SMCIPMITool

User Guide

Version 2.5

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Contents

1 Introduction

1.1 Purpose

IPMI (Intelligent Platform Management Interface) is a standard to allow a user to interface with a computer system to monitor the health of and manage the system.

The SMCIPMITool is a Supermicro utility that allows a user to interface with SuperBlade systems and IPMI devices via a CLI (Command Line Interface).

1.2 Third Party Software

1.2.1 JLine

SMCIPMITool uses JLine for command history and tab-completion. JLine is a Java library used to handle console input and is similar in functionality to BSD editline and GNU readline. People familiar with the readline/editline capabilities for modern shells (such as bash and tcsh) will find most of the command editing features of JLine to be familiar.

Please refer to http://jline.sourceforge.net/index.html for more information.

1.3 Document Conventions

- The syntax of the CLI command is given in **`Courier New 11 bold`**.
- Elements in (< >) indicate the field required as input along with a CLI command, for example **< integer (100-1000)>**.
- Elements in square brackets (**[ ]**) indicate optional fields for a command.
- Both " * " and " , " may be used to specify the numbers for the blade/gigabit/power/ib index(es) commands. For example:

```
CMM> blade 1,2,3 status
CMM> gigabit * status
```

2 Usage and Mode

Two kinds of user modes are provided when you start the SMCIMPITool: Command Line Mode and Shell Mode. Enter the OS console first before you select the mode.

2.1 Command Line Mode

In this mode, one command is entered and executed at a time. After the commands are executed, the SMCIPMITool is exited out. Usually this mode is received for executing simple commands or batch script.

Usage:

```
[java]

java -jar SMCIPMITool.jar <IP> <username> <password> [commands ... ]

[Windows]

SMCIPMITool.exe <IP> <username> <password> [commands ... ]

[Linux]

SMCIPMITool <IP> <username> <password> [commands ... ]
```

2.2 Shell Mode

In this mode, you can run multiple commands on a managed server without exiting the SMCIPMITool, which allows you to have better management of group servers. The related information in the prompt is provided for your reference. When the IPMI devices send the SNMP, you will receive the trap information as well.

Usage:

```
[java]

java -jar SMCIPMITool.jar <IP> <username> <password> shell

[Windows]

SMCIPMITool.exe <IP> <username> <password> shell

[Linux]

SMCIPMITool <IP> <username> <password> shell
```

Example Output:

```
SMC IPMI Tool V2.1.2 (Build 120320) - Super Micro Computer, Inc.
Press Ctrl+D or "exit" to exit
Press "?" or "help" for help
Press TAB for command completion
Press UP and DOWN key for command history
Trap Receiver Started
Managed hosts loaded.
Found hosts loaded.
192.168.23.100 X9SCD (S0/G0,13w) 13:55 SIM(WA)>
```

2.2.1 Keyboard Shortcuts

In the Shell Mode, hot keys allow you to have an ease of use.

Keys	Action
Up Arrow /Down Arrow	Displays the previously executed command
Ctrl + A	Moves the cursor to the previous command line
Ctrl + D	Exits from the SMCIPMITool prompt
Backspace/ Ctrl + H	Removes a single character
TAB	Completes a command without typing the full word
Left Arrow /Right Arrow	Traverses the current line

2.2.2 prompt

Use this command to configure the current status of managed system in prompt. The configuration will be permanently stored and recalled at the next startup.

Usage: **`prompt <type> <on|off>`**

Example Output:

```
username <on|off> : show/hide username
             ip <on|off>       : show/hide IP address
             mb <on|off>       : show/hide Motherboard product Model
             acpi <on|off>     : show/hide ACPI status
             power <on|off>    : show/hide power watts
             fwver <on|off>    : show/hide BMC firmware ver
             time <on|off>     : show/hide time
             all <on|off>      : show/hide all information
             * The change will be stored to config file
```

When you enter the Shell Mode after this, you will see the default prompt listings as follows:

```
ADMIN@192.168.23.92 X9DRW-6F (S0/G0,76w,v00.10) 14:13 SIM(X9)>
   (A)     (B)       (C)     (D) (E)   (F)    (G)  (H)

   (A) Username
   (B) IP address
   (C) Motherboard
   (D) ACPI status
   (E) Power consumption
   (F) IPMI firmware version
   (G) Current time
   (H) IPMI firmware type

    * If the information is not shown even set the item on,
      That means SMCIPMITool cannot get correct data.
```

The prompt may appear differently depending on the type of firmware as follows:

Prompt in SMCIPMITool shell mode	**IPMI Firmware Type**
CMM>	Peppercon Firmware (KIRA) for Blade CMM
SIM(W)>	AMI Firmware (WPCM450)
SIM(WA)>	ATEN Firmware (WPCM450)
SIMBL(W)>	AMI Firmware (WPCM450) for Blade SIMBL
SIMBL>	Peppercon Firmware (KIRA) for Blade SIMBL
SIM-IPMI>	Peppercon Firmware (KIRA) without KVM
SIM-KVM-IPMI>	Peppercon Firmware (KIRA) with KVM
SUPERO-IPMI>	OSA (Renesas 2167) Firmware
SIM(X9)>	AMI Firmware (SH7757) for X9 MBs
ASPD_T>	ATEN ASPEED Firmware for X10 MBs

IPMI>	Others

2.2.3 ch

Specify an IP address and use this command to change the current managed server. The servers that have been accessed are automatically memorized. Next time when you start the SMCIMPITool and enter the Shell Mode, the servers will be recalled in the prompt. You can use the keys“<” or “>” to switch between the servers. Note this command is ONLY available when you are in the Shell Mode.

Useage: **ch**

Example Output:

```
...
   Current managed system(s):
   Index | IP
   ----- | ----------------------
       1 | ADMIN@192.168.23.92
       2 | ADMIN@192.168.23.93
       3 | ADMIN@192.168.23.95
```

2.2.4 hostrun

This is an IPMI command allowing you manage a group of servers. Two ways of running this command are as follows.

2.2.4.1 hostrun found

Run this command on all of the servers found by the `find` command. For details on the `find` command, please see *3.18 find*.

Usage: **`hostrun found <IPMI command>`**

2.2.4.2 hostrun curr

Run this command on all of the servers you manage with the **ch** command. For details on the ch command, please see *2.2.3 ch*.

Usage: **`hostrun curr <IPMI command>`**

2.2.5 search

The search function is built in all commands. The following three examples illustrate how this function works with the commands.

Usage: **`SIM(X9)> <Command> | <Key for search>`**

Example Output 1:

Search "FAN" from sensor list.

```
SIM(X9)>ipmi sr | FAN
       | (6) FAN1                | N/A |   600 RPM |  12550 RPM |
 OK    | (7) FAN2                | 1550 RPM |   600 RPM |  12550 RPM |
       | (8) FAN3                | N/A |   600 RPM |  12550 RPM |
       | (9) FAN4                | N/A |   600 RPM |  12550 RPM |
       | (10) FANA               | N/A |   600 RPM |  12550 RPM |
       | (11) FANB               | N/A |   600 RPM |  12550 RPM |
```

3 Commands

This section lists the commands available with SMCIPMITool. You must follow the usage protocol as described in the previous section.

Command(s):

```
system                              SuperBlade system status overview
failure                             SuperBlade system failure report
blade                               SuperBlade blade management (2)
gigabit                             SuperBlade gigabit switch management (2)
power                               SuperBlade power supply management (2)
ib                                  SuperBlade infiniband management (2)
cmm                                 SuperBlade CMM management (2)
listtemp                            SuperBlade system temperatures
allsel <filename>                   SuperBlade all Blade SEL to CSV (OEM)
burst                               SuperBlade power burst control (8)
ipmi                                IPMI device management (21)
sel                                 IPMI system event log (4)
user                                IPMI user management (6)
nm                                  Node Management V1.5 (16)
nm20                                Node Management V2.0 (X9 MBs) (35)
dcmi                                DCMI Management (2)
bios                                BIOS update for X9 motherboards (8)
pminfo [<busId> <SlaAddr>]          Power supply PMBus health
psfruinfo [<busId> <SlaAddr>]       Power supply FRU health
ver                                 SMCIPMITool version
ch                                  Change managed device in shell mode
list [keyword]                      List all or find available commands
exec <filename> [loop] [delay]      Execute commands from file
find [<Start> <End> <netMask>]      Find IPMI device from local or IP range
found                               found IPMI devices (6)
host                                Host management (6)
hostrun <host|group> <command>      Run a command on host or group
mg                                  Manage group command (8)
trap                                IPMI SNMP Trap receiver management (7)
sc                                  Execute DOS/Linux shell command
ukvm                                KVM launcher (CMM,SIM,SIM(W),SIM(WA),SIM(X9))
kvm                                 SIM KVM console (graphic mode)
kvmw                                SIM(W) KVM console (graphic mode)
kvmwa                               SIM(WA) KVM console (graphic mode)
kvmwx9                              SIM(X9) KVM console (graphic mode)
dr                                  SIM Virtual Media Drive Redirection
vm                                  SIM Virtual Media Management (4)
vmw                                 SIM(W) Virtual Media
vmwa                                SIM(WA) Virtual Media
prompt <type> <on|off>              Config information displayed on prompt
tagLoc                              Tag for Location (16)
sol                                 SOL Commands
hdd                                 HDD status (6)
bbp                                 Battery Backup Power Management (3)
```

3.1 system

The system command displays the system information. In a blade system, this command will also list the modules present (CMM modules, Gb switches, power supplies, etc.).

Usage: **`system`**

Example Output:

```
Blade Module (20/20)
--------------------
 Blade    | Power  | KVM      | UID | Error | BMC | Watt | MB
 -----    | -----  | ---      | --- | ----- | --- | ---- | --
 Blade 1  | Off    | Selected |     |       | Yes | 350W | B8DTT
 Blade 2  | Off    |          |     |       | Yes | 400W | B8DTT
 Blade 3  | On     |          |     |       | Yes | 350W | B8DTT
 Blade 4  | On     |          |     |       | Yes | 350W | B8DTT
 Blade 5  | On     |          |     |       | Yes | 350W | B8DTT
 Blade 6  | On     |          |     |       | Yes | 350W | B8DTT
 Blade 7  | On     |          |     |       | Yes | 350W | B8DTT
 Blade 8  | On     |          |     |       | Yes | 350W | B8DTT
 Blade 9  | On     |          |     |       | Yes | 350W | B8DTT
 Blade 10 | On     |          |     |       | Yes | 350W | B8DTT
 Blade 11 | Off    |          |     |       | Yes | 400W | B8DTT
 Blade 12 | Off    |          |     |       | Yes | 400W | B8DTT
 Blade 13 | On     |          |     |       | Yes | 350W | B8DTT
 Blade 14 | On     |          |     |       | Yes | 350W | B8DTT
 Blade 15 | On     |          |     |       | Yes | 350W | B8DTT
 Blade 16 | On     |          |     |       | Yes | 350W | B8DTT
 Blade 17 | On     |          |     |       | Yes | 350W | B8DTT
 Blade 18 | On     |          |     |       | Yes | 350W | B8DTT
 Blade 19 | On     |          |     |       | Yes | 350W | B8DTT
 Blade 20 | On     |          |     |       | Yes | 350W | B8DTT

Gigabit Switch Module (1/2)
-------------------------
 GBSW   | Power | Error | Init |   Switch |   2.5V |  1.25V | Type
 ----   | ----- | ----- | ---- |   ------ |   ---- |  ----- | ----------
 GBSW 1 | On    |       | Not  | 61C/142F |  2.48V | 1.192V | L3 Switch

Power Supply Module (4/4)
-------------------------
 PS   | Power | Fan 1 | Fan 2 | Temp.    | Watts |     DC |     AC | F/W | FRU
 --   | ----- | ----- | ----- | -----    | ----- |     -- |     -- | --- | ---
 PS 1 | On    |  5152 |  5152 | 56C/133F |  2000 |    N/A |    N/A | 2.6 |  01
 PS 2 | On    |  5381 |  5381 | 54C/129F |  2000 |    N/A |    N/A | 2.6 |  01
 PS 3 | On    |  5267 |  5152 | 57C/135F |  2000 |    N/A |    N/A | 2.6 |  01
 PS 4 | On    |  7328 |  7099 | 54C/129F |  2000 |    N/A |    N/A | 2.6 |  01

IBQDR Module (1/2)
------------------------
 IBQDR   | Power |  Temp. Switch |   Temp. Board |   3.3V |  1.25V
 -----   | ----- |  ------------ |   ----------- |   ---- |  -----
 IBQDR 1 | On    |      57C/135F |      56C/133F |  3.24V |  1.18V

CMM Module(1/2)
----------------
 CMM   | M/S    | Status
 ---   | ---    | ------
 CMM 1 | Master | OK

CMM 1 is being managed now
```

3.2 failure

The failure command brings up a failure report, which lists all failure messages from the system.

Usage: **`failure`**

3.3 blade

The blade command will bring up the following subcommands.

3.3.1 blade status

This command will display the status of all the blade units in the system.

Usage: **`blade status`**

Example Output:

```
Blade Module (20/20)
--------------------
 Blade    | Power  | KVM      | UID | Error | BMC | Watt | MB
 -----    | -----  | ---      | --- | ----- | --- | ---- | --
 Blade 1  | Off    | Selected |     |       | Yes | 350W | B8DTT
 Blade 2  | Off    |          |     |       | Yes | 400W | B8DTT
 Blade 3  | On     |          |     |       | Yes | 350W | B8DTT
 Blade 4  | On     |          |     |       | Yes | 350W | B8DTT
 Blade 5  | On     |          |     |       | Yes | 350W | B8DTT
 Blade 6  | On     |          |     |       | Yes | 350W | B8DTT
 Blade 7  | On     |          |     |       | Yes | 350W | B8DTT
 Blade 8  | On     |          |     |       | Yes | 350W | B8DTT
 Blade 9  | On     |          |     |       | Yes | 350W | B8DTT
 Blade 10 | On     |          |     |       | Yes | 350W | B8DTT
 Blade 11 | Off    |          |     |       | Yes | 400W | B8DTT
 Blade 12 | Off    |          |     |       | Yes | 400W | B8DTT
 Blade 13 | On     |          |     |       | Yes | 350W | B8DTT
 Blade 14 | On     |          |     |       | Yes | 350W | B8DTT
 Blade 15 | On     |          |     |       | Yes | 350W | B8DTT
 Blade 16 | On     |          |     |       | Yes | 350W | B8DTT
 Blade 17 | On     |          |     |       | Yes | 350W | B8DTT
 Blade 18 | On     |          |     |       | Yes | 350W | B8DTT
 Blade 19 | On     |          |     |       | Yes | 350W | B8DTT
 Blade 20 | On     |          |     |       | Yes | 350W | B8DTT
```

3.3.2 blade index(es)

This command is used to check the individual blades in the system. The following subcommands may be used for a specific blade.

3.3.2.1 status

Used to check the status of the individual blade specified.

Usage: **`blade <blade number> status`**

Example Output:

```
[ 1]:
 Blade    | Power  | KVM      | UID | Error | BMC | Watt | MB
 -----    | -----  | ---      | --- | ----- | --- | ---- | --
 Blade 1  | Off    | Selected |     |       | Yes | 350W | B8DTT
[ 2]:
 Blade    | Power  | KVM      | UID | Error | BMC | Watt | MB
 -----    | -----  | ---      | --- | ----- | --- | ---- | --
 Blade 2  | Off    |          |     |       | Yes | 400W | B8DTT
```

3.3.2.2 power

Used to access power control for the individual blade specified.

Usage: **blade <blade number> power [up|down|softshutdown|reset]**

Example Output:

```
[ 1]:
Power: Off
Available commands: up, down, softshutdown, reset
[ 2]:
Power: Off
Available commands: up, down, softshutdown, reset
```

3.3.2.3 kvm

Requests a kvm switch for the individual blade specified.

Usage: **blade <blade number> kvm**

3.3.2.4 uid

Used to turn a UID LED on or off as specified on an individual blade.

Usage: **blade <blade number> uid <on/off>**

3.3.2.5 sensor

Used to get sensor readings from the individual blade specified.

Usage: **blade <blade number> sensor**

Example Output:

```
Status | Sensor              |      Reading | Low Limit | High Limit |
------ | ------              |      ------- | --------- | ---------- |
OK     | CPU1 Temp           |      1C/ 34F |       N/A |   80C/176F |
OK     | CPU2 Temp           |      1C/ 34F |       N/A |   80C/176F |
OK     | System Temp         |     64C/147F |       N/A |   80C/176F |
OK     | CPU1 Vcore          |       0.95 V |     0.6 V |     1.38 V |
OK     | CPU2 Vcore          |       0.96 V |     0.6 V |     1.38 V |
OK     | CPU1 DIMM           |       1.53 V |     1.2 V |     1.65 V |
OK     | CPU2 DIMM           |       1.53 V |     1.2 V |     1.65 V |
OK     | 1.5V                |       1.52 V |    1.34 V |     1.65 V |
OK     | 3.3V                |       3.16 V |    2.96 V |     3.63 V |
OK     | 3.3VSB              |       3.36 V |    2.96 V |     3.63 V |
OK     | 5V                  |       5.06 V |    4.49 V |      5.5 V |
OK     | 12V                 |      12.19 V |   10.75 V |    13.25 V |
OK     | VBAT                |       3.36 V |    2.96 V |     3.63 V |
```

3.3.2.6 bmc

This command will bring up the following subcommands related to the BMC of an individual blade.

3.3.2.6.1 ip

Used to get or set the IP address of a blade's BMC.

Usage (to get): **blade <blade number> bmc ip**

Usage (to set): **blade <blade number> bmc ip <IP>**

3.3.2.6.2 mac

Used to get or set the mac address of a blade's BMC.

Usage (to get): **blade <blade number> bmc mac**

Usage (to set): **blade <blade number> bmc mac <mac_address>**

3.3.2.6.3 gateway

Used to get or set the gateway of a blade's BMC.

Usage (to get): **blade <blade number> bmc gateway**

Usage (to set): **blade <blade number> bmc gateway <gateway IP>**

3.3.2.6.4 netmask

Used to get or set the netmask of a blade's BMC.

Usage (to get): **blade <blade number> bmc netmask**

Usage (to set): **blade <blade number> bmc netmask <netmask>**

3.3.2.6.5 dhcp

Used to enable or disable the DHCP (Dynamic Host Configuration Protocol) of a blade.

Usage: **blade <blade number> bmc dhcp [enable|disable]**

3.3.2.6.6 vlan

Used to display or enable or disable an individual blade's VLAN (Virtual LAN).

Usage: **blade <blade number> bmc vlan [<enable|disable> >tag>]**

3.3.2.6.7 ipmb

Used to send a raw IPMI command to an individual blade.

Usage: **blade <blade number> bmc ipmb <netFn> <cmd> [data]**

3.3.2.7 config

Used to get the configuration of the individual blade specified.

Usage: **blade <blade number> config**

Example Output:

```
MB ID           = BD
Pwr Consumption = 350W
CPUs            = 2
CPU Type        = undefined
CPU Speed       = 2.90Ghz
DIMMs           = 2
Memory Size     = 8192MB
Memory Speed    = 1066Mhz
LANs            = 2
LAN 1 MAC       = 00:30:48:F7:65:CC
LAN 2 MAC       = 00:30:48:F7:65:CD
MB SN           = ???????????????
```

3.4 gigabit

Entering the gigabit command will bring up the following subcommands.

3.4.1 gigabit status

This command will display the status of all the Gb switch units in the system.

Usage: **`gigabit status`**

Example Output:

```
Gigabit Switch Module (1/2)
-----------------------
 GBSW   | Power | Error | Init |   Switch |   2.5V |  1.25V | Type
 ----   | ----- | ----- | ---- |   ------ |   ---- |  ----- | ----------
 GBSW 1 | On    |       | Not  | 61C/142F | 2.496V | 1.192V | L3 Switch
```

3.4.2 gigabit index(es)

This command brings up the following commands related to an individual Gb switch in the system as specified.

3.4.2.1 status

Used to display the status of the gigabit switch specified.

Usage: **`gigabit <gigabit number> status`**

Example Output:

```
 GBSW   | Power | Error | Init |   Switch |   2.5V |  1.25V | Type
 ----   | ----- | ----- | ---- |   ------ |   ---- |  ----- | ----------
 GBSW 1 | On    |       | Not  | 61C/142F |  2.48V | 1.192V | L3 Switch
```

3.4.2.2 power

Used to access power control for the gigabit switch specified.

Usage: **`gigabit <gigabit number> power <on|off|reset>`**

3.4.2.3 wss

Used to access WSS (WebSuperSmart) web configuration control for the gigabit switch specified.

3.4.2.3.1 ip

Used to get or set the IP address of a gigabit switch.

Usage: **`gigabit <gigabit number> wss ip [IP]`**

3.4.2.3.2 netmask

Used to get or set the netmask address of a gigabit switch.

Usage: **`gigabit <gigabit number> wss netmask [netmask]`**

3.4.2.3.3 gateway

Used to get or set the gateway address of a gigabit switch.

Usage: **gigabit <gigabit number> wss gateway [gateway]**

3.4.2.3.4 datetime

Used to get or set the date and time settings for a gigabit switch.

Usage: **gigabit <gigabit number> wss datetime [datetime]**

Example Output:

```
12/29/2010 02:56:02
```

3.4.2.3.5 username

Used to get or set the username of WSS web for a gigabit switch.

Usage: **gigabit <gigabit number> wss username [username]**

3.4.2.3.6 password

Used to get or set the password of WSS web for a gigabit switch.

Usage: **gigabit <gigabit number> wss password [password]**

3.4.2.4 ipmode

Used to get or set the IP mode of the gigabit switch specified.

Usage (to get): **gigabit <gigabit number> ipmode**

Usage (to set): **gigabit <gigabit number> ipmode <mode>**

3.4.2.5 boot

Used to get or set the boot image of the gigabit switch specified.

Usage: **gigabit <gigabit number> boot [image number]**

3.4.2.6 restart

Used to soft restart the gigabit switch specified.

Usage: **gigabit <gigabit number> restart**

3.4.2.7 fd

Used to reset to factory default for the gigabit switch specified.

Usage: **gigabit <gigabit number> fd**

3.5 power

Entering the power command will bring up the following subcommands.

3.5.1 power status

This command will display the status of all the power supply units in the blade system.

Usage: **`power status`**

Example Output:

```
Power Supply Module (4/4)
-------------------------
 PS   | Power | Fan 1 | Fan 2 | Temp.    | Watts |     DC |     AC | F/W | FRU
 --   | ----- | ----- | ----- | -----    | ----- |     -- |     -- | --- | ---
 PS 1 | On    |  5152 |  5152 | 57C/135F |  2000 |    N/A |    N/A | 2.6 |  01
 PS 2 | On    |  5381 |  5381 | 54C/129F |  2000 |    N/A |    N/A | 2.6 |  01
 PS 3 | On    |  5152 |  5152 | 58C/136F |  2000 |    N/A |    N/A | 2.6 |  01
 PS 4 | On    |  7328 |  7213 | 54C/129F |  2000 |    N/A |    N/A | 2.6 |  01
```

3.5.2 power index(es)

This command is used to check the individual power supplies in the blade system and brings up the following commands:

3.5.2.1 status

Used to display the status of the power supply specified.

Usage: **`power <power number> status`**

Example Output:

```
 PS   | Power | Fan 1 | Fan 2 | Temp.    | Watts |     DC |     AC | F/W | FRU
 --   | ----- | ----- | ----- | -----    | ----- |     -- |     -- | --- | ---
 PS 1 | On    |  5152 |  5152 | 56C/133F |  2000 |    N/A |    N/A | 2.6 |  01
```

3.5.2.2 power

Used to access power control for the power supply specified.

Usage: **`power <power number> <on|off>`**

3.5.2.3 fan

Used to access fan control for the power supply specified.

Usage: **`power <power number> fan <1|2|3|4|auto>`**

3.6 ib

Entering the ib command will bring up the following subcommands.

3.6.1 ib status

This command will display the status of all the InfiniBand switches in the system.

Usage: **`ib status`**

Example Output:

```
IBQDR Module (1/2)
------------------------
 IBQDR   | Power |  Temp. Switch |   Temp. Board |   3.3V |  1.25V
 -----   | ----- |  ------------ |   ----------- |   ---- |  -----
 IBQDR 1 | On    |      57C/135F |      56C/133F |  3.24V |  1.18V
```

3.6.2 ib index(es)

This command is used to check the individual InfiniBand switches in the system and will bring up the following subcommands:

3.6.2.1 status

Used to display the status of the InfiniBand switch specified.

Usage: **`ib <ib number> status`**

Example Output:

```
 IB   | Power | Init |  VVDD | 3.3V Aux |  1.2V |  1.8V |  3.3V |   Temp.
 --   | ----- | ---- |  ---- | -------- |  ---- |  ---- |  ---- |   -----
 IB 1 |  Off  | OK   | 1.92V |    2.85V | 0.78V | 1.48V | 2.85V |  0C/32F
```

3.6.2.2 power

Used to access power control for the InfiniBand switch specified.

Usage: **`ib <ib number> power <on|off|reset>`**

3.7 cmm

Entering the cmm command will bring up the following subcommands.

3.7.1 cmm status

This command will display the status of all the CMM in the system.

Usage: **`cmm status`**

Example Output:

```
CMM Module(1/2)
----------------
 CMM   | M/S    | Status
 ---   | ---    | ------
 CMM 1 | Master | OK

CMM 1 is being managed now

CMM IP address:
---------------
CMM 1 IP: 172.31.100.235
```

3.7.2 cmm index

This command is used to check the individual CMM in the system and will bring up the following subcommands:

3.7.2.1 status

Used to display the status of the CMM specified.

Usage: **cmm <cmm number> status**

Example Output:

```
 CMM   | M/S    | Status
 ---   | ---    | ------
 CMM 1 | Master | OK

CMM 1 is being managed now
```

3.7.2.2 dtime

Used to get or set CMM date and time.

Usage: **cmm <cmm number> dtime [datetime]**

Example Output:

```
12/29/2010 02:56:02
(Data time format for setting: "MM/dd/yyyy HH:mm:ss")
```

3.7.2.3 ntp

Used to synch the time with the NTP servers.

Usage: **cmm <cmm number> ntp <UTC offset> <NTP1> [NTP2]**

3.7.2.4 reset

Used to reset the CMM specified.

Usage: **cmm <cmm number> reset**

3.7.2.5 flash

Used to flash CMM firmware to the CMM specified with the filename of the flash upgrade noted.

Usage: **cmm <cmm number> flash <filename>**

3.7.2.6 ver

Used to display the firmware version in the CMM specified.

Usage: **cmm ver**

Example Output:

```
Version:2.2.64  build 5420
```

3.7.2.7 ip

Used to get or set the IP address of the CMM specified.

Usage: **cmm <cmm number> ip [IP address]**

IP address format: ###.###.###.###

3.7.2.8 mac

Used to get or set the MAC address of the CMM specified.

Usage: **cmm <cmm number> mac [mac address]**

MAC address format: ###.###.###.###

3.7.2.9 gateway

Used to get or set the Gateway address of the CMM specified.

Usage: **cmm <cmm number> gateway [gateway address]**

Gateway address format: ###.###.###.###

3.7.2.10 netmask

Used to get or set the Netmask IP address of the CMM specified.

Usage: **cmm <cmm number> netmask [netmask address]**

Netmask address format: ###.###.###.###

3.7.2.11 syncfg

Used to sych the configuration to the slave CMM specified.

3.7.2.12 opmode

Used to get or set the operational mode for the CMM specified.

Usage: **cmm <cmm number> opmode [mode]**

Mode Choices: 0 = Enterprise 1 = Office

3.7.2.13 dhcp

Used to enable or disable the DHCP (Dynamic Host Configuration Protocol) of the CMM.

Usage: **cmm <cmm number> dhcp [enable|disable]**

3.8 listtemp

Entering the listtemp command will display the temperatures of all the modules in the blade system.

Usage: **listtemp**

Example Output:

```
Status | Module       | Sensor              |    Reading | High Limit |
------ | ------       | ------              |    ------- | ---------- |
OK     | Blade 3      | CPU1 Temp           |        Low |        N/A |
OK     | Blade 3      | CPU2 Temp           |        Low |        N/A |
OK     | Blade 3      | System Temp         |   56C/133F |   80C/176F |
OK     | Blade 4      | CPU1 Temp           |        Low |        N/A |
OK     | Blade 4      | CPU2 Temp           |        Low |        N/A |
OK     | Blade 4      | System Temp         |   57C/135F |   80C/176F |
OK     | Blade 5      | CPU1 Temp           |        Low |        N/A |
OK     | Blade 5      | CPU2 Temp           |        Low |        N/A |
OK     | Blade 5      | System Temp         |   63C/145F |   80C/176F |
OK     | Blade 6      | CPU1 Temp           |        Low |        N/A |
OK     | Blade 6      | CPU2 Temp           |        Low |        N/A |
OK     | Blade 6      | System Temp         |   64C/147F |   80C/176F |
OK     | Blade 7      | CPU1 Temp           |     Medium |        N/A |
OK     | Blade 7      | CPU2 Temp           |        Low |        N/A |
OK     | Blade 7      | System Temp         |   62C/144F |   80C/176F |
OK     | Blade 8      | CPU1 Temp           |        Low |        N/A |
OK     | Blade 8      | CPU2 Temp           |        Low |        N/A |
OK     | Blade 8      | System Temp         |   63C/145F |   80C/176F |
OK     | Blade 9      | CPU1 Temp           |     Medium |        N/A |
OK     | Blade 9      | CPU2 Temp           |        Low |        N/A |
OK     | Blade 9      | System Temp         |   62C/144F |   80C/176F |
       | Blade 10     | CPU1 Temp           |        N/A |        N/A |
OK     | Blade 10     | CPU2 Temp           |        Low |        N/A |
OK     | Blade 10     | System Temp         |   59C/138F |   80C/176F |
OK     | Blade 13     | CPU1 Temp           |        Low |        N/A |
OK     | Blade 13     | CPU2 Temp           |        Low |        N/A |
OK     | Blade 13     | System Temp         |   60C/140F |   80C/176F |
OK     | Blade 14     | CPU1 Temp           |        Low |        N/A |
OK     | Blade 14     | CPU2 Temp           |        Low |        N/A |
OK     | Blade 14     | System Temp         |   60C/140F |   80C/176F |
OK     | Blade 15     | CPU1 Temp           |     Medium |        N/A |
OK     | Blade 15     | CPU2 Temp           |        Low |        N/A |
OK     | Blade 15     | System Temp         |   63C/145F |   80C/176F |
OK     | Blade 16     | CPU1 Temp           |        Low |        N/A |
OK     | Blade 16     | CPU2 Temp           |        Low |        N/A |
OK     | Blade 16     | System Temp         |   61C/142F |   80C/176F |
OK     | Blade 17     | CPU1 Temp           |        Low |        N/A |
OK     | Blade 17     | CPU2 Temp           |        Low |        N/A |
OK     | Blade 17     | System Temp         |   63C/145F |   80C/176F |
OK     | Blade 18     | CPU1 Temp           |     Medium |        N/A |
OK     | Blade 18     | CPU2 Temp           |     Medium |        N/A |
OK     | Blade 18     | System Temp         |   65C/149F |   80C/176F |
OK     | Blade 19     | CPU1 Temp           |        Low |        N/A |
OK     | Blade 19     | CPU2 Temp           |     Medium |        N/A |
OK     | Blade 19     | System Temp         |   62C/144F |   80C/176F |
       | Blade 20     | CPU1 Temp           |        N/A |        N/A |
OK     | Blade 20     | CPU2 Temp           |        Low |        N/A |
OK     | Blade 20     | System Temp         |   62C/144F |   80C/176F |
OK     | Power 1      | Temp.               |   56C/133F |   85C/185F |
OK     | Power 2      | Temp.               |   54C/129F |   85C/185F |
OK     | Power 3      | Temp.               |   57C/135F |   85C/185F |
OK     | Power 4      | Temp.               |   54C/129F |   85C/185F |
OK     | GBSW 1       | Switch              |   61C/142F |   80C/176F |
OK     | InfiniBand 1 | Temp.               |    0C/ 32F |   80C/176F |
```

3.9 sel

Entering the sel command will bring up the following subcommands for the system event log.

3.9.1 info

This command gives the information on the system event log.

Usage: **`sel info`**

Example Output:

```
Total Entries:              2
SEL Version:                1.5
Free Space:                 9180bytes
Recent Entry Added: 12/20/2010 22:37:33
Recent Entry Erased:        Pre-Init 00:00:00
```

3.9.2 list

This command will display the list of entries to the system event log.

Usage: **`sel list`**

3.9.3 csv

This subcommand will save the system event log as a csv file with the name specified in the filename.

Usage: **`sel csv <filename>`**

3.9.4 clear

This command will clear the system event log.

Usage: **`sel clear`**

3.10 allsel

Entering the allsel command will save all blade system event logs as a csv file with the name specified in the filename.

Usage: **`allsel <filename>`**

3.11 burst

Entering the burst command will list the following subcommands to control power of blades.

3.11.1 allUp

Use this command to power burst up all blades.

Usage: **`allUp`**

3.11.2 allDown

Use this command to power burst down all blades.

Usage: **`allDown`**

3.11.3 allRest

Use this command to power burst reset all blades.

Usage: **`allReset`**

3.11.4 allSoftshutdown

Use this command to soft shut down all blades.

Usage: **allSoftshutdown**

3.11.5 up

Use this command to power burst up blades.

Usage: **up <index(es)>**

3.11.6 down

Use this command to power burst down blades.

Usage: **down <index(es)>**

3.11.7 reset

Use this command to power burst reset blades.

Usage: **reset <index(es)>**

3.11.8 softshutdown

Use this command to power burst soft shut down blades.

Usage: softshutdown **<index(es)>**

3.12 user

Entering the user command will list the following user management subcommands.

3.12.1 add

Use this command to enter the name of a new user.

Usage: **user add <user ID> <user name> <password> <privilege>**

3.12.2 list

Entering the list command will display the users.

Usage: **user list**

Example Output:

```
Maximum number of Users          : 10
Count of currently enabled Users : 2
 User ID | User Name    | Privilege Level    | Enable
 ------- | ---------    | ---------------    | ------
       2 | ADMIN        | Administrator      | Yes
```

3.12.3 delete

Entering the delete command allows you to delete a user.

Usage: **`user delete <user ID>`**

3.12.4 level

Entering the level command allows you to update the level of a user.

Usage: **`user level <user ID> <privilege>`**

The following levels may be assigned:

- 4: Administrator level
- 3: Operator level
- 2: User level
- 1: Callback

3.12.5 test

Entering the test command allows you to test logging in as a specific user.

Usage: **`user test <user ID> <password>`**

3.12.6 setpwd

Entering the user setpwd command allows you to set the password.

Usage: **`user setpwd <user ID> <password>`**

3.13 vm

Entering the vm command will list the following virtual media management subcommands. Refer to *Appendix B* for more on VM commands.

3.13.1 status

Using the status command lists the status of the drives present in the system.

Usage: **`vm status`**

Example Output:

```
Drive 1
Device Status = CD-ROM image on Windows share set
Image Size = 522766336 (bytes)
Access Mode = Read-Only
Image source = //192.168.10.43/iso/cd1.iso


Drive 2
Device Status = CD-ROM image on Windows share set
Image Size = 522766336 (byte)
Access Mode = Read-Only
Image source = //192.168.10.43/iso/cd2.iso
```

3.13.2 stop

Using the stop command allows you to stop the specified drive.

Usage: **`vm stop <drive ID>`**

3.13.3 floppy

Using the floppy command allows you to upload a floppy image as virtual media.

Usage: **`vm floppy <drive ID> <floppy_filename>`**

3.13.4 iso

Using the iso command allows you to share virtual media via Windows.

Usage: **`vm iso <drive ID> <host IP> <share name> <path to image> [username] [password]`**

Example:

```
CMM>vm iso 1 192.168.10.43 iso cd1.iso
done
```

3.14 ipmi

Entering the ipmi command will list the following ipmi device management subcommands.

3.14.1 sensor

Using the sensor command will display the sensor status and data.

Usage: **`ipmi sensor`**

Example Output:

```
Getting SDR data ...
Getting sensors ...
  Status | (#)Sensor               |      Reading | Low Limit | High Limit |
  ------ | ---------               |      ------- | --------- | ---------- |
  OK     | (7) CPU1 Temp           |          Low |           |            |
  OK     | (8) CPU2 Temp           |          Low |           |            |
  OK     | (9) System Temp         |     63C/145F |   -5C/23F |   75C/167F |
  OK     | (10) CPU1 Vcore         |       0.92 V |    0.82 V |     1.35 V |
  OK     | (11) CPU2 Vcore         |       0.88 V |    0.82 V |     1.35 V |
  OK     | (12) +5V                |       5.12 V |    4.48 V |     5.53 V |
  OK     | (13) +5VSB              |       5.12 V |    4.48 V |     5.53 V |
  OK     | (14) +12V               |      12.19 V |    10.7 V |    13.25 V |
  OK     | (15) -12V               |     -11.99 V |  -12.58 V |   -11.22 V |
  OK     | (16) +3.3V              |       3.26 V |    2.92 V |     3.64 V |
  OK     | (17) +3.3VSB            |       3.24 V |    2.92 V |     3.64 V |
  OK     | (18) VBAT               |       3.21 V |    2.92 V |     3.64 V |
  OK     | (19) Fan1               |     4320 RPM |   675 RPM |  34155 RPM |
         | (20) Fan2               |        0 RPM |   675 RPM |  34155 RPM |
  OK     | (21) Fan3               |     4320 RPM |   675 RPM |  34155 RPM |
  OK     | (22) Fan4               |     4185 RPM |   675 RPM |  34155 RPM |
         | (23) Fan5               |        0 RPM |   675 RPM |  34155 RPM |
         | (24) Fan6               |        0 RPM |   675 RPM |  34155 RPM |
         | (25) Fan7               |        0 RPM |   675 RPM |  34155 RPM |
         | (26) Fan8               |        0 RPM |   675 RPM |  34155 RPM |
  OK     | (27) P1-DIMM1A Temp     |     47C/117F |   -5C/23F |   75C/167F |
         | (28) P1-DIMM1B Temp     |          N/A |   -5C/23F |   75C/167F |
  OK     | (29) P1-DIMM2A Temp     |     48C/118F |   -5C/23F |   75C/167F |
         | (30) P1-DIMM2B Temp     |          N/A |   -5C/23F |   75C/167F |
  OK     | (31) P1-DIMM3A Temp     |     46C/115F |   -5C/23F |   75C/167F |
         | (32) P1-DIMM3B Temp     |          N/A |   -5C/23F |   75C/167F |
  OK     | (33) P2-DIMM1A Temp     |     38C/100F |   -5C/23F |   75C/167F |
         | (34) P2-DIMM1B Temp     |          N/A |   -5C/23F |   75C/167F |
  OK     | (35) P2-DIMM2A Temp     |      37C/99F |   -5C/23F |   75C/167F |
```

```
       | (36) P2-DIMM2B Temp      |          N/A |   -5C/23F |   75C/167F |
OK     | (37) P2-DIMM3A Temp      |      37C/99F |   -5C/23F |   75C/167F |
       | (38) P2-DIMM3B Temp      |          N/A |   -5C/23F |   75C/167F |
OK     | (39) Intrusion           | 00 C0 00 00  |       N/A |        N/A |
OK     | (40) PS Status           | 00 C0 00 00  |       N/A |        N/A |
```

3.14.2 power

Using the power command will list the following power control options.

3.14.2.1 up

Use the power up command to power up a system.

Usage: **ipmi power up**

3.14.2.2 down

Use the power down command to power down a system.

Usage: **ipmi power down**

3.14.2.3 softshutdown

Use the softshutdown command to initiate a soft shutdown of a system.

Usage: **ipmi power softshutdown**

3.14.2.4 reset

Use the reset command to initiate a reset of a system. Using the PXE option forces the first boot device to be used as PXE in the next boot only.

Usage: **ipmi power reset [PXE]**

3.14.2.5 cycle

Use the cycle command to power cycle of a system.

Usage: **ipmi power cycle [interval]**

3.14.2.6 diag

Use the diag command to initiate a diagnostic interrupt of a system.

Usage: **ipmi power diag**

3.14.3 acpi

Using the acpi command will display the ACPI (Advanced Configuration and Power Interface) status.

Usage: **ipmi acpi**

3.14.4 lan

Using the lan command will list the following LAN (Local Area Network) management subcommands.

Usage: **ipmi lan**

Example Output:

```
ip [ip]                          Get/Set IP. Format:###.###.###.###
mac [mac]                        Get/Set MAC. Format:##:##:##:##:##:##
gateway [gateway_IP]             Get/Set gateway. Format:###.###.###.###
netmask [netmask]                Get/Set netmask. Format:###.###.###.###
snmp [<seq> <ip> [mac]]          Get/Set SNMP destination
snmpcomm [community string]      Get/Set SNMP community string
arp [on|off]                     On/Off Gratuitous ARP
dhcp [enable|disable]            Enable/Disable DHCP
vlan [<enable|disable> <tag>]    Display/Enable/Disable VLAN
dns [<Pri._IP> <Sec._IP>]        Get/Set DNS server (OEM)
```

3.14.4.1 ip

Use the ip command to get/set the specified ipmi address.

Usage: **ipmi lan ip [ip]**

Address format: **###.###.###.###**

3.14.4.2 mac

Use the ip command to get/set the specified MAC address.

Usage: **ipmi lan mac [mac]**

Address format: **###.###.###.###**

3.14.4.3 gateway

Use the gateway command to get/set the specified Gateway address.

Usage: **ipmi lan gateway [gateway IP]**

Address format: **###.###.###.###**

3.14.4.4 netmask

Use the netmask command to get/set the specified Netmask.

Usage: **ipmi lan netmask [netmask]**

Address format: **###.###.###.###**

3.14.4.5 snmp

Use the snmp command to get/set the specified SNMP destination.

Usage: **ipmi lan snmp [<seq> <ip> [mac]]**

Example Output:

```
Seq                 IP                MAC
---                 --                ---
  1            0.0.0.0    00:00:00:00:00:00
  2      192.168.12.150    00:00:00:00:00:00
  3            0.0.0.0    00:00:00:00:00:00
  4            0.0.0.0    00:00:00:00:00:00
  5            0.0.0.0    00:00:00:00:00:00
  6            0.0.0.0    00:00:00:00:00:00
  7            0.0.0.0    00:00:00:00:00:00
  8            0.0.0.0    00:00:00:00:00:00
  9            0.0.0.0    00:00:00:00:00:00
 10            0.0.0.0    00:00:00:00:00:00
 11            0.0.0.0    00:00:00:00:00:00
 12            0.0.0.0    00:00:00:00:00:00
 13            0.0.0.0    00:00:00:00:00:00
 14            0.0.0.0    00:00:00:00:00:00
 15            0.0.0.0    00:00:00:00:00:00
```

3.14.4.6 snmpcomm

Use the snmpcomm command to get/set the SNMP community string.

Usage: **ipmi lan snmpcomm [community string]**

Example Output:

```
public
```

3.14.4.7 arp

Use the arp command to enable BMC-generated gratuitous ARPs.

Usage: **ipmi lan arp [on|off]**

3.14.4.8 dhcp

Use the dhcp command to enable or disable DHCP (Dynamic Host Configuration Protocol).

Usage: **ipmi lan dhcp [enable|disable]**

3.14.4.9 vlan

Use the vlan command to enable or disable virtual LAN (vlan).

Usage: **ipmi lan vlan [<enable|disable> <tag>]**

3.14.5 fru

Using the fru command will list the information on the FRU (Field Replaceable Unit).

Usage: **`ipmi fru`**

Example Output:

```
Getting FRU ...
Chassis Type              = undefined (00h)
Chassis Part Number       =
Chassis Serial Number     =
Board Manufacturer Name   = Super Micro
Board Product Name        = IPMI2.0
Board Serial Number       =
Board Part Number         = AOC-SIMCM-O-P
Board FRU File ID         =
Product Manufacturer Name = Super Micro
Product Name              = IPMI2.0
Product PartModel Number  = SBM-CMM-001
Product Version           = 1.0
Product Serial Number     =
Product Asset Tag         =
Product FRU File ID       =
```

3.14.6 Fruw

Use this command to write FRU to update FRU field with abbreviation and given values.

Usage: **`fruw <field> <value>`**

Example Output:

```
192.168.23.157 X9SCD (S0/G0,6w,v01.39) 14:19 SIM(WA)>ipmi fruw BDT "201210101200"
Board mfg. Date/Time (BDT)     = 2012/10/10 12:00:00 (30 A3 86)
Board Manufacturer Name (BM)   = Supermicro
Board Product Name (BPN)       =
Board Serial Number (BS)       =
Board Part Number (BP)         =
Board FRU File ID              =
Product Manufacturer Name (PM) =
Product Name (PN)              =
Product PartModel Number (PPM) =
Product Version (PV)           =
Product Serial Number (PS)     =
Product Asset Tag (PAT)        =
Product FRU File ID            =

192.168.23.157 X9SCD (S0/G0,6w,v01.39) 14:20 SIM(WA)>ipmi fruw BS 123456789
Board mfg. Date/Time (BDT)     = 2012/10/10 12:00:00 (30 A3 86)
Board Manufacturer Name (BM)   = Supermicro
Board Product Name (BPN)       =
Board Serial Number (BS)       = 123456789
Board Part Number (BP)         =
Board FRU File ID              =
Product Manufacturer Name (PM) =
Product Name (PN)              =
Product PartModel Number (PPM) =
Product Version (PV)           =
Product Serial Number (PS)     =
Product Asset Tag (PAT)        =
Product FRU File ID            =
```

3.14.7 Frubackup

Use this command to back up FRU information as a file.

Usage: **`frubackup <filname>`**

3.14.8 Frurestore

Use this command to restore FRU information from a file.

Usage: **`frurestore <filename>`**

3.14.9 oem

Using the oem command will list the following subcommands.

3.14.9.1 clrint

Use the clrint command to clear the chassis intrusion detection switch.

Usage: **`ipmi oem clrint`**

3.14.9.2 id

Use the id command to display the motherboard ID (available for SIMxx IPMI only).

Usage: **`ipmi oem id`**

3.14.9.3 uid

Use the uid command to turn the UID LED on or off (if supported by the device).

Usage: **`ipmi oem uid [on|off]`**

3.14.9.4 backup

Use the backup command to backup the configuration file as the filename specified.

Usage: **`ipmi oem backup <filename>`**

3.14.9.5 restore

Use the restore command to restore the configuration from the filename specified.

Usage: **`ipmi oem restore <filename> <option>`**

3.14.9.6 ipmi oem backupcfg

Use the command to back up the configurations to a binary file. Note that this function is only available on motherboard X8, X9 and X10 series with ATEN firmware.

Usage: **`ipmi oem backupcfg <filename>`**

Example Output:

```
10.133.176.141 X8DTN+-F (S0/G0) 11:09 SIM(WA)>ipmi oem backupcfg 1.bin
Downloading progress:|>>>>>| 100%

Download Time: 0 min 2 sec(s)
Download successfully
```

3.14.9.7 ipmi oem restorecfg

Use the command to retore the configurations from the binary file. Note that this function is only available on motherboard X8, X9 and X10 series with ATEN firmware.

Usage: **ipmi oem restorecfg <filename>**

Example Output:

```
10.133.176.141 X8DTN+-F (S0/G0) 11:09 SIM(WA)>ipmi oem restorecfg 1.bin
Progress:|>>>>>| 100%

Upload Time: 0 min 0 sec(s)
Upload successfully
```

3.14.9.8 ipmi oem getcfg

Use the command to back up the configurations to a txt file. Note that this function is only available on motherboard X8, X9 and X10 series with ATEN firmware.

Usage: **ipmi oem getcfg <filename>**

Example Output:

```
10.133.176.141 X8DTN+-F (S0/G0) 11:12 SIM(WA)>ipmi oem getcfg 1.txt
Downloading progress:|>| 100%

Download Time: 0 min 1 sec(s)
Download successfully
```

3.14.9.9 ipmi oem setcfg

Use the command to restore the configurations from a txt file. Note that this function is only available on motherboard X8, X9 and X10 series with ATEN firmware.

Usage: **ipmi oem setcfg <filename>**

Example Output:

```
10.133.176.141 X8DTN+-F (S0/G0) 11:23 SIM(WA)>ipmi oem setcfg 1.txt
Progress:|>| 100%

Upload Time: 0 min 0 sec(s)
Upload successfully
```

3.14.9.10 lani

Use the lani command to interface with the IPMI LAN.

Usage: **ipmi oem lani [0|1|2]**

3.14.9.11 ipmi oem mac

Use the command to get the system mac address (Lan 1).

Usage: **ipmi oem mac**

Example Output:

```
10.133.99.62 X9SCD (S0/G0,25w,v01.79) 11:01 SIM(WA)>ipmi oem mac
System MAC Address 1: 00:25:90:60:4B:40
```

3.14.10 reset

Using the reset command will reset IPMI.

Usage: **ipmi reset**

3.14.11 ver

Using the ver command will display the following information relating to the IPMI version in use.

Usage: **ipmi ver**

Example Output:

```
IPMI Version       = 2.0
Firmware Revision  = 02.02
Manufacturer ID    = C5 28 00
product ID         = 04 00 00
OEM Version        = 2.2.64  build 5420
OEM Tag            = Dec-15-2010-17-15-CMM
```

3.14.12 flash

Use the flash command to flash a new version of SIM IPMI firmware as specified by the filename.

Usage: **ipmi flash <filename>**

3.14.13 flashw

Use the flashw command to flash a new version of SIM(W) or SIMBL(W) IPMI firmware as specified by the filename.

Usage: **ipmi flashw <filename>**

3.14.14 flashr

Use the flashr command to flash a new version of Renesas (X9 and B9) IPMI firmware.

Usage: **ipmi flashr**

Example Output:

```
192.168.23.17 (S0/G0,55w) 16:08 SIM(X9)>ipmi flashr c:\17.ima
************************************************************
WARNING!
Firmware upgrade must not be interrupted once it is started.
Once you get error after Upgrading, please use local KCS tool
for recovery.(DOS:RKCSFlsh.exe, Linux:RLin32Flsh or
Windows:RWin32Flsh.exe )
************************************************************
Check firmware file... Done (ver:1.10.15)
Check BMC status... Done (ver:1.10.18)
Enter to Flash Mode
Uploading .................................................100%
Upgrading .................................................100%
Verifying .................................................100%
Resetting BMC
Done. (BMC needs 1 minute to restart)
Please reset system for board configuration
Total Elapse Time: 7 min 27 sec(s)
```

3.14.15 flashh

Use the flashh command to flash the SIM(WA) IPMI firmware (*.bin) specified by the filename.

Usage: **ipmi flashh <filename>**

Example Output:

```
192.168.23.157 (S0/G0,6w) 14:19 SIM(WA)>ipmi flashh c:\160.bin
************************************************************
WARNING!
Firmware upgrade must not be interrupted once it is started.
Once you get error after Upgrading, please use local KCS tool
for recovery.(DOS:dupdate.exe, Linux:lupdate or
Windows:wupdate.exe )
************************************************************
Check firmware file... Done (ver:01.60)
Check BMC status... Done (ver:01.60)
Uploading...Done
Updating.................................................100%
Resetting BMC
Done. (BMC needs 1 minute to restart)
Total Elapse Time: 2 min 30 sec(s)
```

3.14.16 flasha

Use the flasha command to flash the ASPEED IPMI firmware (motherboard series X10 and *.bin) The option of keeping the previous configurations is also provided.

0: Do not preserve config

1: Preserve config

Note that this function is only available on firmware version 1.04 or later.Usage: **flasha <filename> [Preserve_opt]**

Example Output:

```
10.133.176.81 X10SLM-F (S0/G0,21w,v09.11) 10:13 ASPD_T>ipmi flasha c:\smt_x10_031.bin
************************************************************
WARNING!
Firmware upgrade must not be interrupted once it is started.
Once you get error after Upgrading, please use local KCS tool
for recovery.
************************************************************
Check firmware file... Done (ver:0.31)
Check BMC status... Done (ver:09.11)
Uploading...Done
Updating.............................................................100%
Resetting BMC
Done. (BMC needs 1 minute to restart)
Total Elapse Time: 3 min 18 sec(s)
```

3.14.17 raw

Use the raw command to send an IPMI raw command.

Usage: **ipmi raw <netFn> <cmd> [data]**

3.14.18 ipmb

Use the ipmb command to send an IPMI raw command.

Usage: **ipmi ipmb <ch> <addr> <netFn> <cmd> [data]**

3.14.19 ipmboem

Use the ipmboem command to send an IPMI raw command.

Usage: **ipmi ipmb <ch> <addr> <netFn> <cmd> [data]**

3.14.20 delsdr

Use the delsdr command to delete the SDR.

Usage: **ipmi delsdr <SDR record ID>**

3.14.21 session info

Use this command to view the information of

Usage: **ipmi sessioninfo**

Example Output:

```
SessionHandler = 16h
Number of possible active sessions = 36
Number of currently active sessions = 6
User ID = 02h
Operating Privilege Level = 04h
Session protocol auxiliary data = 11h
IP Address of remote console = 00 00 00 00 (0.0.0.0)
Mac Address of remote console= 00 00 00 00 00 00 (00:00:00:00:00:00)
Port Number = 00 00 (0)
```

3.14.22 ipmi fan

Use this command to control the fan. Note that the available mode options may vary depending on types of motherboards.

Usage: **ipmi fan**

Example Output:

```
10.133.99.62 X9SCD (S0/G0,23w,v01.79) 10:59 SIM(WA)>ipmi fan
Current Fan Speed Mode is [ Optimal Speed ]

Fan Modes:
0: Standard Speed
1: Full Speed
2: Optimal Speed
3: PUE Optimal Speed
4: Heavy IO Speed
```

3.15 ver

Entering the ver command will list the version and build of the SMCIPMITool application being used.

Usage: **ver**

Example Output:

```
SMC IPMI Tool V1.7.9(Build 101124) - Super Micro Computer, Inc.
```

3.16 list

Entering the list command will display all available commands.

Usage: **`list`**

3.17 find

Entering the find command will search for and display all IPMI devices.

Usage: **`find [<Start_IP> <End_IP> <NetMask>]`**

Example Output:

```
Finding IPMI Devices ...
  172.31.100.235              IPMI 2.0 (SuperBlade TwinBlade CMM)
  172.31.100.242              IPMI 2.0 (SuperBlade CMM)
2 IPMI device(s) found. Use "found" to list found devices
```

3.18 found

Entering the found command will list or clear all found IPMI devices.

Usage: **`found [clear]`**

3.19 exec

Entering the exec command will execute the specified command from a file.

Usage: **`exec <filename> <loop> <delay>`** where

Loop = 0 is for an infinite loop

Delay is in seconds

3.20 host

Entering the host command will list the following host-related subcommands.

3.20.1 list

Use the list command will list the host group and host data.

Usage: **`host list`**

Example Output:

```
Host:
       Host                IP
       ----                --
       1.112               (192.168.1.112)
       1.119               (192.168.1.119)
       bl1                 (192.168.10.243)
       bl2                 (192.168.10.244)

Host Group:
       Group Name          Host
```

```
----------          ----
1                   1.112
                    1.119
bl                  bl1
                    bl2
```

3.20.2 reload

Using the reload command will reload the host data.

Usage: **`host reload`**

3.20.3 add

Use the add command to add a host.

Usage: **`host add <host> <ip> [username] [password]`**

3.20.4 remove

Use the remove command to remove a host.

Usage: **`host remove <host>`**

3.20.5 rename

Use the rename command to rename a host.

Usage: **`host rename <old name> <new name>`**

3.20.6 group

Entering the group command will list the following group-related subcommands.

3.20.6.1 add

Use the add command to add a host group.

Usage: **`host group add <group> [host] ...`**

3.20.6.2 remove

Use the remove command to remove a host group.

Usage: **`host group remove <group>`**

3.20.6.3 rename

Use the rename command to rename a host group.

Usage: **`host group rename <old name> <new name>`**

3.20.6.4 addhost

Use the addhost command to add host into an existing host group.

Usage: **host group addhost <group> <host> ...**

3.20.6.5 removehost

Use the removehost command to remove host from an existing host group.

Usage: **host group removehost <group> <host> ...**

3.21 hostrun

Enter the hostrun command to run a command on an entire host or group.

Usage: **hostrun <host|group> <command>**

Example Output:

```
CMM>hostrun bl ipmi power up
[bl1:192.168.10.243]
Done

[bl2:192.168.10.244]
Done
```

3.22 sc

Enter the sc command to execute a DOS or Linux shell command.

Usage: **sc <command>**

Example Output:

CMM>sc dir (execute dir command in Windows OS)

CMM>sc ls (execute ls command in Linux OS)

CMM>sc ping 192.168.10.123 (execute ping command)

3.23 pminfo

Entering the pminfo command will display information on the health of the PMBus.

Usage: **pminfo [<bus ID> <slave address>]**

Example Output:

```
192.168.23.80 X9DRW-3F (S0/G0,56w) 14:20 SIM(X9)>pminfo
 [SlaveAddress = 78h] [Module 1]
 Item                          |               Value
 ----                          |               -----
 Status                        |     [STATUS OK](01h)
 AC Input Voltage              |       109.5 V
 AC Input Current              |              0.51 A
 DC 12V Output Voltage         |             12.18 V
 DC 12V Output Current         |              3.5 A
 Temperature 1                 |            38C/100F
 Temperature 2                 |             35C/95F
 Fan 1                         |            6688 RPM
 Fan 2                         |               0 RPM
 DC 12V Output Power           |                42 W
 AC Input Power                |                55 W
 PMBus Revision                |              0xFFFF
 PWS Serial Number             |      P5041CB02AW0093
 PWS Module Number             |          PWS-504P-RR
 PWS Revision                  |
```

3.24 psfruinfo

This command will display the FRU health information of power supply.

Usage: **`psfruinfo`**

Example Output:

```
laveAddress = 70h] [Module 1]
 Item                          |               Value
 ----                          |               -----
 Status                        |                  On
 Temperature                   |             36C/97F
 Fan 1                         |            6641 RPM
```

3.25 bbp

Entering the bbp command will bring up the following subcommands for battery backup power management.

3.25.1 status

Use this command to display the status of backup battery power.

Usage: **`status`**

Example Output:

```
192.168.12.137 X8DTU (S0/G0,78w,v01.34) 16:06 SIM(WA)>bbp st
[SlaveAddress = 70h] [Module 1]
Item                          |               Value
----                          |               -----
Manufacturer                  |           SUPERMICRO
Model Name                    |          PWS-206B-1R
Serial Number                 |      TEST1234567890A
Product Version               |                 1.2
Firmware version              |                 1.0
-----                         |
Battery Voltage               |             16.13 V
Battery Current               |                0 mA
Battery Pack Temp             |             31C/88F
Power Wattage                 |                200W
Cycle Count                   |                   6
-----                         |
Battery Power Status          |              Normal
Remaining Energy              |                 96%
Discharge Status              |                None
Discharge Setting             |       Auto (30 days)
Discharge Remaining Days      |             29 days
Battery Status                |              0xC0E0
                               |      [FULLY CHARGED]
                               |   [TERMINATE CHARGE]
```

3.25.2 autoDischarge

Use this command to set the battery auto discharge by day.

Usage: **`autoDischarge <module> <day>`**

3.25.3 discharge

Use this command to manually discharge the battery.

Usage: **`discharge <module>`**

3.26 nm

This command is for Intel Dynamic Power Node Manager V1.5 and specifically used to test motherboards of Supermicro X8 series. Use this command to run tests.

3.26.1 detect

Use the detect command to detect if ME is present.

Usage: **`nm detect`**

Example Output:

```
This device supports Node Manager
```

3.26.2 ver

Use the ver command to display the node manager version.

Usage: **`nm ver`**

Example Output:

```
Node Manager Version = 1.5
Firmware Version     = 1.12
```

3.26.3 cap

Use the cap command to display the node manager capabilities.

Usage: **`nm cap`**

Example Output:

```
Max concurrent settings         = 10
Max Power limit value           = 32767 w
Min Power limit value           = 1 w
Max Correction Time settable    = 600000 ms
Min Correction Time settable    = 6000 ms
Max Statistics Reporting period = 3600 s
Min Statistics Reporting period = 1 s
Limiting type                   = CPU power limiting
Limiting based on               = Wall input power. PSU input power
```

3.26.4 status

Use the status command to display or enable or disable the node manager.

Usage: **`nm status [enable:disable]`**

Example Output:

```
Node Manager is enabled
```

3.26.5 stat

Use the status command to display power statistics (or by policy ID).

Usage: **nm stat [ID]**

Example Output:

```
Gloabal Power statistic
Current = 263 w
Minimum = 0 w
Maximum = 375 w
Average = 259 w
Time    = 12/27/2010 04:50:54
Reporting Period = 1 sec
Node Manager is enabled
Measurements in progress
```

3.26.6 resetStat

Use the resetStat command to reset power statistics (or by policy ID).

Usage: **nm resetStat [ID]**

3.26.7 pstate

Use the pstate command to get or set the P-state.

Usage: **nm pstate [value]**

Example Output:

```
Current P-State   = 7
Number of P-State = 8
```

3.26.8 tstate

Use the tstate command to get or set the T-state.

Usage: **nm tstate [value]**

Example Output:

```
Current T-State   = 0
Number of T-State = 8
```

3.26.9 ptstate

Use the ptstate command to display the P-state and T-state.

Usage: **nm ptstate**

Example Output:

```
P-State : High |_______#| Low          [7/8] (Current/Number of State)
T-State : High |#_______| Low          [0/8] (Current/Number of State)
```

3.26.10 alert

Use the alert command to get or set the destination for alerts. Node Manager will send the alert to the SNMP destination, which can be defined by the “ipmi lan snmp” command.

Usage: **nm alert [destination]**

Example Output:

```
SIM(WA)>ipmi lan snmp
Seq                   IP                 MAC
---                   --                 ---
  1              0.0.0.0    00:00:00:00:00:00
  2       192.168.12.150    00:00:00:00:00:00
  3              0.0.0.0    00:00:00:00:00:00
  4              0.0.0.0    00:00:00:00:00:00
  5              0.0.0.0    00:00:00:00:00:00
  6              0.0.0.0    00:00:00:00:00:00
  7              0.0.0.0    00:00:00:00:00:00
  8              0.0.0.0    00:00:00:00:00:00
  9              0.0.0.0    00:00:00:00:00:00
 10              0.0.0.0    00:00:00:00:00:00
 11              0.0.0.0    00:00:00:00:00:00
 12              0.0.0.0    00:00:00:00:00:00
 13              0.0.0.0    00:00:00:00:00:00
 14              0.0.0.0    00:00:00:00:00:00
 15              0.0.0.0    00:00:00:00:00:00
SIM(WA)>nm alert 2
Done
SIM(WA)>nm alert
Destionation selector = 2
```

3.26.11 scanPolicy

Use the scanPolicy command to get or set the destination for alerts.

Usage: **`nm scanPolicy [end]`**

Example Output:

```
============================================================
Policy ID = 0, Power Limit = 32767 w
Policy state:
 Policy enabled
 Per Domain Node Manager policy control enabled
 Global Node Manager policy control enabled
Exception action:
============================================================
Policy ID = 2, Power Limit = 200 w
Policy state:
 Policy enabled
 Per Domain Node Manager policy control enabled
 Global Node Manager policy control enabled
Exception action:
```

3.26.12 addPolicy

Use the addPolicy command to add a new policy.

Usage: **`nm addPolicy <ID> <limit> <t> <p>`**

Example Output:

```
SIM(WA)>nm addPolicy 15 150 60000 10
Done
```

3.26.13 delPolicy

Use the delPolicy command to delete a policy.

Usage: **`nm delPolicy <ID>`**

3.26.14 getPolicy

Use the getPolicy command to get a policy.

Usage: **nm getPolicy <ID>**

Example:

```
SIM(WA)>nm getPolicy 15
  Power Limit = 150 w
  Correction Time limit       = 60000 ms
  Statistics Reporting Period = 10 s
  Policy state:
      Policy enabled
      Per Domain Node Manager policy control enabled
      Global Node Manager policy control enabled
  Policy Exception action state:
      Send alert
```

3.26.15 enablePolicy

Use the enablePolicy command to enable a policy.

Usage: **nm disablepolicy <ID>**

3.26.16 disablePolicy

Use the disablePolicy command to disable a policy.

Usage: **nm disablePolicy <ID>**

3.27 kvmwa

Entering the kvmwa command will open a KVM window for ATEN firmware.

Usage: **kvmwa**

3.28 ukvm

Entering the ukvm command will auto-detect the firmware and launch the correct KVM (keyboard/video/mouse) window console.

Usage: **ukvm**

3.29 vmwa

Entering the vmwa command will list the following vmwa subcommands (applies only to devices with ATEN firmware). Refer to *Appendix B* for more on VM commands.

Usage: **vmwa**

Notes:

* Supports 2 virtual devices (device 1 & device 2).

  Device 1 will be Hard Disk,USB or Floppy.

  Device 2 will be CD,DVD or ISO file.

* List available devices before mount virtual media when plug in Removable device.

3.29.1 dev1list

Use the dev1list command to list the available device for virtual device 1.

Usage: **vmwa dev1list**

3.29.2 dev1drv

Use the dev1drv command to mount the drive for virtual device 1.

Usage: **vmwa dev1drv <index>**

3.29.3 dev1stop

Use the dev1stop command to stop the virtual device 1.

Usage: **vmwa dev1stop**

3.29.4 dev2list

Use the dev2list command to list the available device for virtual device 2.

Usage: **vmwa dev2list**

3.29.5 dev2cd

Use the dev2cd command to mount the CD/DVD drive for virtual device 2.

Usage: **vmwa dev2cd <index>**

3.29.6 dev2iso

Use the dev2iso command to mount the ISO file for virtual device 2.

Usage: **vmwa dev2iso <filename>**

3.29.7 dev2stop

Use the dev2stop command to stop the virtual device 2.

Usage: **vmwa dev2stop**

3.29.8 allstatus

Use the allstatus command to show all VMWA status.

Usage: **vmwa allstatus**

3.29.9 status

Use the status command to show the status.

Usage: **`vmwa status`**

Example Output:

```
Device 1: None
Device 2: None
```

3.29.10 log

Use the log command to show the log.

Usage: **`vmwa log`**

3.30 dcmi

Entering the dcmi command will list the following DCMI management subcommands (applies only to devices that support DCMI management).

3.30.1 find

Use the find command to search for and display all DCMI devices.

Usage: **`dcmi find [<Start_IP> <End_IP> <NetMask>]`**

Example Output:

```
Finding DCMI Devices ...
  192.168.12.151         DCMI Ver:0.1
  192.168.12.152         DCMI Ver:0.1
2 DCMI device(s) found
```

3.30.2 cap

Use the cap command to list the DCMI capabilities information.

Usage: **`dcmi cap`**

Example Output:

```
DCMI Version = 0.1
Mandatory Platform capabilities
Temperature Monitor    :Compliant
Chassis Power          :Compliant
SEL logging            :Compliant
Identification Support :Compliant

Optional Platform capabilities
Power Management       :Not Compliant

Manageability Access Capabilities
VLAN Capable                          :Available
SOL Supported                         :Available
OOB Primary LAN Channel Available     :Available
OOB Secondary LAN Channel Available   :Not presnt
OOB Serial TMODE Available            :Not presnt
In-Band KCS Channel Available         :Available

SEL Attributes
SEL automatic rollover enabled    :Not presnt
Number of SEL entries             :0

Identification Attributes
Asset Tag Support       :Available
DHCP Host Name Support  :Not presnt
GUID Support            :Available

Temperature Monitoring
Baseboard temperature   :At least 1
Processors temperature  :At least 1
```

```
Inlet temperature       :At least 1

Power Management Device Slave Address
7-bit I2C Slave Address of device on IPMB  :10

Power Management Controller Channel Number
Channel Number    :00
Device Revision   :01

Manageability Access Attributes
Mandatory Primary LAN OOB Support(RMCP+ Support Only) :supported
Optional Secondary LAN OOB Support(RMCP+ Support Only):supported
Optional Serial OOB TMODE Capability                  :supported
```

3.31 dr

Entering the dr command will list the following drive-redirection subcommands (applies only to devices with Peppercon firmware). Refer to *Appendix B* for more on drive-redirection / VM commands

3.31.1 list

Use the list command to list available local drives.

Usage: **`dr list`**

Example Output:

```
C: (Hard Disk)
D: (Hard Disk)
E: (CD-ROM)
```

3.31.2 iso

Use the iso command to set the redirection for ISO file.

Usage: **`dr iso <drive ID> <path to iso file>`**

Example: dr iso c:\cd.iso

This will establish an ISO redirection with your cd.iso

Note: If your path includes a space, please place double quote at begin and end of <path to iso file>.

3.31.3 drv

Use the drv command to set the redirection for local drive.

Usage: **`ddr drv <drive ID> <drive Letter> [write ? enable]`**

Example 1: `dr drv 1 d`

This will establish a drive redirecion with your local d drive.

The write support is disabled

Example 2: `dr drv 1 e enable`

This will establish a drive redirection with your local e drive.

The write support is enabled.

3.32 kvm

Entering the kvm command will open a KVM window for Peppercon firmware.

Usage: **kvm**

3.33 kvmw

Entering the kvmw command will open a KVM window for AMI firmware.

Usage: **kvmw**

3.33.1 kvmwx9

Entering the kvmwx9 or ukvm will open a kvm window for AMI x9 firmare.

Usage: **kvmwx9** (or **ukvm**)

Example Output:

```
kvmwx9                        SIM(X9) KVM console (graphic mode)
```

3.34 vmw

Entering the vmw command will list the following vmw subcommands (applies only to devices with AMI firmware). Refer to *Appendix B* for more on VM commands.

Usage: **vmw**

3.34.1 vmw floppy

This command is used to select the floppy image as virtual media.

Usage: **vmw floppy <image file>**

3.34.2 vmw usbkey

This command is used to select the USB key as virtual media.

Usage: **vmw usbkey <drive letter>**

3.34.3 vmw iso

This command is used to select the ISO file as virtual media.

Usage: **vmw iso <ISO file>**

3.34.4 vmw cd

This command is used to select the CD/DVD drive as virtual media.

Usage: **vmw cd <drive letter>**

3.34.5 vmw stopFloppy

This command is used to stop the connected floppy.

Usage: **vmw stopFloppy**

3.34.6 vmw stopUsbkey

This command is used to stop the connected USB key.

Usage: **vmw stopUsbkey**

3.34.7 vmw stopISO

This command is used to stop the connected ISO.

Usage: **vmw stopISO**

3.34.8 vmw stopCD

This command is used to stop the connected CD/DVD drive.

Usage: **vmw stopCD**

3.34.9 vmw status

This command is used to view the Virtual Media status.

Usage: **vmw status3.35 sol**

3.35 sol

Entering the sol command will list the following SOL subcommands.

3.35.1 sol activate

Use the sol activate command to activate SOL directly in the current text mode. Press the <F12> key to exit.

In order to display the remote text console correctly, the support of ANSI/VT100 terminal control escape sequences is required for the computer terminal or terminal emulator running SMCIPMITool.

Usage: **sol activate**

3.35.2 sol deactivate

Use the sol deactivate command to stop SOL.

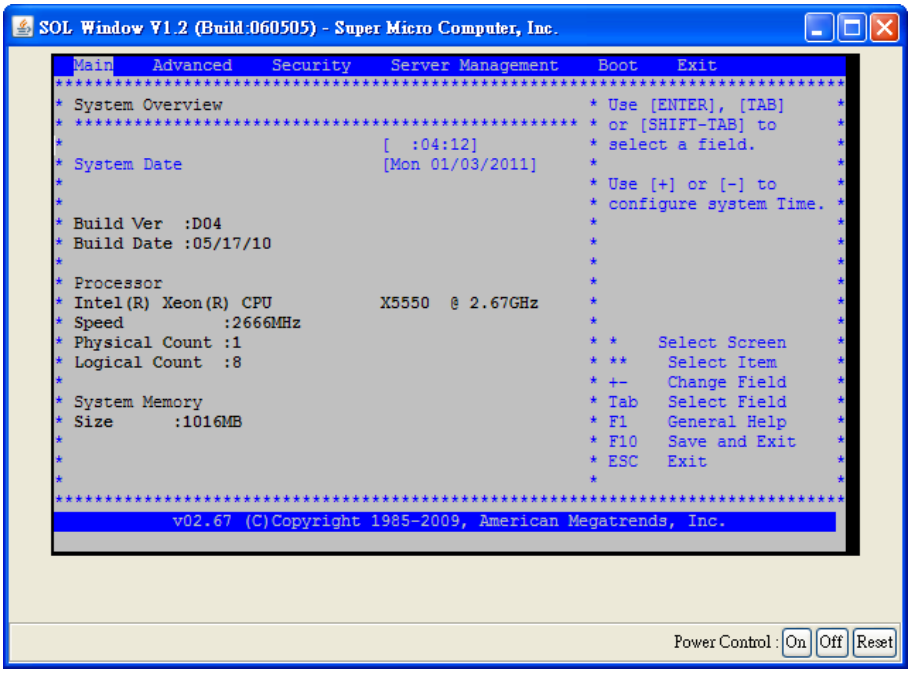
Usage: **`sol deactivate`**

3.35.3 sol window

Use the sol window command to open a SOL window GUI and activate SOL.

Usage: **`sol window`**

Example Output:



3.35.4 sol key

Use the sol key command to key map for Linux or Windows.

Usage: **`sol key [linux|windows]`**

3.35.5 bitrate

Use the sol bitrate command to configure the SOL transmission bit rate.

Usage: **`sol bitrate [9.6|19.2|38.4|57.6|115.2]`**

3.36 nm20

This command is for Intel Dynamic Power Node Manager V2.0 and specifically used for the testing of motherboards of Supermicro X9 series. Use this command to run tests.

Usage: **nm20**

Example Output:

```
nmSDR                           Display NM SDR
selTime                         Get SEL time
deviceID                        Get ME Device ID
reset                           Reboots ME
reset2Default                   Force ME reset to Default
updateMode                      Force ME to Update Mode
powerOff                        Set ME power state off
selfTest                        Get Self Test Results
mode                            Get ME running Mode
listImagesInfo                  List ME Images information
oemGetPower                     OEM Power command for ME
oemGetTemp                      OEM Temp. command for ME
globalEnable                    Global Enable NM policy control
globalDisable                   Global Disable NM policy control
domainEnable <domain ID>        per Domain Enable NM policies
domainDisable <domain ID>       per Domain Disable NM policies
policyEnable <domain ID> <policy ID>     per Policy Enable NM policy
policyDisable <domain ID> <policy ID>    per Policy Disable NM policy
addPowerPolicy <pID> <limit> <t> <p>     Add Power Policy
getPolicy <domain ID> <policy ID>        Get Policy
delPolicy <domain ID> <policy ID>        Delete Policy
scanPolicy                      Scan all presented Policies
addPolicy <dID> <pID> <ptt> <agg> <a> <l> <t> <tl> <p>   Add Policy
statistics <mode> <domainID> <policy ID>         NM statistics
resetStatistics <mode> <domain ID> <policy ID>   Reset NM statistics
cap <domain ID> <Trigger Type>   NM Capabilities
ver                             NM Version
alert [dest]                    NM Alert
pstate [value]                  Get/Set Max allowed CPU P-State
tstate [value]                  Get/Set Max allowed CPU T-State
ptstate                         Show CPU P-State and T-State
cpuCore [cores]                 Get/Set max allowed logical processors
totalPower <domainID> [watts]   Get/Set Total Power Budget
```

3.36.1 nmSDR

Use this command to display NM SDR.

Usage: **nm 20 nmSDR**

Example Output:

```
Record ID          = 1C 00
SDR Version        = 51h
Record Type        = C0h
Record Length      = 0Bh
OEM ID             = 57 01 00 h
Record Subtype     = 0Dh
SubType Version    = 01h
Slave Address      = 2Ch
Channel            = 00h
Health Event Sensor Number             = 1Dh
Exception Event Sensor Number          = 1Eh
Operational Capailities Sensor Number  = 1Fh
Alert Threshold Exceeded Sensor Number = 20h
```

3.36.2 selTime

Use this command to find out SEL time.

Usage: **nm20 selTime**

Example Output:

```
Device ID         = 50h (Intel Management Engine)
Firmware Version  = 2.1.5.73
IPMI Version      = 2.0
Manufacturer ID   = 57 01 00
product ID Minor Ver = Romley platform
firmware implemented version =  NM Revision v2.0
Image Flag = operational image 1
raw  = 50 01 02 15 02 21 57 01 00 02 0B 02 07 30 01
```

3.36.3 deviceID

Use this command to get ME Device ID.

3.36.4 reset

Use this command to reboot ME.

3.36.5 reset2Default

Use this command to force ME to reset to default settings.

3.36.6 updateMode

Use this command to force ME to enter the Update Mode.

3.36.7 powerOff

Use this command to set ME to the power-off state.

3.36.8 selfTest

Use this command to get Self Test results.

3.36.9 mode

Use this command to get ME running Mode.

Usage: **`nm20 mode`**

Example Output:

```
ME is in NORMAL mode
```

3.36.10 listImagesInfo

Use this command to display the information of ME images.

Usage: **`nm20 listImagesInfo`**

Example Output:

```
Recovery Image:
Image Type = recovery image
raw  = 57 01 00 02 01 02 07 35 00

1st operational Image:
Image Type = operational image 1 (This Image is currently running)
raw  = 57 01 00 02 01 02 07 35 05
```

```
2nd operational Image:
Image Type = operational image 2
raw  = 57 01 00 02 01 02 07 35 02
```

3.36.11 oemGetPower

Use this command to get power.

Usage: **nm20 oemGetPower**

Example Output:

```
56 watts
```

3.36.12 oemGetTemp

Use this command to run temporary commands.

Usage: **nm20 oemGetTemp**

Example Output:

```
56 (c)
```

3.36.13 globalEnable

Use this command for Global Enable NM policy control.

3.36.14 globalDisable

Use this command for Global Disable NM policy control.

3.36.15 domainEnable

Use this command for per Domain Enable NM policies.

3.36.16 domainDisable

Use this command for per Domain Disable NM policies.

3.36.17 policyEnable

Use this command for per Policy Enable NM policy.

3.36.18 policyDisable

Use this command for per Policy Disable NM policy.

3.36.19 addPowerPolicy

Use this command to add power policy.

Usage: **nm20 addPowerPolicy**

3.36.20 getPolicy

Use this command to get policy.

3.36.21 delPolicy

Use this command to delete policy.

3.36.22 scanPolicy

Use this command to scan all presented policies.

Usage: **`nm20 scanPolicy`**

Example Output:

```
============================================
Domain ID = 0 , Policy ID = 0
============================================
Values:
Power Limit                 = 32767 w
Correction Time limit       = 600000 ms
Statistics Reporting Period = 60 s
Policy Trigger Limit        = 0
Domain ID:
    Entire platform
Policy state:
    Policy(Enabled)  Domain(Enabled)  Global(Enabled)
Policy Trigger Type:
    No Policy Trigger
Aggressive CPU Power correction:
    Backward compatible with NMV1.5
Policy Exception action state:
    Send alert
raw = 57 01 00 70 10 01 FF 7F C0 27 09 00 00 00 3C 00

Total Policies = 1
```

3.36.23 addPolicy

Use this command to add policy.

Usage: **`nm20 addPolicy`**

3.36.24 statistics

Use this command to display statistics.

Usage: **`nm20 statistics`**

3.36.25 resetStatistics

Use this command to reset NM statistics.

3.36.26 cap

Use this command to view capabilities.

Usage: **`nm cap`**

Example Output:

```
Max concurrent settings         = 8
Max Power limit value           = 32767 w
Min Power limit value           = 1 w
Max Correction Time settable    = 600000 ms
Min Correction Time settable    = 6000 ms
Max Statistics Reporting period = 3600 s
Min Statistics Reporting period = 1 s
Limiting type                   = platform power limiting
Limiting based on               = DC power - PSU output power or bladed system
```

3.36.27 ver

Use this command to show the version.

Usage: **nm20 ver**

Example Output:

```
Node Manager Version = 2.0
Firmware Version     = 2.09
```

3.36.28 alert

Use this command for NM Alert. Refer to *3.26.10 alert* for details.

3.36.29 pstate

Use this command get or set the maximum CPU P-State.

Usage: **nm20 pstate**

Example Output:

```
Current max allowed P-State   = 0
Number of P-State = 20
```

3.36.30 tstate

Use this command get or set the maximum CPU T-State.

Usage: **nm20 tstate**

Example Output:

```
Current max allowed T-State   = 0
Number of T-State = 8
```

3.36.31 ptstate

Use this command to display both CPU P-State and C-State.

Usage: **nm20 ptstate**

Example Output:

```
P-State : High |#____________________| Low       [0/20] (Current/# of State)
T-State : High |#_______| Low   [0/8] (Current/# of State)
```

3.36.32 cpuCore

Use this command to view or set maximum allowed logical processors.

Usage: **nm20 cpuCore**

Example Output:

```
Current Max allowed cores   = 0
Number of logical cores on each processor = 8
Number of installed processor packages    = 0
```

3.36.33 cpuMemTemp

Use this command to view CPU or memory temperature.

Usage: **nm20 cpuMemTemp**

Example Output:

```
CPU#0 = 31(c) (TJmax = 95,DTS = 64)
CPU#1 = 33(c) (TJmax = 95,DTS = 62)
[CPU#0]CHANNEL#0, DIMM#0(P1_DIMMA1) = 27(c)
[CPU#0]CHANNEL#1, DIMM#0(P1_DIMMB1) = 27(c)
[CPU#0]CHANNEL#2, DIMM#0(P1_DIMMC1) = 27(c)
[CPU#0]CHANNEL#3, DIMM#0(P1_DIMMD1) = 26(c)
[CPU#1]CHANNEL#0, DIMM#0(P2_DIMME1) = 26(c)
[CPU#1]CHANNEL#1, DIMM#0(P2_DIMMF1) = 26(c)
[CPU#1]CHANNEL#2, DIMM#0(P2_DIMMG1) = 26(c)
[CPU#1]CHANNEL#3, DIMM#0(P2_DIMMH1) = 26(c)
```

3.36.34 hostCpuData

Use this command to display host CPU data.

Usage: **nm20 hostCpuData**

Example Output:

```
Host CPU data:
End of POST notification was received
Host CPU discovery data is valid
Number of P-States = 16
Number of T-States = 15
Number of installed CPUs/socket = 2
Processor Discovery Data-1 = 26 24 24 22 22 21 21 21
Processor Discovery Data-2 = 00 1D 01 64 00 0C 00 00
```

3.36.35 totalPower

Use this command to get or set Total Power Budget.

3.37 HDD

Entering the hdd command to display the physical and logical HDD status. .

3.37.1 map

Use this command to display the HDD present or error status.

Usage: **hdd map**

Example Output:

```
172.31.11.86 X9DR3-LN4F+ (S0/G0) 17:22 SIM(WA)>hdd map
Enclosure Set :1
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23
------------------------------------------------------------------------
 O  O  O  O  O  O  O  O  O  O  O  O  O  O  O  O  O  O  O  O  O  O  O  O
Enclosure Set :2
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23
------------------------------------------------------------------------
 O  O  O  O  O  O  O  O  O  O  O  O  -  -  -  -  -  -  -  -  -  -  -  -
Enclosure Set :6
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23
------------------------------------------------------------------------
 O  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -
O: OK
X: Error
```

3.37.2 info

Use this command to display HDD information.

Usage: **`hdd info`**

Example Output:

```
172.31.11.86 X9DR3-LN4F+ (S0/G0) 17:22 SIM(WA)>hdd info
 Index | Vendor   | Name             | Ver  | Speed    | Size     | Temp | EID | Status
 ----- | ------   | ----             | ---  | -----    | ----     | ---- | --- | ------
     0 | SEAGATE  | ST31000424SS     | 0003 | 6.0Gb/s  | 930.4 GB | N/A  |   4 | UNCONFIG_GOOD
     1 | SEAGATE  | ST31000424SS     | 0003 | 6.0Gb/s  | 930.4 GB | N/A  |   4 | UNCONFIG_GOOD
     2 | SEAGATE  | ST32000444SS     | 0005 | 6.0Gb/s  | 1.8 TB   | N/A  |   4 | UNCONFIG_GOOD
     3 | SEAGATE  | ST31000424SS     | 0003 | 6.0Gb/s  | 930.4 GB | N/A  |   4 | UNCONFIG_GOOD
     4 | SEAGATE  | ST31000424SS     | 0003 | 6.0Gb/s  | 930.4 GB | N/A  |   4 | UNCONFIG_GOOD
     5 | SEAGATE  | ST31000424SS     | 0003 | 6.0Gb/s  | 930.4 GB | N/A  |   4 | UNCONFIG_GOOD
     6 | SEAGATE  | ST31000424SS     | 0003 | 6.0Gb/s  | 930.4 GB | N/A  |   4 | UNCONFIG_GOOD
     7 | SEAGATE  | ST31000424SS     | 0003 | 6.0Gb/s  | 930.4 GB | N/A  |   4 | UNCONFIG_GOOD
     8 | SEAGATE  | ST3500414SS      | 0005 | 6.0Gb/s  | 464.7 GB | N/A  |   4 | UNCONFIG_GOOD
     9 | SEAGATE  | ST31000424SS     | 0003 | 6.0Gb/s  | 930.4 GB | N/A  |   4 | UNCONFIG_GOOD
    10 | SEAGATE  | ST31000424SS     | 0003 | 6.0Gb/s  | 930.4 GB | N/A  |   4 | UNCONFIG_GOOD
    11 | SEAGATE  | ST31000424SS     | 0003 | 6.0Gb/s  | 930.4 GB | N/A  |   4 | UNCONFIG_GOOD
    12 | TOSHIBA  | MBF2600RC        | 0108 | 6.0Gb/s  | 557.9 GB | 32   |   2 | UNCONFIG_GOOD
    13 | TOSHIBA  | MBF2600RC        | 0108 | 6.0Gb/s  | 557.9 GB | 31   |   2 | UNCONFIG_GOOD
    14 | TOSHIBA  | MBF2600RC        | 0108 | 6.0Gb/s  | 557.9 GB | 31   |   2 | UNCONFIG_GOOD
    15 | TOSHIBA  | MBF2600RC        | 0108 | 6.0Gb/s  | 557.9 GB | 32   |   2 | UNCONFIG_GOOD
    16 | TOSHIBA  | MBF2600RC        | 0108 | 6.0Gb/s  | 557.9 GB | 32   |   2 | UNCONFIG_GOOD
    17 | TOSHIBA  | MBF2600RC        | 0108 | 6.0Gb/s  | 557.9 GB | 31   |   2 | UNCONFIG_GOOD
    18 | TOSHIBA  | MBF2600RC        | 0108 | 6.0Gb/s  | 557.9 GB | 31   |   2 | UNCONFIG_GOOD
    19 | TOSHIBA  | MBF2600RC        | 0107 | 6.0Gb/s  | 557.9 GB | 31   |   2 | UNCONFIG_GOOD
    20 | TOSHIBA  | MBF2600RC        | 0108 | 6.0Gb/s  | 557.9 GB | 31   |   2 | UNCONFIG_GOOD
    21 | TOSHIBA  | MBF2600RC        | 0107 | 6.0Gb/s  | 557.9 GB | 32   |   2 | UNCONFIG_GOOD
    22 | TOSHIBA  | MBF2600RC        | 0107 | 6.0Gb/s  | 557.9 GB | 31   |   2 | UNCONFIG_GOOD
    23 | TOSHIBA  | MBF2600RC        | 0108 | 6.0Gb/s  | 557.9 GB | 32   |   2 | UNCONFIG_GOOD
```

3.37.3 disk

Use this command to display detailed HDD information by index.

Usage: **`hdd disk <index>`**

Example Output:

```
172.31.11.86 X9DR3-LN4F+ (S0/G0) 17:22 SIM(WA)>hdd disk 1
 Field               | Value
 -----               | -----
 Vendor              | SEAGATE
 Name                | ST31000424SS
 revision            | 0003
 Media Err Count     | 0
 Other Err Count     | 0
 Pred Fail Count     | 0
 last Pred Fail Seq  | 0
 FW state            | Unconfigured good drive
 link Speed          | 6.0Gb/s
 Coerced Size        | 930.4 GB
 Temperature         | N/A
 Enclosure ID        | 4
```

3.37.4 lmap

Use this command to display logical HDD present status.

Usage: **hdd lmap**

3.37.5 linfo

Use this command to display logical HDD information.

Usage: **hdd linfo**

3.37.6 ldisk

Use this command to display the detailed information of logical HDD by index.

Usage: **hdd ldisk <index>**

3.38 Tagloc

Use this command to save server location information into BMC. With the '!' hotkey, the location information is listed in shell mode or the Tagloc command. Most tags are stored as numeric values.

Usage: **tagloc**

3.38.1 dataCenter

Use this command to get or set data center tag.

Usage: **dataCenter <id>**

3.38.2 room

Use this command to get or set room tag.

Usage: **room <id>**

3.38.3 row

Use this command to get or set row tag.

Usage: **row <id>**

3.38.4 rack

Use this command to get or set rack tag.

Usage: **rack <id>**

3.38.5 number

Use this command to get or set number tag.

Usage: **number <major id> [minor id]**

3.38.6 mbType

Use this command to get or set type tag.

Usage: **mbType <id>**

3.38.7 chassisType

Use this command to get or set chassis type tag.

Usage: **chassisType <id>**

3.38.8 PowerType

Use this command to get or set power supply type tag.

Usage: **PowerType <id>**

3.38.9 osType

Use this command to get or set operation system type tag.

Usage: **osType <id>**

3.38.10 string

Use this command to get or set OEM string (maximum length of 20 characters).

Usage: **string <text>**

3.38.11 info

Use this command to display tag information.

Usage: **info**

3.38.12 label

Use this command to display tag label.

Usage: **label**

3.38.13 clear

Use this command to clear tag.

Usage: **clear**

3.38.14 export

Use this command to export information to a file.

Usage: **export [filename]**

3.38.15 import

Use this command to import information from a file.

Usage: **import [filename]**

3.39 bios

This command is set to update X9 BIOS and activate product key. It is required to activate product key before use. Please contact your Super Micro sales representative for details.

Usage: **bios**

3.39.1 ver

Use this command to check the BIOS version.

Usage: **ver**

3.39.2 image

Use this command to check the BIOS image file.

Usage: **image <filename>**

3.39.3 update

Use this command to update BIOS.

Usage: **update <filename> [options]**

Example Output:

```
192.168.23.98 X9DRW-3F (S5/G2) 14:50 SIM(X9)>bios update c:\x9drw_082
===============
BIOS Image info
===============
Date     = 08/22/2012
MB Type  = X9DRW-3F
Size     = 16 MB

=============
BIOS ROM info
=============
0636

====================
Uploading BIOS image
====================
Progress:|>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>| 100%
Upload Time: 2 min 46 sec(s)
```

```
=============
Updating BIOS
=============
Progress:|>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>| 100%
Update Time: 3 min 53 sec(s)
Done
Total Elapse Time: 6 min 45 sec(s)
```

3.39.4 setKey

Use this command to activate product key for BIOS update.

Usage: **`setKey <ProductKey>`**

3.39.5 getMACs

Use this command to collect all MAC addresses and save them in files.

Usage: **`getMACs <start> <end> <netMask> <file>`**

3.39.6 setKeys

Use this command to activate multiple product keys for BIOS update.

Usage: **`setKeys <file>`**

3.40 mg

Use this command to save and load a managed group to the default group in the shell mode. You can simply use the ch command to control the managed BMCs in the default group. Besides, you can also run the hostrun command with the curr parameter to manage the default group. To list all managed servers, use the commands “ch” or “mg list.”

3.40.1 list

Use this command to list the current managed devices.

Usage: **`list`**

3.40.2 save

Use this command to save the current managed devices to a file.

Usage: **`saved <filename>`**

3.40.3 load

Use this command to load the managed devices from a file.

Usage: **`load <filename>`**

3.40.4 default

Use this command to manage the default group.

Usage: **`default`**

3.40.5 found

Use this command to manage the found group.

Usage: **`found`**

3.40.6 sort

Use this command to sort the currently managed devices.

Usage: **`sort`**

3.40.7 clear

Use this command to clear all currently managed devices.

Usage: **`clear`**

3.40.8 refresh

Use this command to refresh the managed devices.

Usage: **`refresh`**

3.41 Found

Use this command to save the found BMC devices and copy them to the default group.

3.41.1 list

Use this command to list the found IPMI devices.

Usage: **`list`**

3.41.2 clear

Use this command to clear the found IPMI devices.

Usage: **`clear`**

3.41.3 copy

Use this command to copy the found devices to the default managed group.

Usage: **`copy <index1> [index2] [...]`**

3.41.4 copyall

Use this command to copy all found devices to the default managed group.

Usage: **`copyall`**

3.41.5 saveAs

Use this command to save the found IPMI devices to a file.

Usage: **`saveAs <filename>`**

3.41.6 refresh

Use this command to refresh the found IPMI devices to a file.

Usage: **`refresh`**

3.42 Debug

This command displays raw data between you and BMC. There are 3 display levels.

level 0 : No raw displayed
level 1 : Human read raw data.
IPMI Reqeuest (NetFn, Cmd, Data ...)
BMC Response (Completion, Data ...)
level 2 : IPMI Message raw format
level 3 : IPMI Message raw format with detailed field list

Usage: **`debug [0|1|2|3]`**

Example Output:

```
debug [0|1|2|3]                Display raw data between you and BMC
```

The setting will be stored into SMCIPMITool.properties once the level has been changed. The debug level applies both basic mode and shell mode.

Example Output: [ipmi ver] command with different debug level

```
SIM(X9)>debug 0
      debug level = 0
      level 0 : No raw displayed

      SIM(X9)>ipmi ver
      Firmware Revision  = 00.10
      IPMI Version       = 2.0
      Manufacturer ID    = 7C 2A 00
      product ID         = BB AA 00

      SIM(X9)>debug 1
      debug level = 1
      level 1 : Human read raw data.
                IPMI Reqeuest (NetFn, Cmd, Data ...)
                BMC  Response (Completion, Data ...)

      SIM(X9)>ipmi ver
      [ YOU -> BMC : 06 01 ]
      [ YOU <- BMC : 00 20 01 00 10 02 BF 7C 2A 00 BB AA 0D 00 00 00 ]
      Firmware Revision  = 00.10
      IPMI Version       = 2.0
      Manufacturer ID    = 7C 2A 00
      product ID         = BB AA 00

      SIM(X9)>debug 2
      debug level = 2
      level 2 : IPMI Message raw format

      SIM(X9)>ipmi ver
      [ YOU -> BMC : 20 18 C8 41 00 01 BE ]
```

```
[ YOU <- BMC : 41 1C A3 20 00 01 00 20 01 00 10 02 BF 7C 2A 00 BB AA 0D 00 00 00
 D5 ]
Firmware Revision  = 00.10
IPMI Version       = 2.0
Manufacturer ID    = 7C 2A 00
product ID         = BB AA 00

SIM(X9)>debug 3
debug level = 3
level 3 : IPMI Message raw format with Field listed

SIM(X9)>ipmi ver
==================
Direction = Request
rsSA      = 20
netFnLun  = 18
checkSum1 = C8
rqSA      = 41
rqSeqLun  = 00
cmd       = 01
data      =
checkSum2 = BE
Msg Size  = 7(int)
To Array  = 20 18 C8 41 00 01 BE
==================

====================
Direction = Response
rqSA           = 41
netFnLun       = 1C
checkSum1      = A3
rsSA           = 20
rqSeqLun       = 00
cmd            = 01
completionCode = 00
data           = 20 01 00 10 02 BF 7C 2A 00 BB AA 0D 00 00 00
checkSum2      = D5
Msg Size       = 23(int)
To Array       = 41 1C A3 20 00 01 00 20 01 00 10 02 BF 7C 2A 00 BB AA 0D 00 00
00 D5
==================

Firmware Revision  = 00.10
IPMI Version       = 2.0
Manufacturer ID    = 7C 2A 00
product ID         = BB AA 00

SIM(X9)>
```

3.43 Task

Use Task commands to create and perform tasks in background. Various Task commands on multiple server systems can be run at the same time**.** This function is ideal for long tasks such as updating BIOS or firmware.

Usage: **`task`**

3.43.1 run

Use this command to execute a command in background.

Usage: **`run <IP> <ID> <PW> <Cmd...>`**

Example Output:

```
SIM(WA)>task run 10.133.176.208 ADMIN ADMIN bios update C:\x9drw3.219
Task ID = 1
```

3.43.2 command

Use this command to display the executed command specified by its task ID.

Usage: **`command  <taskID>`**

3.43.3 startTime

Use this command to get the start time of a task.

Usage: **`startTime <taskID>`**

3.43.4 endTime

Use this command to get the end time of a task.

Usage: **`endTime <taskID>`**

3.43.5 state

Use this command to get the state of a task. The types of states are listed below:

WAIT: The task is waiting to be performed.

RUNNING: The task is being run.

END: The task has been completed.

Usage: **`state <taskID>`**

3.43.6 exitcode

Use this command to get the exit code of a task. For a complete list of exit codes, see *Appendix D. Exit Codes*.

Usage: **`exitcode <taskID>`**

3.43.7 message

Use this command to get the task messages.

Usage: **`message <taskID>`**

Example Output:

```
SIM(WA)>task message 1
TaskID : 1 [RUNNING] [Command : 10.133.176.208 ADMIN ADMIN bios update C:\x9drw3.219 ]
System is On. Preparing BIOS update procedure .........Done
===============
 BIOS Image info
===============
 Date     = 02/19/2013
 MB Type  = X9DRW-3F
 Size     = 16 MB

=============
 BIOS ROM info
=============
 0636 BIOS Date: 02/19/2013

====================
 Uploading BIOS image
====================
Progress:|>>>>>>>>>>>>>>>>
TaskID : 1 [RUNNING]
```

3.43.8 remove

Use this command to remove task.

Usage: **remove <taskID>**

3.43.9 message2file

Use this command to save task messages to a file.

Usage: **message2file <taskID> <file>**

3.43.10 removeAll

Use this command to remove all executed tasks having a state indication of “END”.

Usage: **removeAll**

3.43.11 getTaskIDs

Use this command to get all task IDs.

Usage: **getTaskIDs**

3.43.12 status

Use this command to display the performed task status.

Usage: **status**

Example Output:

```
SIM(WA)>task status
TaskID | Start Time      | End Time        | Elapse   | Status  | Exit | Command
------ | ----------      | --------        | ------   | ------  | ---- | --------
     1 | 03/28 11:51:18  | 03/28 11:51:18  | 00:00:00 | END     |  180 | 10.133.176.208 ADMIN ***** bio update C:\x9drw3.219
     2 | 03/28 11:52:08  |                 | 00:02:05 | RUNNING |      | 10.133.176.209 ADMIN ***** bios update C:\x9drw3.219
     3 | 03/28 11:54:09  |                 | 00:00:04 | RUNNING |      | 10.133.99.70 ADMIN ***** bios update C:\x9drw3.219
```

3.43.13 limit

Use this command to limit the number of tasks to be performed at once.

Usage: **limit <number>**

Appendix A Command Categories

Refer to the chart below to determine the command sets supported by the stated configurations.

V: Supported

O: Supported and IPMI FW dependent.

Command Set	Blade w/ CMM	Server w/ ATEN IPMI Firmware	Server w/ AMI IPMI Firmware	Server w/ Peppercon IPMI Firmware	Server w/ATEN or AMI IPMI FW, ME enabled BIOS and PMBus power supply
Super Blade Management	O				
IPMI Management	V	V	V	V	V
KVM and Virtual Media for Peppercon, AMI, ATEN		O	O	O	O
Group Management	V	V	V	V	V
Deployment Tool (BIOS Refresh)	O	O	O		O
Shell and Command Mode	V	V	V	V	V
Trap Receiver	V	V	V	V	V
Node Management for ME-enabled MB					V
DCMI Management		V	V		V
PMBus Health					V
IPMI Device Discovery	V	V	V	V	V
Script	V	V	V	V	V

Refer to the chart below for the command set categories of the primary commands.

Category	Commands
Super Blade Management	system, failure, blade, gigabit, power, ib, cmm, listtemp, allsel
IPMI Management	sel, user, ipmi, ver, sol
KVM and Virtual Media for Peppercon, AMI, ATEN	Peppercon: dr, kvm, vm AMI: kvmw, vmw ATEN: kvmwa, vmwa
Group Management	host, hostrun
Deployment Tool (BIOS Refresh)	deploy
Shell and Command Mode	ch
Trap Receiver	trap
Node Management for ME-enabled MB	nm, nm20
DCMI Management	dcmi
Power Supply Health	pminfo, psfruInfo
IPMI Device Discovery	find, found
Script	exec

Appendix B VM Command Examples

B.1 AMI IPMI Firmware

Available commands:

```
vmw floppy <image file>          Floppy image as virtual media
vmw usbkey <drive letter>        USB key as virutal media
vmw iso    <ISO file>            ISO file as virtual media
vmw cd     <drive letter>        CD/DVD drive as virutal media
vmw stopFloppy                   Stop connected floppy
vmw stopUsbkey                   Stop connected USBKey
vmw stopISO                      Stop connected ISO
vmw stopCD                       Stop connected CD/DVD
vmw status(st)                   Virtual Media status
```

Example of using floppy image as virtual media:

```
SIMBL(W)>vmw floppy c:\DOS50.img
Connecting ...Done
SIMBL(W)>vmw stopFloppy
Disconnecting ...Done
```

Example of using USB key as virtual media:

```
SIMBL(W)>vmw usbkey h
Connecting ...Done
SIMBL(W)>vmw stopUsbkey
Disconnecting ...Done
```

Example of using ISO file as virtual media:

```
SIMBL(W)>vmw iso c:\fdoem.iso
```

```
Connecting ...Done
SIMBL(W)>vmw stopISO
Disconnecting ...Done
```

Example of using CD/DVD drive as virtual media:

```
SIMBL(W)>vmw cd e
Connecting ...Done
SIMBL(W)>vmw stopCD
Disconnecting ...Done
```

Example of displaying Virtual Media status:

```
SIMBL(W)>vmw status
IP           : 192.168.12.163
Target Drive : Virtual Floppy
Read Bytes   : n/a
Status       : Not Connected
Connected to :
Target Drive : Virtual CD
Read Bytes   : n/a
Status       : Not Connected
Connected to :
```

B.2 ATEN IPMI Firmware

Available commands:

```
vmwa dev1list              List available devices for virtual device
1
vmwa dev1drv <index>       Mount drive for virtual device 1
vmwa dev1stop              Stop virtual device 1
```

```
vmwa dev2list             List available devices for virtual device
2

vmwa dev2cd  <index>      Mount CD/DVD for virtual device 2

vmwa dev2iso <filename>   Mount ISO file for virtual device 2

vmwa dev2stop             Stop virtual device 2

vmwa allstatus            Show all VMWA status

vmwa status               Show status

vmwa log                  Show log
```

Notes:

* Supports 2 virtual devices (device 1 & device 2)

Device 1 will be Hard Disk,USB or Floppy

Device 2 will be CD,DVD or ISO file

* List available devices before mounting virtual media when plugged in Removable device

Examples of using USB key as virtual media:

SIM(WA)>vmwa dev1list

```
2: [H: USB Flash]
3: [G: USB HD]
4: [I: USB HD]
5: [C: IDE HD]
6: [D: IDE HD]
```

SIM(WA)>vmwa dev1drv 2

```
Mounting H: USB Flash
Device 1 :VM Plug-In OK!!
```

SIM(WA)>vmwa dev1stop

```
done
```

Examples of using CDROM as virtual media:

SIM(WA)>vmwa dev2list

```
2: [E: IDE CDROM]
3: [F: SCSI CDROM]
```

SIM(WA)>vmwa dev2cd 2

```
Mounting E: IDE CDROM
Device 2 :VM Plug-In OK!!
SIM(WA)>vmwa dev2stop
Done
```

Examples of using ISO image file as virtual media:

SIM(WA)>vmwa dev2iso c:\fdoem.iso

```
Mounting ISO file: c:\fdoem.iso
Device 2 :VM Plug-In OK!!
```

SIM(WA)>vmwa dev2stop

```
Done
```

Examples of showing all VMWA status, status and log:

SIM(WA)>vmwa allstatus

```
[192.168.12.151]:
Device 1: H: USB Flash
Device 2: None
```

SIM(WA)>vmwa status

```
Device 1: None
Device 2: ISO File [c:\fdoem.iso]
```

SIM(WA)>vmwa log

```
Device 1 :Don't access file on Local storage device
Device 1 :VM Plug-In OK!!
Device 1 :VM Plug-Out OK!! Stop!!
Device 2 :VM Plug-In OK!!
Device 2 :VM Plug-Out OK!! Stop!!
Device 2 :VM Plug-In OK!!
```

B.3 Peppercon IPMI Firmware

Available commands for ISO / Drive Redirection:

```
dr list                          List available local drive
dr iso <drive ID> <path to iso file>                    Set ISO redirection
dr drv <drive ID> <drive Letter> [write ? enable]       Set drive redirection
```

Example of using ISO image redirection:

SIMBL>dr iso 1 c:\fdoem.iso

```
Connecting Drive Redirection to 192.168.12.123
MSP: trying connection to 192.168.12.123:443
MSP: connected successfully to 192.168.12.123:443
Done
```

Note: ISO redirection will stop once you quit the shell mode

Examples of using Drive redirection:

SIMBL>dr list

```
A: (Removable)
C: (Hard Disk)
D: (Hard Disk)
E: (CD-ROM)
F: (CD-ROM)
G: (Hard Disk)
I: (Hard Disk)
```

SIMBL>dr drv 1 G

```
Connecting Drive Redirection to 192.168.12.123
MSP: trying connection to 192.168.12.123:443
MSP: connected successfully to 192.168.12.123:443
Done
```

Note: The drive redirection will stop once you quit shell mode

Available commands for Virtual Media:

```
vm status(st)               Virtual media status

vm stop                     Stop virtual media

vm floppy                   Upload a floppy image as virtual media

vm iso                      Virtual media via windows share
```

Examples of using floppy image and ISO image as virtual media:

SIMBL>vm floppy 1 c:\dos50.img

```
Uploading floppy
.....................................................................................
.................
Done
```

SIMBL>vm iso 2 192.168.12.158 blade /ISO/XPE.iso

```
Done
```

SIMBL>vm status

```
Drive 1
Device Status = Internal image set
Image Size = 1474560 (bytes)
Access Mode = Writable
Image source = dos50.img

Drive 2
Device Status = CD-ROM image on Windows share set
Image Size = 89565184 (bytes)
Access Mode = Read-Only
Image source = //192.168.12.158/blade//ISO/XPE.iso
```

Appendix C Trap Receiver

Available commands:

```
trap start                Start Trap receiver

trap stop                 Stop Trap receiver

trap status(st)           Trap receiver status

trap list                 List the received Traps

trap clear                Clear the received Traps

trap save                 Save the received Traps to file

trap savepet              Save as the IPMIView TrapReceiver PET
format
```

Examples of using Trap Receiver:

SIM(WA)>ipmi lan snmp

```
Seq                   IP                 MAC
---                   --                 ---
  1       192.168.12.174    00:00:00:00:00:00
  2              0.0.0.0    00:00:00:00:00:00
  3              0.0.0.0    00:00:00:00:00:00
  4              0.0.0.0    00:00:00:00:00:00
  5              0.0.0.0    00:00:00:00:00:00
  6              0.0.0.0    00:00:00:00:00:00
  7              0.0.0.0    00:00:00:00:00:00
  8              0.0.0.0    00:00:00:00:00:00
  9              0.0.0.0    00:00:00:00:00:00
 10              0.0.0.0    00:00:00:00:00:00
 11              0.0.0.0    00:00:00:00:00:00
 12              0.0.0.0    00:00:00:00:00:00
 13              0.0.0.0    00:00:00:00:00:00
 14              0.0.0.0    00:00:00:00:00:00
 15              0.0.0.0    00:00:00:00:00:00
```

SIM(WA)>trap status

```
Trap Receiver status: Stopped
Trap Received      : 0
```

SIM(WA)>trap start

```
Trap Receiver Started
```

(Trap receiver is started by default. See SMCIPMITool.properties)

(When the trap receiver got a SNMP trap, a notice will be displayed.)

```
SIM(WA) [!Trap(1)]>Info: Use "trap" command for detail.

SIM(WA) [!Trap(1)]>trap list

------------------------------------------------------------------------
Trap (1)
Sender      = 192.168.12.151
Community   = public
Sensor      = FAN 3
Local Time Stamp = 2011/01/03 00:25:32 Mon
Description :
Event Dir : De-assertion
Lower Non-recoverable - going low
------------------------------------------------------------------------
SIM(WA) [!Trap(1)]>trap save snmp.txt

"snmp.txt" file saved
SIM(WA) [!Trap(1)]>trap savepet snmp.pet

"snmp.pet" file saved
SIM(WA) [!Trap(1)]>trap clear

Trap cleared
SIM(WA)>trap stop

Trap Receiver stopped
SIM(WA)>trap status

Trap Receiver status: Stopped
Trap Received      : 0
```

Appendix D Exit Codes

All exit codes are listed below.

STATUS_UNDEFINED	144
STATUS_DONE	0
STATUS_CONNECT_FAILED	145
STATUS_LOGIN_FAILED	146
STATUS_EXECUTE_PARAMETER_VALIDATE_FAILED	147
STATUS_EXECUTE_EXCEPTION_OCCURRED	148
STATUS_EXECUTE_FAILED	149
STATUS_EXECUTE_ON_SLAVE_CMM_OR_UNAVAILABLE	150
STATUS_EXECUTE_MODULE_NOT_PRESENT	151
STATUS_EXECUTE_ONLY_FOR_CMM_CONNECTED	152
STATUS_EXECUTE_NOT_SUPPORTED_DEVICE	153
STATUS_COMMAND_NOT_FOUND	180
STATUS_COMMAND_IP_FORMAT_ERROR	181
STATUS_COMMAND_PARAMETER_LENGTH_INVALID	182
STATUS_RESULT_NOT_ENOUGH_POWER	215

Contacting Supermicro

Headquarters

Address: Super Micro Computer, Inc.
980 Rock Ave.
San Jose, CA 95131 U.S.A.
Tel: +1 (408) 503-8000
Fax: +1 (408) 503-8008
Email: marketing@supermicro.com (General Information)
support@supermicro.com (Technical Support)
Web Site: www.supermicro.com

Europe

Address: Super Micro Computer B.V.
Het Sterrenbeeld 28, 5215 ML
's-Hertogenbosch, The Netherlands
Tel: +31 (0) 73-6400390
Fax: +31 (0) 73-6416525
Email: sales@supermicro.nl (General Information)
support@supermicro.nl (Technical Support)
rma@supermicro.nl (Customer Support)

Asia-Pacific

Address: Super Micro Computer, Inc.
3F., No.150, Jian 1st Rd., Zhonghe Dist.,
New Taipei City 23511, Taiwan (R.O.C.)
Tel: +886-(2) 8226-3990
Fax: +886-(2) 8226-3992
Web Site: www.supermicro.com.tw
Technical Support:
Email: support@supermicro.com.tw
Tel: +886-(2)-8226-3990