SMCIPMITool

User's Guide

Revision 2.24

The information in this USER'S GUIDE has been carefully reviewed and is believed to be accurate. The vendor assumes no responsibility for any inaccuracies that may be contained in this document, makes no commitment to update or to keep current the information in this manual, or to notify any person organization of the updates. Please Note: For the most up-to-date version of this manual, please see our web site at www.supermicro.com.

Super Micro Computer, Inc. ("Supermicro") reserves the right to make changes to the product described in this manual at any time and without notice. This product, including software, if any, and documentation may not, in whole or in part, be copied, photocopied, reproduced, translated or reduced to any medium or machine without prior written consent.

DISCLAIMER OF WARRANTY ON SOFTWARE AND MATERIALS. You expressly acknowledge and agree that use of the Software and Materials is at your sole risk. FURTHERMORE, SUPER MICRO COMPUTER INC. DOES NOT WARRANT OR MAKE ANY REPRESENTATIONS REGARDING THE USE OR THE RESULTS OF THE USE OF THE SOFTWARE OR MATERIALS IN TERMS OF THEIR CORRECTNESS, ACCURACY, RELIABILITY, OR OTHERWISE. NO ORAL OR WRITTEN INFORMATION OR ADVICE GIVEN BY SUPER MICRO COMPUTER INC. OR SUPER MICRO COMPUTER INC. AUTHORIZED REPRESENTATIVE SHALL CREATE A WARRANTY OR IN ANY WAY INCREASE THE SCOPE OF THIS WARRANTY. SHOULD THE SOFTWARE AND/OR MATERIALS PROVE DEFECTIVE, YOU (AND NOT SUPER MICRO COMPUTER INC. OR A SUPER MICRO COMPUTER INC. AUTHORIZED REPRESENTATIVE) ASSUME THE ENTIRE COST OF ALL NECESSARY SERVICE, REPAIR, OR CORRECTION.

LIMITATION OF LIABILITY. UNDER NO CIRCUMSTANCES INCLUDING NEGLIGENCE, SHALL SUPER MICRO COMPUTER INC. BE LIABLE FOR ANY INCIDENTAL, SPECIAL, OR CONSEQUENTIAL DAMAGES THAT RESULT FROM THE USE OR INABILITY TO USE THE SOFTWARE OR MATERIALS, EVEN IF SUPER MICRO COMPUTER INC. OR A SUPER MICRO COMPUTER INC. AUTHORIZED REPRESENTATIVE HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Any disputes arising between manufacturer and customer shiall be governed by the laws of Santa Clara County in the State of California, USA. The State of California, County of Santa Clara shall be the exclusive venue for the resolution of any such disputes. Super Micro's total liability for all claims will not exceed the price paid for the hardware product.

Manual Revision 2.24

Release Date: September 4th, 2020

Document Revision History

Date	Revision	Description
2016/01/20	2.15.0	Added document revision history. Revised the usage of the nvme command.
2017/03/20	2.18.0	Added the diagnostic command sets. Modified the description of the diag command.
2017/09/29	2.19.0	Added the watchdog commands. Modified the description of the nm status command.
2018/01/29	2.20.0	Added descriptions of the new nm commands in these sections. nm20: from 3.30.36 to3.30.42. nm30: from 3.31.8 to 3.31.10. nm40: 3.32. Added port service command sets.
2018/10/29	2.21.0	Added the mdr commands. Added the file mode.
2019/05/23	2.22.0	Added the mel commands. Added Appendix G. Added IPv6 commands.
2019/12/02	2.23.0	Added the ipmi fd command
2019/05/18	2.24.0	Added ipmi flashrf command Added system lockdown command Added mel list command Added ipmi oem smbpbi commands Added redfish version command Added redfish firmwareInventory command sets Added ipmi uflash command Added bios rfupdate command

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 https://github.com/jline/jline2 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
```

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

1.4 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 ... ]

* IP can be replaced by hostname if the DNS setting is correct.
* Please note that it is better to use SMCIPMITool original bundle java or equivalent
version if directly run with jar file.
```

1.5 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.

In shell mode, special characters“<” and “>” are both reserved for special uses. They cannot be typed in shell mode.

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)>


* IP can be replaced by hostname if the DNS setting is correct.
* Please note that it is better to use SMCIPMITool original bundle java or equivalent
version if directly run with jar file.
```

1.5.1 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

1.5.2 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 Current 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 for Nuvoton WPCM450 BMC
SIM(WA)>	ATEN Firmware for Nuvoton WPCM450 BMC
SIMBL(W)>	AMI Firmware for Nuvoton WPCM450 BMC on 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 Firmware for Renesas 2167 BMC
SIM(X9)>	AMI Firmware for Renesas SH7757 BMC
ASPD_T>	ATEN ASPEED Firmware for early X10 MBs
MicroCMM>	MicroBlade CMM
MicroNode>	MicroBlade Node
SuperBlade>	SuperBlade Node
AST2400	ASPEED AST2400 BMC
AST2500	ASPEED AST2500 BMC
IPMI>	Others

1.5.3 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
```

1.5.4 hostrun

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

1.5.4.1 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>`**

1.5.4.2 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>`**

1.5.5 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:

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 |
```

1.6 File Mode

In this mode, you can launch SMCIPMTool with hiding username and password in a file.

Usage:

```
[java]
java -jar SMCIPMITool.jar -filemode <file> -i <IP> -c <"commands ...">
[Windows]
SMCIPMITool.exe -filemode <file> -i <IP> -c <"commands ...">
[Linux]
SMCIPMITool -filemode <file> -i <IP> -c <"commands ...">
Note: In Linux system, please do not use whitespace at the beginning and end of
the "commands"



Supported parameters description:

   -c <command>        Operation command, ex: -c "ipmi power status"
   -i <ip>             BMC IP
   -filemode <file>           Read username and password from file
```

```
                            ex: file.txt
                            --------------
                            username=ADMIN
                            password=ADMIN
* IP can be replaced by hostname if the DNS setting is correct
```

2 Commands

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

Command(s):

```
superblade                          SuperBlade blade management (13)
microblade                          MicroBlade & 8U/4U SuperBlade blade management (6)
ipmi                                IPMI device management (30)
sel                                 IPMI system event log (5)
user                                IPMI user management (7)
nm                                  Node Management V1.5 (16)
nm20                                 Node Management V2.0/V3.0(Romley platform or later)(42)
nm30                                Node Management V3.0 (Grantley platform or later) (10)
nm40                                Node Management V4.0 (2)
dcmi                                DCMI Management (4)
bios                                BIOS update (9)
pminfo [<busId> <SlaAddr>]          Power supply PMBus health
psfruinfo [<busId> <SlaAddr>]       Power supply FRU health
psbbpInfo [<busId> <SlaAddr>]       Battery Backup Power status
ver                                 SMCIPMITool version
ch                                  Change managed device in shell mode
list [keyword]                      List all or find available commands
exec <file> [loop] [delay]          Execute commands from file
execm <file> [loop] [delay]         Execute commands from file for TaskRun
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 shell command
ukvm                                KVM launcher for all platform
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
sol                                 SOL Commands
hdd                                 HDD status (6)
bbp                                 Battery Backup Power Management (5)
task                                Background Task (13)
tp                                  TwinPro MCU Information (19)
```

```
wsiso                          Mount ISO file via Windows Share or SAMBA (for X9 and
later) (3)
tas                            TAS settings (7)
nvme                           NVMe (Non-Volatile Memory Express) (8)
nodekey                        Node Product Key (1)
rsc [filename.ext]             iKVM remote screen capture(X9 or later) ext:png|jpg
rko [filepath]                 iKVM remote keyboard operation(X9 or later)
diag                           Super Diagnostics (3)
```

2.1 Superblade

This command set is supported on Super CMM module (SBx-xxx-xxx). For example SBI-4129P-T3N and SBM-XEM-X10SM.

2.1.1 superblade system

The superblade 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: superblade **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
```

2.1.2 superblade failure

Use this command to bring up a failure report, which lists all failure messages from the system.

Usage: superblade **`failure`**

2.1.3 superblade blade

Use this command to bring up the following subcommands.

2.1.3.1 superblade blade status

Use this commands to display the status of all the blade units in the system.

Usage: superblade **`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
```

2.1.3.2 superblade blade index(es)

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

2.1.3.2.1 superblade blade <blade number> status

Use this command to check the status of the specified individual blade.

Usage: superblade **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
```

2.1.3.2.2 superblade blade <blade number> power

Use this command to access power control for the specified individual blade.

Usage: superblade **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
```

2.1.3.2.3 superblade blade <blade number> kvm

Use this command to request a kvm switch for the specified individual blade.

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

2.1.3.2.4 superblade blade <blade number> uid

Use this command to turn a UID LED on or off as specified on an individual blade.

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

2.1.3.2.5 superblade blade <blade number> sensor

Use this command to to get sensor readings from the specified individual blade.

Usage: superblade **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 |
```

2.1.3.2.6 superblade blade <blade number> bmc

Use this command to bring up the following subcommands related to the BMC of an individual blade.

2.1.3.2.6.1 superblade blade <blade number> ip

Use this command to get or set the IP address of a blade's BMC.

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

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

2.1.3.2.6.2 superblade blade <blade number> mac

Use this command to get or set the mac address of a blade's BMC.

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

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

2.1.3.2.6.3 superblade blade <blade number> gateway

Use this command to get or set the gateway of a blade's BMC.

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

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

2.1.3.2.6.4 superblade blade <blade number> netmask

Use this command to get or set the netmask of a blade's BMC.

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

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

2.1.3.2.6.5 superblade blade <blade number> dhcp

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

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

2.1.3.2.6.6 superblade blade <blade number> vlan

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

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

2.1.3.2.6.7 superblade blade <blade number> ipmb

Use this command to to send a raw IPMI command to an individual blade.

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

2.1.3.2.7 superblade blade <blade number> config

Use this command to to get the configuration of the specified individual blade.

Usage: superblade **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
```

2.1.3.2.8 superblade blade <blade number> sn

Use this command to to get the MB serial number of the specified individual blade.

Usage: superblade **blade <blade number> sn**

2.1.4 superblade gigabit

Use this command to bring up the following subcommands.

2.1.4.1 superblade gigabit status

Use this command to display the status of all the Gb switch units in the system.

Usage: superblade **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
```

2.1.4.2 superblade gigabit index(es)

Use this command to bring up the following commands related to an individual Gb switch in the system as specified.

2.1.4.2.1 superblade gigabit <gigabit number> status

Use this command to display the status of the specified gigabit switch.

Usage: superblade **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
```

2.1.4.2.2 superblade gigabit <gigabit number> power

Use this command to to access power control for the specified gigabit switch.

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

2.1.4.2.3 superblade gigabit <gigabit number> wss

Use this command to access WSS (WebSuperSmart) web configuration control for the specified gigabit switch.

2.1.4.2.3.1 superblade gigabit <gigabit number> wss ip

Use this command to to get or set the IP address of a gigabit switch.

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

2.1.4.2.3.2 superblade gigabit <gigabit number> wss netmask

Use this command to get or set the netmask address of a gigabit switch.

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

2.1.4.2.3.3 superblade gigabit <gigabit number> wss gateway

Use this command to get or set the gateway address of a gigabit switch.

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

2.1.4.2.3.4 superblade gigabit <gigabit number> wss datetime

Use this command to get or set the date and time settings for a gigabit switch.

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

Example Output:

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

2.1.4.2.3.5 superblade gigabit <gigabit number> wss username

Use this command to get or set the WSS web username for a gigabit switch.

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

2.1.4.2.3.6 superblade gigabit <gigabit number> wss password

Use this command to get or set the WSS web password for a gigabit switch.

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

2.1.4.2.4 superblade gigabit <gigabit number> ipmode

Use this command to get or set the IP mode of the gigabit switch specified.

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

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

2.1.4.2.5 superblade gigabit <gigabit number> boot

Use this command to get or set the boot image of the gigabit switch specified.

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

2.1.4.2.6 superblade gigabit <gigabit number> restart

Use this command to soft restart the gigabit switch specified.

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

2.1.4.2.7 superblade gigabit <gigabit number> fd

Use this command to reset to factory default for the gigabit switch specified.

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

2.1.5 superblade power

Use this command to bring up the following subcommands.

2.1.5.1 superblade power status

Use this command to display the status of all the power supply units in the blade system.

Usage: superblade **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
```

2.1.5.2 superblade power index(es)

Use this command to check the individual power supplies in the blade system and bring up the following commands:

2.1.5.2.1 superblade power <power number> status

Use this command to display the status of the specified power supply.

Usage: superblade **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
```

2.1.5.2.2 superblade power <power number> power

Use this command to access power control for the specified power supply.

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

2.1.5.2.3 superblade power <power number> fan

Use this command to access fan control for the specified power supply.

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

2.1.6 superblade ib

Use this command to command bring up the following subcommands.

2.1.6.1 superblade ib status

Use this command to display the status of all the InfiniBand switches in the system.

Usage: superblade **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
```

2.1.6.2 superblade ib index(es)

Use this command to check the individual InfiniBand switches in the system and bring up the following subcommands.

2.1.6.2.1 superblade ib <ib number> status

Use this command to display the status of the specified InfiniBand switch.

Usage: superblade **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
```

2.1.6.2.2 superblade ib <ib number> power

Use this command to access power control for the specified InfiniBand switch.

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

2.1.7 superblade cmm

Use this command to bring up the following subcommands.

2.1.7.1 superblade cmm status

Use this command to display the status of all the CMMs in the system.

Usage: superblade **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
```

2.1.7.2 superblade cmm index

Use this command to check the individual CMMs in the system and bring up the following subcommands.

2.1.7.2.1 superblade cmm <cmm number> status

Use this command to display the status of the specified CMM.

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

Example Output:

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

CMM 1 is being managed now
```

2.1.7.2.2 superblade cmm <cmm number> dtime

Use this command to get or set CMM date and time.

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

Example Output:

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

2.1.7.2.3 superblade cmm <cmm number> ntp

Use this command to synch the time with the NTP servers.

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

2.1.7.2.4 superblade cmm <cmm number> reset

Use this command to reset the specified CMM.

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

2.1.7.2.5 superblade cmm <cmm number> flash

Use this command to flash CMM firmware to the CMM specified with the filename of the flash upgrade noted.

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

2.1.7.2.6 superblade cmm <cmm number> ver

Use this command to display the firmware version in the specified CMM.

Usage: superblade **cmm ver**

Example Output:

```
Version:2.2.64  build 5420
```

2.1.7.2.7 superblade cmm <cmm number> ip

Use this command to get or set the IP address of the specified CMM.

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

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

2.1.7.2.8 superblade cmm <cmm number> mac

Use this command to get or set the MAC address of the specified CMM.

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

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

2.1.7.2.9 superblade cmm <cmm number> gateway

Use this command to get or set the Gateway address of the specified CMM.

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

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

2.1.7.2.10 superblade cmm <cmm number> netmask

Use this command to get or set the Netmask IP address of the specified CMM.

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

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

2.1.7.2.11 superblade cmm <cmm number> syncfg

Use this command to synch the configuration to the specified slave CMM.

2.1.7.2.12 superblade cmm <cmm number> opmode

Use this command to get or set the operational mode for the specified CMM.

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

Mode Choices: 0 = Enterprise 1 = Office

2.1.7.2.13 superblade cmm <cmm number> dhcp

Use this command to enable or disable the DHCP (Dynamic Host Configuration Protocol) of the CMM.

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

2.1.8 superblade listtemp

Use this command to display the temperatures of all the modules in the blade system.

Usage: superblade **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 |
```

2.1.9 superblade allsel <filename>

Use this command to save all system event logs to a file in .csv format.

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

2.1.10 superblade burst

Use this command to list the following subcommands to control the power of blades.

2.1.10.1 superblade burst allUp

Use this command to power burst up all blades.

Usage: superblade burst **`allUp`**

2.1.10.2 superblade burst allDown

Use this command to power burst down all blades.

Usage: superblade burst **`allDown`**

2.1.10.3 superblade burst allRest

Use this command to power burst reset all blades.

Usage: superblade burst **`allReset`**

2.1.10.4 superblade burst allSoftshutdown

Use this command to soft shut down all blades.

Usage: superblade burst **`allSoftshutdown`**

2.1.10.5 superblade burst up

Use this command to power burst up blades.

Usage: superblade burst **`up <index(es)>`**

2.1.10.6 superblade burst down

Use this command to power burst down blades.

Usage: superblade burst **`down <index(es)>`**

2.1.10.7superblade burst reset

Use this command to power burst reset blades.

Usage: superblade burst **`reset <index(es)>`**

2.1.10.8 superblade burst softshutdown

Use this command to power burst soft shut down blades.

Usage: superblade burst softshutdown **`<index(es)>`**

2.1.11 superblade listmac

Use this command to display the mac address of all the modules in the blade system, including BMC management mac and host mac.

Usage: superblade **`listmac`**

2.1.12 superblade midPlaneFRU

Use this command to display middle plane FRU information.

Usage: superblade **`midplaneFRU`**

2.1.13 superblade powerconsumption

Use this command to display blade power consumption and enclosure power supply power consumption. Please note that blade power readings are only available after B10 series. Otherwise the messages would be “no support”.

Usage: superblade powerconsumption

2.2 microblade

This command set is supported on Micro CMM module (MBx-xxx-xxx). For example MBE-628EB-422D and MBM-GEM-001.

2.2.1 microblade summary

Use this command to display the MicroBlade system summary.

Usage: **microBlade summary**

Example Output:

```
Blade Module (1/28)
------------------------
 Blade | Error
 ----- | -----
 B5    | Normal
    Node | BMC IP          | Error
    ---- | ------          | -----
    1    | 10.133.176.67   | Normal
    2    | 10.133.176.106  | Normal
    3    | 10.133.176.109  | Normal
    4    | 10.133.176.101  | Normal

Switch Module (0/4)
------------------------
 Switch | Status
 ------ | ------

Power Supply Module (1/8)
------------------------
 Power Suuply | Status
 ------------ | ------
 B4           | Normal
```

2.2.2 microblade node

2.2.2.1 microblade node sensor

Use this command to display the MicroBlade node sensor information.

Usage: **microBlade node sensor [<bladeIndex> [nodeIndex]]**

2.2.2.2 microblade node status

Use this command to display the MicroBlade node status.

Usage: **microBlade node status [<bladeIndex> [nodeIndex]]**

2.2.2.3 microblade node power

Use this command to get or set the MicroBlade node power status.

Usage: **microbBlade node power <bladeID> <nodeID> [options]**

```
For power status options:
power down: 0
power up:1
power cycle:2
power reset:3
soft-shutdown:5
```

2.2.2.4 microblade node ip

Use this command to get or set the MicroBlade node IP address.

Usage:

```
(to get) microBlade node ip <bladeID> <nodeID>

(to set) microBlade node ip <bladeID> <nodeID> [IP]
```

2.2.2.5 microblade node dhcp

Use this command to get or set the MicroBlade node dhcp status.

Usage:

```
(to get) microBlade node dhcp <bladeID> <nodeID>

(to set) microBlade node dhcp <bladeID> <nodeID> [static:1 | dhcp:2]
```

2.2.2.6 microblade node mac

Use this command to get or set MicroBlade node mac status.

Usage:

```
(to get) microBlade node mac <bladeID> <nodeID>

(to set) microBlade node mac <bladeID> <nodeID> [MAC]
```

2.2.2.7 microblade node mask

Use this command to get or set MicroBlade node net Mask.

Usage:

```
(to get) microBlade node mask <bladeID> <nodeID>

(to set) microBlade node mask <bladeID> <nodeID> [Subnet  Mask]
```

2.2.2.8 microblade node gateway

Use this command to get or set MicroBlade node gateway IP address.

Usage:

```
(to get) microBlade node gateway <bladeID> <nodeID>

(to set) microBlade node gateway <bladeID> <nodeID> [gateway]
```

2.2.2.9 microblade node name

Use this command to get or set the MicroBlade node name.

Usage:

(to get) microBlade node name <bladeID> <nodeID>

(to set) microBlade node name <bladeID> <nodeID> [name]

2.2.2.10 microblade node uid

Use this command to to get or set the MicroBlade node uid status.

Usage:

(to get) microBlade node uid <bladeID> <nodeID>

(to set) microBlade node uid <bladeID> <nodeID> [on | off]

2.2.3 microblade switch

2.2.3.1 microblade switch info

Use this command to display information about the MicroBlade switch.

Usage: **microBlade switch info [switch index]**

2.2.3.2 microblade switch power

Use this command to display the power status of the MicroBlade switch.

Usage:

(to get) microBlade switch power <switch index>

(to set) microBlade switch power <switch index> [On|Off|Reset]

2.2.3.3 microblade switch username

Use this command to get or set the MicroBlade switch username.

Usage:

(to get) microBlade switch username <switch index>

(to set) microBlade switch username <switch index> [Username]

2.2.3.4 microblade switch lan

2.2.3.4.1 microblade switch lan ip

Use this command to get or set the MicroBlade switch LAN IP address.

Usage:

(to get)microBlade switch lan ip <switch index>

(to set)microBladeSwitch lan ip <switch index> [IP]

2.2.3.4.2 microblade switch lan dhcp

Use this command to get or set the MicroBlade switch LAN dhcp status.

Usage:

(to get) microBlade switch lan dhcp <switch index>

(to set) microBlade switch lan dhcp <switch index> [static:1 |dhcp:2]

2.2.3.4.3 microblade switch lan mask

Use this command to get or set the MicroBlade switch LAN net mask.

Usage:

(to get) microBlade switch lan mask <switch index>

(to set) microBlade switch lan mask <switch index> [Subnet Mask]

2.2.3.4.4 microblade switch lan gateway

Use this command to et or set the MicroBlade switch gateway LAN IP address.

Usage:

(to get) microBlade switch lan gateway <switch index>

(to set) microBlade switch lan gateway <switch index> [gateway]

2.2.3.5 microblade switch getTime

Use this command to display the MicroBlade switch time.

Usage: **microBlade switch getTime <switch index>**

2.2.4 microblade psu

2.2.4.1 microblade psu info

Use this command to display information about the MicroBlade power supply.

Usage: **microBlade psu info [psu index]**

2.2.4.2 microblade psu power

Use this command to provide power supply power control.

Usage:

(to get) microBlade psu power [psu index]

(to set) microBlade psu power [psu index] [on]

2.2.4.3 microblade psu fanMode

Use this command to switch the power supply power to be in a fan mode.

Usage:

(to get) microBlade psu fanMode

(to set) microBlade psu fanMode [Auto:0 | Manual:1]

2.2.4.4 microblade psu fanSpeed

Use this command to provide power supply power for fan speed control.

Usage:

(to get) microBlade psu fanSpeed

(to set) microBlade psu fanMode [Index <1 to 10>]

2.2.5 microblade fru

2.2.5.1 microblade fru cmm

Use this command to provide FRU information of the CMM.

2.2.5.2 microblade fru midplane

Use this command to provide FRU information of the middle plane.

Usage: **microBlade midplane**

Example Output:

```
FRU Device ID: 2
Board Info:
---------------------------
Language                  = English
Board mfg. Date/Time      = 1996/01/01 00:00:00 (00 00 00)
Board Manufacturer Name   = Supermicro
Board Product Name        =
Board Serial Number       =
Board Part Number         =

Product Info:
---------------------------
Product Manufacturer Name =
Product Name              =
Product PartModel Number  =
Product Version           =
Product Serial Number     =
Product Asset Tag         =
```

2.2.5.3 microblade fru switch

Use this command to provide FRU information of the switch.

2.2.5.4 microblade fru psu

Use this command to provide FRU information of the power supply.

2.2.6 microblade powerConsumption

Use this command to access microblade system enclosure power consumption.

Usage: **`microBlade powerConsumption`**

2.3 sel

Use this command to bring up the following subcommands for the system event log.

2.3.1 sel info

Use this command to display 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
```

2.3.2 sel list

Use this command to display the list of entries to the system event log.

Usage: **sel list**

2.3.3 sel csv

Use this command to fsave the system event log as a csv file with the name specified in the filename.

Usage: **sel csv <filename>**

2.3.4 sel clear

Use this command to clear the system event log.

Usage: **sel clear**

2.3.5 sel time

Use this command to get/set system SEL time.

Usage: **sel time [YYYYMMDDhhmmss]**

2.4 user

Use this command to list the following user management subcommands.

Note that two commands, "**user add**" and "**user password**" require password setting, and you need to follow the password complexity rules according to the BMC FW version.

Follow the rules to set up passwords:

A password must be 8 to 19 characters long.

A password cannot be a reverse of the user name.

A password must contain at least three of these character types: lowercase letters (a-z), uppercase letters (A-Z), number digits (0-9) and special characters.

2.4.1 user add

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

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

2.4.2 user list

Use this command to list 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
```

2.4.3 user delete

Use this command to delete a user.

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

2.4.4 user level

Use this command 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

2.4.5 user test

Use this command to test logging in as a specific user.

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

2.4.6 user setpwd

Use this command to set the password.

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

2.5 vm

Use this command to list the following virtual media management subcommands. For more details on VM commands, see *Appendix B*.

Note: This command only works properly in shell mode.

2.5.1 vm status

Use this command to list 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
```

2.5.2 vm stop

Use this command to stop the specified drive.

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

2.5.3 vm floppy

Use this command to upload a floppy image as virtual media.

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

2.5.4 vm iso

Use this command 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
```

2.6 ipmi

Use this command to list the following ipmi device management subcommands.

2.6.1 ipmi sensor

Use this command to 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 |
```

2.6.2 ipmi power

Use this command to list the following power control options.

2.6.2.1 ipmi power status

Use this command to display system power status.

Usage: **ipmi power status**

2.6.2.2 ipmi power up

Use this command to power up a system.

Usage: **ipmi power up**

2.6.2.3 ipmi power down

Use this command to power down a system.

Usage: **ipmi power down**

2.6.2.4 ipmi power softshutdown

Use this command to initiate a soft shutdown of a system.

Usage: **ipmi power softshutdown**

2.6.2.5 ipmi power reset

Use this command to reset a system. Note that the PXE option forces the first boot device to be used as PXE in the next boot only.

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

2.6.2.6 ipmi power cycle

Use this command to power cycle a system.

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

2.6.2.7 ipmi power diag

Use this command to initiate a diagnostic interrupt of a system.

Usage: **ipmi power diag**

2.6.2.8 ipmi power bootoption <Index>

Use this command to set the boot device in the next boot. A boot option index is brought up.

Usage: **ipmi power bootoption**

```
For bootoption index :
```

```
1: PXE              2:  Hard-drive
3: CD/DVD           4:  Bios
5: USB KEY          6:  USB HDD
7: USB Floppy       8:  USB CD/DVD
9: UEFI Hard-drive  10: UEFI CD/DVD
11: UEFI USB KEY    12: UEFI USB HDD
13: UEFI USB CD/DVD 14: UEFI PXE
                        Ex: set power cycle interval as 10 seconds and execute power cycle
```

2.6.3 ipmi acpi

Use this command to display the ACPI (Advanced Configuration and Power Interface) status.

Usage: **ipmi acpi**

2.6.4 ipmi lan

Use this command to 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)
```

2.6.4.1 ipmi lan ip

Use this command to get or set the specified ipmi address.

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

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

2.6.4.2 ipmi lan mac

Use this command to get or set the specified MAC address.

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

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

2.6.4.3 ipmi lan gateway

Use this command to get or set the specified Gateway address.

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

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

2.6.4.4 ipmi lan netmask

Use this command to get or set the specified Netmask.

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

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

2.6.4.5 ipmi lan snmp

Use this command to get or 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
```

2.6.4.6 ipmi lan snmpcomm

Use this command to get or set the SNMP community string.

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

Example Output:

```
public
```

2.6.4.7 ipmi lan arp

Use this command to enable BMC-generated gratuitous ARPs.

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

2.6.4.8 ipmi lan dhcp

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

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

2.6.4.9 ipmi lan vlan

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

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

2.6.4.10 ipmi lan dns

Use this command to get/set DNS server. Note that this is an OEM command, and it only supports AMI devices.

Usage: **ipmi lan dns [<Pri._IP> <Sec._IP>]**

2.6.4.11 ipmi lan protocol

Use this command to get/set the BMC IP protocol. Note that there are three optional parameters (0, 1, and 2) for you to specify the IP protocol.

0: IPv4 only

1: IPv6 only

2: Dual

Usage: **ipmi lan protocol [protocol]**

2.6.4.12 ipmi lan ipv6

The following command sets support IPv6 settings. It is recommended that you use an address in standard IPv6 format as input.

Note: SMCIPMITool has supported compressed IPv6 addresses since revision 2.23.0; however, it's still possible that a command might not run because of a failure to translate compressed IPv6 adresses to uncompressed ones.

Here is an example of standard IPv6 IP: FE80:0000:0000:ABCD:EFGH:0000:0000:0000:0000.

2.6.4.12.1 ipmi lan ipv6 list

List all IPv6 static IP addresses.

Usage: **ipmi lan ipv6 list**

2.6.4.12.2 ipmi lan ipv6 add

Add an IPv6 static IP address to list.

Usage: **ipmi lan ipv6 add <id> <ip> [prefix]**

2.6.4.12.3 ipmi lan ipv6 clear
Delete an IPv6 static IP address from list.

Usage: **ipmi lan ipv6 clear <id>**

2.6.4.12.4 ipmi lan ipv6 mode
Use this command to get/set IPv6 mode. The mode is either stateful or stateless. In this command, we use 0 to represent stateless and 1 to represent stateful.

Usage: **ipmi lan ipv6 mode [stateless:0 | stateful:1]**

2.6.4.12.5 ipmi lan ipv6 autoconfig
Use this command to get/set IPv6 auto configuration status. The auto configuration status is either on or off. In this command, we use 0 to represent off and 1 to represent on.

Usage: **ipmi lan ipv6 autoconfig [off:0|on:1]**

2.6.4.12.6 ipmi lan ipv6 dns
Use this command to check or set IPv6 DNS server setting.

Usage:

To set DNS : **ipmi lan ipv6 dns [ip]**

To clear DNS: **ipmi lan ipv6 dns clear**

2.6.4.12.7 ipmi lan ipv6 route
IPv6 static route settings.

2.6.4.12.7.1 ipmi lan ipv6 route status
Use this command to get/set IPv6 static route status. The status is either on or off.

Usage: **ipmi lan ipv6 route status [on | off]**

2.6.4.12.7.2 ipmi lan ipv6 route list
Use this command to list IPv6 static route.

Usage: **ipmi lan ipv6 route list**

2.6.4.12.7.3 ipmi lan ipv6 route add
Use this command to add IPv6 static route.

Usage:

ipmi lan ipv6 route add <ID> <prefix Length> <prefix value> <address>

2.6.4.12.7.4 ipmi lan ipv6 route clear
Use this command to clear specified IPv6 static route.

Usage: **ipmi lan ipv6 route clear <id>**

2.6.4.12.8 ipmi lan ipv6 duid

Use this command to show IPv6 DUID.

Usage: **ipmi lan ipv6 duid**

2.6.5 ipmi fru

Use this command to 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       =
```

2.6.6 ipmi fruw

Use this command to write FRU to update FRU field with abbreviation and given values. In some RoT system, fru data is considered as critical data. When there is an fru entry updated, it will be further backup to nand flash. Due to the backup action, writing fru data to system may take much longer in RoT platform than other platforms.

Usage: ipmi **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             =
```

2.6.7 ipmi frubackup

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

Usage: ipmi **frubackup <filname>**

2.6.8 ipmi frurestore

Use this command to restore FRU information from a file.

Usage: ipmi **frurestore <filename>**

2.6.9 ipmi oem

Use this command to list the following subcommands.

2.6.9.1 ipmi oem clrint

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

Usage: **ipmi oem clrint**

2.6.9.2 ipmi oem id

Use this command to display the motherboard ID.

Usage: **ipmi oem id**

2.6.9.3 ipmi oem uid

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

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

2.6.9.4 ipmi oem gethostname

Get IPMI host name.

Usage: **ipmi oem gethostname**

2.6.9.5 ipmi oem sethostname

Set IPMI host name.

Usage: **ipmi oem sethostname <hostname>**

2.6.9.6 ipmi oem backup

Use this command to back up the configurations to a file (only available on X7 series motherboards).

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

2.6.9.7 ipmi oem restore

Use this command to restore the configurations from the specific file (only available on X7 series motherboards).

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

2.6.9.8 ipmi oem backupcfg

Use this command to back up the configurations to a binary file. Note that this function is only available on motherboard X8 series and later, 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
```

2.6.9.9 ipmi oem restorecfg

Use the command to restore the configurations from the binary file. Note that this function is only available on motherboard X8 series and later, 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
```

2.6.9.10 ipmi oem getcfg

Use this command to back up the configurations to a txt file. Note that this function is only available on motherboard X8 series and later, 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
```

2.6.9.11 ipmi oem setcfg

Use this command to restore the configurations from a txt file. Note that this function is only available on motherboard X8 series and later, 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
```

2.6.9.12 ipmi oem lani

Use this command to interface with the IPMI LAN.

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

Example Output:

```
10.133.176.141 X10DRFR (S5/G2) 10:28 ASPD_T>ipmi oem lani 2
done

10.133.176.141 X10DRFR (S5/G2) 10:28 ASPD_T>ipmi oem lani
Current LAN interface is [ Failover ]

Parameter for setting:
0:Dedicated
1:On Board LAN1
2:Failover
```

2.6.9.13ipmi oem mac

Use this 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
```

Notes:

- The following IPMI OEM x10cfg commands are license required.
- These commands are supported on X10 platform and later.

2.6.9.14 ipmi oem x10cfg ldap

Use this command to configure the LDAP authentication. Note that the available mode options may vary depending on the type of motherboard.

Usage: **ipmi oem x10cfg ldap [<authentication> <SSL> <port> <ip address> <bind password> <bind DN> <search base>]**

Example Output:

```
ASPD_T>ipmi oem x10cfg ldap
 LDAP Authentication                              |                  Off
 LDAP Authentication over SSL                     |                  Off
 Port                                             |                    0
 IP Address                                       |              0.0.0.0
 Bind Password                                    |
 Bind DN                                          |
 Bind Search Base                                 |

Usage: ipmi oem x10cfg ldap [<authentication> <SSL> <port> <ip address> <bind
password> <bind DN> <search base>]
For authentication:
On  : 1
Off : 0
For SSL:
On  : 1
Off : 0
* When SLL is on, port number should be 636; Off, port number should be 389
```

2.6.9.15 ipmi oem x10cfg ad

Use this command to configure the active directory authentication. Note that the available mode options may vary depending on the type of motherboard.

Usage: **ipmi oem x10cfg ad**

Example Output:

```
ASPD_T>ipmi oem x10cfg ad
Command:ipmi oem x10cfg ad
Command(s):
list                          List active directory server and role group
server <...>                  Edit Active Directory server
add <...>                     Add/Edit role group
delete <group id>             Delete role group
```

2.6.9.16 ipmi oem x10cfg radius

Use this command to configure RADIUS. Note that the available mode options may vary depending on the type of motherboard.

Usage: **ipmi oem x10cfg radius [<authentication> <port> <ip address> <secret>]**

Example Output:

```
ASPD_T>ipmi oem x10cfg radius
 RADIUS Authentication                          |                  Off
 Port                                           |                    0
 IP Address                                     |              0.0.0.0
 Secret                                         |

Usage: ipmi oem x10cfg radius [<authentication> <port> <ip address> <secret>]
For authentication:
On  : 1
Off : 0
* The port number should be 1-65535
```

2.6.9.17 ipmi oem x10cfg ipCtrl

Use this command to configure IP access rules. Note that the available mode options may vary depending on the type of motherboard.

Usage: **ipmi oem x10cfg ipCtrl**

Example Output:

```
ASPD_T>ipmi oem x10cfg ipCtrl
Command:ipmi oem x10cfg ipCtrl
Command(s):
list                              List IP access control
status <enable/disable>           Enable/Disable IP access control
add <...>                         Add IP access control
edit <...>                        Edit IP access control
delete <rule no>                  Delete IP access control
```

2.6.9.18 ipmi oem x10cfg ntp

Entering the ntp command will list the following NTP management subcommands.

Usage: **ipmi oem x10cfg ntp**

Example Output:

```
list                              List configuration date and time setting
state [enable|disable]            Get/Set NTP state
timezone [-1200 ~ +1400]          Get/Set NTP time zone
daylight [yes|no]                 Get/Set NTP daylight saving time
primary [server]                  Get/Set primary NTP server
secondary [server]                Get/Set secondary NTP server
```

2.6.9.18.1 ipmi oem x10cfg ntp list

Use this command to display the NTP settings.

Usage: **ipmi oem x10cfg ntp list**

Example Output:

```
NTP State             : Disable
Time Zone             : UTC +0000
Primary NTP Server    : localhost
Secondary NTP Server  : 127.0.0.1
Daylight Saving Time  : No
```

2.6.9.18.2 ipmi oem x10cfg ntp state

Use this command to get or set the NTP state.

Usage: **ipmi oem x10cfg ntp state [enable|disable]**

2.6.9.18.3 ipmi oem x10cfg ntp timezone

Use this command to get or set the NTP time zone.

Usage: **ipmi oem x10cfg ntp timezone [-1200 ~ +1400]**

2.6.9.18.4 ipmi oem x10cfg ntp daylight

Use this command to get or set NTP daylight.

Usage: **ipmi oem x10cfg ntp daylight [yes|no]**

2.6.9.18.5 ipmi oem x10cfg ntp primary

Use this command to get or set a specific NTP server.

Usage: **ipmi oem x10cfg ntp primary [server]**

2.6.9.18.6 ipmi oem x10cfg ntp secondary

Use this command to get or set a specific NTP server.

Usage: **ipmi oem x10cfg ntp secondary [server]**

2.6.9.19 ipmi oem x10cfg ddns

Use this command to list the following DDNS management subcommands.

Usage: **ipmi oem x10cfg ddns**

Example Output:

```
list                            List dynamic DNS configuration setting
state [enable|disable]          Get/Set dynamic DNS state
server [ip]                     Get/Set dynamic DNS server IP
hostname [name]                 Get/Set BMC host name
tsig [enable|disable]           Get/Set TSIG authentication
```

2.6.9.19.1 ipmi oem x10cfg ddns list

Use this command to display the DDNS settings.

Usage: **ipmi oem x10cfg ddns list**

Example Output:

```
Dynamic Update State  : Enable
Dynamic DNS Server IP : 127.0.0.1
BMC Host Name         : localhost
TSIG Authentication   : Enable
```

2.6.9.19.2 ipmi oem x10cfg ddns state

Use this command to get or set the DDNS state.

Usage: **ipmi oem x10cfg ddns state [enable|disable]**

2.6.9.19.3 ipmi oem x10cfg ddns server

Use this command to get or set the specific DDNS server.

Usage: **ipmi oem x10cfg ddns server [ip]**

2.6.9.19.4 ipmi oem x10cfg ddns hostname

Use this command to get or set the BMC host name.

Usage: **ipmi oem x10cfg ddns hostname [name]**

2.6.9.19.5 ipmi oem x10cfg ddns tsig

Use this command to get or set the TSIG authentication.

Usage: **ipmi oem x10cfg ddns tsig [enable|disable]**

2.6.9.20 ipmi oem x10cfg alert

Use this command to list the following alert management subcommands.

Usage: **ipmi oem x10cfg alert**

Example Output:

```
list [number]                   List alert destination settings
level <number> [level]          Get/Set event severity
ip <number> [ip]                Get/Set alert destination IP
mail <number> [mail]            Get/Set alert mail address
subject <number> [subject]      Get/Set alert mail subject
message <number> [message]      Get/Set alert mail message
send <number>                   Send a test alert mail to destination
delete <number>                 Delete alert destination
```

2.6.9.20.1 ipmi oem x10cfg alert list

Use this command to display the alert settings.

Usage: **ipmi oem x10cfg alert list [number]**

Example Output:

```
------------------------------------------------------------------------------
 1. Event Severity      : Disable All
    Destination Address : 0.0.0.0 & N/A
    Subject             : N/A
    Message             : N/A
------------------------------------------------------------------------------
 2. Event Severity      : Disable All
    Destination Address : 0.0.0.0 & N/A
    Subject             : N/A
    Message             : N/A
------------------------------------------------------------------------------
 3. Event Severity      : Disable All
    Destination Address : 0.0.0.0 & N/A
    Subject             : N/A
    Message             : N/A
------------------------------------------------------------------------------
```

```
 4. Event Severity      : Disable All
    Destination Address : 0.0.0.0 & N/A
    Subject             : N/A
    Message             : N/A
-------------------------------------------------------------------------------
 5. Event Severity      : Disable All
    Destination Address : 0.0.0.0 & N/A
    Subject             : N/A
    Message             : N/A
-------------------------------------------------------------------------------
 6. Event Severity      : Disable All
    Destination Address : 0.0.0.0 & N/A
    Subject             : N/A
    Message             : N/A
-------------------------------------------------------------------------------
 7. Event Severity      : Disable All
    Destination Address : 0.0.0.0 & N/A
    Subject             : N/A
    Message             : N/A
-------------------------------------------------------------------------------
 8. Event Severity      : Disable All
    Destination Address : 0.0.0.0 & N/A
    Subject             : N/A
    Message             : N/A
-------------------------------------------------------------------------------
 9. Event Severity      : Disable All
    Destination Address : 0.0.0.0 & N/A
    Subject             : N/A
    Message             : N/A
-------------------------------------------------------------------------------
10. Event Severity      : Disable All
    Destination Address : 0.0.0.0 & N/A
    Subject             : N/A
    Message             : N/A
-------------------------------------------------------------------------------
11. Event Severity      : Disable All
    Destination Address : 0.0.0.0 & N/A
    Subject             : N/A
    Message             : N/A
-------------------------------------------------------------------------------
12. Event Severity      : Disable All
    Destination Address : 0.0.0.0 & N/A
    Subject             : N/A
    Message             : N/A
-------------------------------------------------------------------------------
13. Event Severity      : Disable All
    Destination Address : 0.0.0.0 & N/A
    Subject             : N/A
    Message             : N/A
-------------------------------------------------------------------------------
14. Event Severity      : Disable All
    Destination Address : 0.0.0.0 & N/A
    Subject             : N/A
    Message             : N/A
-------------------------------------------------------------------------------
15. Event Severity      : Disable All
    Destination Address : 0.0.0.0 & N/A
    Subject             : N/A
    Message             : N/A
-------------------------------------------------------------------------------
16. Event Severity      : Disable All
    Destination Address : 0.0.0.0 & N/A
```

```
        Subject             : N/A
        Message             : N/A
    ------------------------------------------------------------------------------
```

2.6.9.20.2 ipmi oem x10cfg alert level

Use this command to get or set severity as a specific alert.

Usage: **ipmi oem x10cfg alert level <number> [level]**

The following levels may be assigned:

- 1: Disable All
- 2: Information and Above
- 3: Warning and Above
- 4: Critical And Above
- 5: Non-recoverable and Above

2.6.9.20.3 ipmi oem x10cfg alert ip

Entering the ip command allows you to get or set the destination IP as a specific alert.

Usage: **ipmi oem x10cfg alert ip <number> [ip]**

2.6.9.20.4 ipmi oem x10cfg alert mail

Use this command to get or set the destination mail address as a specific alert.

Usage: **ipmi oem x10cfg alert mail <number> [mail]**

2.6.9.20.5 ipmi oem x10cfg alert subject

Use this command to get or set the destination mail subject as a specific alert.

Usage: **ipmi oem x10cfg alert subject <number> [subject]**

2.6.9.20.6 ipmi oem x10cfg alert message

Use this command to get or set the destination message as a specific alert.

Usage: **ipmi oem x10cfg alert message <number> [message]**

2.6.9.20.7 ipmi oem x10cfg alert send

Use this command to send a specific alert.

Usage: **ipmi oem x10cfg alert send <number>**

2.6.9.20.8 ipmi oem x10cfg alert delete

Use this command to delete a specific alert.

Usage: **ipmi oem x10cfg alert delete <number>**

2.6.9.21 ipmi oem x10cfg smtp

Use this command to list the following SMTP management subcommands.

Usage: **ipmi oem x10cfg smtp**

Example Output:

```
list                              List SMTP mail server configuration
ssl [enable|disable]              Get/Set SMTP SSL authentication state
server [server name]          Get/Set SMTP server
port [number]                     Get/Set SMTP port number
user [name]                       Get/Set SMTP user name
password <password>               Set SMTP password
sender <mail>                     Get/Set SMTP sender's address
```

2.6.9.21.1 ipmi oem x10cfg smtp list

Use this command to display the SMTP settings.

Usage: **ipmi oem x10cfg smtp list**

Example Output:

```
SSL Authentication: Disable
Server             :localhost
Port               : 587
User Name          :Admin
Sender Address     :admin@admin.com
```

2.6.9.21.2 ipmi oem x10cfg smtp ssl

Use this command to get or set the STMP SSL authentication state.

Usage: **ipmi oem x10cfg smtp ssl [enable|disable]**

2.6.9.21.3 ipmi oem x10cfg smtp server

Use this command to get or set a specific SMTP server.

Usage: **ipmi oem x10cfg smtp server [server name]**

2.6.9.21.4 ipmi oem x10cfg smtp port

Use this command to get or set the SMTP port number.

Usage: **ipmi oem x10cfg smtp port [numer]**

2.6.9.21.5 ipmi oem x10cfg smtp user

Use this command to get or set the SMTP user name.

Usage: **ipmi oem x10cfg smtp user [name]**

2.6.9.21.6 ipmi oem x10cfg smtp password

Use this command to get or set the SMTP password.

Usage: **ipmi oem x10cfg smtp password [password]**

2.6.9.21.7 ipmi oem x10cfg smtp sender

Use this command to get or set the SMTP mail address.

Usage: **ipmi oem x10cfg smtp sender [mail]**

2.6.9.22 ipmi oem x10cfg dns

Use this command to get or set the dns server IP.

Usage: **ipmi oem x10cfg dns [IP]**

2.6.9.23 ipmi oem portService

SMCIPMITool allows you to do http, https, ikvm, ssh, wsman and ssl port settings.

2.6.9.23.1 ipmi oem portService http

Use this command to get or set the HTTP service port.

Usage: **ipmi oem portService http [port]**

2.6.9.23.2 ipmi oem portService https

Use this command to get or set the HTTPS service port.

Usage: **ipmi oem portService https [port]**

2.6.9.23.3 ipmi oem portService ikvm

Use this command to get or set the iKVM service port.

Usage: **ipmi oem portService ikvm [port]**

2.6.9.23.4 ipmi oem portService ssh

Use this command to get or set the SSH service port.

Usage: **ipmi oem portService ssh [port]**

2.6.9.23.5 ipmi oem portService wsman

Use this command to get or set the WSMAN service port.

Usage: **ipmi oem portService wsman [port]**

2.6.9.23.6 ipmi oem portService ssl

Use this command to enable or disable the SSL service.

Usage: **ipmi oem portService ssl [y/n]**

2.6.9.24 ipmi oem smbpbi

Use this command to list the following smbpbi subcommands.

Usage: **ipmi oem smbpbi**

Example Output:

```
        gpu                     Get/Set GPU commands
```

2.6.9.24.1 ipmi oem smbpbi gpu info

Use this command to list the GPU information.

2.6.9.25 ipmi oem systemlockdown

Use this command to enable or disable system lockdown mode. Please note that this feature require DCMS license and is not supported on X11 and prior platform.

Usage: **ipmi oem systemlockdown <on|off>**

2.6.9.26 ipmi oem summary

Use this command to display a summary table including IP, Mac address, firmware version, BIOS version and so on.

Usage: **ipmi oem summary**

Example Output:

```
Summary
-----------------------------------------
IP                    : 10.136.176.161
MAC Address           : 00:25:90:5D:2F:63
Firmware Revision     : 0.53
Firmware Build Date   : 10/16/2015
CPLD Version          : 02.b1.01
System MAC Address 1  : 00:25:90:5D:2F:2C
```

2.6.10 ipmi reset

Use this command to perform a BMC cold reset.

Usage: **ipmi reset**

2.6.11 ipmi fd

Use this command to restore to BMC factory default. Three types of option parameters are provided:

- 1: Removes current settings and preserves the configurations in the "Users" on IPMI Web.
- 2: Removes current settings and restores the factory defaults and the default password of the motherboard.
- 3: Removes current settings and sets user's password to ADMIN.

Usage: **ipmi fd <option>**

2.6.12 ipmi ver

Use this command to display the versions of IPMI.

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
```

2.6.13 ipmi flash

Use this command to flash the SIM IPMI firmware by its file name.

Usage: **ipmi flash <filename>**

2.6.14 ipmi flashw

Use this command to flash the SIM(W) or SIMBL(W) IPMI firmware by the file name.

Usage: **ipmi flashw <filename>**

2.6.15 ipmi flashr

Use this command to flash the 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)
```

2.6.16 ipmi flashh

Use this command to flash the SIM(WA) IPMI firmware (*.bin) by the file name.

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)
```

2.6.17 ipmi flasha

Use this command to flash the ASPEED IPMI firmware (motherboard series X10 and X11 UP,*.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: **ipmi 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)
Entering update mode...
Uploading...Done
Updating.....................................................................100%
Resetting BMC
Done. (BMC needs 1 minute to restart)
Total Elapse Time: 3 min 18 sec(s)
```

2.6.18 ipmi flashrf

Use this command to flash the ASPEED IPMI firmware (motherboard series X12 and later).

Following preserve options are provided:

-cfg Preserve Configuration (Will restore to factory default if not preserved.)

-sdr Preserve SDR (Will restore the SDR defaults if not preserved.)

-ssl Preserve SSL certificate (Will restore the default SSL certificate if not preserved.)

Usage: **ipmi flashrf <filename> [Preserve_opt]**

Parameters of three options can be appended in any order. For example "ipmi flashrf <filename> -sdr -ssl" is equal to "ipmi flashrf -ssl -sdr"

Example Output:

```
10.147.160.26 X12SPZ (S0/G0) 16:19 X12 AST2500>ipmi flashrf
D:/firmware/SMT_X12AST2500_ROT_RSA4K.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:1.23.00)
Check BMC status... Done (ver:1.24.00)
Uploading file......Done
Updating >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>100%
Resetting BMC
Done
Total Elapsed Time: 2 min 54 sec(s)
```

2.6.19 ipmi uflash

Like ukvm is a universal KVM for different platforms, this command is to provide a universal update command across supermicro platforms for different generations. It is supported by X10 to X12 platforms and later. If user do not know which command is the right command to update BMC, this general update command is a solution.

Following preserve options are provided:

0: Do not preserve config

1: Preserve config

Usage: **ipmi uflash <filename> [Preserve_opt]**

Example Output:

```
10.147.160.26 X12SPZ (S0/G0) 16:19 X12 AST2500>ipmi uflash
D:/firmware/SMT_X12AST2500_ROT_RSA4K.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:1.24.00)
Check BMC status... Done (ver:1.24.00)
Uploading file......Done
Updating >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>100%
Resetting BMC
Done
Total Elapsed Time: 2 min 56 sec(s)
```

2.6.20 ipmi raw

Use this command to send an IPMI raw command.

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

2.6.21 ipmi ipmb

Use this command to send an IPMI raw command.

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

2.6.22 ipmi ipmboem

Use this command to to send an IPMI raw command.

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

2.6.23 ipmi delsdr

Use this command to to delete the SDR.

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

2.6.24 ipmi session info

Use this command to view the information.

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)
```

2.6.25 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: PUE2 Optimal Speed
4: Heavy IO Speed
```

2.6.26 ipmi watchdog

This command can be used for a number of system timeout functions. Setting a timeout value at '0' allows the selected timeout action to occur immediately.

2.6.26.1 ipmi watchdog reset

Use this command to start and restart the watchdog timer at the initial countdown.

Usage: **ipmi watchdog reset**

2.6.26.2 ipmi watchdog set

Use this command to initialize and configure the watchdog timer. The command is also used to stop the timer.

Usage: **watchdog set <action> <countdown> <interval>**

Example Output:

```
action: Time out action index
   0: No action
   1: Hard reset
   2: Power down
   3: Power cycle
countown: Initial countdown value
interval: Pre-timeout interval in seconds
```

2.6.26.3 ipmi watchdog info

Use this command to retrieve the current settings and countdown of the watchdog timer.

Usage: **ipmi watch**mple O**dog info**

Exautput:

```
Item                          |                          Value
```

```
----                            |                          -----
Watchdog Timer Use              |                    SMS/OS (0x04)
Watchdog Timer Is               |                  Started/Running
Watchdog Timer Actions          |                Power Cycle (0x03)
Pre-timeout interval            |                        20 seconds
Timer Expiration Flags          |                              0x00
Initial Countdown               |                           30 sec
Present Countdown               |                           20 sec
```

2.7 ver

Use this command to 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.
```

2.8 list

Use this command to display all available commands.

Usage: **list**

2.9 find

Use this command to 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
```

2.10 found

Use this command to list or clear all found IPMI devices.

Usage: **found [clear]**

2.10.1 found list

Use this command to list all found IPMI devices.

Usage: **found list**

2.10.2 found clear

Use this command to clear all found IPMI devices.

Usage: **found clear**

2.10.3 found copy <index1> [index2] [...]

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

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

2.10.4 found copyall

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

Usage: **found copyall**

2.10.5 found saveAs <filename>

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

Usage: **found saveAs<filename>**

2.10.6 found refresh

Use this command to refresh the result of found IPMI devices.

Usage: **found refresh**

2.11 exec

Use this command to execute the specified command from a file.

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

Loop = 0 is for an infinite loop

Delay is in seconds

2.12 host

Use this command to list the following host-related subcommands.

2.12.1 host list

Use this command to 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
```

2.12.2 host reload

Use this command to reload the host data.

Usage: **host reload**

2.12.3 host add

Use this command to add a host.

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

2.12.4 host remove

Use this command to remove a host.

Usage: **host remove <host>**

2.12.5 host rename

Use this command to rename a host.

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

2.12.6 host group

Use this command to list the following group-related subcommands.

2.12.6.1 host group add

Use this command to to add a host group.

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

2.12.6.2 host group remove

Use this command to remove a host group.

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

2.12.6.3 host group rename

Use this command to rename a host group.

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

2.12.6.4 host group addhost

U Use this command to to add a host to an existing host group.

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

2.12.6.5 host group removehost

Use this command to remove a host from an existing host group.

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

2.13 hostrun

Use this 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
```

2.14 sc

Use this 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)
```

2.15 pminfo

Use this command to 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                  |
```

2.16 psfruinfo

Use this command to display the FRU health information of a power supply.

Usage: **psfruinfo**

Example Output:

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

2.17 psbbpInfo

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

Usage: **psbbpInfo**

Example Output:

```
192.168.12.137 X8DTU (S0/G0,78w,v01.34) 16:06 SIM(WA)>psbbpinfo
[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]
```

2.18 mdr

This is IPMI Rack Scale extensions command that applicable for the Intel Xeon Processor Scalable Family Platform. Use this command to list the following managed data region subcommands.

2.18.1 mdr smbios

2.18.1.1 mdr smbios biosInfo

Use this command to display the BIOS information.

Usage: **mdr smbios biosInfo**

2.18.1.2 mdr smbios systemInfo

Use this command to display the system information.

Usage: **mdr smbios systemInfo**

2.18.1.3 mdr smbios baseboardInfo

Use this command to display the baseboard/module information.

Usage: **mdr smbios baseboardInfo**

2.18.1.4 mdr smbios processorInfo

Use this command to display the processor information.

Usage: **mdr smbios processorInfo**

2.18.1.5 mdr smbios memoryDevice

Use this command to display the memory devices.

Usage: **mdr smbios memoryDevice**

2.18.1.6 mdr smbios nicInfo

Use this command to display the NIC information.

Usage: **mdr smbios nicInfo**

2.18.1.7 mdr smbios pcieInfo

Use this command to display the PCIe information.

Usage: **mdr smbios pcieInfo**

2.18.1.8 mdr smbios storageDevice

Use this command to display the storage device information.

Usage: **mdr smbios storageDevice**

2.18.1.9 mdr smbios all

Use this command to display all information.

Usage: **mdr smbios all**

2.18.1.10 mdr smbios summary

Use this command to display summary information.

Usage: **mdr smbios summary**

Example Output:

```
============================================================
                          BIOS
------------------------------------------------------------
Version                    |                          2.0b
Release Date               |                  01/09/2018
============================================================
                     Processor (2/2)
------------------------------------------------------------
CPU1:            Intel(R) Xeon(R) Gold 5117 CPU @ 2.00GHz
                          Max Speed: 4.00 GHz / Core(14)
CPU2:            Intel(R) Xeon(R) Gold 5117 CPU @ 2.00GHz
                          Max Speed: 4.00 GHz / Core(14)
============================================================
                  Memory Device (4/16)
------------------------------------------------------------
P1-DIMMA1                  |          32767 MB @2666 MHz
P1-DIMMB1                  |          32767 MB @2666 MHz
P2-DIMMD1                  |          32767 MB @2666 MHz
P2-DIMME1                  |          32767 MB @2666 MHz
============================================================
                        Storage
------------------------------------------------------------
SATA / AHCI                |          2000 GB / 7200 RPM
SATA / AHCI                |                       2000 GB
============================================================
```

2.18.1.11 mdr smbios dumpToFile

Use this command to dump SMBIOS data to file.

Usage: **mdr smbios dumpToFile <filename>**

2.18.2 mdr cableID

Use this command to display PCIe Cable EEPROM Data.

Usage: **mdr cableID**

2.19 bbp

Use this command to bring up the following subcommands for battery backup power management.

2.19.1 bbp status

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

Usage: bbp **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]
```

2.19.2 bbp autoDischarge

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

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

2.19.3 bbp discharge

Use this command to manually discharge the battery.

Usage: **discharge <module>**

2.19.4 bbp shutdown

Use this command to set graceful shutdown after timeout (power supply failure).

Usage: **bbp hutdown <on|off> [sec]**

2.19.5 bbp shutdownTimeout

Use this command to get the timeout value for graceful shutdown.

Usage: **bbp shutdownTimeout**

2.20 nm

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

2.20.1 nm detect

Use this command to detect if ME is present.

Usage: **nm detect**

Example Output:

```
This device supports Node Manager
```

2.20.2 nm ver

Use this command to display the node manager version.

Usage: **nm ver**

Example Output:

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

2.20.3 nm cap

Use this 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
```

2.20.4 nm status

Use this command to display or enable or disable the node manager global policy. It get node manager statistics with parameter global =1, domain =0 and policy =0.

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

Example Output:

```
Node Manager global policy is enabled
```

2.20.5 nm stat

Use this 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
```

2.20.6 nm resetStat

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

Usage: **nm resetStat [ID]**

2.20.7 nm pstate

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

Usage: **nm pstate [value]**

Example Output:

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

2.20.8 nm tstate

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

Usage: **nm tstate [value]**

Example Output:

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

2.20.9 nm ptstate

Use this 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)
```

2.20.10 nm alert

Use this command to get or set the destination for alerts. The node manager will send an 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
```

2.20.11 nm scanPolicy

Use this 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:
```

2.20.12 nm addPolicy

Use this command to add a new policy.

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

Example Output:

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

2.20.13 nm delPolicy

Use this command to delete a policy.

Usage: **nm delPolicy <ID>**

2.20.14 nm getPolicy

Use this 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
```

2.20.15 nm enablePolicy

Use this command to enable a policy.

Usage: **nm disablepolicy <ID>**

2.20.16 nm disablePolicy

Use this command to disable a policy.

Usage: **nm disablePolicy <ID>**

2.21 kvmwa

Use this command will open a KVM window for ATEN firmware.

Usage: **kvmwa**

2.22 ukvm

Use this command to auto-detect the firmware and launch the correct KVM (keyboard/video/mouse) window console. KVM console will be disconnected if users perform FW update or BIOS update. Administrative privileges are required (Linux: sudo, Windows: run as administartor) to perform virtual storage mounting function.

Usage: **ukvm**

2.23 vmwa

Use this command to list the following vmwa subcommands (which only applies to devices with ATEN firmware). For more details on VM commands, see *Appendix B* details. Please note that this command only works in shell mode.

Usage: **vmwa**

Notes:

- Supports two virtual devices (device 1 and device 2).
  - Device 1 is a USB or a floppy disk. Hard drives can be listed but can not be mounted due to OS security concerns
  - Device 2 will be a CD, a DVD or an ISO file.
- List all available devices before mounting virtual media when plugging in a removable device.
- This command only works properly in shell mode.

2.23.1 vmwa dev1list

Use this command to list the available devices for virtual device 1.

Usage: **vmwa dev1list**

2.23.2 vmwa dev1drv

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

Usage: **vmwa dev1drv <index>**

2.23.3 vmwa dev1stop

Use this command to stop the virtual device 1.

Usage: **vmwa dev1stop**

2.23.4 vmwa dev2list

Use this command to list the available devices for virtual device 2.

Usage: **vmwa dev2list**

2.23.5 vmwa dev2cd

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

Usage: **vmwa dev2cd <index>**

2.23.6 vmwa dev2iso

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

Usage: **vmwa dev2iso <filename>**

2.23.7 vmwa dev2stop

Use this command to stop the virtual device 2.

Usage: **vmwa dev2stop**

2.23.8 vmwa status

Use this command to show the status.

Usage: **vmwa status**

Example Output:

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

2.23.9 vmwa log

Use this command to show the log.

Usage: **vmwa log**

2.24 dcmi

Use this command to list the following DCMI management subcommands (which only applies to the devices that support DCMI management).

2.24.1 dcmi find

Use this 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
```

2.24.2 dcmi cap

Use this command to list the DCMI capabilities.

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
```

2.24.3 dcmi powerStatus

Use this command to display the related DCMI power status from a BMC.

Usage: **dcmi powerStatus**

Example Output:

```
Instantaneous power reading     | 62W
Minimum during sampling period | 59W
Maximum during sampling period | 122W
Average during sampling period | 62W
IPMI timestamp                  | 2018/01/31 14:20:16
Sampling period                 | 1192005000 Milliseconds
Power reading state             | Activated
```

2.24.4 dcmi MCID

Use this command to get or set the Controller Identifier String.

Usage: **dcmi MCID [MCID String]**

2.25 dr

Use this command to list the following drive-redirection subcommands (which only applies to the devices with a Peppercon firmware). For more details on drive-redirection/VM commands, see *Appendix B*.

2.25.1 dr list

Use this command to list the available local drives.

Usage: **dr list**

Example Output:

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

2.25.2 dr iso

Use this command to set the redirection for the 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 quotes at the beginning and the end of <path to iso file>.

2.25.3 dr drv

Use this command to set the redirection for the 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.

2.26 kvm

Use this command to open a KVM window for Peppercon firmware.

Usage: **kvm**

2.27 kvmw

Use this command to open a KVM window for AMI firmware.

Usage: **kvmw**

2.28 kvmwx9

Use this command to open a kvm window for AMI x9 firmware.

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

Example Output:

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

2.29 vmw

Use this command to list the following vmw subcommands (only applies to devices with AMI firmware.) For more details on VM commands, see *Appendix B*.

Usage: **vmw**

Note: This command only works properly in shell mode.

2.29.1 vmw floppy

Use this command to select the floppy image as virtual media.

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

2.29.2 vmw usbkey

Use this command to select the USB key as virtual media.

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

2.29.3 vmw iso

Use this command to select the ISO file as virtual media.

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

2.29.4 vmw cd

Use this command to select the CD/DVD drive as virtual media.

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

2.29.5 vmw stopFloppy

Use this command to stop the connected floppy.

Usage: **`vmw stopFloppy`**

2.29.6 vmw stopUsbkey

Use this command to stop the connected USB key.

Usage: **`vmw stopUsbkey`**

2.29.7 vmw stopISO

Use this command to stop the connected ISO.

Usage: **`vmw stopISO`**

2.29.8 vmw stopCD

Use this command to stop the connected CD/DVD drive.

Usage: **`vmw stopCD`**

2.29.9 vmw status

Use this command to view the Virtual Media status.

Usage: **`vmw status3.35 sol`**

2.30 sol

Use this command to list the following SOL subcommands.

2.30.1 sol activate

Use this 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 for ANSI/VT100 terminal control escape sequences is required for the computer terminal or terminal emulator running SMCIPMITool.

Usage: **`sol activate`**

Note: Command Prompt in Windows doesn't support ANSI/VT100 Terminal Control. If the remote text console uses ANSI/VT100 terminal control (i.e., BIOS, Linux text console), please use "sol window" to open a SOL GUI instead.

2.30.2 sol deactivate

Use this command to stop SOL.

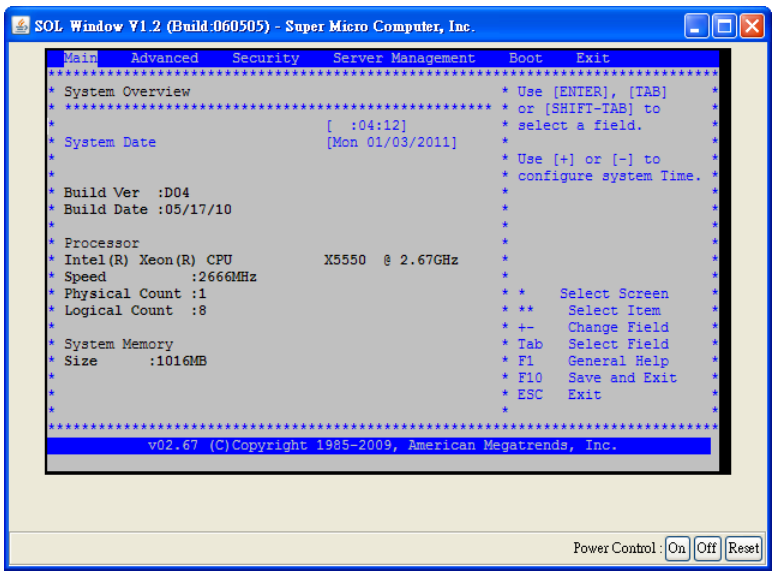
Usage: **`sol deactivate`**

2.30.3 sol window

Use this command to open a SOL window GUI and activate SOL.

Usage: **`sol window`**

Example Output:



2.30.4 sol key

Use this command to key map for Linux or Windows.

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

2.30.5 bitrate

Use this command to configure the SOL transmission bit rate.

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

2.30.6 retryCount

Use this command to configure the SOL retry counts.

Usage: **sol retryCount [Number]**

2.30.7 retryInterval

Use this command to set the interval for BMC to retry sending SOL packets to the remote console. Note that retry interval is set in milliseconds, and the value should be ten or a multiple of ten.

Usage: **sol retryInterval [Interval time]**

2.31 nm20

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

Note that all of the extended commands explained in this section follow the Intel Dynamic Power Node Manager specifications, including the ME IPMI interface, NM IPMI interface and BMC IPMI interface.

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> [<ca>]    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> [<ca>] 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
policySuspendPeriod              Policy Suspend Periods (5)
dcmi                             DCMI Power Management Commands (5)
sensor                           Get Sensor
summary                          Summary
```

2.31.1 nm20 nmSDR

Use this command to display NM SDR.

Usage: **nm20 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
```

2.31.2 nm20 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
```

2.31.3 nm20 deviceID

Use this command to get the ME Device ID.

2.31.4 nm20 reset

Use this command to reboot ME.

2.31.5 nm20 reset2Default

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

2.31.6 nm20 updateMode

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

2.31.7 nm20 powerOff

Use this command to set ME to the power-off state. Please note that if the bmc status is S0/S1, you cannot turn off ME immediately. It will display a "not support in present state" message.
To power off ME, you should turn off the chassis power first.

Usage: **`nm20 powerOff`**

2.31.8 nm20 selfTest

Use this command to get the Self Test results.

2.31.9 nm20 mode

Use this command to get the ME running mode.

Usage: **`nm20 mode`**

Example Output:

```
ME is in NORMAL mode
```

2.31.10 nm20 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
```

2.31.11 nm20 oemGetPower

Use this command to get power.

Usage: **nm20 oemGetPower**

Example Output:

```
56 watts
```

2.31.12 nm20 oemGetTemp

Use this command to run temporary commands.

Usage: **nm20 oemGetTemp**

Example Output:

```
56 (c)
```

2.31.13 nm20 globalEnable

Use this command for Global Enable NM policy control.

2.31.14 nm20 globalDisable

Use this command for Global Disable NM policy control.

2.31.15 nm20 domainEnable

Use this command for per Domain Enable NM policies.

Usage: **nm20 domainEnable <domain ID>**

2.31.16 nm20 domainDisable

Use this command for per Domain Disable NM policies.

Usage: **nm20 domainDisable <domain ID>**

2.31.17 nm20 policyEnable

Use this command for per Policy Enable NM policy.

Usage: **nm20 policyEnable <domain ID> <policy ID>**

2.31.18 nm20 policyDisable

Use this command for per Policy Disable NM policy.

Usage: **nm20 policyDisable <domain ID> <policy ID>**

2.31.19 nm20 addPowerPolicy

Use this command to add power policy.

Usage: **addPowerPolicy <pID> <limit> <t> <p> [<ca>]**

```
pID  : Policy ID
limit: Policy Target Limit
t    : Correction Time Limit (ms)
p    : Statistics Reporting Period in seconds
ca   : Policy ID conflict action:
     0 - no action (default)
     1 - overwrite

* domainID will be 0(Entire platform) for this command
ex: nm20 addPowerPolicy  1 100 6000 10
```

2.31.20 nm20 getPolicy

Use this command to get policy.

Usage: **nm20 getPolicy <domain ID> <policy ID>**

2.31.21 nm20 delPolicy

Use this command to delete policy.

Usage: **nm20 delPolicy <domain ID> <policy ID>**

2.31.22 nm20 scanPolicy

Use this command to scan all presented policies.

Usage: **nm20 scanPolicy**

Example Output:

```
    ============================================
    Domain ID = 0 , Policy ID = 1
    ============================================
    Values:
    Power Limit                 = 32767 w
    Correction Time limit       = 600000 ms
    Statistics Reporting Period = 30 s
    Policy Trigger Limit        = 100
    Domain ID:
        Entire platform
    Policy state:
        Policy(Enabled)  Domain(Enabled)  Global(Enabled)
    Policy Trigger Type:
        Inlet Temperature Limit Policy Trigger in [Celsius]
    Aggressive CPU Power correction:
        Backward compatible with NMV1.5
    Policy Exception action state:
    raw = 57 01 00 70 11 00 FF 7F C0 27 09 00 64 00 1E 00
```

```
    Alert Thresholds:
    Number of alert thresholds = 0

    Suspend Periods:
    Number Of Periods = 0

    Total Policies = 1
```

2.31.23 nm20 addPolicy

Use this command to add policy.

Usage: **addPolicy <dID> <pID> <ptt> <agg> <a> <l> <t> <tl> <p> [<ca>]**

```
dID: Domain ID
  0 - Entire platform
  1 - CPU subsystem
  2 - Memory subsystem
  4 - High Power I/O subsystem
pID: Policy ID
ptt: Policy Trigger Type:
  0 - No Policy Trigger
  1 - Inlet Temperature Limit Policy Trigger in [Celsius]
  2 - Missing Power Reading Timeout in 1/10th of second
  3 - Time After Host Reset Trigger in 1/10th of second
  4 - Boot time policy
agg: Aggressive CPU Power Correction:
  0 - Automatic mode (default).
  1 - Force non-aggressive mode
  2 - Force aggressive mode
a: Policy Exception Actions
  1 - send alert
  2 - shutdown system
  3 - send alert & shutdown system
l: Policy Target Limit
t: Correction Time Limit (ms)
tl: Policy Trigger Limit
p: Statistics Reporting Period in seconds
ca: Policy ID conflict action
  0 - no action (default)
  1 - overwrite
```

2.31.24 nm20 statistics

Use this command to display statistics.

Usage: **nm20 statistics <mode> <domainID> <policy ID>**

2.31.25 nm20 resetStatistics

Use this command to reset NM statistics.

Usage: **nm20 resetStatistics <mode> <domain ID> <policy ID>**

2.31.26 nm20 cap

Use this command to view capabilities.

Usage: **nm20 cap <domain ID> <Trigger Type>**

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
```

2.31.27 nm20 ver

Use this command to show the version.

Usage: **nm20 ver**

Example Output:

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

2.31.28 nm20 alert

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

Usage: **nm20 alert [dest]**

2.31.29 nm20 pstate

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

Usage: **nm20 pstate [value]**

Example Output:

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

2.31.30 nm20 tstate

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

Usage: **nm20 tstate [value]**

Example Output:

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

2.31.31 nm20 ptstate

Use this command to display both the 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)
```

2.31.32 nm20 cpuCore

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

Usage: **nm20 cpuCore [cores]**

Example Output:

```
Current Max allowed cores   = 8
Number of logical processors on the platform = 8
Number of installed processor packages    = 1
Number of logical cores on each processor = 8
```

2.31.33 nm20 totalPower

Use this command to get or set the Total Power Budget.

Usage: **nm20 totalPower <domainID> [watts]**

2.31.34 nm20 cpuMemTemp

Use this command to view the 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)
```

2.31.35 nm20 hostCpuData

Use this command to display the 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
```

2.31.36 nm20 getAlertThreshold

Use this command to get the Policy Alert Thresholds.

Usage: **nm20 getAlertThreshold <domainId> <policyId>**

Example Output:

```
Number of alert thresholds = 3
Threshold[0] = 150
Threshold[1] = 250
Threshold[2] = 300
```

2.31.37 nm20 setAlertThreshold

Use this command to set the Policy Alert Thresholds.

Usage:

nm20 setAlertThreshold <domainId> <policyId> <count> [<th0> <th1> <th2>]

```
domainId:
        0 - Entire platform
        1 - CPU subsystem
        2 - Memory subsystem
        3 - HW Proection (NM3.0)
        4 - High Power I/O subsystem
policyId: 0~255
count   :
        0   - Clear all thresholds
        1~3 - Number of alert thresholds
th0~th2 : threshold value
```

2.31.38 nm20 setPowerDrawRange

Use this command to set the Node Manager Power Draw Range.

Usage: **setPowerDrawRange <domainID> <min> <max>**

2.31.39 nm20 policySuspendPeriod

List the commands related to the policy suspend period.

```
Command(s):
get <domainId> <policyId>        Get Policy Suspend Periods
add <domainId> <policyId> <startTime> <stopTime> <days>
                                 Set Policy Suspend Periods
```

```
update <domainId> <policyId> <periodId> [start=<startTime> stop=<stopTime>
days=<days>]
                                    Update Policy Suspend Periods
delete <domainId> <policyId> <periodId>
                                    Delete Policy Suspend Periods
clear <domainId> <policyId>         Clear Policy Suspend Periods
```

2.31.39.1 nm20 policySuspendPeriod get

Use this command to get the Policy Suspend Periods.

Usage: **nm20 policySuspendPeriod get <domain ID> <policy ID>**

Example Output:

```
============================================
Domain ID = 0 , Policy ID = 16
============================================
Number Of Periods = 2
[Suspend Periods 1]
        Start = 13:00
        Stop  = 15:00
        Days  = Monday Tuesday Wednesday
[Suspend Periods 2]
        Start = 11:00
        Stop  = 12:00
        Days  = Friday Saturday
```

2.31.39.2 nm20 policySuspendPeriod add

Use this command to add the Policy Suspend Periods.

Usage:

nm20 policySuspendPeriod add <domainId> <policyId> <startTime> <stopTime> <days>

```
domainId :
        0 - Entire platform
        1 - CPU subsystem
        2 - Memory subsystem
        3 - HW Proection (NM3.0)
        4 - High Power I/O subsystem
policyId : 0~255
startTime: Policy suspend start time (HHmm) [0000~2359]
stopTime : Policy suspend stop time (HHmm) [0006~2400]
   * If there is a need to specify an end-time that is beyond midnight, use two
suspend periods.
days     : Suspend period recurrence
       1 - Monday, 2 - Tuesday, 3 - Wednesday, 4 - Thursday, 5 - Friday,
       6 - Saturday, 7 - Sunday
        ex: every Monday, Wednesday, Sunday => 137
```

2.31.39.3 nm20 policySuspendPeriod update

Use this command to update the Policy Suspend Periods.

Usage:

nm20 policySuspendPeriod update <domainId> <policyId> <periodId> [start=<startTime> stop=<stopTime> days=<days>]

```
domainId :
        0 – Entire platform
        1 – CPU subsystem
        2 – Memory subsystem
        3 – HW Proection (NM3.0)
        4 – High Power I/O subsystem
policyId : 0~255
startTime: Policy suspend start time (HHmm) [0000~2359]
stopTime : Policy suspend stop time (HHmm) [0006~2400]
   * If there is a need to specify an end-time that is beyond midnight, use two
suspend periods.
days     : Suspend period recurrence
       1 – Monday, 2 – Tuesday, 3 – Wednesday, 4 – Thursday, 5 – Friday,
       6 - Saturday, 7 - Sunday
         ex: every Monday, Wednesday, Sunday => 137

Ex: Modify start time of period 1 for domain 0, policy 16.
nm20 policySuspendPeriod update 0 16 1 start=1400
```

2.31.39.4 nm20 policySuspendPeriod delete

Use this command to delete the Policy Suspend Periods.

Usage: **nm20 policySuspendPeriod delete <domainId> <policyId> <periodId>**

2.31.39.5 nm20 policySuspendPeriod clear

Use this command to clear Policy Suspend Periods.

Usage: **nm20 policySuspendPeriod clear <domainId> <policyId>**

2.31.40 nm20 dcmi

List the commands which relate to node manager DCMI

```
Command(s):
cap                                 Get DCMI Capability Info
powerReading <mode> [<period>]      Get Power Reading
powerLimit [<action> <limit> <cTime> <period>]
                                    Get/Set Power Limit
powerLimitEnable                    Enable Power Limit
powerLimitDisable                   Disable Power Limit
```

2.31.40.1 nm20 dcmi cap

Use this command to get DCMI Capability Information.

Usage: **nm20 dcmi cap**

Example Output:

```
Enhanced Power Statistics attributes
DCMI Version      :1.1
Parameter Revision:2
The number of supported rolling average time periods:9
Rolling Average Time periods:
        05 - 5 Seconds
        0F - 15 Seconds
        1E - 30 Seconds
        41 - 1 Minutes
        43 - 3 Minutes
        47 - 7 Minutes
        4F - 15 Minutes
        5E - 30 Minutes
        81 - 1 Hours
```

2.31.40.2 nm20 dcmi powerReading

Use this command to get Power Reading.

Usage: **nm20 dcmi powerReading <mode> [<period>]**

```
mode:
   1 - System Power Statistics
   2 - Enhanced System Power Statistics
period (hex): Rolling average time period.
         For mode=2, use "nm20 dcmi cap" to get supported value.
```

Example Output:

```
Instantaneous power reading    | 66W
Minimum during sampling period | 40W
Maximum during sampling period | 113W
Average during sampling period | 60W
IPMI timestamp                 | 2018/01/19 15:43:15
Sampling period                | 281453000 Milliseconds
Power reading state            | Activated
```

2.31.40.3 nm20 dcmi powerLimit

Use this command to get or set the Power Limit.

Usage: To get the Power Limit:

nm20 dcmi powerLimit

To set the Power Limit:,

nm20 dcmi powerLimit <action> <limit> <cTime> <period>

```
action: Exception actions
      0(0x00) - No action
      1(0x01) - Hard Power Off system and log event to SEL
     17(0x11) - Log event to SEL
limit : Power limit in watts
cTime : Correction time limit in milliseconds
period: Management application statistics sampling period in seconds.
```

Example Output:

```
Exception actions     :No action
Power limit requested :300W
Correction time limit :6000ms
Management application statistics sampling period :5s
```

2.31.40.4 nm20 dcmi powerLimitEnable

Use this command to enable the Power Limit.

Usage: **nm20 dcmi powerLimitEnable**

2.31.40.5 nm20 dcmi powerLimitDisable

Use this command to disable the Power Limit.

Usage: **`nm20 dcmi powerLimitDisable`**

2.31.41 nm20 sensor

Use this command to get the sensors of Node Manager.

Usage: **`nm20 sensor`**

Example Output:

```
 Id    | Sensor                                  |      Reading |  Low Limit | High Limit |
------ | ---------                               |      ------- |  --------- | ---------- |
8      | PCH Thermal Threshold                   |      34C/93F |     2C/36F |   95C/203F |
32     | CPU 0 Thermal Control Circuit Activation |          0 % |        0 % |        0 % |
33     | CPU 1 Thermal Control Circuit Activation |          N/A |        N/A |        N/A |
52     | CPU 0 Memory Throttling                 |          0 % |        0 % |        0 % |
53     | CPU 1 Memory Throttling                 |          N/A |        N/A |        N/A |
162    | Volumetric Airflow                      |          N/A |        N/A |        N/A |
163    | Inlet Airflow Temperature               |      26C/79F |     0C/32F |  247C/477F |
189    | Outlet Airflow Temperature              |          N/A |        N/A |        N/A |
173    | Total Chassis power                     |          N/A |        N/A |        N/A |
190    | Core CUPS                               |          4 % |        N/A |        N/A |
191    | IO CUPS                                 |          0 % |        N/A |        N/A |
192    | Memory CUPS                             |          1 % |        N/A |        N/A |
78     | PSU 0 AC Power Input                    |          N/A |        N/A |        N/A |
86     | PSU 0 Temperature                       |          N/A |        N/A |        N/A |
164    | PSU 0 DC Power Output                   |          N/A |        N/A |        N/A |
------ | ---------                               |      ------- |  --------- | ---------- |
28     | CPU 0 Thermal Status                    |               Normal                 |
29     | CPU 1 Thermal Status                    |                N/A                   |
36     | CPU 0 T-Control                         |                 20                   |
37     | CPU 1 T-Control                         |                N/A                   |
48     | CPU 0 T-JMAX                            |                102                   |
49     | CPU 1 T-JMAX                            |                N/A                   |
102    | PSU 0 Status                            |                N/A                   |
```

2.31.42 nm20 summary

Use this command to get the information of Node Manager.

Usage: **`nm20 summary`**

```
                          Purley Platform
        Intel Intelligent Power Node Manager 4.0 (4.0.4.288)
                    SEL Time - 2018/01/19 16:03:41

                  Node Manager Policy (5) [Enable]
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
|                  #0 Entire platform (3) [Enable]                   |
+-----------------------------------------------------------+--------+
|  ID|   State|   Limit|                                    Trigger Type|
+====================================================================+
|   1|  Enable| 32767 W|           Inlet Temperature Limit (100 C)|
+-----------------------------------------------------------+--------+
|  16|  Enable| 32767 W|                          No Policy Trigger|
+-----------------------------------------------------------+--------+
|  17|  Enable|   300 W|                          No Policy Trigger|
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
|                   #1 CPU subsystem (1) [Enable]                    |
+-----------------------------------------------------------+--------+
|  ID|   State|   Limit|                                    Trigger Type|
+====================================================================+
|   4|  Enable|     0 W|                          No Policy Trigger|
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
|                 #2 Memory subsystem (1) [Enable]                   |
+-----------------------------------------------------------+--------+
|  ID|   State|   Limit|                                    Trigger Type|
+====================================================================+
|   5|  Enable|     0 W|                          No Policy Trigger|
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

Total Power Budget: Not set

DCMI Power Limit (W):   300

                    CUPS Policy
+-------------------------------------------------+
|Domain    |Target        |   State| Threshold (%)|
+=================================================+
|Core      |BMC           |  Enable|            80|
+-------------------------------------------------+
|Core      |Remote Console|  Enable|            80|
+-------------------------------------------------+

           CPU Information
+-------------------------------------+
| P-State| T-State| Max Allowed Cores|
+=====================================+
|   12/13|    0/15|             16/32|
+-------------------------------------+

             Power Usage
+-------------------------------------+
|Domain                  |  Usage (W)|
+=====================================+
|Entire platform         |         63|
+-------------------------------------+
|CPU subsystem           |         37|
```

```
+-------------------------------------+
|Memory subsystem        |          0|
+-------------------------------------+

           CUPS Utilization
+-------------------------------------+
|Domain                  |  Usage (%)|
+=====================================+
|Core                    |          3|
+-------------------------------------+
|Memory                  |          0|
+-------------------------------------+
|IO                      |          0|
+-------------------------------------+
```

2.32 nm30

This command is for Intel Dynamic Power Node Manager V3.0 and specifically used for testing Supermicro X10 series or newer motherboards. Use this command to run tests.

Note that all of the extended commands explained in this section follow the Intel Dynamic Power Node Manager specifications, including the ME IPMI interface, NM IPMI interface and BMC IPMI interface.

Usage: **nm30**

Example Output:

```
cupsCap                          CUPS Capability
cupsData                         CUPS Data
cupsConfig                       CUPS Configuration
cupsPolicy                       CUPS Policies
cupsCore                         Core CUPS Utilization
cupsIO                           IO CUPS Utilization
cupsMem                          Memory CUPS Utilization
setCupsPolicy <domainId> <storage> <alert> <threshold> <avgWindow>
                                 Set CUPS Policy
cupsPolicyEnable <domainId>      Enable CUPS Policy
cupsPolicyDisable <domainId>     Disable CUPS Policy
```

2.32.1 nm30 cupsCap

Use this command to display CUPS capability.

Usage: **nm30 cupsCap**

Example Output:

```
10.133.176.73 X10DRG-Q (S0/G0,v1.77) 11:28 ASPD_T>nm30 cupsCap
CUPS Capabilities: CUPS feature is enabled
CUPS Policy      : CUPS policies configuration available
CUPS version     : 1
```

2.32.2 nm30 cupsData

Use this command to display CUPS data.

Usage: **nm30 cupsData**

Example Output:

```
10.133.176.73 X10DRG-Q (S0/G0,v1.77) 11:31 ASPD_T>nm30 cupsData
CUPS Index: 17

CUPS Dynamic Load Factors:
  CPU CUPS dynamic Load factor    : 100
  Memory CUPS dynamic Load factor : 0
  IO CUPS dynamic Load factor     : 0

Base Utilization:
  Base CPU CUPS utilization value    : 41 E5 8E 05 00 00 00 00
  Base Memory CUPS utilization value : 6B 62 C3 00 00 00 00 00
  Base IO CUPS utilization value     : 00 00 00 00 00 00 00 00

Aggregate utilization values:
  Aggregate CPU CUPS utilization value    : 0C 41 9F 13 00 00 00 00
  Aggregate Memory CUPS utilization value : D6 F0 02 00 00 00 00 00
  Aggregate IO CUPS utilization value     : 00 00 00 00 00 00 00 00

Utilization Average:
  Utilization average for the core domain   : 17% (11 00 00 00 00 00 00 00 )
  Utilization average for the memory domain : 0% (00 00 00 00 00 00 00 00 )
  Utilization average for the IO domain     : 0% (00 00 00 00 00 00 00 00 )
```

2.32.3 nm30 cupsConfig

Use this command to display CUPS configurations.

Usage: **nm30 cupsConfig**

Example Output:

```
10.133.176.73 X10DRG-Q (S0/G0,v1.77) 11:32 ASPD_T>nm30 cupsConfig
CUPS Feature Enabled Status : CUPS feature is enabled
Load Factor Configuration   : Dynamic
Static Core Load Factor     : 1
Static Memory Load Factor   : 1
Static IO Load Factor       : 1
```

2.32.4 nm30 cupsPolicy

Use this command to display CUPS policy.

Usage: **`nm30 cupsPolicy`**

Example Output:

```
10.133.176.73 X10DRG-Q (S0/G0,v1.77) 11:33 ASPD_T>nm30 cupsPolicy
CUPS Policy ID           : Core Domain
Target identifier        : BMC
Policy Status            : Policy Enabled
Policy Storage           : Persistent storage
Policy Excursion Actions : Sending of alert enabled
CUPS Threshold           : 0
Averaging Window in sec  : 6

CUPS Policy ID           : Memory Domain
Target identifier        : BMC
Policy Status            : Policy Enabled
Policy Storage           : Persistent storage
Policy Excursion Actions : Sending of alert enabled
CUPS Threshold           : 0
Averaging Window in sec  : 6

CUPS Policy ID           : IO Domain
Target identifier        : BMC
Policy Status            : Policy Enabled
Policy Storage           : Persistent storage
Policy Excursion Actions : Sending of alert enabled
CUPS Threshold           : 0
Averaging Window in sec  : 6

CUPS Policy ID           : Core Domain
Target identifier        : Remote Console
Policy Status            : Policy Enabled
Policy Storage           : Persistent storage
Policy Excursion Actions : Sending of alert enabled
CUPS Threshold           : 0
Averaging Window in sec  : 6

CUPS Policy ID           : Memory Domain
Target identifier        : Remote Console
Policy Status            : Policy Enabled
Policy Storage           : Persistent storage
Policy Excursion Actions : Sending of alert enabled
CUPS Threshold           : 0
Averaging Window in sec  : 6

CUPS Policy ID           : IO Domain
Target identifier        : Remote Console
Policy Status            : Policy Enabled
Policy Storage           : Persistent storage
Policy Excursion Actions : Sending of alert enabled
CUPS Threshold           : 0
Averaging Window in sec  : 6
```

2.32.5 nm30 cupsCore

Use this command to display Core CUPS utilization.

Usage: **nm30 cupsCore**

Example Output:

```
10.133.176.73 X10DRG-Q (S0/G0,v1.77) 11:34 ASPD_T>nm30 cupsCore
Core CUPS = 43
```

2.32.6 nm30 cupsIO

Use this command to display IO CUPS utilization.

Usage: **nm30 cupsIO**

Example Output:

```
10.133.176.73 X10DRG-Q (S0/G0,v1.77) 11:34 ASPD_T>nm30 cupsIO
IO CUPS = 0
```

2.32.7 nm30 cupsMem

Use this command to display memory CUPS utilization.

Usage: **nm30 cupsMem**

Example Output:

```
10.133.176.73 X10DRG-Q (S0/G0,v1.77) 11:35 ASPD_T>nm30 cupsMem
Memory CUPS = 0
```

2.32.8 nm30 setCupsPolicy

Use this command to set the CUPS Policy.

Usage:

nm30 setCupsPolicy <domainId> <storage> <alert> <threshold> <avgWindow>

```
domainId:
        1 - Core Domain
        2 - Memory Domain
        4 - IO Domain
storage:
        0 - Persistent storage
        1 - Volatile memory
alert:
        0 - Disable alerting
        1 - Enable sending of alert
threshold: CUPS Threshold
avgWindow: Averaging Window (in Seconds)
```

2.32.9 nm30 cupsPolicyEnable

Use this command to enable the CUPS policy.

Usage: **nm30 cupsPolicyEnable <domainId>**

2.32.10 nm30 cupsPolicyDisable

Use this command to disable the CUPS policy.

Usage: **nm30 cupsPolicyDisable <domainId>**

2.33 nm40

This command is for Intel Dynamic Power Node Manager V4.0 and specifically used for testing Supermicro X11 series or newer motherboards. Use this command to run tests.

```
Command(s):
setTurboSyncRatio <socket> <limit>       Set Turbo Synchronization Ratio
getTurboSyncRatio <socket> <core>        Get Turbo Synchronization Ratio
```

2.33.1 nm40 setTurboSyncRatio

Use this command to set an identical maximum turbo ratio limit across selected set of CPU sockets.

Usage: **nm40 setTurboSyncRatio <socket> <limit>**

```
socket: CPU socket number
        0~7       - CPU socket number that configuration should be applied to.
                    (Supported value depends on system configuration)
        255 (FFh) - Apply configuration to all present sockets
limit: Turbo Ratio Limit
        0         - Restore default settings
        Others    - Turbo Ratio Limit to set
```

2.33.2 nm40 getTurboSyncRatio

Use this command to get the current turbo ratio limit.

Usage: **getTurboSyncRatio <socket> <core>**

```
socket: CPU socket number
        0~7       - For which current settings should be read.
        255 (FFh) - All sockets will return common maximum settings.
core: Active cores configuration
        255 (FFh) - Read configuration for all active cores.
```

Example Output:

```
Current Turbo Ratio Limit = 0
Default Turbo Ratio Limit = 21
Maximum Turbo Ratio Limit = 28
Minimum Turbo Ratio Limit = 7
```

2.34 hdd

Enter the hdd command to display the physical and logical HDD status. Please note that the command is hardware-dependent. The command is only for several SAS RAID model. If the hardware is not supported then message “The device is not supported” will appear.

Note: These sets of commands only work with mega RAID 2108 and 3108 devices.

2.34.1 hdd 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
Device: 0, Enclosure Set: 1
0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2
------------------------------------------------------------------
O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O O - -

Device: 0, Enclosure Set: 2
0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2
------------------------------------------------------------------
O O - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

Device: 0, Enclosure Set: 6
0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2
------------------------------------------------------------------
O - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

O: OK
X: Error
-: Not Present
```

2.34.2 hdd info

Use this command to display HDD information.

Usage: **hdd info [device id]**

device id: option (Default = 0)

Example Output:

```
172.31.11.86 X9DR3-LN4F+ (S0/G0) 17:22 SIM(WA)>hdd info
 Device ID: 0
```

```
Index | Vendor   | Name           | Ver  | Speed    | Size      | Temp | EID | Status
----- | ------   | ----           | ---  | -----    | ----      | ---- | --- | ------
    0 | SEAGATE  | ST31000424SS   | 0003 | 6.0Gb/s  | 930.4 GB  | N/A  |   4 | SYSTEM
    1 | SEAGATE  | ST31000424SS   | 0003 | 6.0Gb/s  | 930.4 GB  | N/A  |   4 | SYSTEM
    2 | SEAGATE  | ST32000444SS   | 0005 | 6.0Gb/s  | 1.8 TB    | N/A  |   4 | SYSTEM
    3 | SEAGATE  | ST31000424SS   | 0003 | 6.0Gb/s  | 930.4 GB  | N/A  |   4 | SYSTEM
    4 | SEAGATE  | ST31000424SS   | 0003 | 6.0Gb/s  | 930.4 GB  | N/A  |   4 | SYSTEM
    5 | SEAGATE  | ST31000424SS   | 0003 | 6.0Gb/s  | 930.4 GB  | N/A  |   4 | SYSTEM
    6 | SEAGATE  | ST31000424SS   | 0003 | 6.0Gb/s  | 930.4 GB  | N/A  |   4 | SYSTEM
    7 | SEAGATE  | ST31000424SS   | 0003 | 6.0Gb/s  | 930.4 GB  | N/A  |   4 | SYSTEM
    8 | SEAGATE  | ST3500414SS    | 0005 | 6.0Gb/s  | 464.7 GB  | N/A  |   4 | SYSTEM
    9 | SEAGATE  | ST31000424SS   | 0003 | 6.0Gb/s  | 930.4 GB  | N/A  |   4 | SYSTEM
   10 | SEAGATE  | ST31000424SS   | 0003 | 6.0Gb/s  | 930.4 GB  | N/A  |   4 | SYSTEM
   11 | SEAGATE  | ST31000424SS   | 0003 | 6.0Gb/s  | 930.4 GB  | N/A  |   4 | SYSTEM
   12 | TOSHIBA  | MBF2600RC      | 0108 | 6.0Gb/s  | 557.9 GB  | 32   |   2 | SYSTEM
   13 | TOSHIBA  | MBF2600RC      | 0108 | 6.0Gb/s  | 557.9 GB  | 31   |   2 | SYSTEM
   14 | TOSHIBA  | MBF2600RC      | 0108 | 6.0Gb/s  | 557.9 GB  | 31   |   2 | SYSTEM
   15 | TOSHIBA  | MBF2600RC      | 0108 | 6.0Gb/s  | 557.9 GB  | 32   |   2 | SYSTEM
   16 | TOSHIBA  | MBF2600RC      | 0108 | 6.0Gb/s  | 557.9 GB  | 32   |   2 | SYSTEM
   17 | TOSHIBA  | MBF2600RC      | 0108 | 6.0Gb/s  | 557.9 GB  | 31   |   2 | SYSTEM
   18 | TOSHIBA  | MBF2600RC      | 0108 | 6.0Gb/s  | 557.9 GB  | 31   |   2 | SYSTEM
   19 | TOSHIBA  | MBF2600RC      | 0107 | 6.0Gb/s  | 557.9 GB  | 31   |   2 | SYSTEM
   20 | TOSHIBA  | MBF2600RC      | 0108 | 6.0Gb/s  | 557.9 GB  | 31   |   2 | SYSTEM
   21 | TOSHIBA  | MBF2600RC      | 0107 | 6.0Gb/s  | 557.9 GB  | 32   |   2 | SYSTEM
   22 | TOSHIBA  | MBF2600RC      | 0107 | 6.0Gb/s  | 557.9 GB  | 31   |   2 | SYSTEM
   23 | TOSHIBA  | MBF2600RC      | 0108 | 6.0Gb/s  | 557.9 GB  | 32   |   2 | SYSTEM
```

2.34.3 hdd disk

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

Usage: **`hdd disk <index> [device id]`**

device id: option (Default = 0)

Example Output:

```
172.31.11.86 X9DR3-LN4F+ (S0/G0) 17:22 SIM(WA)>hdd disk 1
 Device ID: 0
 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

172.31.11.86 X10DSC+ (S0/G0,750w) 18:28 ASPD_T>hdd disk 0 1
 Device ID: 1
 Field                | Value
 -----                | -----
 Vendor               | HGST
 Name                 | HUH721008AL4200
```

```
revision              | A21D
Media Err Count       | 0
Other Err Count       | 0
Pred Fail Count       | 0
last Pred Fail Seq    | 0
FW state              | drive is exposed and controlled by host
link Speed            | 12.0Gb/s
Coerced Size          | 7.3 TB
Temperature           | 31C/ 88F
Enclosure ID          | 1
```

2.34.4 lmap

Use this command to display logical HDD present status.

Usage: **hdd lmap**

2.34.5 linfo

Use this command to display logical HDD information.

Usage: **hdd linfo**

2.34.6 ldisk

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

Usage: **hdd ldisk <index>**

2.35 bios

This command is set to update BIOS and activate the product key. However, some of the product may not support update BIOS through SMCIPMITool. If that is the case then message “The device is not supported” will appear.

It is required to activate the product key before use. Please contact your Supermicro sales representative for details.

Usage: **bios**

2.35.1 bios ver

Use this command to check the BIOS version.

Usage: **bios ver**

2.35.2 bios image

Use this command to check the BIOS image file. Please note that options:-N -R -MER suggested.

Usage: **bios image <filename>**

2.35.3 bios update

Use this command to update BIOS. This command is to update BIOS via IPMI.

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

Options:

```
           -N: Program NVRAM

           -R: Preserve SMBIOS

         -MER: Program ME Firmware ME Region

 -FORCEREBOOT: Force to reboot after BIOS update
```

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)
```

2.35.4 bios rfupdate

Use this command to update BIOS. This command is to update bios via redfish. It supports X12 /H12 and later platforms.

Usage: **bios rfupdate <filename> [options]**

Preserve option

```
-me                 Preserve ME
```

-smbios **Preserve SMBIOS**

-nvram **Preserve NVRAM**

-backup **Backup image (Rot only)**

-reboot **Force power down to proceed update**

Example Output:

```
192.168.5.3 X12DPU (S5/G2) 10:19 X12 AST2600RoT>bios rfupdate
D:\firmware\X12DPU_T202008281417.bin
===============
BIOS Image info
===============
Date      = 08/28/2020
MB Type   = X12DPU
Size      = 32 MB
Rev       = 1.0


==================
Start BIOS Upgrade
==================

Uploading file......Done
Updating >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>100%
Done
Update Time: 4 min 32 sec(s)
```

2.35.5 bios setKey

Use this command to activate the product key for BIOS updates.

Usage: **bios setKey <ProductKey> or <file>**

Key format example for X11 and prior:

`4F15-1F39-BEB3-0EA5-2C14-41CF`

Key format example for X12 and later:

`{"ProductKey":{"Node":{"LicenseID":"1","LicenseName":"SFTOOBLIC","CreateDate":"20200514"},"Signature":"xxxxxxxx"}}`

Example file content:

```
{"ProductKey":{"Node":{"LicenseID":"1","LicenseName":"SFTOOBLIC","CreateDate":"20200514"},"Signature":"xxxxxxxx"}}
```

2.35.6 bios getMACs

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

Usage: **bios getMACs <start> <end> <netMask> <file> [<username> <password>]**

2.35.7 bios setKeys

Use this command to activate multiple SFT-OOB-LIC product keys for BIOS updates.

Usage: **bios setKeys <file>**

Example file content:

1. for X11 and prior

```
0CC47AF4D2B9;10.147.160.2;E66F-5F17-7AF6-99D8-C303-C15E
```

2. for X12 and later

```
0CC47AF4D2B8;10.147.160.3;{"ProductKey":{"Node":{"LicenseID":"1","LicenseName":"SF
TOOBLIC","CreateDate":"20200514"},"Signature":"YB1quU1c8MVs3VmMNSbXcivoS1bO9X5s52i
IH1F1mvx3vArJykX5WH52AUY3DzMnWNruwd00bF3Bq2kExdxwQrbb73ql9fDoL53ZrUld5NsEn+ESV7i00
jR9HQBYr4qokKiAn8Ec0iAzWmqAzmUuUzT+fc1LLnsXEWvW5DuQhAI+FeBMOXRsK7Tx51GLra5kDOc4N/r
QHeQHWXaYrQ851VTqcsMJ9PcdSKCNbYqv31/sQKP7znElRzQRwHS4oFbTGd1KltpN/ARxmUObkTJGlgIMJ
4RmgRHCne4dF4MDwObMa+Q3R7lK5Le4EtZdPPcefGkrhezWpLr4fXLdZrc+Iw=="}}
```

Note: All Target device's username/password must be the same.

2.36 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. In addition, you can also run the hostrun command with the curr parameter to manage the default group. To list all managed servers, use the "ch" or "mg list" command.

2.36.1 mg list

Use this command to list the current managed devices.

Usage: mg **list**

2.36.2 mg save

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

Usage: **mg save <filename>**

2.36.3 mg load

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

Usage: **mg load <filename>**

2.36.4 mg default

Use this command to manage the default group.

Usage: **`mg default`**

2.36.5 mg found

Use this command to manage the found group.

Usage: **`mg found`**

2.36.6 mg sort

Use this command to sort the currently managed devices.

Usage: **`mg sort`**

2.36.7 mg clear

Use this command to clear all currently managed devices.

Usage: **`mg clear`**

2.36.8 mg refresh

Use this command to refresh the managed devices.

Usage: **`mg refresh`**

2.37 found

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

2.37.1 found list

Use this command to list the found IPMI devices.

Usage: **`found list`**

2.37.2 found clear

Use this command to clear the found IPMI devices.

Usage: **`found clear`**

2.37.3 found copy

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

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

2.37.4 found copyall

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

Usage: **found copyall**

2.37.5 found saveAs

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

Usage: **found saveAs <filename>**

2.37.6 found refresh

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

Usage: **found refresh**

2.38 task

Use Task commands to create and perform tasks in the 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**

Note: This command set only works properly in shell mode.

2.38.1 task run

Use this command to execute a command in the background.

Usage: task **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
```

2.38.2 task command

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

Usage: **task command <taskID>**

2.38.3 task startTime

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

Usage: **task startTime <taskID>**

2.38.4 task endTime

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

Usage: **task endTime <taskID>**

2.38.5 task 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: **task state <taskID>**

2.38.6 task 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: **task exitcode <taskID>**

2.38.7 task message

Use this command to get the task messages.

Usage: **task 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]
```

2.38.8 task remove

Use this command to remove a task.

Usage: **task remove <taskID>**

2.38.9 task message2file

Use this command to save the task messages to a file.

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

2.38.10 task removeAll

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

Usage: **task removeAll**

2.38.11 task getTaskIDs

Use this command to get all task IDs.

Usage: **task getTaskIDs**

2.38.12 task status

Use this command to display the performed task status.

Usage: **task 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
```

2.38.13 task limit

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

Usage: **task limit <number>**

2.39 tp

Use this command to manage TwinPro MCU information.

Usage: **tp**

Example Output:

```
10.133.176.73 X10DRG-Q (S0/G0,v1.77) 11:51 ASPD_T> tp
Command:tp
Command(s):
info                              Get MCU Info
nodeID                            Get Node ID
systemName  [data]                Get/Set System Name
systemPN                          Get System P/N
systemSN                          Get System S/N
chassisPN                         Get Chassis P/N
chassisSN                         Get Chassis S/N
backPlanePN                       Get BackPlane P/N
backPlaneSN                       Get BackPlane S/N
chassisLocation [data]            Get/Set Chassis Location (Hex Value)
bpLocation                        Get BackPlane Location (FatTwin only, 1:Right
2:Left)
nodePN                            Get NodeP/N
nodeSN                            Get NodeS/N
```

2.39.1 tp info

Use this command to display MCU information.

Usage: **tp info**

Example Output:

```
Node | Power    | IP              | Watts | Current | CPU1 | CPU2 | System
---- | -------- | --------------  | ----- | ------- | ---- | ---- | ------
   1 | Active   | 10.138.33.131   |  112W |    9.2A |  43C |  39C |    24C
   2 | Active   | 10.138.33.132   |   90W |    7.5A |  36C |  35C |    24C

Node | Node P/N                 | Node S/N
---- | --------                 | --------
   1 | X10DRFR-NT               | VM155S028212
   2 | X10DRFR-NT               | VM155S028210

onfiguration ID   : 2
urrent Node ID    : 1
ystem Name        : (Empty)
ystem P/N         : SYS-F628R3-RC0BPT+
ystem S/N         : S188314X5811348
hassis P/N        : CSE-F424AS-R1K28BP
hassis S/N        : CF424AE19N60085
ackplane P/N      : BPN-PDB-F424
ackplane S/N      : EB154S008729
hassis Location   : FF FF FF FF FF
P Location        : Left
CU Version        : 1.08
PN Revision    : 2.00
```

2.39.2 tp nodeID

Use this command to get the Node ID.

Usage: **tp nodeID**

2.39.3 tp systemName

Use this command to get/set the system name.

Usage: **tp systemName [data]**

2.39.4 tp systemPN

Use this command to get the system product number.

Usage: **tp systemPN**

2.39.5 tp systemSN

Use this command to get the system serial number.

Usage: **tp systemSN**

2.39.6 tp chassisPN

Use this command to get the chassis product number.

Usage: **tp chassisPN**

2.39.7 tp chassisSN

Use this command to get the chassis serial number.

Usage: **tp chassisSN**

2.39.8 tp backPlanePN

Use this command to get the plane product number.

Usage: **tp backPlanePN**

2.39.9 tp backPlaneSN

Use this command to get the plane serial number.

Usage: **tp backPlaneSN**

2.39.10 tp chassisLocation

Use this command to get the chassis location value.

Usage: **tp chassisLocation [data]**

2.39.11 tp bpLocation

Use this command to get back the plane location. It is FatTwin system only. (1: Right, 2:Left)

Usage: **tp bpLocation**

2.39.12 tp bpnID

Use this command to get the BPN ID.

Usage: **tp bpnID**

2.39.13 tp bpnRevision

Use this command to get the BPN revision.

Usage: **tp bpnRevision**

2.39.14 tp nodePN

Use this command to get the node product number.

Usage: **tp nodePN**

2.39.15 tp nodeSN

Use this command to get the node serial number.

Usage: **tp nodeSN**

2.39.16 tp configID

Use this command to get/set the config ID.

Usage: **tp configID [ID]**

2.40 wsiso

This virtual media function mounts an ISO file via Widnows Share or SAMBA (available on X9, X10 and later motherboards). Note that this command requires a node product key.

Notes:

- This command requires a node product key.
- This command works in command mode.

Usage: **wsiso**

Example Output:

```
10.134.15.187 X9DRT-P (S0/G0,76w,v3.32) 13:48 SIM(WA)>wsiso
Command:wsiso
Command(s):
status                          Status of Virtual Media
mount <...>                     mount ISO file
umount                          umount ISO file
```

2.40.1 wsiso status

Use this command to display the virtual media status.

Usage: **wsiso status**

2.40.2 wsiso mount

Use this command to mount an ISO file.

Usage: **wsiso mount <IP> <path> [username] [password]**

```
IP: IP or domain name of share host
path: path to iso file
username: username of share host (optional)
password: password of share host (optional)

Ex 1: mount linux.iso
 wsiso mount 192.168.1.100 /iso/linux.iso
Ex 2: mount linux.iso with username and password
 wsiso mount 192.168.1.100 /iso/linux.iso admin admin

  * Use one ISO file at a time. Make sure umount existing ISO before mount new ISO
file
  * This command is available for X9 and X10 platform with SFT-OOB-LIC node
product key
```

2.40.3 wsiso umount

Use this command to unmount an ISO file.

Usage: **wsiso umount**

2.41 tas

2.41.1 tas info

This command provides TAS version, status and other information.

Example Output:

72.31.3.105 X10DRH-C (S0/G0,197w) 15:50 ASPD_T>tas info

```
Item                          |                Value
----                          |                -----
Version                       |                1.4.0
Build data                    |               170502
Protocol version              |                 0x01
Status                        |              Running
TAS start time                |  2017/05/11 11:19:27
Last Update Time              |  2017/05/11 15:48:35
```

2.41.2 tas pause

Use this command to pause the TAS service.

Usage: **tas pause**

2.41.3 tas resume

Use this command to resume the TAS service.

Usage: **tas resume**

2.41.4 tas refresh

Use this command to trigger TAS to recollect data.

Usage: **tas refresh**

2.41.5 tas clear

Use this command to clear the collected TAS data in the BMC.

Usage: **tas clear**

2.41.6 tas period

Use this command to get or set the TAS update period in seconds (time limit is from 5 to 60 seconds).

Usage:

(to get) tas period

(to set) tas period [sec]

2.41.7 tas exec

Execute a user's specified command by TAS. You can specify a Windows or Linux executable file that exists in the target OS. TAS executes it as an agent. (No results are provided.)

Usage: **tas exec <cmd>**

2.42 nvme

Th NVMe command set provides nvme information and management.

Usage: **nvme**

Example Output:

```
Command(s):
list                                        NVME Summary
info                                        PCIe SSD NVME Info
rescan                                      Rescan all devices by in band
insert      <aoc> <group> <slot>            Insert SSD by out of band
locate      <HDD Name>                      Locate SSD
stopLocate <HDD Name>                       Stop Locate SSD
remove      <HDD Name>                      Remove NVME device
smartData   [HDD Name]                      NVME SMART Data
```

2.42.1 nvme list

Use this command to display the nvme summary information, including in-band and out-of-band.

Usage: **nvme list**

2.42.2 nvme info

Use this command to display the nvme out-of-band details.

Usage: **nvme info**

Example Output:

```
10.163.55.95 (S0/G0) 17:56 ASPD_T>nvme info
[AOC Number:0] [Firmware Info:E8 05]
 Item                          |                      Value
 ----                          |                      -----
 Slot                          |                          0
 Located                       |                         No
 Temperature                   |                       34 C
 Class Code                    |                   02 08 01
 ID                            |                      80 86
 Serial Number                 |        CVFT4182001K400GGN
 Model Number                  |       INTEL SSDPE2MD400G4
 Port0 Max Link Speed          |                   8.0 GT/s
 Port0 Max Link Width          |                         x4
 Port1 Max Link Speed          |                   8.0 GT/s
 Port1 Max Link Width          |                         x4
 Init Power Requirement        |                   10 Watts
 Max  Power Requirement        |                   25 Watts

 Item                          |                      Value
 ----                          |                      -----
 Slot                          |                          1
 Located                       |                         No
 Temperature                   |                       35 C
 Class Code                    |                   02 08 01
 ID                            |                      80 86
 Serial Number                 |        CVFT41820018400GGN
```

```
Model Number                    |       INTEL SSDPE2MD400G4
Port0 Max Link Speed            |                   8.0 GT/s
Port0 Max Link Width            |                       x4
Port1 Max Link Speed            |                   8.0 GT/s
Port1 Max Link Width            |                       x4
Init Power Requirement          |                  10 Watts
Max  Power Requirement          |                  25 Watts
```

2.42.3 nvme rescan

Use this command to rescan all nvme devices from OS.

Usage: **nvme rescan**

2.42.4 nvme insert

Use this command to insert a SSD.

Usage: **nvme insert <aoc> <group> <slot>**

2.42.5 nvme locate

This command allows you to specify the HDD name or slot location. Use this command to locate a SSD.

Usage: **nvme locate <HDD Name>**

nvme locate <aoc> <group> <slot>

2.42.6 nvme stopLocate

Use this command to stop locating an SSD. You can specify the HDD name or slot location.

Usage: **nvme stoplocate <HDD Name>**

nvme stoplocate <aoc> <group> <slot>

2.42.7 nvme remove

Use this command to remove a SSD by specifying the HDD name or slot location.

Usage: **nvme remove <HDD name> [option]**

To disconnect an NVME device on the OS and then eject from BMC, use 0 for [option]. (By default.)

To disconnect an NVME device on the OS but not eject from BMC afterwards, use 1 for [option].

nvme remove <aoc> <group> <slot>

2.42.8 nvme smartData

Use this command to display the nvme in band details.

Usage: **nvme smartData <HDD name>**

Example Output:

```
Item                          |                Value
----                          |                -----
Device name                   |                nvme1
Critical warning              |                    0
IB Temp.                      |                 28 C
Available spare               |                 100%
Available spare threshold     |                  10%
Percentage used               |                   0%
Data units read (512k bytes)  |               25,943
Data units written (512k bytes) |                   1
Host read commands            |            3,246,438
Host write commands           |                    3
Controller busy time (minutes) |                    0
Power cycles                  |                   79
Power on hours                |                  195
Unsafe shutdowns              |                    3
Media errors                  |                    0
Error log entries             |                    0
```

2.43 nodeKey

Use this command to manage the currently activated node product key.

Usage: **nodekey**

Example Output:

```
172.31.10.31 B9DRG-E (S0/G0,16w) 14:01 SIMBL(W)>nodekey
Command:nodekey
Command(s):
list                            List Node Product Key
```

2.43.1 nodekey list

Use this command to list the node product key.

Usage: **nodekey list**

Example Output:

```
172.31.10.31 X10DRT (S0/G0,17w) 14:13 ASPT>nodekey list
SFT-OOB-LIC activated
```

2.44 rsc

Use this command to capture remote screenshots of a managed system and saves the image file locally. (This function is available on X9, X10 series and later ATEN boards). Files in .png and .jpg formats are supported.

Usage: **`rsc [filename.ext]`**

Example Output:

```
10.134.15.187 X9DRT-P (S0/G0,62w,v3.32) 13:53 SIM(WA)>rsc
Write file "10.134.15.187-20141113-142720.png" done
```

Notes:

- This command requires a node product key.
- This command works in command mode.

2.45 rko

Use this command to send a series of keyboard actions to a managed system. (This function is available on X9, X10 and later ATEN boards). Writie a keyboard script in a file and use the rko command to send it.

Usage: **`rko [filepath]`**

Please refer following help for keyboard definition.

```
================================================================================
|                      Remote Keyboard Operation Help                          |
================================================================================
Keyboard Operation Parameters List
----------------------------------
Alphanumeric Keys : A-Z, a-z, 0-9, Symbols Keys (example: ,./!#%& ... etc)
Modifier Keys     : [Shift], [Ctrl], [Alt], [Win]
Navigation Keys   : [Up], [Down], [Left], [Right], [PageUp], [PageDown],
                    [Home], [End]
Editing Keys      : [Enter], [Backspace], [Insert], [Delete], [Tab], [Space]
Miscellaneous Keys: [PrtSc], [Pause], [Esc], [F1]-[F12]
Macro Key example : [Ctrl+Alt+Delete], [Alt+F4], [Ctrl+v] ... etc
Delay Parameter   : [Delay=?h?m?s], [Delay=?m?s], [Delay=?s]

Keyboard Operation File Sample
------------------------------
[Ctrl+Alt+Delete][Delay=5s]
password[Enter][Delay=10s]
cmd[Enter][Delay=1s]
ipconfig[Enter]
```

Notes:

- This command requires a node product key.
- This command works in command mode.

2.46 diag

Use this command to frun bios diagnostic functions remotely.

Usage: **diag**

Example Output:

```
Command(s):
start <diag Image>              Start Diagnostics on target system
download <filename>             Download diagnostic result
display <JSON file>             Display diagnostic result from file
```

2.46.1 diag start

Usage: **diag start drv <index>**

diag start iso <ISO Image>

There are two methods to run the SMCIPMITool remotely. You can run the tool with either a pen drive or an ISO image. The SMCIPMITool can be run on different platforms, and refer to the commands below to start the SMCIPMITool in shell mode.

With a Pen Drive:

- Download and unzip the file "USBForSuperDiag.zip" from https://www.supermicro.com/sms
- Save the file to a pen drive and insert it in the system.
- Type "vmwa dev1list" to locate the pen drive.
- Type "diag start drv <index> to start the tool.

Example output:

```
10.136.33.151 X10DRU-i+ (S0/G0,115w) 13:55 ASPD_T>vmwa dev1list
2: [F: USB Flash]
3: [C: IDE HD]
4: [D: IDE HD]
10.136.33.151 X10DRU-i+ (S0/G0,117w) 13:55 ASPD_T>diag start drv 2
```

With an ISO Image

1. Download and unzip the file "ISOForSuperDiag.zip" from https://www.supermicro.com/sms in the system.
2. Type "diag start iso <image>" to start the Tool.

The following steps illustrate how this command is executed

1. Virtual Media is started to mount the diagnostics image.
2. The boot option is set to UEFI.

3. The remote system is powered off.
4. About 10 seconds later, the remote system is powered on.
5. The diagnostics tool is started to run the check-up.
6. SMCIPMITool will monitor the diagnostics . Once it is finished, "done" is shown on the screen of the local system.

Note: This command only works properly in shell mode.

2.46.2 diag download

Usage: **`diag download <filename>`**

The following steps illustrate how this command is executed.

1. The command generalFileDownload is executed to download the JSON file.
2. The JSON file in saved in the local system.

2.46.3 diag display

Usage: **`diag display <filename>`**

The following steps illustrate how this command is executed.

1. The JSON file is retrieved from the local system.
2. The JSON file is parsed, and the result is displayed.

To display the specific diagnostic results, you can use the parameters “pass,” “fail” or “info” as filter criteria.

Parameter	Description
pass	Displays the items that have passed the diagnostics.
fail	Displays the items that have failed the diagnostics.
info	Displays the items and their basic information.

Usage Examples:

Diag display <JSON file> pass

Diag display <JSON file> fail

Diag display <JSON file> info

To specify the amount of diplaying lines, you can use the additional parameter “line” as following:

Parameter	Description
line	Limit display lines. Press any key to scroll pages, and use <Ctrl>+<D> to terminate the display console.

Usage Examples:

Diag display <JSON file> line 15

Diag display <JSON file> info line 20

2.47 mel

This command set provides ablility to download BMC maintenance log file or sending out clear maintenance log command to BMC.

2.47.1 mel list

Usage: **`mel list [[begin end] or [last]]`**

This command is used to list BMC maintenance event log in all or range.

Usage Examples:

```
mel list
mel list 5 10
[list the events from 5th to 10th]
mel list 20
[list the last 20 events]
```

2.47.2 mel download

Usage: **`mel download <filename>`**

This command is used to download BMC maintenance event log to a file.

2.47.3 mel clear

Usage: **`mel clear`**

This command can clear BMC maintenance event log.

2.48 Redfish

This command set is to retrieve data from BMC via redfish. X12 and later platform is supported. For platforms prior than X11, it may have limited support due to BMC redfish URL implementation.

2.48.1 redfish version

Usage: **redfish version**

This command is to display current redfish version of BMC.

2.48.2 redfish firmwareInventory

User can use this command to get firmwareInventory information. User can also perform installing actions.

2.48.2.1 Redfish firmwareInventory info

Usage: **redfish firmwareInventory info**

This command is to get firmware inventory information.

2.48.2.2 Redfish firmwareInventory install

This command is to do firmware resiliency actions. User can update last known good image or recover from backup image. Please note that this function requires DCMS license.

Usage: **redfish firmwareInventory install <Target> <Action>**

Target:

BMC

BIOS

Action:

0: Recover

1: UpdateGolden

This command is to perform firmware inventory actions. User can do recover or updateGolden for BMC or BIOS image.

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
Superblade Management	O				
MicroBlade 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
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
Superblade Management	`superblade`
Microblade Management	`microblade`
IPMI Management	`sel, user, ipmi, ver, sol`

KVM and Virtual Media for Peppercon, AMI, ATEN	`Peppercon: dr, kvm, vm`
	`AMI: kvmw, vmw,kvmwx9`
	`ATEN: kvmwa, vmwa, wsiso, rsc, rko`

Group Management	`host, hostrun`
Shell and Command Mode	`ch`
Trap Receiver	`trap`
Node Management for ME-enabled MB	`nm, nm20, nm30`
DCMI Management	`dcmi`
Power Supply Health	`pminfo, psfruInfo, bbp, psbbpinfo`
IPMI Device Discovery	`find, found`
Script	`exec,task`
Hdd	`hdd, nvme`
Firmware Update	`bios, ipmi flash(w,r,h,a)`
Twin MultiNode	`tp`
Node Product Key	`nodekey`
Auxiliary	`shell, list, mg, sc, prompt`

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 a floppy image as virtual media:

```
SIMBL(W)>vmw floppy c:\DOS50.img

Connecting ...Done
SIMBL(W)>vmw stopFloppy

Disconnecting ...Done
```

Example of using a USB key as virtual media:

```
SIMBL(W)>vmw usbkey h

Connecting ...Done

SIMBL(W)>vmw stopUsbkey

Disconnecting ...Done
```

Example of using an ISO file as virtual media:

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

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

Disconnecting ...Done
```

Example of using a CD/DVD drive as virtual media:

```
SIMBL(W)>vmw cd e

Connecting ...Done
SIMBL(W)>vmw stopCD

Disconnecting ...Done
```

Example of displaying the 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 status               Show status
vmwa log                  Show log
```

Notes:

- Supports two virtual devices (device 1 & device 2):
  - Device 1 is a USB or a floppy disk. Hard drives can be listed but can not be mounted due to OS security concerns.
  - Device 2 is a CD, a DVD or an ISO file.
- List the available devices before mounting virtual media.

Examples of using a 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 a CD-ROM 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 an 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 and log:

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

The available commands for ISO/drive redirection are:

```
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 an 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 a floppy image and an 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

The available commands are:

```
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)

(If the trap receiver gets an 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 Node Product Key Functions

The node product key, including SFT-OOB-LIC and SFT-DCMS-Single, is used with the following commands:

- bios update
- bios ver
- wsiso mount
- wsiso status
- wsiso umount
- rsc
- rko
- x10cfg commands

Appendix E 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

Appendix F List of Supported BMCs:

- ASPEED AST2500 BMC on-Board (e.g., X11SPL-F, X11DPU, X11DGQ and, B11DPT)
- ASPEED AST2400 BMC on-Board (e.g., X10, X11SSH-F, B10 and B1)
- Renesas SH7757 BMC on-Board (e.g., X9 andB9 series)
- Nuvoton WPCM450 BMC on-Board (e.g., X9 series)
- Winbond WPCM450 BMC on-Board (e.g., X8 series)

Note: KVM-over-LAN supports the BMCs with ATEN solution in ASPEED AST2500 (e.g., X11, B11), AST2400 (e.g., X10, B10 and B1) and WPCM450 (e.g., X9).

Appendix G SMC RAKP

You need to set up “oem_rakp=on” in SMCIPMITool.properties if you enable the SMC RAKP from BMC web. Please note that SMCIPMITool will be in SMC RAKP mode for all hosts when the setting is in use, meaning this other hosts disabled by smc rakp will not be able to log in.

The example below illustrates how to enable the smc rakp on BMC web and set up oem_rakp in SMCIPMItool.properties.


```
prompt_mb_name=on
prompt_time=on
no_prompt=off
record=off
history=on
prompt_powerW=on
prompt_fwVer=off
prompt_acpi=on
prompt_username=off
debug_level=0
prompt_ip=on
bmc_security=on
trap=on
oem_rakp=on
```

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)
Web Site:	www.supermicro.com.nl

Asia-Pacific

Address:	Super Micro Computer, Inc. 3F, No. 150, Jian 1st Rd. Zhonghe Dist., New Taipei City 235 Taiwan (R.O.C)
Tel:	+886-(2) 8226-3990
Fax:	+886-(2) 8226-3992
Web Site:	www.supermicro.com.tw
Email:	support@supermicro.com.tw