```
racadm help <subcommand>
```

Examples

- `racadm help getsysinfo`

```
getsysinfo -- display general CMC and system
information

Usage:

racadm getsysinfo [-d] [-c] [-A]

-d : show CMC information
-c : show chassis information
-A : do not show headers or labels
```

ifconfig

NOTE: To use this subcommand, you must have **Administrator** privilege.

Description

Display network interface information.

Usage

```
racadm ifconfig
```

Examples

```
racadm ifconfig

eth0      Link encap:Ethernet  HWaddr 00:55:AB:39:10:
0F
          inet addr:10.35.155.160  Bcast:10.35.155.25
5  Mask:255.255.255.0
          UP BROADCAST RUNNING MULTICAST  MTU:1500  M
etric:1
          RX packets:457405 errors:0 dropped:0 overru
ns:0 frame:0
          TX packets:16321 errors:0 dropped:0 overrun
s:0 carrier:0
```

```
          collisions:0 txqueuelen:0
          RX bytes:51383270 (49.0 MiB)  TX bytes:6573
645 (6.2 MiB)
```

netstat

NOTE: To use this subcommand, you must have **Administrator** privilege.

Description

Display routing table and network statistics.

Usage

```
racadm netstat
```

Examples

```
racadm netstat
```

```
Kernel IP routing table
Destination     Gateway         Genmask         Flags
   MSS Window  irtt Iface
10.35.155.0     *               255.255.255.0   U
     0 0          0 eth0
default         10.35.155.1     0.0.0.0         UG
     0 0          0 eth0
```

ping

NOTE: To use this subcommand, you must have **Administrator** privilege.

Description

Send ICMP echo packets to a destination on the network.

Usage

```
racadm ping <IP address>
```

Examples

```
racadm ping 10.9.72.252
```

```
PING 10.9.72.252 (10.9.72.252): 56 data bytes
64 bytes from 10.9.72.252: icmp_seq=0 ttl=121 time=2.9
ms

--- 10.9.72.252 ping statistics ---
1 packets transmitted, 1 packets received, 0 percent
packet loss
round-trip min/avg/max = 2.9/2.9/2.9 ms
```

racdump

NOTE: To use this subcommand, you must have **Administrator** privilege.

Description

Displays the comprehensive chassis status and configuration state information, as well as historic event logs. Used for post deployment configuration verification and during debugging sessions.

Racdump includes the following subsystems and aggregates the following RACADM commands:

Subsystem	RACADM Command
General System/RAC information	getsysinfo
Session information	getssinfo
Sensor information	getsensorinfo
Switches information (IO Module)	getioinfo
Mezzanine card information (Daughter card)	getdcinfo
All modules information	getmodinfo
Power budget information	getpbinfo
KVM information	getkvminfo
NIC information (CMC module)	getniccfg
Redundancy information	getredundancymode
Trace log information	gettracelog

Subsystem	RACADM Command
RAC event log	gettraclog
System event log	getsel

Usage

```
racadm racdump
```

Example

```
racadm racdump

================================================
=========================
 General System/RAC Information
================================================
=========================

CMC Information:
CMC Date/Time           =
 Wed, 28 Nov 2007 11:55:49 PM
Primary CMC Version     = X08
Standby CMC Version     = N/A
Last Firmware Update    = Wed Nov 21 21:37:56 2007
Hardware Version        = 2
Current IP Address      = 10.35.155.160
Current IP Gateway      = 10.35.155.1
Current IP Netmask      = 255.255.255.0
DHCP Enabled            = 1
MAC Address             = 00:55:AB:39:10:0F
Current DNS Server 1    = 0.0.0.0
Current DNS Server 2    = 0.0.0.0
DNS Servers from DHCP   = 0
Register DNS CMC Name   = 0
DNS CMC Name            = cmc-servicetag
Current DNS Domain      =


Chassis Information:
System Model            = PowerEdgeM1000eControlPanel
```

```
System AssetTag          = 00000
Service Tag              =
Chassis Name             = Dell Rack System
Chassis Location         = [UNDEFINED]
Power Status             = ON

================================================================
==========================
 Session Information
================================================================
==========================

Type    User     IP Address      Login Date/Time
SSH     root     10.9.72.252     11/28/2007 23:40:53
KVM     root     169.254.31.30   11/28/2007 18:44:51



================================================================
==========================
 Sensor Information
================================================================
==========================

<senType> <Num> <sensorName> <status> <reading> <units> <lc> <uc>
FanSpeed    1    Fan-1         OK      14495    rpm     7250 14500
FanSpeed    2    Fan-2         OK      14505    rpm     7250 14500
FanSpeed    3    Fan-3         OK       4839    rpm     2344 14500
FanSpeed    4    Fan-4         OK      14527    rpm     7250 14500
FanSpeed    5    Fan-5         OK      14505    rpm     7250 14500
FanSpeed    6    Fan-6         OK       4835    rpm     2344 14500
FanSpeed    7    Fan-7         OK      14521    rpm     7250 14500
FanSpeed    8    Fan-8       Not OK        1    rpm     7250 14500
FanSpeed    9    Fan-9         OK       4826    rpm     2344 14500

<senType> <Num> <sensorName> <status> <reading> <units> <lc> <uc>
Temp        1   Ambient_Temp    OK       21     celcius  N/A  40
```

```
<senType> <Num>  <sensorName>  <status>   <AC-OK status>
PWR         1       PS-1        Online          OK
PWR         2       PS-2        Online          OK
PWR         3       PS-3        Online          OK
PWR         4       PS-4       Slot Empty       N/A
PWR         5       PS-5        Failed          OK
PWR         6       PS-6        Slot Empty      N/A
```

racreset

NOTE: To use this subcommand, you must have **Administrator** privilege.

Description

Issues a soft or hard reset to the CMC. The reset event is written into the CMC log. When this command is executed without the **hard** option, racreset executes a soft reset. A hard reset performs a deep reset operation on the CMC. A hard reset should only be performed as a last-case resort to recover the CMC.

CAUTION: You must reboot your system after performing a hard reset of the CMC. See "racreset" on page 73.

CAUTION: When you issue a racreset subcommand, the CMC may require up to one minute to return to a usable state.

Usage

```
racadm racreset [hard | soft]
```

Options

Table 2-27 describes the **racreset** subcommand options.

Table 2-27. racreset Subcommand Options

Option	Description
`hard`	A *hard* reset performs a deep reset operation on the remote access controller. A hard reset should only be used as a last-case resort for CMC recovery purposes.
`soft`	A *soft* reset performs a graceful reboot operation on the CMC.

Example

- `racadm racreset`

  Executes a soft reset sequence on the CMC.

- `racadm racreset soft`

  Executes a soft reset sequence on the CMC.

- `racadm racreset hard`

  Executes a hard reset sequence on the CMC.

racresetcfg

NOTE: To use this subcommand, you must have **Administrator** privilege.

NOTE: Power off the chassis before running this command.

Description

Removes all database property entries on the CMC or iKVM and restores the default factory configuration. After restoring the database properties, the CMC resets automatically. The iKVM also resets automatically when `racresetcfg` is used to restore its default properties.

CAUTION: This command deletes your current CMC configuration and resets the CMC and serial configuration to the original default settings. After reset, the default name and password are root and calvin, respectively, and the IP address is 192.168.0.120. If you issue racresetcfg from a network client (for example, a supported Web browser or Telnet/SSH), you must use the default IP address.

Usage

```
racadm racresetcfg [-m <module>]
```

Options

Table 2-28 describes the **racresetcfg** subcommand options.

Table 2-28. racresetcfg Subcommand Options

Option	Description
-m <*module*>	Specifies the module whose database properties you want to reset. <*module*> may be any of the following: • `chassis` • `kvm` • server-*n* where n=1 - 16 Default: `chassis`

Example

```
racadm racresetcfg -m kvm

The configuration has initiated restoration to factory
defaults.
```

serveraction

NOTE: To use this subcommand, you must have **Administrator** privilege.

Description

Executes a server reset, power-up, power-down, or powercycle on the specified server.

Usage

```
racadm serveraction [-m <server-n>] <action>

racadm serveraction [-a] <action>
```

Options

Table 2-29 describes the **serveraction** subcommand options.

Table 2-29. serveraction Subcommand Options

Option	Description
`-m server-`*n*	Specifies the server by its slot number (1–16) in the chassis. For example, server-2.
-a	The specified power action is performed on all servers
<*action*>	Specifies the action. <*action*> may be one of the following: • `powerdown` — Powers down the server. • `powerup` — Powers up the server. • `powercycle` — Issues a power-cycle operation on the server. • `hardreset` — Performs a reset (reboot) operation on the server. • `graceshutdown` — Shuts down the server gracefully. • `powerstatus` — Displays current power status (Online, Off) of the server.

Example

- ```
  racadm serveraction -m server-1 powerup
  Server power operation successful.
  ```
- ```
  racadm serveraction -m server-9 powerup
  ERROR: Server in slot 9 is an extension of the
  server in slot 1.
  ```

setchassisname

NOTE: To use this subcommand, you must have **Administrator** privilege.

Description

Sets the name of the chassis in the LCD.

Usage

```
racadm setchassisname <name>
```

Example

```
racadm setchassisname dellchassis-1
The chassis name was set successfully.
```

setassettag

NOTE: To use this subcommand, you must have **Administrator** privilege.

Description

Sets the N-byte ASCII asset tag for the chassis.

Usage

```
racadm setassettag -m chassis <asset tag>
```

Options

Table 2-30 describes the **setassettag** subcommand options.

Table 2-30. setassettag Subcommand Options

Option	Command
-m <*module*>	Specifies the module whose asset tag you want to set. **Legal value:** `chassis` **NOTE:** Because there is only one legal value, you can obtain the same output if you do not include this option.

Example

Input:

```
racadm setassettag -m chassis 783839–33
```

or

```
racadm setassettag 783839–33
The asset tag was changed successfully.
```

setflexaddr

NOTE: To use this subcommand, you must have **Chassis Configuration Administrator** privilege.

Description

Enables/disables FlexAddress on a particular slot/fabric.

NOTE: If the fabric type is determined to be Infiniband, the operation is canceled and the command returns an error. If the FlexAddress feature is not activated, the command will return an error.

NOTE: The server must be powered off to change the slot state. All servers must be powered off to change the fabric state.

Usage

```
racadm setflexaddr [-i <slot#> <state>]
[-f <fabricName> <state>]

<slot#> =  1 to 16

<fabricName> =  A, B, C

<state> =  0 or 1
```

where 0 is disable and 1 is enable

Options

Table 2-31 describes the **setflexaddr** subcommand options.

Table 2-31. setflexaddr Subcommand Options

Option	Description
`-i` <*slot#*> <*state*>	Enables/disables FlexAddress for the specified slot.
`-f` <*fabricName*> <*state*>	Enables/disables FlexAddress for the specified fabric.

Example

- `racadm setflexaddr -i 1 0`

```
Slot 1 FlexAddress state set successfully
```

- `racadm setflexaddr -f A 1`
  `Fabric A FlexAddress state set successfully`

setled

NOTE: To use this subcommand, you must have **Administrator** privilege.

Description

Sets the state (blinking or not blinking) of the LED on the specified module.

Usage

`racadm setled -m <module> -l <ledState>`

Options

Table 2-32 describes the **setled** subcommand options.

Table 2-32. setled Subcommand Options

Option	Description
-m <*module*>	Specifies the module whose LED you want to configure. <*module*> can be one of the following: • `server-`*n* where *n*=1–16 • `switch-`*n* where *n*=1–6 • `cmc-active` • `chassis`
-l <*ledstate*>	Specifies whether the LED should blink. <*ledstate*> can be one of the following: • `0` — no blinking • `1` — blinking

Example

- `racadm setled -m server-1 -l 1`
  `LED state was set successfully.`

- `racadm setled -m server-9 -1 1`

  `ERROR: Server in slot 9 is an extension of the server in slot 1.`

setniccfg

NOTE: To use this subcommand, you must have **Administrator** privilege.

Description

Sets the IP configuration for the specified module.

Usage

`racadm setniccfg [-m <module>] [-d] [-o] [-s <ipaddress> <subnetmask> <gateway>] [-k <speed> <duplex>]`

`racadm setniccfg [-m <module>] -d`

`racadm setniccfg [-m <module>] -s <ipAddress> <netmask> <gateway>`

`racadm setniccfg [-m <module>] -o`

`racadm setniccfg [-m <module>] -k [<speed> <duplex>]`

Options

Table 2-33 describes the **setniccfg** subcommand options.

Table 2-33. setniccfg Subcommand Options

Option	Description
`-m <module>`	Specifies the module for which you want to set the IP configuration. <*module*> can be any of the following: • `server-`*n* where *n*=1–16 • `switch-`*n* where *n*=1–6 • `chassis` If the **-m** option is excluded, the module defaults to `chassis`.
`-d`	Enables DHCP for the Ethernet management port (default is DHCP enabled).
`-s`	Enables static IP settings by specifying the IP address, subnet mask, and gateway. <*ipAddress*>, <*netmask*>, and <*gateway*> must be typed as dot-separated strings. If this option is not supplied, the existing static settings are used.
`-o`	Disables the Ethernet management port completely.
`-k`	Specifies the speed and duplex for the NIC. • Speed: `10`, `100` • Duplex: `half`, `full` • (no value supplied): Autonegotiate

Examples

- `racadm setniccfg -m server-1 143.166.152.39 143.166.152.1 255.255.255.0`

  `OK`

- `racadm setniccfg -m server-9 143.166.152.39 143.166.152.1 255.255.255.0`

  `ERROR: Server in slot 9 is an extension of the server in slot 1.`

- `racadm setniccfg -k 100 full`

```
Speed and Duplex settings modified successfully.
```

setractime

NOTE: To use this subcommand, you must have **Administrator** privilege.

Description

Sets the date and time on the CMC.

Usage

```
racadm setractime -d <yyyymmddhhmmss.mmmmmmsoff>
racadm setractime -l <yyyymmddhhmmss> [-z <zone>]
```

Options

Table 2-34 describes the **setractime** subcommand options.

Table 2-34. setractime Subcommand Options

Option	Description
-d	Sets the time in the string *yyyymmddhhmmss.mmmmmmsoff* where: • *yyyy* is a the year • *mm* is the month • *dd* is the day • *hh* is the hour • *mm* is the minutes • *ss* is the seconds • *mmmmmm* is the number of microseconds • *s* is a + (plus) sign or a - (minus) sign, which indicates the sign of the offset • *off* is the offset in minutes **NOTE:** The *off* is the offset in minutes from GMT and must be in 15-minute increments.

Table 2-34. setractime Subcommand Options

Option	Description
-z <*zone*>	Sets the time zone. For example, PST8PDT (Western United States), 279 (Seoul), 329 (Sydney). To see a list of time zones, type: `racadm setractime -z *`
-l	Sets the local date and time in the string *yyyymmddhhmmss* where: • *yyyy* is a the year • *mm* is the month • *dd* is the day • *hh* is the hour • *mm* is the minute • *ss* is the second **NOTE:** Setting the time using the -l and -z options is recommended. This command format allows the CMC to fully support local time zones, including the ability to automatically adjust the CMC time to the local Daylight Savings Time.

Example

The **setractime** subcommand supports dates ranging from 1/1/1970 00:00:00 through 12/31/2030 23:59:59. To set the date to October 24, 2007 at 3:02:30 PM PST:

```
racadm setractime -l 20071024150230 -z PST8PDT
The time was set successfully.
```

setslotname

NOTE: To use this subcommand, you must have **Administrator** privilege.

NOTE: See the "Editing Slot Names" section in the *CMC User's Guide* for rules for selecting slot names.

Description

Sets the name of a slot in the chassis.

Usage

```
racadm setslotname -i <slotID> <slotname>
```

Options

Table 2-35 describes the **setslotname** subcommand options.

Table 2-35. setslotname Subcommand Options

Option	Description
<*slotID*>	Indicates the location of the slot in the chassis. **Legal values:** 1–16
<*slotname*>	The new name to assign to the slot.

Example

```
racadm setslotname -i 3 mserver3
The slot name was set successfully.
```

setsysinfo

NOTE: To use this subcommand, you must have **Administrator** privilege.

Description

Sets the name or location of the chassis.

Usage

```
racadm setsysinfo [-c chassisname|chassislocation]
<string>
```

Option

Table 2-36 describes the **setsysinfo** subcommand options.

Table 2-36. setsysinfo Subcommand Options

Option	Description
<*string*>	Indicates the N-byte ASCII chassis name or location.

Example

```
racadm setsysinfo -c chassisname "Dell Rack System"
The chassis name was set successfully.
```

sslcertdownload

NOTE: To use this subcommand, you must have **Chassis Configuration Administrator** privilege.

Description

Downloads an SSL certificate from the RAC to the client's file system.

Usage

```
racadm sslcertdownload -t <type> -f <filename>
```

Options

Table 2-37 describes the **sslcertdownload** subcommand options.

Table 2-37. sslcertdownload Subcommand Options

Option	Description
-t	Specifies the type of certificate you want to download: 1 — server certificate 2 — Microsoft Active Directory certificate
-f	Specifies the local file path and file name where you want to save the certificate.

Restrictions

The **sslcertdownload** subcommand can only be executed from a remote client.

Example

```
racadm sslcertdownload -t 1 -f c:\cert\cert.txt
Certificate successfully downloaded from the CMC.
```

sslcertupload

NOTE: To use this subcommand, you must have **Chassis Configuration Administrator** privilege.

Description

Uploads a custom SSL server or certificate authority-signed certificate from the client to the CMC.

Usage

```
racadm sslcertupload -t <type> -f <filename>
```

Options

Table 2-38 describes the **sslcertupload** subcommand options.

Table 2-38. sslcertupload Subcommand Options

Option	Description
`-t <`*type*`>`	Specifies the type of certificate to upload: `1` — Server certificate `2` — Certificate authority-signed certificate
`-f <`*filename*`>`	Specifies the file name of the certificate to be uploaded.

Restrictions

The **sslcertupload** subcommand can only be executed from a local client.

Example

```
racadm sslcertupload -t 1 -f c:\cert\cert.txt
Certificate successfully uploaded to the CMC.
```

sslcertview

NOTE: To use this subcommand, you must have **Administrator** privilege.

Description

Displays the SSL server or certificate authority-signed certificate that exists on the CMC.

Usage

```
racadm sslcertview -t <type> [-A]
```

Options

Table 2-39 describes the **sslcertview** subcommand options.

Table 2-39. sslcertview Subcommand Options

Option	Description
`-t <`*type*`>`	Specifies the type of certificate to view, either the Microsoft Active Directory certificate or server certificate. `1` — server certificate `2` — Microsoft Active Directory certificate
`-A`	Suppresses headers and labels in the output.

Restrictions

The **sslcertupload** subcommand can only be executed from a local client.

Examples

```
racadm sslcertview -t 1

Serial Number            : 00

Subject Information:
Country Code (CC)        : US
Locality (L)             : Round Rock
Organization (O)         : Dell Inc.
Organizational Unit (OU) : OpenCMC Group
Common Name (CN)         : CMCdefault

Issuer Information:
Country Code (CC)        : US
Locality (L)             : Round Rock
```

```
Organization (O)          : Dell Inc.
Organizational Unit (OU) : OpenCMC Group
Common Name (CN)          : CMCdefault

Valid From                : Nov  6 01:23:03 2007 GMT
Valid To                  : Nov  3 01:23:03 2017 GMT
```

sslcsrgen

NOTE: To use this subcommand, you must have **Chassis Configuration Administrator** privilege.

Description

Generates and downloads an SSL certificate signing request (CSR) from the CMC to your management station or shared network. You can use the CSR to create a custom SSL certificate for transactions on the CMC.

Usage

```
racadm sslcsrgen [-g]

racadm sslcsrgen [-g] [-f <filename>]

racadm sslcsrgen [-s]
```

Options

Table 2-40 describes the **sslcsrgen** subcommand options.

Table 2-40. sslcsrgen Subcommand Options

Option	Description
`-g`	Generates a new CSR. The **-g** option cannot be used with the **-s** option.
`-s`	Returns the status of a CSR generation process: • CSR was generated successfully. • CSR does not exist. • CSR generation in progress. The -s option cannot be used with the -g option.

Table 2-40. sslcsrgen Subcommand Options

Option	Description
`-f <filename>`	Specifies the filename where the CSR will be downloaded. Can only be used with the -g option.

NOTE: The -f option is supported from the remote RACADM interface only, and not from serial/telnet/SSH console.

NOTE: If no options are specified, a CSR is generated and downloaded to the local file system as **sslcsr** by default.

Restrictions

The **sslcsrgen** subcommand can only be executed from a local client and cannot be used in the serial, Telnet, or SSH interface.

Example

- `racadm sslcsrgen -s`

  `CSR generation in progress.`
- `racadm sslcsrgen -g -f c:\csr\csrtest.txt`

  `The csr was generated successfully.`

sslresetcfg

NOTE: To use this subcommand, you must have **Chassis Configuration Administrator** privilege.

Description

Regenerates the self-signed certificate used by the CMC Web GUI. The certificate takes effect 30 seconds after the command is entered.

Usage

```
racadm sslresetcfg
```

Example

- `racadm sslresetcfg`

```
Certificate generated successfully and webserver
restarted.
```

testemail

Table 2-41. sslcsrgen Subcommand Options

Option	Description
`-g`	Generates a new CSR. The **-g** option cannot be used with the **-s** option.
`-s`	Returns the status of a CSR generation process: • CSR was generated successfully. • CSR does not exist. • CSR generation in progress. The -s option cannot be used with the -g option.
`-f <`*filename*`>`	Specifies the filename where the CSR will be downloaded. Can only be used with the -g option.

NOTE: To use this subcommand, you must have **Test Alert User** privilege.

Description

Sends a test email from the CMC to a specified destination.

NOTE: This command is valid only if email alerts are enabled on the CMC. For more information about email alerts, see the "Configuration Email Alerts" section in the *CMC User's Guide*.

Usage

```
racadm testemail -i <index>
```

Option

Table 2-42 describes the **testemail** subcommand options.

Table 2-42. testemail Subcommand Options

Option	Description
-i <*index*>	Specifies the index of the email alert to test.

Example

```
racadm testemail -i 1
Test email sent successfully.
```

testtrap

NOTE: To use this subcommand, you must have **Test Alert User** privilege.

Description

Tests the CMC SNMP trap alerting feature by sending a test trap from the CMC to a specified destination trap listener on the network.

NOTE: This command is valid only if SNMP alerts are enabled on the CMC. For more information about SNMP alerts, see the "Configuring SNMP Alerts" section in the *CMC User's Guide*.

Usage

```
racadm testtrap -i <index>
```

Options

Table 2-43 describes the **testtrap** subcommand options.

Table 2-43. testtrap Subcommand Options

Option	Description
-i <*index*>	Specifies the index of the trap configuration to use for the test. **Legal values:** 1–4

Example

```
racadm testtrap -i 4
Test trap sent successfully.
```

3

CMC Property Database Group and Object Definitions

The CMC property database contains the configuration information for the CMC. Data is organized by associated object, and objects are organized by object group. The IDs for the groups and objects that the property database supports are listed in this section.

Use the group and object IDs with the RACADM subcommands **config** (see "config" on page 23) and **getconfig** (see "getconfig" on page 34) to configure the CMC. The following sections describe each object and indicate whether the object is readable, writable, or both.

All string values are limited to displayable ASCII characters, except where otherwise noted.

Displayable Characters

Displayable characters include the following set:

```
abcdefghijklmnopqrstuvwxwz
ABCDEFGHIJKLMNOPQRSTUVWXYZ
0123456789~`!@#$%^&*()_+-={}[]|\:";'<>,.?/
```

idRacInfo (read only)

NOTE: Use this object with the **config** or **getconfig** subcommands.

NOTE: To use this object property, you must have **CMC Login User** privilege.

Description

Displays information for CMC properties. **Read only.**

Synopsis

```
racadm getconfig -g idRacInfo
```

#idRacType

Identifies the remote access controller type as the CMC.

#idRacProductInfo

Uses a text string to identify the product, for example, Chassis Management Controller.

#idRacDescriptionInfo

A text description of the RAC type.

#idRacVersionInfo

A string containing the current product firmware version.

#idRacBuildInfo

The current RAC firmware build version.

#idRacName

A user-assigned name that identifies the CMC.

Example

```
racadm getconfig -g idRacInfo

# idRacType=8
# idRacProductInfo=Chassis Management Controller
# idRacDescriptionInfo=This system component provides
a complete set of remote management functions for
blade servers
# idRacVersionInfo=P21
# idRacBuildInfo=200708301525
# idRacName=CMC-1
```

cfgLanNetworking

NOTE: Use this object with the **config** or **getconfig** subcommands.

NOTE: To use this object property, you must have **Chassis Configuration Administrator** privilege.

NOTE: You can configure any setting that is not preceded by the hash sign (#) in the output. To modify a configurable object, use the **-o** option.

Description

Displays information for and configures network related properties.

Synopsis

```
racadm getconfig -g cfgLanNetworking
```

cfgNicEnable

Enables or disables the CMC NIC. If this property is set to 0 (false), the remote network interfaces to the CMC are not accessible, and the CMC is available only through the serial RACADM interfaces.

- Configuration options: 1 (true), 0 (false)
- Default: 1

cfgNicIpAddress

Assigns a static IP address to the CMC. This property is used only if **cfgNicUseDhcp** is set to 0 (false).

- Legal value: A string representing a valid IP address. For example, 192.168.0.20.

cfgNicNetmask

Assigns a static subnet mask for the CMC IP address. This property is used only if **cfgNicUseDhcp** is set to 0 (false).

- Legal value: A string representing a valid subnet mask. For example, 255.255.255.0.

cfgNicGateway

Assigns a static gateway for the CMC IP address. This property is used only if **cfgNicUseDhcp** is set to 0 (false).

- Legal value: A string representing a valid gateway. For example, 192.168.0.1.

cfgNicUseDhcp

Enables or disables the use of DHCP (Dynamic Host Configuration Protocol) by the CMC for the NIC. If set to **0**, then DHCP is disabled and IP addresses are statically assigned. If set to **1**, then DHCP is enabled and IP address are automatically assigned.

- **Configuration options:** 1 (true), 0 (false)
- **Default:** 0

#cfgNicMacAddress

Read only. MAC Address of the CMC; format: **dd:dd:dd:dd:dd:dd,** where **d** is a hexadecimal digit in range 0 - 9, A - F

cfgDNSServersFromDHCP (Read/Write)

NOTE: To modify this property, you must have **Configure CMC** permission.

Specifies that the DNS server IP addresses should be assigned from the DHCP server on the network.

- **Configuration options:** 1 (true), 0 (false)
- **Default:** 1

cfgDNSServer1 (Read/Write)

NOTE: To modify this property, you must have **Configure CMC** permission.

Specifies the DNS server 1 IP address. This property is only valid if **cfgDNSServersFromDHCP** is set to **0** (false).

- **Configuration options:** A string representing a valid IP address, for example: 192.168.0.20.

NOTE: **cfgDNSServer1** and **cfgDNSServer2** may be set to identical values while swapping addresses.

cfgDNSServer2 (Read/Write)

NOTE: To modify this property, you must have **Configure CMC** permission.

Retrieves DNS server 2 IP address. This parameter is only valid if **cfgDNSServersFromDHCP** is set to **0** (false).

- **Configuration options:** A string representing a valid IP address, for example: 192.168.0.20.
- **Default:** 0.0.0.0

NOTE: **cfgDNSServer1** and **cfgDNSServer2** may be set to identical values while swapping addresses.

cfgDNSRacName

Displays the CMC name. This parameter is used only if **cfgDNSRegisterRac** is set to 1 (true).

- Configuration options: String of up to 63 alphanumeric characters and hyphens; must begin with a letter. For example: `cmc-1`, `d-345`.
- Default: `cmc-<service tag>`

cfgDNSDomainName

Displays the DNS domain name. This parameter displays only if **cfgDNSDomainNameFromDHCP** is set to 0 (false).

- **Configuration options:** String of up to 254 alphanumeric characters and hyphens; *must begin with a letter.* For example: `p45`, `a-tz-1`, `rid-`.
- **Default:** ""

cfgDNSDomainNameFromDHCP

Specifies whether the CMC DNS domain name is assigned by the network DHCP server.

- **Configuration options:** 1 (true), 0 (false)
- **Default:** 1

cfgDNSRegisterRac

Registers the CMC name on the DNS server.

- **Configuration options:** 1 (true), 0 (false)

- Default: 0

Example

```
racadm getconfig -g cfgLanNetworking
cfgNicEnable=1
cfgNicIpAddress=192.168.22.101
cfgNicNetmask=255.255.255.0
cfgNicGateway=192.168.22.101
cfgNicUseDhcp=1
#cfgNicMacAddress=00:00:00:00:00:01
cfgDNSServersFromDHCP=0
cfgDNSServer1=192.168.0.5
cfgDNSServer2=192.168.0.6
cfgDNSRacName=d-345
cfgDNSDomainName=d-
cfgDNSDomainNameFromDHCP=0
cfgDNSRegisterRac=0
```

cfgCurrentLanNetworking (read only)

NOTE: Use this object with the **getconfig** subcommand.

Description

Displays the current CMC NIC properties.

Synopsis

```
racadm getconfig cfgCurrentLanNetworking
racadm config cfgCurrentLanNetworking
```

cfgNicCurrentIpAddress

Displays the current IP address of the CMC.

cfgNicCurrentNetmask

Displays the current subnet mask for the CMC IP address.

cfgNicCurrentGateway

Displays the current gateway for the CMC IP address.

cfgNicCurrentDhcpWasUsed

Indicates whether DHCP is used to configure the NIC:

0— address is static.

1— address was obtained from the DHCP server.

cfgDNSCurrentServer1

Displays the IP address for DNS server 1.

cfgDNSCurrentServer1

Displays the IP address for DNS server 2.

cfgDNSCurrentDomainName

Displays the DNS domain name.

Example

```
racadm getconfig -g cfgCurrentLanNetworking
# cfgNicCurrentIpAddress=143.166.152.116
# cfgNicCurrentNetmask=255.255.255.0
# cfgNicCurrentGateway=143.166.152.1
# cfgNicCurrentDhcpWasUsed=0
# cfgDNSCurrentServer1=192.168.0.5
# cfgDNSCurrentServer2=192.168.0.6
# cfgDNSCurrentDomainName=MYDOMAIN
```

cfgRemoteHosts

NOTE: Use this object with the **config** or **getconfig** subcommands.

NOTE: To use this object property, you must have **Chassis Configuration Administrator** privilege.

Description

Enables/disables and configures firmware updates and SMTP email alerting.

cfgRhostsFwUpdateTftpEnable

Enables or disables CMC firmware updates from a network TFTP server.

- **Configuration options:** 1 (true), 0 (false)
- **Default:** 1

cfgRhostsFwUpdateIpAddr

The IP address of the network SMTP server. The SMTP server transmits e-mail alerts from the CMC (if the alerts are configured and enabled).

Configuration options: A string representing a valid SMTP server IP address. For example, 192.168.0.55.

Default: 0.0.0.0

cfgRhostsFwUpdatePath

Specifies the TFTP path where the CMC firmware image file exists on the TFTP server. The TFTP path is relative to the TFTP root path on the TFTP server.

NOTE: The server may still require you to specify the drive (for example, C).

Legal value: String of up to 255 characters.

cfgRhostsSmtpServerIpAddr

Specifies the IP address of the network SMTP server, which transmits email alerts from the CMC if the alerts are configured and enabled.

Legal value: A string representing a valid SMTP server IP address. For example, 192.168.0.55.

Default: 0.0.0.0

cfgRhostsNtpEnable

Enables or disables the use of the Network Time Protocol (NTP) for date and time synchronization.

- **Configuration options:** 1 (true), 0 (false)
- **Default:** 0

cfgRhostsNtpServer1

Specifies the IP address of the network NTP server.

Legal value: A string representing a valid NTP server. For example, ntp.ntp.net. At least one NTP server must be specified and duplicate entries are not allowed

Default: [null]

cfgRhostsNtpServer2

Specifies the IP address of the network NTP server.

Legal value: A string representing a valid NTP server. For example, ntp.ntp.net. At least one NTP server must be specified and duplicate entries are not allowed

Default: [null]

cfgRhostsNtpServer3

Specifies the IP address of the network NTP server.

Legal value: A string representing a valid NTP server. For example, ntp.ntp.net. At least one NTP server must be specified and duplicate entries are not allowed

Default: [null]

Example

```
racadm getconfig -g cfgRemoteHosts

cfgRhostsFwUpdateTftpEnable=1
cfgRhostsFwUpdateIpAddr=127.0.0.1
cfgRhostsFwUpdatePath=m13_0417.bin
cfgRhostsSmtpServerIpAddr=localhost.localdomain
cfgRhostsNtpEnable=1
cfgRhostsNtpServer1=pool.ntp.org
cfgRhostsNtpServer2=ntp.bogus.net
cfgRhostsNtpServer3=ntp.nist.gov
```

cfgUserAdmin

NOTE: In the current CMC firmware version, the objects **cfgUserAdminEnable** and **cfgUserAdminPrivilege** are interrelated; changing the value of one property causes the value of the other property to change. For example, if a user does not have login privilege, the user is disabled by default. When you enable the user by changing the value of **UserAdminEnable** to 1, the right most digit of the **UserAdminPrivilege** will also become 1. On the other hand, if you change the right most digit of the **UserAdminPrivilege** to 0, the value of **UserAdminEnable** will become 0.

NOTE: Use this object with the **config** or **getconfig** subcommands. You must supply an index group number to use these commands as follows: **-i <index group>**

NOTE: To use this object property, you must have **Chassis Configuration Administrator** privilege.

NOTE: You can configure any setting that is not preceded by the hash sign (**#**) in the output. To modify a configurable object, use the **-o** option.

Description

Displays information for and configures CMC users.

cfgUserAdminIndex

Read only. Displays the index number. The index number is used to specify a unique group name. Only valid for indexed groups. The index is specified by a decimal integer from 1–16.

cfgUserAdminEnable

Enables or disables an individual user.

Configuration options: 1 (true), 0 (false)

Default: 0

cfgUserAdminUserName

Displays/sets the name of the user for the specified index name. The user index is created by writing a string into this name field if the index is empty. Writing a string of double quotation marks ("") deletes the user at that index. The string cannot contain "/" (forward slash), "\" (backslash), "." (period), "@" ("at") or quotations marks.

Legal value: String of up to 16 characters

cfgUserAdminPassword

Write only. Displays the password for this user index as a series of asterisks (*). It cannot be seen or displayed after this property is written.

cfgUserAdminPrivilege

Specifies the role-based authority privileges for the user. The value is represented as a bitmask that allows for any combination of privileges values. Table 3-1 describes the allowed bit masks. Table 3-2 provides sample privileges bit masks for users with one or more privileges.

Configuration options: 0x0000000-0x0000fff, and 0x0

Default: 0x0000000

Example

```
racadm getconfig -g cfgUserAdmin -i 1

# cfgUserAdminIndex=1
cfgUserAdminEnable=1
cfgUserAdminUserName=root
# cfgUserAdminPassword=******** (Write-Only)
cfgUserAdminPrivilege=0x00000fff
```

Table 3-1. Bit Masks for User Privileges

User Privilege	Privilege Bit Mask
CMC Login User	0x0000001
Chassis Configuration Administrator	0x0000002
User Configuration Administrator	0x0000004
Clear Logs Administrator	0x0000008
Chassis Control Administrator	0x0000010
Super User	0x0000020
Server Administrator	0x0000040
Test Alert User	0x0000080
Debug Command Administrator	0x0000100

Table 3-1. Bit Masks for User Privileges *(continued)*

User Privilege	Privilege Bit Mask
Fabric A Administrator	0x0000200
Fabric B Administrator	0x0000400
Fabric C Administrator	0x0000800

Table 3-2. Sample Bit Masks for User Privileges

User Privilege	Privilege Bit Mask
The user is not allowed to access the CMC.	0x00000000
The user can only log in to the CMC and view CMC and server configuration information.	0x00000001
The user can log in to and configure the CMC.	0x00000001 + 0x00000002 = 0x00000003

cfgEmailAlert

NOTE: Use this object with the **config** or **getconfig** subcommands.

NOTE: To use this object property, you must have **Chassis Configuration Administrator** privileges.

NOTE: You can configure any setting that is not preceded by the hash sign (**#**) in the output. To modify a configurable object, use the **-o** option.

Description

Configures CMC email alerting.

cfgEmailAlertIndex

Read only. Displays the unique index of an alert instance.

Configuration range: 1–4

Default: This parameter is populated based on the existing instances.

cfgEmailAlertEnable

Enables or disables CMC e-mail alerting.

Configuration options: 1 (enable), 0 (disable)

Default: 0 (disabled)

cfgEmailAlertAddress

Read only. Indicates the destination email address for the email alerts.
Configuration options: Email address format, with a maximum length of 64 ASCII characters.

Default: [null]

cfgEmailAlertEmailName

Specifies the name or other identifier associated with the destination email address. The e-mail name can refer to an individual, group, location, department, etc.

Configuration options: String of up to 32 characters.

Default: [null]

Example

```
racadm getconfig -g cfgEmailAlert -i 2

# cfgEmailAlertIndex=1
cfgEmailAlertEnable=1
cfgEmailAlertAddress=kfulton@dell.com
cfgEmailAlertName=Kevin Fulton
```

cfgSessionManagement

NOTE: Use this object with the **config** or **getconfig** subcommands.

NOTE: To use this object property, you must have **Chassis Configuration Administrator** privilege.

Description

Displays current settings for and configures idle timeout properties for Web server, Telnet, SSH, and RACADM sessions. Changes to idle timeout settings take effect at the next login. To disable idle timeout for a connection, set this property to **0**.

Objects

cfgSsnMgtWebserverTimeout

Specifies the time (in seconds) after which an idle connection to the Web server is automatically terminated.

Configuration range: 60–10800 seconds

Default: 1800 seconds

cfgSsnMgtTelnetIdleTimeout

Specifies the time (in seconds) after which an idle Telnet session is automatically terminated.

Configuration options: 0 (no timeout); 60–10800 seconds

Default: 1800seconds

cfgSsnMgtSshIdleTimeout

Specifies the time (in seconds) after which an idle Secure Shell session is automatically terminated.

Configuration options: 0 (no timeout); 60–10800 seconds

Default: 1800 seconds

cfgSsnMgtRacadmTimeout

Specifies the time (in seconds) after which an idle remote RACADM connection is automatically terminated.

Configuration range: 10–1920 seconds

Default: 30 seconds

Example

```
racadm getconfig -g cfgSessionManagement

cfgSsnMgtWebserverTimeout=0
cfgSsnMgtTelnetIdleTimeout=0
cfgSsnMgtSshIdleTimeout=300
cfgSsnMgtRacadmTimeout=0
```

cfgSerial

NOTE: Use this object with the **config** or **getconfig** subcommands.

NOTE: To use this object property, you must have **Chassis Configuration Administrator** privilege.

Description

Displays information for and configures serial parameters.

Objects

cfgSerialBaudRate

Sets the baud rate on the CMC serial port.

Configuration options: 9600, 19200, 28800, 38400, 57600, 115200

Default: 115200

cfgSerialConsoleEnable

Enables or disables the CMC serial console interface.

Configuration options: 1 (true), 0 (false)

Default: 1

cfgSerialConsoleQuitKey

Specifies the key or key combination that terminates the serial text console. The value can be represented by one of the following:

- Decimal value — For example: 95
- Hexidecimal value — For example: 0x12
- Octal value — For example: 007
- ASCII value — For example: <Ctrl>a

  ASCII values may be represented using the following Escape Key codes:

  a <Ctrl> with any alphabetic character (a-z, A-Z)

  b <Ctrl> with one of the following special characters: [ ] \ ^ _

Legal value: String of up to 4 characters

Default: <Ctrl><\>

cfgSerialConsoleIdleTimeout

The maximum number of seconds to wait before an idle serial session is disconnected.

Configuration options: 0 (no timeout), 60–1920 seconds

Default: 1800 seconds

cfgSerialConsoleNoAuth

Enables or disables the CMC serial console login authentication. When enabled (0), you must authenticate at a login prompt. When disabled (1), you are logged in automatically.

Configuration options: 0 (enabled), 1 (disabled)

Default: 0

cfgSerialConsoleCommand

Specifies a serial command that is executed after a user logs in to the serial console interface.

Example: `"connect server-1"`

Default: `""`

cfgSerialHistorySize

Specifies the maximum size of the serial history buffer.

Configuration range: 0–8192

Default: 8192

cfgSerialTelnetEnable

Enables or disables the Telnet console interface on the CMC.

Configuration options: 1 (true), 0 (false)

Default: 0

cfgSerialSshEnable

Enables or disables the secure shell (SSH) interface on the CMC.

Configuration options: 1 (true), 0 (false)

Default: 1

Example

```
racadm getconfig -g cfgSerial

cfgSerialBaudRate=115200
cfgSerialConsoleEnable=1
cfgSerialConsoleQuitKey=^\
cfgSerialConsoleIdleTimeout=1920
cfgSerialConsoleNoAuth=0
cfgSerialConsoleCommand="connect server-1"
cfgSerialHistorySize=1000
cfgSerialTelnetEnable=0
cfgSerialSshEnable=1
```

cfgNetTuning

NOTE: Use this object with the **config** or **getconfig** subcommands.

NOTE: To use this object property, you must have **Chassis Configuration Administrator** privilege.

Description

Displays and configures CMC network tuning parameters.

cfgNetTuningNicSpeed

Specifies the speed for the CMC NIC. This property is used only if **cfgNetTuningNicAutoNeg** is set to 0 (disabled). **Configuration options:** 10 or 100

Default: 100

cfgNetTuningNicFullDuplex

Specifies the duplex setting for the CMC NIC. This property is used only if **cfgNetTuningNicAutoNeg** is set to 0 (disabled). **Configuration options:** 0 (half duplex), 1 (full duplex)

Default: 1

cfgNetTuningNicMtu

Specifies the size in bytes of the maximum transmission unit used by the CMC NIC. **Configuration range:** 576–1500

Default: 1500

cfgNetTuningNicAutoneg

Enables auto-negotiation of physical link speed and duplex. When enabled, auto-negotiation takes priority over values set in the **cfgNetTuningNicSpeed** and **cfgNetTuningNicFullDuplex** objects. **Configuration options:** 1 (enabled), 0 (disabled)

Default: 1

Example

```
racadm getconfig -g cfgNetTuning

cfgNetTuningNicSpeed=100
cfgNetTuningNicFullDuplex=1
cfgNetTuningNicMtu=1500
cfgNetTuningNicAutoneg=1
```

cfgOobSnmp

NOTE: Use this object with the **config** or **getconfig** subcommands.

NOTE: To use this object property, you must have **Chassis Configuration Administrator** privilege.

NOTE: You can configure any setting that is not preceded by the hash sign (**#**) in the output. To modify a configurable object, use the **-o** option.

Description

Enables or disables the SNMP agent for the CMC. The CMC SNMP agent supports the standard RFC1213 mib-2, and the Dell enterprise-specific mib.

cfgOobSnmpAgentEnable

Enables or disables the SNMP agent in the CMC.

Configuration options: 1 (true), 0 (false)

Default: 0

cfgOobSnmpAgentCommunity

Sets the community string (identical to the community name) used for authentication. The community string acts as a password shared between different hosts over the network. This community string value must match with that of the other hosts for any kind of communication through SNMP.

Example

```
racadm getconfig -g cfgOobSnmp

cfgOobSnmpTrapsEnable=1
cfgOobSnmpAgentCommunity=public
```

cfgTraps

NOTE: Use this object with the **config** or **getconfig** subcommands.

NOTE: To use this object property, you must have **Chassis Configuration Administrator** privilege.

NOTE: You can configure any setting that is not preceded by the hash sign (**#**) in the output. To modify a configurable object, use the **-o** option.

Description

Displays information for and configures delivery of SNMP traps for a specific user.

cfgTrapsIndex

Read only. Indicates the unique index of an alert instance.

cfgTrapsEnable

Enables or disables event traps on the CMC.

Configuration options: 1 (true), 0 (false)

cfgTrapsAlertDestIpAddr

Sets the IP address that will receive the alert.

Configuration options: A string representing a valid IP address. For example, 192.168.0.20.

cfgTrapsCommunityName

Sets the community string (identical to the community name) used for authentication. The community string acts as a password shared between different hosts over the network. This community string value must match with that of the other hosts for any kind of communication through SNMP.

Example

```
racadm getconfig -g cfgTraps -i 2

# cfgTrapsIndex=2
cfgTrapsEnable=1
cfgTrapsAlertDestIpAddr=
cfgTrapsCommunityName=public
```

cfgAlerting

NOTE: Use this object with the **config** or **getconfig** subcommands.

NOTE: To use this object property, you must have **Chassis Configuration Administrator** privilege.

Description

Enables or disables SNMP event trap alerting and sets the event filter.

cfgAlertingEnable

Enables or disables event traps on the CMC.

Configuration options: 1 (true), 0 (false)

cfgAlertingFilterMask

Configuration options: Hex values 0x0–0x001fffff. For information on hex values for events, see the *Chassis Management Controller User's Guide*.

Default: 0x17ff8db

cfgAlertingSourceEmailName

Email address used to send email notifications when an event occurs.

Examples

- ```
  racadm getconfig -g cfgAlerting -o
  cfgAlertingEnable
  ```

  ```
  0x007fffff
  ```

- ```
  racadm config -g cfgAlerting -o cfgAlertingEnable
  1
  ```

  ```
  Object value modified successfully.
  ```

cfgRacTuning

NOTE: Use this object with the **config** or **getconfig** subcommands.

NOTE: To use this object property, you must have **Chassis Configuration Administrator** privilege.

NOTE: You can configure any setting that is not preceded by the hash sign (**#**) in the output. To modify a configurable object, use the **-o** option.

Description

Configures CMC tuning parameters.

cfgRacTuneRemoteRacadmEnable

Enables or disables the Remote RACADM interface in the CMC.

Configuration options: 1 (true), 0 (false)

Default: 1

cfgRacTuneWebserverEnable

Enables and disables the CMC Web server. If this property is set to 0 (FALSE, or disabled), you cannot access the CMC through client Web browsers or remote RACADM. This property has no effect on the Telnet/SSH/serial or local RACADM interfaces.

Configuration options: 1 (true), 0 (false)

Default: 1

cfgRacTuneHttpPort

Specifies the port number to use for HTTP network communication with the CMC.

Configuration range: 10–65535

Default: 80

cfgRacTuneHttpsPort

Specifies the port number to use for HTTPS network communication with the CMC.

Configuration range: 10–65535

Default: 443

cfgRacTuneTelnetPort

Specifies the port number used for the CMC telnet interface.

Configuration range: 10–65535

Default: 23

cfgRacTuneSshPort

Specifies the port number used for the CMC SSH interface.

Configuration range: 10–65535

Default: 22

cfgRacTuneIpRangeEnable

Enables or disables the IP address Range validation feature of the CMC.

Configuration options: 1 (true), 0 (false)

Default: 0

cfgRacTuneIpRangeAddr

Specifies the acceptable IP address bit pattern in positions determined by the 1's in the range mask property (**cfgRacTuneIpRangeMask**).

Configuration options: IP address-formatted string. For example, 192.168.0.44.

Default: 192.168.1.1

cfgRacTuneIpRangeMask

Specifies the IP range mask property.

Configuration options: A bitmask value that is applied left-justified bits. For example, 255.255.255.0.

Default: 255.255.255.0

cfgRacTuneIpBlkEnable

Enables or disables the IP address blocking feature of the CMC.

Configuration options: 1 (true), 0 (false)

Default: 0

cfgRacTuneIpBlkFailCount

Sets the maximum number of login failures to occur in the window before the login attempts from the IP address are rejected.

Configuration range: 2–16

Default: 5

cfgRacTuneIpBlkFailWindow

Defines the time span in seconds within which the failed attempts are counted. When the failure attempts age to this limit, the failures are dropped from the count.

Configuration range: 2–65535

Default: 60

cfgRacTuneIpBlkPenaltyTime

Defines the time span in seconds during which session requests from an IP address with excessive failures are rejected.

Configuration range: 2–65535

Default: 300

cfgRacTuneTimezoneOffset

Specifies the number of seconds' difference from Coordinated Universal Time (UTC)/Greenwich Mean Time (GMT). This value is negative if current time zone is west of Greenwich.

cfgRacTuneDaylightOffset

Specifies the number of seconds of Daylight Savings included in the current time zone. This value is 0 if the time zone is not a Daylight Saving time zone.

Example

```
racadm getconfig -g cfgRacTuning

cfgRacTuneRemoteRacadmEnable=1
cfgRacTuneWebserverEnable=1
cfgRacTuneHttpPort=80
cfgRacTuneHttpsPort=443
cfgRacTuneTelnetPort=23
cfgRacTuneSshPort=22
cfgRacTuneIpRangeEnable=0
cfgRacTuneIpRangeAddr=192.168.1.1
cfgRacTuneIpRangeMask=255.255.255.0
cfgRacTuneIpBlkEnable=0
cfgRacTuneIpBlkFailCount=5
cfgRacTuneIpBlkFailWindow=60
cfgRacTuneIpBlkPenaltyTime=300
cfgRacTuneTimezoneOffset=0
cfgRacTuneDaylightOffset=0
```

cfgRacSecurity

NOTE: Use this object with the **config** or **getconfig** subcommands.

NOTE: To use this object property, you must have **Chassis Configuration Administrator** privilege.

Description

Configures settings related to the CMC SSL certificate signing request (CSR) feature.

NOTE: You must configure the properties in this group before you can generate a CSR from the CMC.

For more information on generating certificate signing requests using RACADM, see "sslcsrgen" on page 88.

cfgRacSecCsrKeySize

Specifies the SSL asymmetric key size for the CSR.

Configuration options: 512, 1024, 2048

Default: 1024

cfgRacSecCsrCommonName

Specifies the CSR Common Name (CN).

Configuration options: String of up to 254 characters.

Default: [null]

cfgRacSecCsrOrganizationName

Specifies the CSR Organization Name (O).

Legal value: String of up to 254 characters.

Default: [null]

cfgRacSecCsrOrganizationUnit

Specifies the CSR Organization Unit (OU).

Legal value: String of up to 254 characters.

Default: [null]

cfgRacSecCsrLocalityName

Specifies the CSR Locality (L).

Legal value: String of up to 254 characters.

Default: [null]

cfgRacSecCsrStateName

Specifies the CSR State Name (S).

Legal value: String of up to 254 characters.

Default: [null]

cfgRacSecCsrCountryCode

Specifies the CSR Country Code (CC).

Legal value: String of up to 254 characters.

Default: [null]

cfgRacSecCsrEmailAddr

Specifies the CSR email address.

Legal value: String of up to 254 characters.

Default: [null]

Example

```
racadm config -g cfgRacSecurity

cfgRacSecCsrKeySize=1024
cfgRacSecCommonName=
cfgRacSecOrganizationName=
cfgRacSecOrganizationUnit=
cfgRacSecLocalityName=
cfgRacSecStateName=
cfgRacSecCountryCode=
cfgRacSecEmailAddr=
```

cfgActiveDirectory

NOTE: Use this object with the **config** or **getconfig** subcommands.

NOTE: To use this object property, you must have **Chassis Configuration Administrator** privilege.

NOTE: You can configure any setting that is not preceded by the hash sign (**#**) in the output. To modify a configurable object, use the **-o** option.

Description

Configures Microsoft® Active Directory® properties.

cfgADEnable

Enables or disables Active Directory user authentication on the CMC. If this property is disabled, local CMC authentication is used for user logins instead. **Configuration options:** 1 (true), 0 (false)

Default: 0

cfgADRacDomain

Specifies the Active Directory domain on which the CMC resides. **Configuration options:** String of up to 254 characters with no spaces.

Default: [null]

cfgADRootDomain

Specifies the root domain of the domain forest. **Configuration options:** String of up to 254 characters with no spaces.

Default: [null]

cfgADRacName

Specifies the name of CMC as recorded in the Active Directory forest.**Configuration options:** String of up to 254 characters with no spaces.

Default: [null]

cfgADAuthTimeout

Specifies the number of seconds to wait for Active Directory authentication requests to complete before timing out. **Configuration range:** 15–300

Default: 120

cfgADType

Indicates the schema type (extended or standard) to use with Active Directory.

Configuration options: 1 (extended), 2 (standard)

Default: 1 (extended)

cfgADSpecifyServerEnable

Allows you to enable/disable and specify an LDAP server or a global catalog server. Use **cfgADDomainController** or **cfgADGlobalCatalog** to specify the IP address.

Configuration options: 1 (enabled), 0 (disabled)

Default: 0 (disabled)

cfgADDomainController

Specifies the LDAP server from which you want the CMC to obtain user names. **Must be used with cfgADSpecifyServerEnable.**

Legal value: Valid IP address or fully qualified domain name (FQDN).

cfgADGlobalCatalog

Specifies the global catalog server from which you want the CMC to obtain user names. **Must be used with cfgADSpecifyServerEnable.**

Legal value: Valid IP address or FQDN.

Example

```
racadm getconfig -g cfgActiveDirectory

cfgADEnable=1
cfgADRacDomain=
cfgADRootDomain=help
cfgADRacName=
cfgADRacAuthTimeout=300
cfgADRacType=0x4
cfgADRacSpecifyServerEnable=1
cfgRacADDomainController=192.168.1.1
cfgRacADGlobalCatalog=127.0.0.1
```

cfgStandardSchema

NOTE: Use this object with the **config** or **getconfig** subcommands.

NOTE: To use this object property, you must have **Chassis Configuration Administrator** privilege.

NOTE: You can configure any setting that is not preceded by the hash sign (#) in the output. To modify a configurable object, use the **-o** option.

Description

Configures the Standard Schema settings for Active Directory.

cfgSSADRoleGroupIndex

Read only. Displays the index of the Role Group as recorded in the Active Directory.

Configuration range: 1–5

cfgSSADRoleGroupName

Specifies the name of the Role Group as recorded in the Active Directory forest.

Configuration options: String of up to 254 characters with no spaces.

Default: [null]

cfgSSADRoleGroupDomain

Specifies the Active Directory Domain in which the Role Group resides.

Configuration options: String of up to 254 characters with no spaces.

cfgSSADRoleGroupPrivilege

Specifies the bit mask numbers (see Table 3-1) to set role-based authority privilege for a Role Group.

Configuration range: 0x00000000–0x000001ff

Default: [null]

Example

```
racadm getconfig -g cfgStandardSchema

# cfgSSADRoleGroupIndex=1
cfgSSADRoleGroupName=blsys-1
cfgSSADRoleGroupDomain=
cfgSSADRolGroupPrivilege=3081
```

cfgChassisPower

NOTE: Use this object with the **config** or **getconfig** subcommands.

NOTE: To use this object property, you must have **Chassis Configuration Administrator** privilege.

NOTE: You can configure any setting that is not preceded by the hash sign (**#**) in the output. To modify a configurable object, use the **-o** option.

Description

Displays information for and configures power for the chassis.

cfgChassisInPower

Read only. Indicates the cumulative input power consumption data (in watts and BTU/hr) captured from all healthy and functional PSUs in the chassis.

cfgChassisPeakPower

Read only. The maximum system level power consumption (in watts) since the value was last cleared by a user.

cfgChassisPeakPowerTimestamp

Read only. The timestamp recorded when the peak system power value occurred.

cfgChassisMinPower

Read only. The minimum system level power consumption value (in watts) over the time since the value was last cleared.

cfgChassisMinPowerTimestamp

Read only. The timestamp recorded when the minimum system power occurred.

cfgChassisPowerStatus

Read only. Indicates the power status of the chassis.

Configuration options: 1 (other), 2 (unknown), 3 (OK), 4 (non-critical), 5 (critical), 6 (non-recoverable)

cfgChassisRedundantState

Read only. Enables or disables power redundancy for the chassis.

Values: 0 (none), 1 (full)

cfgChassisPowerCap

Indicates the maximum power consumption limit (in watts) for the entire chassis. The command will generate an error if blade throttling is necessary to achieve the power goal based on the value for this setting.

Configuration range: 2768–7928 watts

Default: 7928 watts

cfgChassisPowerCapF

Indicates the maximum power consumption limit (in watts) for the entire chassis. Use cfgChassisPowerCapF when power consumption is to be changed regardless of whether blade throttling is required.

Configuration range: 2768–7928 watts

Default: 7928 watts

cfgChassisPowerCapBTU

Indicates the maximum power consumption limit (in BTU/hr) for the entire chassis. The command will generate an error if blade throttling is necessary to achieve the power goal based on the value for this setting.

Configuration range: 9445-27051 BTU/hr

Default: 27051 BTU/hr

cfgChassisPowerCapFBTU

Indicates the maximum power consumption limit (in BTU/hr) for the entire chassis. Use cfgChassisCapFBTU when power consumption is to be changed regardless of whether blade throttling is required.

Configuration range: 9445-27051 BTU/hr

Default: 27051 BTU/hr

cfgChassisPowerCapPercent

Indicates the power consumption limit as a percentage. The percentage is computed mathematically as the minimum power + (percent * (maximum power - minimum power)). The command will generate an error if blade throttling is necessary to achieve the power goal based on the value for this setting.

Configuration range: 0-100

Default: 100

cfgChassisPowerCapFPercent

Indicates the power consumption limit as a percentage. The percentage is computed mathematically as the minimum power + (percent * (maximum power - minimum power)). Use cfgChassisPowerCapFPercent when power consumption is to be changed regardless of whether blade throttling is required.

Configuration range: 0-100

Default: 100

cfgChassisRedundancyPolicy

Sets the redundancy policy of the chassis.

Configuration options: 0 (no redundancy), 1 (AC redundancy), 2 (power supply redundancy).

Default: 0 (no redundancy)

cfgChassisDynamicPSUEngagementEnable

Enables or disables dynamic engagement.

Configuration options: 0 (disabled), 1 (enabled)

Default: 0 (disabled)

cfgChassisInMaxPowerCapacity

Read only. Indicates the total chassis power budget (in watts) available for chassis operation.

cfgChassisInRedundancyReserve

Read only. Indicates the amount of redundant power (in watts) in reserve that can be utilized in the event of an AC grid or PSU failure. This value is 0 if the Redundancy Policy is set to 0 (no redundancy).

cfgChassisInPowerServerAllocation

Read only. Indicates (in watts) the cumulative power allocated to servers.

Default: 7928

cfgChassisInfrastructureInPowerAllocation

Read only. Indicates the estimated cumulative DC output power consumption (in watts), determined from a field replaceable unit (FRU) on the hardware modules in the chassis.

cfgChassisTotalInPowerAvailable

Read only. Indicates the amount of power (in watts) available for use by the chassis.

cfgChassisStandbyInPowerCapacity

Read only. Indicates the amount of power (in watts) available for powering up any hardware modules that are either added to the chassis or powered up (if they are already present in the chassis).

cfgChassisPowerClear

Write only. To reset **cfgChassisMinPower** and **cfgChassisMaxPowerCapacity**, set this object to 1.

cfgChassisPowerClearTimestamp

Read only. Time stamp when **cfgChassisMinPower** and **cfgChassisMaxPowerCapacity** were reset.

cfgChassisPowerButtonEnable

Indicates if the chassis power button is enabled or disabled.

Values: 0 (disabled), 1 (enabled)

cfgSystemEnergyConsumptionClear

Write only. To reset energy statistics, set this value to **1**.

Examples

```
racadm getconfig -g cfgChassisPower
# cfgChassisInPower=0 W | 0 BTU/hr
# cfgChassisPeakPower=0 W
# cfgChassisPeakPowerTimestamp=06:32:55 01/26/2009
# cfgChassisMinPower=0 W
# cfgChassisMinPowerTimestamp=06:32:55 01/26/2009
# cfgChassisPowerStatus=5
# cfgChassisRedundantState=0
cfgChassisPowerCap=7928 W
cfgChassisPowerCapF=7928 W
cfgChassisPowerCapBTU=200 BTU/hr
cfgChassisPowerCapFBTU=200 BTU/hr
cfgChassisPowerCapPercent =10%
cfgChassisPowerCapFPercent =10%
cfgChassisRedundancyPolicy=0
cfgChassisDynamicPSUEngagementEnable=0
# cfgChassisInMaxPowerCapacity=0 W
# cfgChassisInRedundancyReserve=0 W
# cfgChassisInPowerServerAllocation=0 W
# cfgChassisInfrastructureInPowerAllocation=51 W
# cfgChassisTotalInPowerAvailable=0 W
# cfgChassisStandbyInPowerCapacity=0 W
# cfgChassisPowerClear=******** (Write-Only)
# cfgChassisPowerClearTimestamp=18:00:00
12/31/1969
cfgChassisPowerButtonEnable=1
cfgSystemEnergyConsumptionClear = ****(Write-Only)
```

- `racadm config -g cfgChassisPower -o cfgChassisPowerClear 1`

  Clears **cfgChassisMinPower** and **cfgChassisPeakPower**.

cfgServerInfo

NOTE: Use this object with the **config** or **getconfig** subcommands.

NOTE: To use this object property, you must have **Chassis Configuration Administrator** privilege.

NOTE: You can configure any setting that is not preceded by the hash sign (**#**) in the output. To modify a configurable object, use the **-o** option.

Description

Displays information for and configures a server in the chassis.

cfgServerInfoIndex

Read only. Displays the index name of the server.

cfgServerSlotNumber

Read only. Specifies the location of the specified server (1–16) in the chassis.

cfgServerServiceTag

Read only. Displays the service tag of the specified server.

cfgServerName

Specifies the name of the specified server.

Configuration options: String of alphanumeric characters, periods, and dashes; maximum of 15 characters.

Default: SLOT-<*slot number*>

cfgServerBmcMacAddress

Read only. Displays the BMC MAC address of the specified server.

cfgServerNic1MacAddress

Read only. Displays the MAC address of the server NIC.

cfgServerNic2MacAddress

Read only. Displays the MAC address of the server NIC.

cfgServerPriority

Sets the priority level allotted to the server in the chassis for power budgeting purposes.

Configuration range: 1–9 in descending priority, where 1 holds the highest priority

Default: 1

cfgServerNicEnable

Enables or disables LAN channel.

Configuration options: 0 (disable), 1 (enable)

cfgServerIPMIOverLanEnable

Enables or disables IPMI LAN channel.

Configuration options: 0 (disable), 1 (enable)

#cfgServerPowerBudgetAllocation

Read only. Displays the current power allocation for the server.

cfgServerDNSRegisterIMC

Enables or disables DNS name registration for the integrated management controller, iDRAC.

Configuration options: 0 (disable), 1 (enable)

cfgServerDNSIMCName

Displays the DNS domain name for the integrated Remote Access Controller, iDRAC.

#cfgServerRootPassword

Write only. Displays the password for iDRAC as a series of asterisks (*). It cannot be seen or displayed after this property is written.

Example

```
racadm getconfig -g cfgServerInfo -i 1
```

```
# cfgServerInfoIndex=1
cfgServerSlotNumber=1
# cfgServerServiceTag=JGPRQ61
cfgServerName=Server-1
# cfgServerBmcMacAddress=00:11:43:FD:B7:2A
# cfgServerNic1MacAddress=00:11:43:FD:B7:2A
# cfgServerNic2MacAddress=00:11:43:FD:B7:2A
# cfgServerNic3MacAddress=00:11:43:FD:B7:2A
# cfgServerNic4MacAddress=00:11:43:FD:B7:2A
cfgServerPriority=1
cfgServerNicEnable=1
cfgServerIPMIOverLanEnable=1
# cfgServerPowerBudgetAllocation=200W
```

```
racadm getconfig -g cfgServerInfo -i 9
```

```
# cfgServerInfoIndex=9
cfgServerSlotNumber=9
# cfgServerServiceTag=N/A
cfgServerName=Server-9
# cfgServerBmcMacAddress=N/A
# cfgServerNic1MacAddress=N/A
# cfgServerNic2MacAddress=00:11:43:FD:B7:2A
cfgServerPriority=1
cfgServerNicEnable=N/A
cfgServerIPMIOverLanEnable=N/A
# cfgServerPowerBudgetAllocation=N/A
```

cfgKVMInfo

NOTE: Use this object with the **config** or **getconfig** subcommands.

NOTE: To use this object property, you must have **Chassis Configuration Administrator** privilege.

NOTE: You can configure any setting that is not preceded by the hash sign (**#**) in the output. To modify a configurable object, use the **-o** option.

Description

Displays information for and configures the iKVM.

cfgKVMAccessToCMCEnable

Enables or disables the Dell CMC Console access on the iKVM.

Configuration options: 1 (enable), 0 (disable)

cfgKVMFrontPanelEnable

Enables or disables front panel access on the iKVM.

Configuration options: 1 (enable), 0 (disable)

Example

```
racadm getconfig -g cfgKVMInfo

cfgKVMAccessToCMCEnable=1
cfgKVMFrontPanelEnable=1
```

4

Using the LCD Panel Interface

You can use the LCD panel to perform configuration and diagnostics, and to obtain status information about the chassis and its contents.

LCD Navigation

Use the buttons to the right of the LCD screen to operate the LCD panel. The up, down, left, and right arrow buttons change the selected menu items or icons on the screen. The selected item is shown with a light blue background or border.

The center button activates the selected item.

When messages displayed on the LCD screen are longer than will fit on the screen, use the left and right arrow buttons to scroll the text left and right.

The icons described in Table 4-1 are used in navigating between LCD screens:

Table 4-1. LCD Panel Navigational Icons

Icon Normal	Icon Highlighted	Icon Name and Description
		Back. Highlight and press the center button to return to the previous screen.
		Accept/Yes. Highlight and press the center button to accept a change and return to the previous screen.
		Skip/Next. Highlight and press the center button to skip any changes and go to the next screen.
		No. Highlight and press the center button to answer "No" to a question and go to the next screen.
		Rotate. Highlight and press the center button to switch between the front and rear graphical views of the chassis.
or		**NOTE:** The amber background indicates that the opposite view has errors.

Table 4-1. LCD Panel Navigational Icons *(continued)*

Icon Normal	Icon Highlighted	Icon Name and Description
		Component Identify. Blinks the blue LED on a component. **NOTE:** There will be a blinking blue rectangle around this icon when **Component Identify** is enabled.

Main Menu

From the **Main** menu you can navigate to one of the following screens:

- **LCD Setup Menu** — select the language to use and the LCD screen that displays when no one is using the LCD.
- **Server** — displays status information for servers.
- **Enclosure** — displays status information for the chassis.

1 Use the up and down arrow buttons to highlight an item.

2 Press the center button to activate your selection.

LCD Setup Menu

The **LCD Setup** menu displays a menu of items that can be configured:

- **Language Setup** — choose the language you want to use for LCD screen text and messages.
- **Default Screen** — choose the screen that displays when there is no activity on the LCD panel.

1 Use the up and down arrow buttons to highlight an item in the menu or highlight the **Back** icon if you want to return to the **Main** menu.

2 Press the center button to activate your selection.

Language Setup Screen

The **Language Setup** screen allows you to select the language used for LCD panel messages. The currently active language is highlighted with a light blue background.

1 Use the up, down, left, and right arrow buttons to highlight the desired language.

2 Press the center button. The Accept icon appears and is highlighted.

3 Press the center button to confirm the change. The **LCD Setup** menu is displayed.

Default Screen

The **Default Screen** allows you to change the screen that the LCD panel displays when there is no activity at the panel. The factory default screen is the **Main Menu**. You can choose from the following screens to display:

- **Main Menu**
- **Server Status** (front graphical view of the chassis)
- **Module Status** (rear graphical view of the chassis)
- **Custom** (Dell logo with chassis name)

The currently active default screen is highlighted in light blue.

1 Use the up and down arrow buttons to highlight the screen you want to set to the default.

2 Press the center button. The **Accept** icon is highlighted.

3 Press the center button again to confirm the change. The **Default Screen** is displayed.

Graphical Server Status Screen

The **Graphical Server Status** screen displays icons for each server installed in the chassis and indicates the general health status for each server. The server health is indicated by the color of the server icon:

- Gray — server is off with no errors
- Green — server is on with no errors
- Amber — server has one or more errors
- Black — server is not present

A blinking light blue rectangle around a server icon indicates that the server is highlighted.

To view the **Graphical Module Status** screen:

1 Highlight the rotate icon.

2 Press the center button.

To view the status screen for a server:

1. Use the arrow buttons to highlight the desired server.
2. Press the center button. The **Server Status** screen displays.

To return to the Main Menu:

1. Use the arrow buttons to highlight the **Back** icon.
2. Press the center button.

Graphical Module Status Screen

The **Graphical Module Status** screen displays all modules installed in the rear of the chassis and provides summary health information for each module. Module health is indicated by the color of each module icon as follows:

- Gray — module is off or on standby with no errors
- Green — module is on with no errors
- Amber — module has one or more errors
- Black — module is not present

A blinking light blue rectangle around a module icon indicates that the module is highlighted.

To view the Gra**phical Server Status** screen:

1. Highlight the rotate icon.
2. Press the center button.

To view the status screen for a module:

1. Use the up, down, left, and right arrow buttons to highlight the desired module.
2. Press the center button. The **Module Status** screen displays.

To return to the **Main Menu**:

1. Use the arrow buttons to highlight the **Back** icon.
2. Press the center button. The **Main Menu** displays.

Enclosure Menu Screen

From this screen you can navigate to the following screens:

- **Module Status** screen
- **Enclosure Status** screen

- **IP Summary** screen
- **Main Menu**

1. Use the navigation buttons to highlight the desired item. (Highlight the **Back** icon to return to the **Main Menu**.)
2. Press the center button. The selected screen displays.

Module Status Screen

The **Module Status** screen displays information and error messages about a module. See "LCD Module and Server Status Information" on page 151 and "LCD Error Messages" on page 140 for messages that can appear on this screen.

Use the up and down arrow keys to move through messages. Use the left and right arrow keys to scroll messages that do not fit on the screen.

Highlight the **Back** icon and press the center button to return to the **Graphical Module Status** screen.

Enclosure Status Screen

The Enclosure Status screen displays information and error messages about the enclosure. See "LCD Error Messages" on page 140 for messages that can appear on this screen.

Use the up and down arrow keys to move through messages. Use the left and right arrow keys to scroll messages that do not fit on the screen.

Highlight the **Back** icon and press the center button to return to the **Enclosure Status** screen.

IP Summary Screen

The **IP Summary** screen shows IP information for the CMC and the iDRAC of each installed server.

Use the up and down arrow buttons to scroll through the list. Use the left and right arrow buttons to scroll selected messages that are longer than the screen.

Use the up and down arrow buttons to select the **Back** icon and press the center button to return to the **Enclosure** menu.

Diagnostics

The LCD panel helps you to diagnose problems with any server or module in the chassis. If there is a problem or fault with the chassis or any server or other module in the chassis, the LCD panel status indicator blinks amber. On the **Main Menu** a blinking icon with an amber background displays next to the menu item—Server or Enclosure—that leads to the faulty server or module.

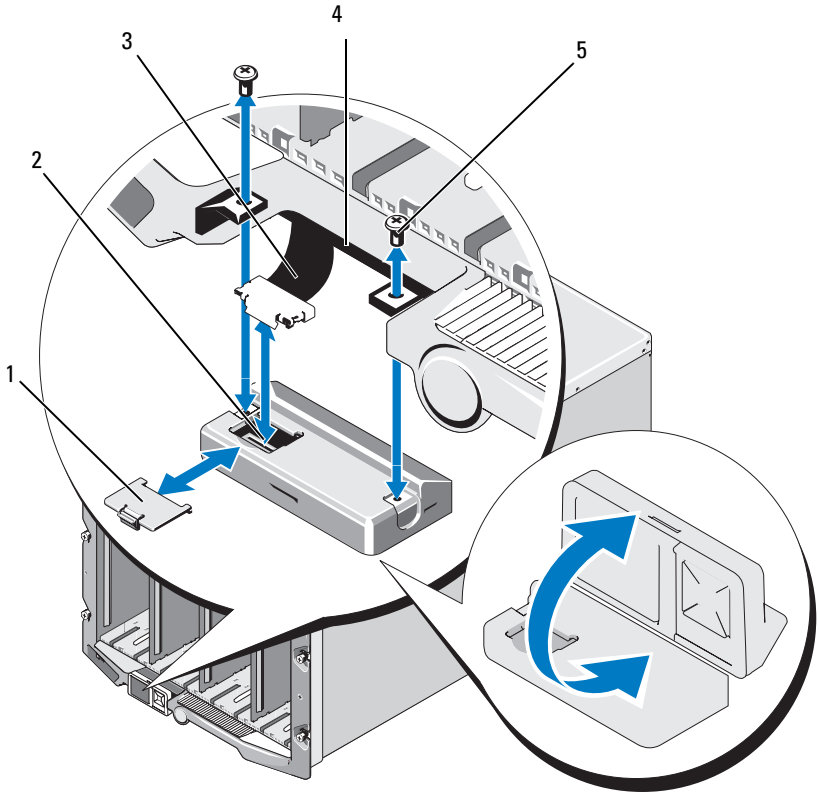
By following the blinking amber icons down through the LCD menu system, you can display the status screen and error messages for the item that has the problem.

Error messages on the LCD panel can be removed by removing the module or server that is the cause of the problem or by clearing the hardware log for the module or server. For server errors, use the iDRAC Web interface or command line interface to clear the server's System Event Log (SEL). For chassis errors, use the CMC Web interface or command line interface to clear the hardware log.

LCD Hardware Troubleshooting

If you are experiencing issues with the LCD in relation to your use of the CMC, use the following hardware troubleshooting items to determine if there is an LCD hardware or connection issue.

Figure 4-1. Removing and Installing the LCD Module



1	cable cover	2	LCD module
3	ribbon cable	4	hinges (2)
5	screws (2)		

Symptom	Issue	Recovery Action
Alert screen message `CMC Not Responding` and LED is blinking amber	Loss of communication from CMC to the LCD front panel	Check that the CMC is booting; then, reset the CMC using GUI or RACADM commands.
Alert screen message `CMC Not Responding` and LED is solid amber or is off	LCD front panel stuck in boot block during a CMC failover	Disconnect and reconnect the front panel circuit board to the I/O panel cable from front panel. Reset the CMC using GUI or RACADM commands.
LED blinks amber or is blank	The LCD to front panel circuit board cable is not connected properly or is faulty; or the front panel is faulty	Review the hardware log using the GUI or RACADM commands. Look for a message that states: `Control Panel TFT Cable: Cable sensor for Control Panel, configuration error was asserted` Replace the front panel.
Screen text is scrambled	Defective LCD screen	Replace the front panel.
LCD screen message `No CMC Found`	No CMC is present in the chassis	Insert a CMC into the chassis or replace existing CMC if present and nonfunctional.

Symptom	Issue	Recovery Action

Blank LCD and LED off	The front panel circuit board cable or the I/O panel cable are not connected properly; or one or both are faulty.	Review the hardware log using the GUI or RACADM commands. Look for messages that state:
		`Control Panel FPC Cable: Cable sensor for Control Panel, configuration error was asserted`
		`Control Panel I/O Cable: Cable sensor for Control Panel, configuration error was asserted`
		Check that the cables are connected properly.

Front Panel LCD Messages

This section contains two subsections that list error and status information that is displayed on the front panel LCD.

Error messages on the LCD have a format that is similar to the System Event Log (SEL) viewed from the CLI or Web interface. The format is as follows:

```
<Severity> <Sensor Name>: <Sensor Type> sensor for
<Entity>, <Description of event>
```

The tables in the error section list the error and warning messages that are displayed on the various LCD screens and the possible cause of the message. Text enclosed in angled brackets (< >) indicates that the text may vary.

Status information on the LCD includes descriptive information about the modules in the chassis. The tables in this section describe the information that is displayed for each component.

LCD Error Messages

Table 4-2. CMC Status Screens

Severity	Message	Cause
Critical	CMC <number> Battery: Battery sensor for CMC, failed was asserted	CMC CMOS battery is missing or no voltage.
Critical	CMC <number> CPU Temp: Temperature sensor for CMC, failure event	CMC CPU temperature exceeded the critical threshold.
Critical	CMC <number> Ambient Temp: Temperature sensor for CMC, failure event	CMC Ambient temperature exceeded the critical threshold.
Warning	Chassis FW Mismatch: Version Change sensor for Chassis, firmware or software incompatibility (System BIOS in slot XX with CMC) was asserted.	Possible loss of functionally or features due to incompatible software versions.
Warning	Chassis FW Mismatch: Version Change sensor for Chassis, firmware or software incompatibility (iDRAC in slot XX with CMC) was asserted.	Possible loss of functionally or features due to incompatible software versions.

Table 4-3. Enclosure/Chassis Status Screen

Severity	Message	Cause
Critical	Chassis Fan <number> Presence: Fan sensor for Chassis Fan, device removed was asserted	This fan is required for proper cooling of the enclosure/chassis.
Warning	Power Supply Redundancy: PS Redundancy sensor for Power Supply, redundancy degraded was asserted	One or more PSU have failed or removed and the system can no longer support full PSU redundancy.

Table 4-3. Enclosure/Chassis Status Screen *(continued)*

Severity	Message	Cause
Critical	Power Supply Redundancy: PS Redundancy sensor for Power Supply, redundancy lost was asserted	One or more PSU have failed or removed and the system is no longer redundant.
Critical	Power Supply Redundancy: PS Redundancy sensor for Power Supply, non-redundant: insufficient resources	One or more PSU have failed or removed and the system lacks sufficient power to maintain normal operations. This could cause servers to power down.
Critical	Control Panel Temp: Temperature sensor for Control Panel, failure event	Chassis/Enclosure temperature exceeded the critical threshold.
Critical	CMC <number> Standalone: Micro Controller sensor for CMC, non-redundant was asserted	CMC no longer redundant. **NOTE:** This will only show if the standby CMC was removed or has failed.
Critical	Chassis Eventlog CEL: Event Log sensor for Chassis Eventlog, all event logging disabled was asserted	The CMC cannot log events.
Critical	Chassis Eventlog CEL: Event Log sensor for Chassis Eventlog, log full was asserted	Chassis device detects that only one entry can be added to the CEL before it is full.
Warning	Chassis Eventlog CEL: Event Log sensor for Chassis Eventlog, log almost full was asserted	Chassis event log is 75% full.

Table 4-4. Fan Status Screens

Severity	Message	Cause
Critical	Chassis Fan <number> Status: Fan sensor for Chassis Fan, failure event	The speed of the specified fan is not sufficient to provide enough cooling to the system.

Table 4-5. IOM Status Screens

Severity	Message	Cause
Warning	I/O Module <number> Status: Module sensor for I/O Module, transition to non-critical from OK was asserted	The IO module was good, but now having fabric mismatch or link tuning mismatch.
Critical	I/O Module <number> Status: Module sensor for I/O Module, transition to critical from less severe was asserted	The I/O module has a fault. The same error can also happen if the I/O module is thermal-tripped.

Table 4-6. iKVM Status Screen

Severity	Message	Cause
Warning	Local KVM Health: Module sensor for Local KVM, transition to non-critical from OK was asserted	Minor failure, such as corrupted firmware.
Critical	Local KVM Health: Module sensor for Local KVM, transition to critical from less severe was asserted	USB host enumeration failure or OSCAR failure.
Non-Recoverable	Local KVM Health: Module sensor for Local KVM, transition to non-recoverable was asserted	Serial RIP failure or USB host chip failure.

Table 4-7. PSU Status Screens

Severity	Message	Cause
Critical	Power Supply PSU <number>: Power Supply sensor for Power Supply, failure was asserted	The PSU has failed.
Critical	Power Supply PSU <number>: Power Supply sensor for Power Supply, input lost was asserted	Loss of AC power or AC cord unplugged.

Table 4-8. Server Status Screen

Severity	Message	Cause
Warning	System Board Ambient Temp: Temperature sensor for System Board, warning event	Server Ambient temperature crossed a warning threshold.
Critical	System Board Ambient Temp: Temperature sensor for System Board, failure event	Server Ambient temperature crossed a failing threshold.
Critical	System Board CMOS Battery: Battery sensor for System Board, failed was asserted	CMOS battery is not present or has no voltage.
Critical	System Board ROMB Battery: Battery sensor for System Board, failed was asserted	Storage battery is not present or has no voltage.
Warning	System Board System Level: Current sensor for System Board, warning event	Current crossed a warning threshold.
Critical	System Board System Level: Current sensor for System Board, failure event	Current crossed a failing threshold.
Critical	System Board <current sensor name>: Current sensor for System Board, state asserted was asserted	Current out of range
Critical	CPU <number> <voltage sensor name>: Voltage sensor for CPU <number>, state asserted was asserted	Voltage out of range.
Critical	System Board <voltage sensor name>: Voltage sensor for System Board, state asserted was asserted	Voltage out of range.
Critical	CPU <number> <voltage sensor name>: Voltage sensor for CPU <number>, state asserted was asserted	Voltage out of range.

Table 4-8. Server Status Screen *(continued)*

Severity	Message	Cause
Critical	CPU<number> Status: Processor sensor for CPU<number>, IERR was asserted	CPU failure.
Critical	CPU<number> Status: Processor sensor for CPU<number>, thermal tripped was asserted	CPU overheated.
Critical	CPU<number> Status: Processor sensor for CPU<number>, configuration error was asserted	Incorrect processor type or in wrong location.
Critical	CPU<number> Status: Processor sensor for CPU<number>, presence was de-asserted	Required CPU is missing or not present.
Critical	System Board Video Riser: Module sensor for System Board, device removed was asserted	Required module was removed.
Critical	Mgt Riser Presence: Presence sensor for Mgt Riser, absent was asserted	Management Riser was removed.
Critical	Backplane Presence: Presence sensor for Backplane, absent was asserted	Backplane was removed.
Critical	System Board HeatSink Pres: Presence sensor for System Board, absent was asserted	Required system board heat sink was removed.
Critical	Mezz B <slot number> Status: Add-in Card sensor for Mezz B <slot number>, install error was asserted	Incorrect Mezzanine card installed for I/O fabric.
Critical	Mezz B <slot number> PG: Voltage sensor for Mezz B <slot number>, state asserted was asserted	No power to Mezzanine card.

Table 4-8. Server Status Screen *(continued)*

Severity	Message	Cause
Critical	Mezz C <slot number> Status: Add-in Card sensor for Mezz C <slot number>, install error was asserted	Incorrect Mezzanine card installed for I/O fabric.
Critical	Mezz C <slot number> PG: Voltage sensor for Mezz C <slot number>, state asserted was asserted	No power to Mezzanine card.
Critical	Backplane Drive <number>: Drive Slot sensor for Backplane, drive removed	Storage Drive was removed.
Critical	Backplane Drive <number>: Drive Slot sensor for Backplane, drive fault was asserted	Storage Drive failed.
Critical	Storage PG: Voltage sensor for Storage, state asserted was asserted	No voltage to storage device.
Critical	System Board PFault Fail Safe: Voltage sensor for System Board, state asserted was asserted	This event is generated when the system board voltages are not at normal levels.
Critical	System Board OS Watchdog: Watchdog sensor for System Board, timer expired was asserted	The iDRAC watchdog timer expires and no action is set.
Critical	System Board OS Watchdog: Watchdog sensor for System Board, reboot was asserted	The iDRAC watchdog detected that the system has crashed (timer expired because no response was received from Host) and the action is set to reboot.
Critical	System Board OS Watchdog: Watchdog sensor for System Board, power off was asserted	The iDRAC watchdog detected that the system has crashed (timer expired because no response was received from Host) and the action is set to power off.

Table 4-8. Server Status Screen *(continued)*

Severity	Message	Cause
Critical	System Board OS Watchdog: Watchdog sensor for System Board, power cycle was asserted	The iDRAC watchdog detected that the system has crashed (timer expired because no response was received from Host) and the action is set to power cycle.
Critical	System Board SEL: Event Log sensor for System Board, log full was asserted	The SEL device detects that only one entry can be added to the SEL before it is full.
Warning	ECC Corr Err: Memory sensor, correctable ECC (<DIMM Location>) was asserted	Correctable ECC errors reach a critical rate.
Critical	ECC Uncorr Err: Memory sensor, uncorrectable ECC (<DIMM Location>) was asserted	An uncorrectable ECC error was detected.
Critical	I/O Channel Chk: Critical Event sensor, I/O channel check NMI was asserted	A critical interrupt is generated in the I/O Channel.
Critical	PCI Parity Err: Critical Event sensor, PCI PERR was asserted	Parity error was detected on the PCI bus.
Critical	PCI System Err: Critical Event sensor, PCI SERR (<Slot number or PCI Device ID>) was asserted	PCI error detected by device.
Critical	SBE Log Disabled: Event Log sensor, correctable memory error logging disabled was asserted	Single bit error logging is disable when too many SBE get logged.
Critical	Logging Disabled: Event Log sensor, all event logging disabled was asserted	All error logging is disabled.
Non-Recoverable	CPU Protocol Err: Processor sensor, transition to non-recoverable was asserted	The processor protocol entered a non-recoverable state.
Non-Recoverable	CPU Bus PERR: Processor sensor, transition to non-recoverable was asserted	The processor bus PERR entered a non-recoverable state.

Table 4-8. Server Status Screen *(continued)*

Severity	Message	Cause
Non-Recoverable	CPU Init Err: Processor sensor, transition to non-recoverable was asserted	The processor initialization entered a non-recoverable state.
Non-Recoverable	CPU Machine Chk: Processor sensor, transition to non-recoverable was asserted	The processor machine check entered a non-recoverable state.
Critical	Memory Spared: Memory sensor, redundancy lost (<DIMM Location>) was asserted	Memory spare is no longer redundant.
Critical	Memory Mirrored: Memory sensor, redundancy lost (<DIMM Location>) was asserted	Mirrored Memory is no longer redundant.
Critical	Memory RAID: Memory sensor, redundancy lost (<DIMM Location>) was asserted	RAID Memory is no longer redundant.
Warning	Memory Added: Memory sensor, presence (<DIMM Location>) was deasserted	Added memory module was removed.
Warning	Memory Removed: Memory sensor presence (<DIMM Location>) was deasserted	Memory module was removed.
Critical	Memory Cfg Err: Memory sensor, configuration error (<DIMM Location>) was asserted	Memory configuration is incorrect for the system.
Warning	Mem Redun Gain: Memory sensor, redundancy degraded (<DIMM Location>) was asserted	Memory redundancy is down graded but not lost.
Critical	PCIE Fatal Err: Critical Event sensor, bus fatal error was asserted	Fatal error is detected on the PCIE bus.
Critical	Chipset Err: Critical Event sensor, PCI PERR was asserted	Chip error is detected.

Table 4-8. Server Status Screen *(continued)*

Severity	Message	Cause
Warning	Mem ECC Warning: Memory sensor, transition to non-critical from OK (<DIMM Location>) was asserted	Correctable ECC errors have increased from a normal rate.
Critical	Mem ECC Warning: Memory sensor, transition to critical from less severe (<DIMM Location>) was asserted	Correctable ECC errors have reached a rate.
Critical	System Board POST Err: POST sensor for System Board, POST fatal error <additional error information> was asserted	See Hardware Service Manual for BIOS POST addition error information.
Critical	POST Err: POST sensor, No memory installed	No memory detected on board
Critical	POST Err: POST sensor, Memory configuration error	Memory detected but is not configurable
Critical	POST Err: POST sensor, Unusable memory error	Memory configured but not usable
Critical	POST Err: POST sensor, Shadow BIOS failed	System BIOS shadow failure
Critical	POST Err: POST sensor, CMOS failed	CMOS failure
Critical	POST Err: POST sensor, DMA controller failed	DMA controller failure
Critical	POST Err: POST sensor, Interrupt controller failed	Interrupt controller failure
Critical	POST Err: POST sensor, Timer refresh failed	Timer refresh failure
Critical	POST Err: POST sensor, Programmable interval timer error	Programmable interval timer error
Critical	POST Err: POST sensor, Parity error	Parity error

Table 4-8. Server Status Screen *(continued)*

Severity	Message	Cause
Critical	POST Err: POST sensor, SIO failed	SIO failure
Critical	POST Err: POST sensor, Keyboard controller failed	Keyboard controller failure
Critical	POST Err: POST sensor, System management interrupt initialization failed	System Management Interrupt initialization failure
Critical	POST Err: POST sensor, BIOS shutdown test failed	BIOS shutdown test failure
Critical	POST Err: POST sensor, BIOS POST memory test failed	BIOS POST memory test failure
Critical	POST Err: POST sensor, Dell remote access controller configuration failed	Dell Remote Access Controller configuration failure
Critical	POST Err: POST sensor, CPU configuration failed	CPU configuration failure
Critical	POST Err: POST sensor, Incorrect memory configuration	Incorrect memory configuration
Critical	POST Err: POST sensor, POST failure	General failure after video
Critical	Hdwar version err: Version Change sensor, hardware incompatibility was asserted	Incompatible hardware was detected
Critical	Hdwar version err: Version Change sensor, hardware incompatibility (BMC/iDRAC firmware) was asserted	Hardware is incompatible with the firmware
Critical	Hdwar version err: Version Change sensor, hardware incompatibility (BMC/iDRAC firmware and CPU mismatch) was asserted	CPU and firmware not compatible

Table 4-8. Server Status Screen *(continued)*

Severity	Message	Cause
Critical	Mem Overtemp: Memory sensor, correctable ECC <DIMM Location> was asserted	Memory module overheating
Critical	Mem Fatal SB CRC: Memory sensor, uncorrectable ECC was asserted	South bridge memory failed
Critical	Mem Fatal NB CRC: Memory sensor, uncorrectable ECC was asserted	North bridge memory failed
Critical	WatchDog Timer: Watchdog sensor, reboot was asserted	Watch dog timer cause system to reboot
Critical	WatchDog Timer: Watchdog sensor, timer expired was asserted	Watch dog timer expired but no action taken
Warning	Link Tuning: Version Change sensor, successful software or F/W change was deasserted	Failed to update link tuning setting for proper NIC operation
Warning	Link Tuning: Version Change sensor, successful hardware change <device slot number> was deasserted	Failed to update link tuning setting for proper NIC operation
Critical	LinkT/ FlexAddr: Link Tuning sensor, failed to program virtual MAC address (Bus # Device # Function #) was asserted	FlexAddress could not be programmed for this device
Critical	LinkT/ FlexAddr: Link Tuning sensor, device option ROM failed to support link tuning or flex address (Mezz <location>) was asserted	Option ROM does not support FlexAddress or link tuning.
Critical	LinkT/ FlexAddr: Link Tuning sensor, failed to get link tuning or flex address data from BMC/iDRAC was asserted	Failed to obtain linking tuning or FlexAddress information from BMC/iDRAC

Table 4-8. Server Status Screen *(continued)*

Severity	Message	Cause
Critical	LinkT/ FlexAddr: Link Tuning sensor, device option ROM failed to support link tuning or flex address (Mezz XX) was asserted	PCI device Option ROM for a NIC does not support link tuning or the FlexAddress feature.
Critical	LinkT/ FlexAddr: Link Tuning sensor, failed to program virtual MAC address (<location>) was asserted	BIOS failed to program virtual MAC address on the given NIC device.
Critical	I/O Fatal Err: Fatal IO Group sensor, fatal IO error (<location>)	Generated in association with a CPU IERR and indicates which device caused the CPU IERR.
Warning	PCIE NonFatal Er: Non Fatal IO Group sensor, PCIe error (<location>)	Generated in association with a CPU IERR.

LCD Module and Server Status Information

The tables in this section describe status items that are displayed on the front panel LCD for each type of component in the chassis.

Table 4-9. CMC Status

Item	Description
Name/Location	Example: CMC1, CMC2
Error Messages	If no error then "No Errors" is shown; otherwise error messages are listed, critical errors first, then warnings.
IP Address	Only shows on active CMC.
Firmware Version	Only shows on active CMC.

Table 4-10. Chassis/Enclosure Status

Item	Description
User Define Name	Example: “Dell Rack System”. This is settable via CMC CLI or Web GUI

Table 4-10. Chassis/Enclosure Status *(continued)*

Item	Description
Error Messages	If no error then "No Errors" is shown; otherwise error messages are listed, critical errors first, then warnings.
Model Number	Example "PowerEdgeM1000"
Power Consumption	Current power consumption in watts
Surplus for Peak Performance	The surplus for peak performance is computed based on the following factors: • If server power throttling is enabled, the surplus for peak performance value is the difference between the System Input Power Warning Threshold and the sum of the Input Power Allocated to Servers and the Input Power Allocated to Chassis Infrastructure. • If server power throttling is disabled, the surplus for peak performance value is the difference between the System Input Power Cap and the sum of the Input Power Allocated to Servers and the Input Power Allocated to Chassis Infrastructure. The value for surplus for peak performance is displayed in watts.
Peak Power	Peak power consumed in watts
Minimum Power	Minimum power consumed in watts
Ambient Temperature	Current ambient temperature in degrees Celsius
Service Tag	The factory-assigned service tag
CMC redundancy mode	Non-Redundant or Redundant
PSU redundancy mode	Non-Redundant, AC Redundant, or DC Redundant

Table 4-11. Fan Status

Item	Description
Name/Location	Example: Fan1, Fan2, etc.

Table 4-11. Fan Status *(continued)*

Item	Description
Error Messages	If no error then "No Errors" is shown; otherwise error messages are listed, critical errors first, then warnings.
RPM	Current fan speed in RPM

Table 4-12. PSU Status

Item	Description
Name/Location	Example: PSU1, PSU2, etc.
Error Messages	If no error then "No Errors" is shown; otherwise error messages are listed, critical errors first, then warnings.
Status	Offline, Online, or Standby
Maximum Wattage	Maximum Wattage that PSU can supply to the system

Table 4-13. IOM Status

Item	Description
Name/Location	Example: IOM A1, IOM B1, and so on.
Error Messages	If no error then "No Errors" is shown; otherwise error messages are listed, critical errors first, then warnings.
Status	Off or On
Model	Model of the IOM
Fabric Type	Networking type
IP address	Only shows if IOM is On. Will be all zero for a pass through type IOM.
Service Tag	The factory-assigned service tag.

Table 4-14. iKVM Status

Item	Description
Name	iKVM

Table 4-14. iKVM Status *(continued)*

Item	Description
Error Messages	If no error then "No Errors" is shown; otherwise error messages are listed, critical errors first, then warnings.
Status	Off or On
Model/Manufacture	A description of the iKVM model.
Service Tag	The factory-assigned service tag.
Part Number	The manufacturer part number.
Firmware Version	The iKVM firmware version.

Table 4-15. Server Status

Item	Description
Name/Location	Example: Server 1, Server 2, and so on.
Error Messages	If no error then "No Errors" is shown; otherwise error messages are listed, critical errors first, then warnings.
Slot Name	CMC slot name. Example SLOT-01. **NOTE:** This is configured through the CMC CLI or Web GUI.
Name	User settable name of the server. Settable via server BIOS, iDRAC CLI or Web GUI. Displays if iDRAC finished booting, or will display iDRAC booting messages.
Model Number	Displays if iDRAC finished booting.
Service Tag	Displays if iDRAC finished booting.
iDRAC IP Address	Displays if iDRAC finished booting. If iDRAC is set for DHCP and has not obtained IP, will display **Acquiring.**
iDRAC Firmware Version	Displays if iDRAC finished booting. **NOTE:** iDRAC version 1.01 is displayed as 1.1. There is no iDRAC version 1.1.
FlexAddress enabled on Fabrics: <Fabric>	Displays if feature is installed. Lists fabrics that are FlexAddress-enabled for this server (for example, A, B, C).

Glossary

Active Directory
Active Directory is a centralized and standardized system that automates network management of user data, security, and distributed resources, and enables interoperation with other directories. Active Directory is designed especially for distributed networking environments.

ARP
Address resolution protocol, a method for finding a host's Ethernet address from its Internet address.

ASCII
American Standard Code for Information Interchange, a code representation used for displaying or printing letters, numbers, and other characters.

blade
A self-contained server designed for high density racks.

BIOS
Basic input/output system, the part of system software that provides the lowest-level interface to peripheral devices and which controls the first stage of the system boot process, including installation of the operating system into memory.

CMC
The Dell Chassis Management Controller, providing remote management capabilities and power control functions for Dell PowerEdge™ systems.

bus
A set of conductors connecting the various functional units in a computer. Busses are named by the type of data they carry, such as data bus, address bus, or PCI bus.

CA
A certificate authority (CA) is a business entity that is recognized in the IT industry for meeting high standards of reliable screening, identification, and other important security criteria. Examples of CAs include Thawte and VeriSign. After the CA receives your CSR, they review and verify the information the CSR contains. If the applicant meets the CA's security standards, the CA issues a

certificate to the applicant that uniquely identifies that applicant for transactions over networks and on the Internet.

CD
Compact disc

Certificate Signing Request (CSR)
A digital request to a certificate authority for a secure server certificate.

CLI
Command Line interface

DHCP
Dynamic host configuration protocol, a means of dynamically allocating IP addresses to computers on a network.

DLL
Dynamic link library, a library of functions, any of which can be called when needed by a larger program that is running in the system. The smaller functions let the larger program communicate with a specific device such as a printer or scanner.

DNS
Domain name system

iDRAC
The Dell Integrated Remote Access Controller, a systems management hardware and software solution that provides remote management capabilities, crashed system recovery, and power control functions for Dell PowerEdge systems.

delay time (OSCAR user interface)
The number of seconds before the OSCAR Main dialog box is displayed after <Print Screen> is pressed.

extended schema
A solution used with Active Directory to determine user access to the CMC; uses Dell-defined Active Directory objects.

FQDN
Fully qualified domain name, a domain name that specifies a module's absolute position in the DNS tree hierarchy. Microsoft® Active Directory® only supports an FQDN of 64 bytes or fewer.

FSMO
Flexible single master operation, a Microsoft Active Directory domain controller task that guarantees atomicity of an extension operation.

GB1
The uplink port on the chassis.

GMT
Greenwich Mean Time. GMT is the standard time common to every place in the world. GMT nominally reflects the mean solar time along the prime meridian (0 longitude) that runs through the Greenwich Observatory outside of London, UK.

GUI
Graphical user interface, which refers to a computer display interface that uses elements such as windows, dialog boxes, and buttons as opposed to a command prompt interface, in which all user interaction is displayed and typed in text.

hardware log
A CMC-generated record of events relating to hardware on the chassis.

ICMP
Internet control message protocol, a way for operating systems to send error messages.

ID
Identifier, commonly used when referring to a user identifier (user ID) or object identifier (object ID).

iKVM
Avocent® Integrated KVM Switch Module, an optional, hot-pluggable module to the chassis providing local access to keyboard, mouse, and video to any of the 16 servers in the chassis, as well as the additional Dell CMC Console option that connects to the chassis' active CMC.

IOMINF
I/O module infrastructure device.

IP
Internet Protocol. IP is the network layer for TCP/IP. IP provides packet routing, fragmentation, and reassembly.

IPMB
Intelligent platform management bus, which is used in systems management technology.

Kbps
Kilobits per second, a data transfer rate.

LAN
Local area network

LDAP
Lightweight directory access protocol

LED
Light-emitting diode

LOM
Local area network on motherboard

MAC
Media access control, a network sublayer between a network node and the network physical layer.

MAC address
Media access control address, a unique address embedded in the physical components of a NIC.

management station
A system that remotely accesses the CMC.

Mbps
Megabits per second, which is a data transfer rate.

MC
Mezzanine card

Microsoft Active Directory
A centralized, standardized system that automates network management of user data, security, and distributed resources, and enables interoperation with other directories. Active Directory is designed especially for distributed networking environments.

NIC
Network interface card, an adapter circuit board installed in a computer to provide a physical connection to a network.

OID
Object identifier

OSCAR
On Screen Configuration and Reporting, a graphical user interface used for iKVM access.

PCI
Peripheral component interconnect, a standard interface and bus technology for connecting peripherals to a system and for communicating with those peripherals.

POST
Power-on self-test, a sequence of diagnostic tests that are run automatically by a system when it is powered on.

RAC
Remote access controller

RAM
Random-access memory. RAM is general-purpose readable and writable memory on systems.

RAM disk
A memory-resident program which emulates a hard drive.

ROM
Read-only memory, from which data may be read, but to which data cannot be written.

RPM
Red Hat Package Manager, a package-management system for the Red Hat Enterprise Linux operating system. RPM manages the installation of software packages. It is similar to an installation program.

SEL
System event log or hardware log

SMTP
Simple mail transfer protocol, used to transfer electronic mail between systems—usually over an Ethernet.

SNMP
Simple network management protocol, designed to manage nodes on an IP network. iDRACs are SNMP-managed devices (nodes).

SNMP trap
A notification (event) generated by the CMC that contains information about state changes on the managed system or about potential hardware problems.

SSH
Secure Shell, a network protocol that allows data to be exchanged over a secure channel between two computers.

SSL
Secure sockets layer, a protocol that provides secure communications over networks for data transfers.

standard schema
A solution used with Active Directory to determine user access to the CMC; uses Active Directory group objects only.

STK
The staking port on the chassis

TCP/IP
Transmission control protocol/Internet protocol, representing the set of standard Ethernet protocols that includes the network layer and transport layer protocols.

TFTP
Trivial file transfer protocol, a simple file transfer protocol used for downloading boot code to diskless devices or systems.

UPS
Uninterruptible power supply

USB
Universal serial bus, a serial bus standard to interface devices.

UTC
Universal Coordinated Time. *See* GMT.

vKVM
Virtual keyboard-video-mouse console

VLAN
Virtual local area network

VNC
Virtual network computing

VT-100
Video Terminal 100, which is used by the most common terminal emulation programs.

WAN
Wide area network

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