SMCIPMITool

User's Guide

Revision 2.18

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Manual Revision 2.18

Release Date: 2017/04

Document revision history

Date	Revision	Description
2015/12/30	2.15.0	Add document revision history
2016/01/20	2.15.0	Revise nvme command usage
2017/01/20	2.18.0	Add diagnostic command sets
2017/03/20	2.18.0	Modify diag command content.

Contents

Document revision history 3

1 Introduction 19

1.1 Purpose 19

1.2 Third Party Software 19

1.2.1 JLine 19

1.3 Document Conventions 19

2 Usage and Mode 20

2.1 Command Line Mode 20

2.2 Shell Mode 20

2.2.1 Keyboard Shortcuts 21

2.2.2 prompt 21

2.2.3 ch 22

2.2.4 hostrun 22

2.2.4.1 hostrun found 22

2.2.4.2 hostrun curr 23

2.2.5 search 23

3 Commands 24

3.1 superblade 26

3.1.1 superblade system 26

3.1.2 superblade failure 27

3.1.3 superblade blade 27

3.1.3.1 superblade blade status 27

3.1.3.2 superblade blade index(es) 27

3.1.3.2.1 superblade blade <blade number> status 28

3.1.3.2.2 superblade blade <blade number> power 28

3.1.3.2.3 superblade blade <blade number> kvm 28

3.1.3.2.4 superblade blade <blade number> uid 28

3.1.3.2.5 superblade blade <blade number> sensor 28

3.1.3.2.6 superblade blade <blade number> bmc 29

3.1.3.2.7 superblade blade <blade number> config 30
3.1.3.2.8 superblade blade <blade number> sn 30
3.1.4 superblade gigabit 30
3.1.4.1 superblade gigabit status 30
3.1.4.2 superblade gigabit index(es) 30
3.1.4.2.1 superblade gigabit <gigabit number> status 31
3.1.4.2.2 superblade gigabit <gigabit number> power 31
3.1.4.2.3 superblade gigabit <gigabit number> wss 31
3.1.4.2.4 superblade gigabit <gigabit number> ipmode 32
3.1.4.2.5 superblade gigabit <gigabit number> boot 32
3.1.4.2.6 superblade gigabit <gigabit number> restart 32
3.1.4.2.7 superblade gigabit <gigabit number> fd 32
3.1.5 superblade power 32
3.1.5.1 superblade power status 32
3.1.5.2 superblade power index(es) 33
3.1.5.2.1 superblade power <power number> status 33
3.1.5.2.2 superblade power <power number> power 33
3.1.5.2.3 superblade power <power number> fan 33
3.1.6 superblade ib 33
3.1.6.1 superblade ib status 33
3.1.6.2 superblade ib index(es) 33
3.1.6.2.1 superblade ib <ib number> status 33
3.1.6.2.2 superblade ib <ib number> power 34
3.1.7 superblade cmm 34
3.1.7.1 superblade cmm status 34
3.1.7.2 superblade cmm index 34
3.1.7.2.1 superblade cmm <cmm number> status 34
3.1.7.2.2 superblade cmm <cmm number> dtime 35
3.1.7.2.3 superblade cmm <cmm number> ntp 35
3.1.7.2.4 superblade cmm <cmm number> reset 35
3.1.7.2.5 superblade cmm <cmm number> flash 35

3.1.7.2.6 superblade cmm <cmm number> ver 35
3.1.7.2.7 superblade cmm <cmm number> ip 35
3.1.7.2.8 superblade cmm <cmm number> mac 35
3.1.7.2.9 superblade cmm <cmm number> gateway 36
3.1.7.2.10 superblade cmm <cmm number> netmask 36
3.1.7.2.11 superblade cmm <cmm number> syncfg 36
3.1.7.2.12 superblade cmm <cmm number> opmode 36
3.1.7.2.13 superblade cmm <cmm number> dhcp 36
3.1.8 superblade listtemp 36
3.1.9 superblade allsel <filename> 37
3.1.10 superblade burst 37
3.1.10.1 superblade burst allUp 37
3.1.10.2 superblade burst allDown 38
3.1.10.3 superblade burst allRest 38
3.1.10.4 superblade burst allSoftshutdown 38
3.1.10.5 superblade burst up 38
3.1.10.6 superblade burst down 38
3.1.10.7 superblade burst reset 38
3.1.10.8 superblade burst softshutdown 38
3.1.11 superblade listmac 38
3.1.12 superblade midPlaneFRU 38
3.1.13 superblade powerconsumption 39
3.2 microblade 39
3.2.1 microblade summary 39
3.2.2 microblade node 39
3.2.2.1 microblade node sensor 39
3.2.2.2 microblade node status 39
3.2.2.3 microblade node power 40
3.2.2.4 microblade node ip 40
3.2.2.5 microblade node dhcp 40
3.2.2.6 microblade node mac 40

3.2.2.7 microblade node mask 40
3.2.2.8 microblade node gateway 41
3.2.2.9 microblade node name 41
3.2.2.10 microblade node uid 41
3.2.3 microblade switch 41
3.2.3.1 microblade switch info 41
3.2.3.2 microblade switch power 41
3.2.3.3 microblade switch username 41
3.2.3.4 microblade switch lan 42
3.2.3.4.1 microblade switch lan ip 42
3.2.3.4.2 microblade switch lan dhcp 42
3.2.3.4.3 microblade switch lan mask 42
3.2.3.4.4 microblade switch lan gateway 42
3.2.3.5 microblade switch getTime 42
3.2.4 microblade psu 43
3.2.4.1 microblade psu info 43
3.2.4.2 microblade psu power 43
3.2.4.3 microblade psu fanMode 43
3.2.4.4 microblade psu fanSpeed 43
3.2.5 microblade fru 43
3.2.5.1 microblade fru cmm 43
3.2.5.2 microblade fru midplane 43
3.2.5.3 microblade fru switch 44
3.2.5.4 microblade fru psu 44
3.2.6 microblade powerConsumption 44
3.3 sel 45
3.3.1 sel info 45
3.3.2 sel list 45
3.3.3 sel csv 45
3.3.4 sel clear 45
3.4 user 46

3.4.1 user add 46
3.4.2 user list 46
3.4.3 user delete 46
3.4.4 user level 46
3.4.5 user test 46
3.4.6 user setpwd 47
3.5 vm 47
3.5.1 vm status 47
3.5.2 vm stop 47
3.5.3 vm floppy 47
3.5.4 vm iso 48
3.6 ipmi 48
3.6.1 ipmi sensor 48
3.6.2 ipmi power 49
3.6.2.1 ipmi power status 49
3.6.2.2 ipmi power up 49
3.6.2.3 ipmi power down 49
3.6.2.4 ipmi power softshutdown 49
3.6.2.5 ipmi power reset 49
3.6.2.6 ipmi power cycle 49
3.6.2.7 ipmi power diag 49
3.6.2.8 ipmi power bootoption <Index> 49
3.6.3 ipmi acpi 50
3.6.4 ipmi lan 50
3.6.4.1 ipmi lan ip 50
3.6.4.2 ipmi lan mac 50
3.6.4.3 ipmi lan gateway 50
3.6.4.4 ipmi lan netmask 51
3.6.4.5 ipmi lan snmp 51
3.6.4.6 ipmi lan snmpcomm 51
3.6.4.7 ipmi lan arp 51

3.6.4.8 ipmi lan dhcp 51
3.6.4.9 ipmi lan vlan 52
3.6.5 ipmi fru 52
3.6.6 ipmi fruw 52
3.6.7 ipmi frubackup 53
3.6.8 ipmi frurestore 53
3.6.9 ipmi oem 53
3.6.9.1 ipmi oem clrint 53
3.6.9.2 ipmi oem id 53
3.6.9.3 ipmi oem uid 53
3.6.9.4 ipmi oem backup 53
3.6.9.5 ipmi oem restore 54
3.6.9.6 ipmi oem backupcfg 54
3.6.9.7 ipmi oem restorecfg 54
3.6.9.8 ipmi oem getcfg 54
3.6.9.9 ipmi oem setcfg 55
3.6.9.10 ipmi oem lani 55
3.6.9.11 ipmi oem mac 55
3.6.9.12 ipmi oem x10cfg ldap 55
3.6.9.13 ipmi oem x10cfg ad 56
3.6.9.14 ipmi oem x10cfg radius 56
3.6.9.15 ipmi oem x10cfg ipCtrl 57
3.6.9.16 ipmi oem x10cfg ntp 57
3.6.9.16.1 ipmi oem x10cfg ntp list 57
3.6.9.16.2 ipmi oem x10cfg ntp state 57
3.6.9.16.3 ipmi oem x10cfg ntp timezone 58
3.6.9.16.4 ipmi oem x10cfg ntp daylight 58
3.6.9.16.5 ipmi oem x10cfg ntp primary 58
3.6.9.16.6 ipmi oem x10cfg ntp secondary 58
3.6.9.17 ipmi oem x10cfg ddns 58
3.6.9.17.1 ipmi oem x10cfg ddns list 58

3.6.9.17.2 ipmi oem x10cfg ddns state 58
3.6.9.17.3 ipmi oem x10cfg ddns server 59
3.6.9.17.4 ipmi oem x10cfg ddns hostname 59
3.6.9.17.5 ipmi oem x10cfg ddns tsig 59
3.6.9.18 ipmi oem x10cfg alert 59
3.6.9.18.1 ipmi oem x10cfg alert list 59
3.6.9.18.2 ipmi oem x10cfg alert level 61
3.6.9.18.3 ipmi oem x10cfg alert ip 61
3.6.9.18.4 ipmi oem x10cfg alert mail 61
3.6.9.18.5 ipmi oem x10cfg alert subject 61
3.6.9.18.6 ipmi oem x10cfg alert message 61
3.6.9.18.7 ipmi oem x10cfg alert send 61
3.6.9.18.8 ipmi oem x10cfg alert delete 61
3.6.9.19 ipmi oem x10cfg smtp 62
3.6.9.19.1 ipmi oem x10cfg smtp list 62
3.6.9.19.2 ipmi oem x10cfg smtp ssl 62
3.6.9.19.3 ipmi oem x10cfg smtp server 62
3.6.9.19.4 ipmi oem x10cfg smtp port 62
3.6.9.19.5 ipmi oem x10cfg smtp user 62
3.6.9.19.6 ipmi oem x10cfg smtp password 62
3.6.9.19.7 ipmi oem x10cfg smtp mail 63
3.6.9.20 ipmi oem x10cfg dns 63
3.6.9.21 ipmi oem summary 63
3.6.10 ipmi reset 63
3.6.11 ipmi ver 63
3.6.12 ipmi flash 63
3.6.13 ipmi flashw 64
3.6.14 ipmi flashr 64
3.6.15 ipmi flashh 64
3.6.16 ipmi flasha 65
3.6.17 ipmi raw 65

3.6.18 ipmi ipmb 65
3.6.19 ipmi ipmboem 65
3.6.20 ipmi delsdr 65
3.6.21 ipmi session info 66
3.6.22 ipmi fan 66
3.7 ver 66
3.8 list 66
3.9 find 67
3.10 found 67
3.10.1 found list 67
3.10.2 found clear 67
3.10.3 found copy <index1> [index2] [...] 67
3.10.4 found copyall 67
3.10.5 found saveAs <filename> 67
3.10.6 found refresh 67
3.11 exec 68
3.12 host 68
3.12.1 host list 68
3.12.2 host reload 68
3.12.3 host add 68
3.12.4 host remove 69
3.12.5 host rename 69
3.12.6 host group 69
3.12.6.1 host group add 69
3.12.6.2 host group remove 69
3.12.6.3 host group rename 69
3.12.6.4 host group addhost 69
3.12.6.5 host group removehost 69
3.13 hostrun 70
3.14 sc 70
3.15 pminfo 70

3.16 psfruinfo 71
3.17 psbbpInfo 71
3.18 bbp 72
3.18.1 bbp status 72
3.18.2 bbp autoDischarge 72
3.18.3 bbp discharge 72
3.31.4 bbp shutdown 72
3.31.5 bbp shutdownTimeout 73
3.19 nm 73
3.19.1 nm detect 73
3.19.2 nm ver 73
3.19.3 nm cap 73
3.19.4 nm status 74
3.19.5 nm stat 74
3.19.6 nm resetStat 74
3.19.7 nm pstate 74
3.19.8 nm tstate 74
3.19.9 nm ptstate 75
3.19.10 nm alert 75
3.19.11 nm scanPolicy 75
3.19.12 nm addPolicy 76
3.19.13 nm delPolicy 76
3.19.14 nm getPolicy 76
3.19.15 nm enablePolicy 76
3.19.16 nm disablePolicy 76
3.20 kvmwa 77
3.21 ukvm 77
3.22 vmwa 77
3.22.1 vmwa dev1list 77
3.22.2 vmwa dev1drv 77
3.22.3 vmwa dev1stop 77

3.22.4 vmwa dev2list 78
3.22.5 vmwa dev2cd 78
3.22.6 vmwa dev2iso 78
3.22.7 vmwa dev2stop 78
3.22.8 vmwa allstatus 78
3.22.9 vmwa status 78
3.22.10 vmwa log 78
3.23 dcmi 78
3.23.1 dcmi find 79
3.23.2 dcmi cap 79
3.24 dr 80
3.24.1 dr list 80
3.24.2 dr iso 80
3.24.3 dr drv 80
3.25 kvm 81
3.26 kvmw 81
3.27 kvmwx9 81
3.28 vmw 81
3.28.1 vmw floppy 81
3.28.2 vmw usbkey 81
3.28.3 vmw iso 82
3.28.4 vmw cd 82
3.28.5 vmw stopFloppy 82
3.28.6 vmw stopUsbkey 82
3.28.7 vmw stopISO 82
3.28.8 vmw stopCD 82
3.28.9 vmw status 82
3.29 sol 83
3.29.1 sol activate 83
3.29.2 sol deactivate 83
3.29.3 sol window 83

3.29.4 sol key 84
3.29.5 bitrate 84
3.29.6 retryCount 84
3.29.7 retryInternal 84
3.30 nm20 85
3.30.1 nm20 nmSDR 85
3.30.2 nm20 selTime 86
3.30.3 nm20 deviceID 86
3.30.4 nm20 reset 86
3.30.5 nm20 reset2Default 86
3.30.6 nm20 updateMode 86
3.30.7 nm20 powerOff 86
3.30.8 nm20 selfTest 86
3.30.9 nm20 mode 86
3.30.10 nm20 listImagesInfo 87
3.30.11 nm20 oemGetPower 87
3.30.12 nm20 oemGetTemp 87
3.30.13 nm20 globalEnable 87
3.30.14 nm20 globalDisable 87
3.30.15 nm20 domainEnable 88
3.30.16 nm20 domainDisable 88
3.30.17 nm20 policyEnable 88
3.30.18 nm20 policyDisable 88
3.30.19 nm20 addPowerPolicy 88
3.30.20 nm20 getPolicy 88
3.30.21 nm20 delPolicy 88
3.30.22 nm20 scanPolicy 88
3.30.23 nm20 addPolicy 89
3.30.24 nm20 statistics 90
3.30.25 nm20 resetStatistics 90
3.30.26 nm20 cap 90

3.30.27 nm20 ver 90
3.30.28 nm20 alert 90
3.30.29 nm20 pstate 90
3.30.30 nm20 tstate 91
3.30.31 nm20 ptstate 91
3.30.32 nm20 cpuCore 91
3.30.33 nm20 cpuMemTemp 91
3.30.34 nm20 hostCpuData 92
3.30.35 nm20 totalPower 92
3.31 nm30 92
3.31.1 nm30 cupsCap 92
3.31.2 nm30 cupsData 93
3.31.3 nm30 cupsConfig 93
3.31.4 nm30 cupsPolicy 93
3.31.5 nm30 cupsCore 94
3.31.6 nm30 cupsIO 95
3.31.7 nm30 cupsMem 95
3.32 hdd 95
3.32.1 hdd map 95
3.32.2 hdd info 96
3.32.3 hdd disk 97
3.32.4 lmap 97
3.32.5 linfo 97
3.32.6 ldisk 97
3.33 bios 98
3.33.1 bios ver 98
3.33.2 bios image 98
3.33.3 bios update 98
3.33.4 bios setKey 99
3.33.5 bios getMACs 99
3.33.6 bios setKeys 99

3.34 mg 99
3.34.1 mg list 99
3.34.2 mg save 99
3.34.3 mg load 99
3.34.4 mg default 100
3.34.5 mg found 101
3.34.6 mg sort 101
3.34.7 mg clear 101
3.34.8 mg refresh 101
3.35 found 101
3.35.1 found list 101
3.35.2 found clear 101
3.35.3 found copy 101
3.35.4 found copyall 101
3.35.5 found saveAs 102
3.35.6 found refresh 102
3.36 task 102
3.36.1 task run 102
3.36.2 task command 102
3.36.3 task startTime 102
3.36.4 task endTime 103
3.36.5 task state 103
3.36.6 task exitcode 103
3.36.7 task message 103
3.36.8 task remove 104
3.36.9 task message2file 104
3.36.10 task removeAll 104
3.36.11 task getTaskIDs 104
3.36.12 task status 104
3.36.13 task limit 104
3.37 tp 104

3.37.1 tp info 105
3.37.2 tp nodeID 105
3.37.3 tp systemName 105
3.37.4 tp systemPN 106
3.37.5 tp systemSN 106
3.37.6 tp chassisPN 106
3.37.7 tp chassisSN 106
3.37.8 tp backPlanePN 106
3.37.9 tp backPlaneSN 106
3.37.10 tp chassisLocation 106
3.37.11 tp bpLocation 106
3.37.12 tp bpnID 106
3.37.13 tp bpnRevision 107
3.37.14 tp nodePN 107
3.37.15 tp nodeSN 107
3.37.16 tp configID 107
3.37.17 tp mcuUpdate 107
3.38 wsiso 107
3.38.1 wsiso status 108
3.38.2 wsiso mount 108
3.38.3 wsiso umount 108
3.39 tas 108
3.39.1 tas info 108
3.39.2 tas pause 109
3.39.3 tas resume 109
3.39.4 tas refresh 109
3.39.5 tas clear 109
3.39.6 tas period 109
3.39.7 tas exec 109
3.40 nvme 110
3.40.1 nvme list 110

3.40.2 nvme info 110
3.40.3 nvme rescan 111
3.40.4 nvme insert 111
3.40.5 nvme locate 111
3.40.6 nvme stopLocate 111
3.40.7 nvme remove 111
3.40.8 nvme smartData 111
3.41 nodeKey 112
3.41.1 nodekey list 112
3.42 rsc 112
3.43 rko 113
3.44 diag 113
3.44.1 diag start 114
3.44.2 diag download 115
3.44.3 diag display 115
Appendix A Command Categories 117
Appendix B VM Command Examples 119
B.1 AMI IPMI Firmware 119
B.2 ATEN IPMI Firmware 121
B.3 Peppercon IPMI Firmware 123
Appendix C Trap Receiver 125
Appendix D Node Product Key Functions 127
Appendix E Exit Codes 128
Appendix F Software compability matrix 129
Contacting Supermicro 136

1 Introduction

1.1 Purpose

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

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

1.2 Third Party Software

1.2.1 JLine

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

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

1.3 Document Conventions

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

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

2 Usage and Mode

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

2.1 Command Line Mode

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

Usage:

```
[java]
java -jar SMCIPMITool.jar <IP> <username> <password> [commands ... ]
[Windows]
SMCIPMITool.exe <IP> <username> <password> [commands ... ]
[Linux]
SMCIPMITool <IP> <username> <password> [commands ... ]
```

2.2 Shell Mode

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

Usage:

```
[java]
java -jar SMCIPMITool.jar <IP> <username> <password> shell
[Windows]
SMCIPMITool.exe <IP> <username> <password> shell
[Linux]
SMCIPMITool <IP> <username> <password> shell
```

Example Output:

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

2.2.1 Keyboard Shortcuts

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

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

2.2.2 prompt

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

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

Example Output:

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

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

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

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

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

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

Prompt in SMCIPMITool shell mode	IPMI Firmware Type
CMM>	Peppercon Firmware (KIRA) for Blade CMM
SIM(W)>	AMI Firmware (WPCM450)
SIM(WA)>	ATEN Firmware (WPCM450)
SIMBL(W)>	AMI Firmware (WPCM450) for Blade SIMBL
SIMBL>	Peppercon Firmware (KIRA) for Blade SIMBL
SIM-IPMI>	Peppercon Firmware (KIRA) without KVM
SIM-KVM-IPMI>	Peppercon Firmware (KIRA) with KVM
SUPERO-IPMI>	OSA (Renesas 2167) Firmware
SIM(X9)>	AMI Firmware (SH7757) for X9 MBs
ASPD_T>	ATEN ASPEED Firmware for X10 MBs
MicroCMM>	MicroBlade CMM
MicroNode>	MicroBlade Node
SuperBlade>	SuperBlade B10 MBs
IPMI>	Others

2.2.3 ch

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

Useage: **ch**

Example Output:

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

2.2.4 hostrun

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

2.2.4.1 *hostrun found*

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

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

2.2.4.2 *hostrun curr*

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

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

2.2.5 search

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

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

Example Output 1:

Search "FAN" from sensor list.

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

3 Commands

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

Command(s):

```
superblade                        SuperBlade blade management (2)
microblade                         MicroBlade blade management (4)
ipmi                               IPMI device management (27)
sel                                IPMI system event log (5)
user                               IPMI user management (7)
nm                                 Node Management V1.5 (16)
nm20                               Node Management V2.0/V3.0 (X9/X10 MBs) (35)
nm30                               Node Management V3.0 (X10 Grantley MBs) (7)
dcmi                               DCMI Management (2)
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 <filename> [loop] [delay]     Execute commands from file
find [<Start> <End> <netMask>]     Find IPMI device from local or IP range
found                              found IPMI devices (6)
host                               Host management (6)
hostrun <host|group> <command>     Run a command on host or group
mg                                 Manage group command (8)
trap                               IPMI SNMP Trap receiver management (7)
sc                                 Execute shell command
ukvm                               KVM launcher (CMM,SIM,SIM(W),SIM(WA),SIM(X9))
kvm                                SIM KVM console (graphic mode)
kvmw                               SIM(W) KVM console (graphic mode)
kvmwa                              SIM(WA) KVM console (graphic mode)
kvmwx9                             SIM(X9) KVM console (graphic mode)
dr                                 SIM Virtual Media Drive Redirection
vm                                 SIM Virtual Media Management (4)
vmw                                SIM(W) Virtual Media
vmwa                               SIM(WA) Virtual Media
prompt <type> <on|off>             Config information displayed on prompt
tagLoc                             Tag for Location (16)
sol                                SOL Commands
hdd                                HDD status (6)
bbp                                Battery Backup Power Management (5)
task                               Background Task (13)
tp                                 TwinPro MCU Information (14)
wsiso                               Mount ISO file via Windows Share or SAMBA (for X9,X10)
tas                                TAS settings (6)
```

```
nvme                            NVMe (Non-Volatile Memory Express) (4)
nodekey                         Node Product Key (1)
rsc [filename.ext]              iKVM remote screen capture(X9,X10 ATEN firmware)
rko [filepath]                  iKVM remote keyboard operation(X9,X10 ATEN firmware)
diag                            Diag functions (3)
```

3.1 superblade

3.1.1 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
```

3.1.2 superblade failure

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

Usage: superblade **`failure`**

3.1.3 superblade blade

The blade command will bring up the following subcommands.

3.1.3.1 *superblade blade status*

This command will 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
```

3.1.3.2 *superblade blade index(es)*

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

3.1.3.2.1 superblade blade <blade number> status

Used to check the status of the individual blade specified.

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
```

3.1.3.2.2 superblade blade <blade number> power

Used to access power control for the individual blade specified.

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
```

3.1.3.2.3 superblade blade <blade number> kvm

Requests a kvm switch for the individual blade specified.

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

3.1.3.2.4 superblade blade <blade number> uid

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

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

3.1.3.2.5 superblade blade <blade number> sensor

Used to get sensor readings from the individual blade specified.

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 |
```

3.1.3.2.6 superblade blade <blade number> bmc

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

3.1.3.2.6.1 superblade blade <blade number> ip

Used 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>**

3.1.3.2.6.2 superblade blade <blade number> mac

Used 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>**

3.1.3.2.6.3 superblade blade <blade number> gateway

Used 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>**

3.1.3.2.6.4 superblade blade <blade number> netmask

Used 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>**

3.1.3.2.6.5 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]**

3.1.3.2.6.6 superblade blade <blade number> vlan

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

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

3.1.3.2.6.7 superblade blade <blade number> ipmb

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

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

3.1.3.2.7 superblade blade <blade number> config

Used to get the configuration of the individual blade specified.

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
```

3.1.3.2.8 superblade blade <blade number> sn

Used to get the MB serial number of the individual blade specified

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

3.1.4 superblade gigabit

Entering the gigabit command will bring up the following subcommands.

3.1.4.1 *superblade gigabit status*

This command will 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
```

3.1.4.2 *superblade gigabit index(es)*

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

3.1.4.2.1 superblade gigabit <gigabit number> status

Used to display the status of the gigabit switch specified.

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
```

3.1.4.2.2 superblade gigabit <gigabit number> power

Used to access power control for the gigabit switch specified.

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

3.1.4.2.3 superblade gigabit <gigabit number> wss

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

3.1.4.2.3.1 superblade gigabit <gigabit number> wss ip

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

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

3.1.4.2.3.2 superblade gigabit <gigabit number> wss netmask

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

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

3.1.4.2.3.3 superblade gigabit <gigabit number> wss gateway

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

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

3.1.4.2.3.4 superblade gigabit <gigabit number> wss datetime

Used 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
```

3.1.4.2.3.5 superblade gigabit <gigabit number> wss username

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

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

3.1.4.2.3.6 superblade gigabit <gigabit number> wss password

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

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

3.1.4.2.4 superblade gigabit <gigabit number> ipmode

Used 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>**

3.1.4.2.5 superblade gigabit <gigabit number> boot

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

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

3.1.4.2.6 superblade gigabit <gigabit number> restart

Used to soft restart the gigabit switch specified.

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

3.1.4.2.7 superblade gigabit <gigabit number> fd

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

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

3.1.5 superblade power

Entering the power command will bring up the following subcommands.

3.1.5.1 *superblade power status*

This command will 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
```

3.1.5.2 *superblade power index(es)*

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

3.1.5.2.1 superblade power <power number> status

Used to display the status of the power supply specified.

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
```

3.1.5.2.2 superblade power <power number> power

Used to access power control for the power supply specified.

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

3.1.5.2.3 superblade power <power number> fan

Used to access fan control for the power supply specified.

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

3.1.6 superblade ib

Entering the ib command will bring up the following subcommands.

3.1.6.1 *superblade ib status*

This command will 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
```

3.1.6.2 *superblade ib index(es)*

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

3.1.6.2.1 superblade ib <ib number> status

Used to display the status of the InfiniBand switch specified.

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
```

3.1.6.2.2 superblade ib <ib number> power

Used to access power control for the InfiniBand switch specified.

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

3.1.7 superblade cmm

Entering the cmm command will bring up the following subcommands.

3.1.7.1 *superblade cmm status*

This command will 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
```

3.1.7.2 *superblade cmm index*

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

3.1.7.2.1 superblade cmm <cmm number> status

Used to display the status of the CMM specified.

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

Example Output:

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

CMM 1 is being managed now
```

3.1.7.2.2 superblade cmm <cmm number> dtime

Used 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")
```

3.1.7.2.3 superblade cmm <cmm number> ntp

Used to synch the time with the NTP servers.

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

3.1.7.2.4 superblade cmm <cmm number> reset

Used to reset the CMM specified.

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

3.1.7.2.5 superblade cmm <cmm number> flash

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

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

3.1.7.2.6 superblade cmm <cmm number> ver

Used to display the firmware version in the CMM specified.

Usage: superblade **cmm ver**

Example Output:

```
Version:2.2.64  build 5420
```

3.1.7.2.7 superblade cmm <cmm number> ip

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

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

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

3.1.7.2.8 superblade cmm <cmm number> mac

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

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

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

3.1.7.2.9 superblade cmm <cmm number> gateway

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

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

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

3.1.7.2.10 superblade cmm <cmm number> netmask

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

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

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

3.1.7.2.11 superblade cmm <cmm number> syncfg

Used to synch the configuration to the slave CMM specified.

3.1.7.2.12 superblade cmm <cmm number> opmode

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

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

Mode Choices: 0 = Enterprise 1 = Office

3.1.7.2.13 superblade cmm <cmm number> dhcp

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

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

3.1.8 superblade listtemp

Entering the listtemp command will 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 |
```

3.1.9 superblade allsel <filename>

Entering this commad will save all system event logs to a file in .csv format.

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

3.1.10 superblade burst

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

3.1.10.1 *superblade burst allUp*

Use this command to power burst up all blades.

Usage: superblade burst **`allUp`**

3.1.10.2 *superblade burst allDown*

Use this command to power burst down all blades.

Usage: superblade burst **allDown**

3.1.10.3 *superblade burst allRest*

Use this command to power burst reset all blades.

Usage: superblade burst **allReset**

3.1.10.4 *superblade burst allSoftshutdown*

Use this command to soft shut down all blades.

Usage: superblade burst **allSoftshutdown**

3.1.10.5 *superblade burst up*

Use this command to power burst up blades.

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

3.1.10.6 *superblade burst down*

Use this command to power burst down blades.

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

3.1.10.7 *superblade burst reset*

Use this command to power burst reset blades.

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

3.1.10.8 *superblade burst softshutdown*

Use this command to power burst soft shut down blades.

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

3.1.11 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**

3.1.12 superblade midPlaneFRU

Use this command to display middle plane FRU information.

Usage: superblade **midplaneFRU**

3.1.13 superblade powerconsumption

Display blade power consumption and Enclosure power supply power consumption. Please note that blade power readings only available after B10 series. Otherwise the messages would be “no support”.

Usage: superblade powerconsumption

3.2 microblade

3.2.1 microblade summary

Used 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
```

3.2.2 microblade node

3.2.2.1 *microblade node sensor*

Used to display the MicroBlade node sensor information.

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

3.2.2.2 *microblade node status*

Used to display the MicroBlade node status.

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

3.2.2.3 *microblade node power*

Used 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
```

3.2.2.4 *microblade node ip*

Used 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]

3.2.2.5 *microblade node dhcp*

Used 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]

3.2.2.6 *microblade node mac*

Used to get or set MicroBlade node mac status.

Usage:

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

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

3.2.2.7 *microblade node mask*

Used 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]

3.2.2.8 *microblade node gateway*

Used 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]

3.2.2.9 *microblade node name*

Used to get or set the MicroBlade node name.

Usage:

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

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

3.2.2.10 *microblade node uid*

Used 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]

3.2.3 microblade switch

3.2.3.1 *microblade switch info*

Used to display information about the MicroBlade switch.

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

3.2.3.2 *microblade switch power*

Used 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]

3.2.3.3 *microblade switch username*

Used to get or set the MicroBlade switch username.

Usage:

(to get) microBlade switch username <switch index>

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

3.2.3.4 *microblade switch lan*

3.2.3.4.1 microblade switch lan ip

Used 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]

3.2.3.4.2 microblade switch lan dhcp

Used 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]

3.2.3.4.3 microblade switch lan mask

Used 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]

3.2.3.4.4 microblade switch lan gateway

Used to get 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]

3.2.3.5 *microblade switch getTime*

Used to display the MicroBlade switch time.

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

3.2.4 microblade psu

3.2.4.1 *microblade psu info*

Used to display information about the MicroBlade power supply.

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

3.2.4.2 *microblade psu power*

Used to provide power supply power control.

Usage:

(to get) microBlade psu power [psu index]

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

3.2.4.3 *microblade psu fanMode*

Used to switch the power supply power to be in fan mode.

Usage:

(to get) microBlade psu fanMode

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

3.2.4.4 *microblade psu fanSpeed*

Used to provide power supply power for fan speed control.

Usage:

(to get) microBlade psu fanSpeed

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

3.2.5 microblade fru

3.2.5.1 *microblade fru cmm*

Provide FRU information of the CMM.

3.2.5.2 *microblade fru midplane*

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         =
```

3.2.5.3 *microblade fru switch*

Provide FRU information of the switch.

3.2.5.4 *microblade fru psu*

Provide FRU information of the power supply.

3.2.6 microblade powerConsumption

Used to microblade system enclosure power consumption.

Usage: **`microBlade powerConsumption`**

3.3 sel

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

3.3.1 sel info

This command gives the information on the system event log.

Usage: **sel info**

Example Output:

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

3.3.2 sel list

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

Usage: **sel list**

3.3.3 sel csv

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

Usage: **sel csv <filename>**

3.3.4 sel clear

This command will clear the system event log.

Usage: **sel clear**

allsel

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

Usage: **allsel <filename>**

3.4 user

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

3.4.1 user add

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

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

3.4.2 user list

Entering the list command will display the users.

Usage: **user list**

Example Output:

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

3.4.3 user delete

Entering the delete command allows you to delete a user.

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

3.4.4 user level

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

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

The following levels may be assigned:

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

3.4.5 user test

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

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

3.4.6 user setpwd

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

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

3.5 vm

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

Notes:
* This command only works properly in shell mode.

3.5.1 vm status

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

Usage: **`vm status`**

Example Output:

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


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

3.5.2 vm stop

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

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

3.5.3 vm floppy

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

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

3.5.4 vm iso

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

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

Example:

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

3.6 ipmi

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

3.6.1 ipmi sensor

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

Usage: **ipmi sensor**

Example Output:

```
Getting SDR data ...
Getting sensors ...
  Status | (#)Sensor               |      Reading | Low Limit | High Limit |
  ------ | ---------               |      ------- | --------- | ---------- |
  OK     | (7) CPU1 Temp           |          Low |           |            |
  OK     | (8) CPU2 Temp           |          Low |           |            |
  OK     | (9) System Temp         |     63C/145F |   -5C/23F |   75C/167F |
  OK     | (10) CPU1 Vcore         |       0.92 V |    0.82 V |     1.35 V |
  OK     | (11) CPU2 Vcore         |       0.88 V |    0.82 V |     1.35 V |
  OK     | (12) +5V                |       5.12 V |    4.48 V |     5.53 V |
  OK     | (13) +5VSB              |       5.12 V |    4.48 V |     5.53 V |
  OK     | (14) +12V               |      12.19 V |    10.7 V |    13.25 V |
  OK     | (15) -12V               |     -11.99 V |  -12.58 V |   -11.22 V |
  OK     | (16) +3.3V              |       3.26 V |    2.92 V |     3.64 V |
  OK     | (17) +3.3VSB            |       3.24 V |    2.92 V |     3.64 V |
  OK     | (18) VBAT               |       3.21 V |    2.92 V |     3.64 V |
  OK     | (19) Fan1               |     4320 RPM |   675 RPM |  34155 RPM |
         | (20) Fan2               |        0 RPM |   675 RPM |  34155 RPM |
  OK     | (21) Fan3               |     4320 RPM |   675 RPM |  34155 RPM |
  OK     | (22) Fan4               |     4185 RPM |   675 RPM |  34155 RPM |
         | (23) Fan5               |        0 RPM |   675 RPM |  34155 RPM |
         | (24) Fan6               |        0 RPM |   675 RPM |  34155 RPM |
         | (25) Fan7               |        0 RPM |   675 RPM |  34155 RPM |
         | (26) Fan8               |        0 RPM |   675 RPM |  34155 RPM |
  OK     | (27) P1-DIMM1A Temp     |     47C/117F |   -5C/23F |   75C/167F |
         | (28) P1-DIMM1B Temp     |          N/A |   -5C/23F |   75C/167F |
  OK     | (29) P1-DIMM2A Temp     |     48C/118F |   -5C/23F |   75C/167F |
         | (30) P1-DIMM2B Temp     |          N/A |   -5C/23F |   75C/167F |
  OK     | (31) P1-DIMM3A Temp     |     46C/115F |   -5C/23F |   75C/167F |
         | (32) P1-DIMM3B Temp     |          N/A |   -5C/23F |   75C/167F |
  OK     | (33) P2-DIMM1A Temp     |     38C/100F |   -5C/23F |   75C/167F |
         | (34) P2-DIMM1B Temp     |          N/A |   -5C/23F |   75C/167F |
  OK     | (35) P2-DIMM2A Temp     |      37C/99F |   -5C/23F |   75C/167F |
         | (36) P2-DIMM2B Temp     |          N/A |   -5C/23F |   75C/167F |
  OK     | (37) P2-DIMM3A Temp     |      37C/99F |   -5C/23F |   75C/167F |
         | (38) P2-DIMM3B Temp     |          N/A |   -5C/23F |   75C/167F |
```

```
OK      | (39) Intrusion           | 00 C0 00 00  |       N/A |        N/A |
OK      | (40) PS Status           | 00 C0 00 00  |       N/A |        N/A |
```

3.6.2 ipmi power

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

3.6.2.1 *ipmi power status*

Use the power status command to display system power status.

Usage: **ipmi power status**

3.6.2.2 *ipmi power up*

Use the power up command to power up a system.

Usage: **ipmi power up**

3.6.2.3 *ipmi power down*

Use the power down command to power down a system.

Usage: **ipmi power down**

3.6.2.4 *ipmi power softshutdown*

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

Usage: **ipmi power softshutdown**

3.6.2.5 *ipmi power reset*

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

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

3.6.2.6 *ipmi power cycle*

Use the cycle command to power cycle a system.

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

3.6.2.7 *ipmi power diag*

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

Usage: **ipmi power diag**

3.6.2.8 *ipmi power bootoption <Index>*

Use the bootoption command to set boot device in next boot. Following is the boot option index.

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
                          Ex: set power cycle interval as 10 seconds and execute power cycle
```

3.6.3 ipmi acpi

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

Usage: **ipmi acpi**

3.6.4 ipmi lan

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

Usage: **ipmi lan**

Example Output:

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

3.6.4.1 *ipmi lan ip*

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

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

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

3.6.4.2 *ipmi lan mac*

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

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

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

3.6.4.3 *ipmi lan gateway*

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

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

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

3.6.4.4 *ipmi lan netmask*

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

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

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

3.6.4.5 *ipmi lan snmp*

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

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

Example Output:

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

3.6.4.6 *ipmi lan snmpcomm*

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

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

Example Output:

```
public
```

3.6.4.7 *ipmi lan arp*

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

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

3.6.4.8 *ipmi lan dhcp*

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

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

3.6.4.9 *ipmi lan vlan*

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

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

3.6.5 ipmi fru

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

Usage: **ipmi fru**

Example Output:

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

3.6.6 ipmi fruw

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

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             =
```

3.6.7 ipmi frubackup

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

Usage: ipmi **frubackup <filname>**

3.6.8 ipmi frurestore

Use this command to restore FRU information from a file.

Usage: ipmi **frurestore <filename>**

3.6.9 ipmi oem

Using the oem command will list the following subcommands.

3.6.9.1 *ipmi oem clrint*

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

Usage: **ipmi oem clrint**

3.6.9.2 *ipmi oem id*

Use the id command to display the motherboard ID.

Usage: **ipmi oem id**

3.6.9.3 *ipmi oem uid*

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

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

3.6.9.4 *ipmi oem backup*

Use the backup command to backup the configuration file as the filename specified (only available on X7 series motherboards).

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

3.6.9.5 *ipmi oem restore*

Use the restore command to restore the configuration from the filename specified (only available on X7 series motherboards).

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

3.6.9.6 *ipmi oem backupcfg*

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

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

Example Output:

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

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

3.6.9.7 *ipmi oem restorecfg*

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

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

Example Output:

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

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

3.6.9.8 *ipmi oem getcfg*

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

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

Example Output:

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

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

3.6.9.9 *ipmi oem setcfg*

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

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

Example Output:

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

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

3.6.9.10 *ipmi oem lani*

Use the lani command to interface with the IPMI LAN.

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

3.6.9.11 *ipmi oem mac*

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

Usage: **ipmi oem mac**

Example Output:

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

Notes:

Following Ipmi oem x10cfg commands are license required.

3.6.9.12 *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
```

3.6.9.13 *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
```

3.6.9.14 *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
```

3.6.9.15 *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
```

3.6.9.16 *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
```

3.6.9.16.1 ipmi oem x10cfg ntp list

Entering the list command will 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
```

3.6.9.16.2 ipmi oem x10cfg ntp state

Use this command to get/set the NTP state.

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

3.6.9.16.3 ipmi oem x10cfg ntp timezone

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

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

3.6.9.16.4 ipmi oem x10cfg ntp daylight

Use this command to get/set NTP daylight.

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

3.6.9.16.5 ipmi oem x10cfg ntp primary

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

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

3.6.9.16.6 ipmi oem x10cfg ntp secondary

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

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

3.6.9.17 *ipmi oem x10cfg ddns*

Entering the ddns command will 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
```

3.6.9.17.1 ipmi oem x10cfg ddns list

Entering the list command will 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
```

3.6.9.17.2 ipmi oem x10cfg ddns state

Use this command to get or set the DDNS state.

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

3.6.9.17.3 ipmi oem x10cfg ddns server

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

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

3.6.9.17.4 ipmi oem x10cfg ddns hostname

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

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

3.6.9.17.5 ipmi oem x10cfg ddns tsig

Use this command to get or set the TSIG authentication.

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

3.6.9.18 *ipmi oem x10cfg alert*

Entering the alert command will 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
```

3.6.9.18.1 ipmi oem x10cfg alert list

Entering the list command will 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
-------------------------------------------------------------------------------
```

3.6.9.18.2 ipmi oem x10cfg alert level

Entering the level command allows you to get/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

3.6.9.18.3 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]**

3.6.9.18.4 ipmi oem x10cfg alert mail

Entering the mail command allows you to get or set the destination mail address as a specific alert.

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

3.6.9.18.5 ipmi oem x10cfg alert subject

Entering the subject command allows you to get or set the destination mail subject as a specific alert.

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

3.6.9.18.6 ipmi oem x10cfg alert message

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

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

3.6.9.18.7 ipmi oem x10cfg alert send

Entering the send command allows you to send a specific alert.

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

3.6.9.18.8 ipmi oem x10cfg alert delete

Entering the delete command allows you to delete a specific alert.

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

3.6.9.19 *ipmi oem x10cfg smtp*

Entering the smtp command will 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 [enable|disable]           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
```

3.6.9.19.1 ipmi oem x10cfg smtp list

Entering the list command will 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
```

3.6.9.19.2 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]**

3.6.9.19.3 ipmi oem x10cfg smtp server

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

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

3.6.9.19.4 ipmi oem x10cfg smtp port

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

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

3.6.9.19.5 ipmi oem x10cfg smtp user

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

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

3.6.9.19.6 ipmi oem x10cfg smtp password

Use this command to get or set the SMTP password.

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

3.6.9.19.7 ipmi oem x10cfg smtp mail

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

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

3.6.9.20 *ipmi oem x10cfg dns*

Get/Set dns server IP

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

3.6.9.21 *ipmi oem summary*

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
```

3.6.10 ipmi reset

Using the reset command will reset IPMI.

Usage: **ipmi reset**

3.6.11 ipmi ver

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

Usage: **ipmi ver**

Example Output:

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

3.6.12 ipmi flash

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

Usage: **ipmi flash <filename>**

3.6.13 ipmi flashw

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

Usage: **ipmi flashw <filename>**

3.6.14 ipmi flashr

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

Usage: **ipmi flashr**

Example Output:

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

3.6.15 ipmi flashh

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

Usage: **ipmi flashh <filename>**

Example Output:

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

3.6.16 ipmi flasha

Use the flasha 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: **flasha <filename> [Preserve_opt]**

Example Output:

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

3.6.17 ipmi raw

Use the raw command to send an IPMI raw command.

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

3.6.18 ipmi ipmb

Use the ipmb command to send an IPMI raw command.

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

3.6.19 ipmi ipmboem

Use the ipmboem command to send an IPMI raw command.

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

3.6.20 ipmi delsdr

Use the delsdr command to delete the SDR.

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

3.6.21 ipmi session info

Use this command to view the information of

Usage: **ipmi sessioninfo**

Example Output:

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

3.6.22 ipmi fan

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

Usage: **ipmi fan**

Example Output:

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

Fan Modes:
0: Standard Speed
1: Full Speed
2: Optimal Speed
3: PUE2 Optimal Speed
4: Heavy IO Speed
5: PUE3 Optimal Speed
```

3.7 ver

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

Usage: **ver**

Example Output:

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

3.8 list

Entering the list command will display all available commands.

Usage: **list**

3.9 find

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

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

Example Output:

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

3.10 found

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

Usage: **found [clear]**

3.10.1 found list

Use the list command to list all found IPMI devices.

Usage: **found list**

3.10.2 found clear

Use the clear command to clear all found IPMI devices.

Usage: **found clear**

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

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

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

3.10.4 found copyall

Copy all found devices to the default managed group

Usage: **found copyall**

3.10.5 found saveAs <filename>

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

Usage: **found saveAs<filename>**

3.10.6 found refresh

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

Usage: **found refresh**

3.11 exec

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

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

Loop = 0 is for an infinite loop

Delay is in seconds

3.12 host

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

3.12.1 host list

Use the list 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
```

3.12.2 host reload

Using the reload command will reload the host data.

Usage: **host reload**

3.12.3 host add

Use the add command to add a host.

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

3.12.4 host remove

Use the remove command to remove a host.

Usage: **host remove <host>**

3.12.5 host rename

Use the rename command to rename a host.

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

3.12.6 host group

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

3.12.6.1 *host group add*

Use the add command to add a host group.

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

3.12.6.2 *host group remove*

Use the remove command to remove a host group.

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

3.12.6.3 *host group rename*

Use the rename command to rename a host group.

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

3.12.6.4 *host group addhost*

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

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

3.12.6.5 *host group removehost*

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

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

3.13 hostrun

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

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

Example Output:

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

[bl2:192.168.10.244]
Done
```

3.14 sc

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

Usage: **sc <command>**

Example Output:

```
CMM>sc dir (execute dir command in Windows OS)
CMM>sc ls (execute ls command in Linux OS)
CMM>sc ping 192.168.10.123 (execute ping command)
```

3.15 pminfo

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

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

Example Output:

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

3.16 psfruinfo

This command will 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
```

3.17 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]
```

3.18 bbp

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

3.18.1 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]
```

3.18.2 bbp autoDischarge

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

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

3.18.3 bbp discharge

Use this command to manually discharge the battery.

Usage: **discharge <module>**

3.31.4 bbp shutdown

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

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

3.31.5 bbp shutdownTimeout

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

Usage: **bbp shutdownTimeout**

3.19 nm

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

3.19.1 nm detect

Use the detect command to detect if ME is present.

Usage: **nm detect**

Example Output:

```
This device supports Node Manager
```

3.19.2 nm ver

Use the ver command to display the node manager version.

Usage: **nm ver**

Example Output:

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

3.19.3 nm cap

Use the cap command to display the node manager capabilities.

Usage: **nm cap**

Example Output:

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

3.19.4 nm status

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

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

Example Output:

```
Node Manager is enabled
```

3.19.5 nm stat

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

Usage: **nm stat [ID]**

Example Output:

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

3.19.6 nm resetStat

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

Usage: **nm resetStat [ID]**

3.19.7 nm pstate

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

Usage: **nm pstate [value]**

Example Output:

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

3.19.8 nm tstate

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

Usage: **nm tstate [value]**

Example Output:

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

3.19.9 nm ptstate

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

Usage: **nm ptstate**

Example Output:

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

3.19.10 nm alert

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

Usage: **nm alert [destination]**

Example Output:

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

3.19.11 nm scanPolicy

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

Usage: **nm scanPolicy [end]**

Example Output:

```
============================================================
Policy ID = 0, Power Limit = 32767 w
Policy state:
 Policy enabled
 Per Domain Node Manager policy control enabled
```

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

3.19.12 nm addPolicy

Use the addPolicy command to add a new policy.

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

Example Output:

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

3.19.13 nm delPolicy

Use the delPolicy command to delete a policy.

Usage: **nm delPolicy <ID>**

3.19.14 nm getPolicy

Use the getPolicy command to get a policy.

Usage: **nm getPolicy <ID>**

Example:

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

3.19.15 nm enablePolicy

Use the enablePolicy command to enable a policy.

Usage: **nm disablepolicy <ID>**

3.19.16 nm disablePolicy

Use the disablePolicy command to disable a policy.

Usage: **nm disablePolicy <ID>**

3.20 kvmwa

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

Usage: **kvmwa**

3.21 ukvm

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

Usage: **ukvm**

3.22 vmwa

Entering the vmwa command will list the following vmwa subcommands (applies only to devices with ATEN firmware). Refer to *Appendix B* for more on VM commands. Please note that this command only works in shell mode.

Usage: **vmwa**

Notes:

* Supports 2 virtual devices (device 1 & device 2).
Device 1 will be Hard Disk, USB or Floppy.
Device 2 will be CD, DVD or ISO file.
* List available devices before mount virtual media when plug in Removable device.
* This command only works properly in shell mode.

3.22.1 vmwa dev1list

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

Usage: **vmwa dev1list**

3.22.2 vmwa dev1drv

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

Usage: **vmwa dev1drv <index>**

3.22.3 vmwa dev1stop

Use the dev1stop command to stop the virtual device 1.

Usage: **vmwa dev1stop**

3.22.4 vmwa dev2list

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

Usage: **vmwa dev2list**

3.22.5 vmwa dev2cd

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

Usage: **vmwa dev2cd <index>**

3.22.6 vmwa dev2iso

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

Usage: **vmwa dev2iso <filename>**

3.22.7 vmwa dev2stop

Use the dev2stop command to stop the virtual device 2.

Usage: **vmwa dev2stop**

3.22.8 vmwa allstatus

Use the allstatus command to show all VMWA status.

Usage: **vmwa allstatus**

3.22.9 vmwa status

Use the status command to show the status.

Usage: **vmwa status**

Example Output:

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

3.22.10 vmwa log

Use the log command to show the log.

Usage: **vmwa log**

3.23 dcmi

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

3.23.1 dcmi find

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

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

Example Output:

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

3.23.2 dcmi cap

Use the cap command to list the DCMI capabilities information.

Usage: **dcmi cap**

Example Output:

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

Optional Platform capabilities
Power Management       :Not Compliant

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

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

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

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

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

Power Management Controller Channel Number
Channel Number    :00
```

```
Device Revision   :01

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

3.24 dr

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

3.24.1 dr list

Use the list command to list the available local drives.

Usage: **dr list**

Example Output:

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

3.24.2 dr iso

Use the iso 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 quote at begin and end of <path to iso file>.

3.24.3 dr drv

Use the drv 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.

3.25 kvm

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

Usage: **kvm**

3.26 kvmw

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

Usage: **kvmw**

3.27 kvmwx9

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

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

Example Output:

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

3.28 vmw

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

Usage: **vmw**

Notes:

* This command only works properly in shell mode.

3.28.1 vmw floppy

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

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

3.28.2 vmw usbkey

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

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

3.28.3 vmw iso

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

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

3.28.4 vmw cd

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

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

3.28.5 vmw stopFloppy

This command is used to stop the connected floppy.

Usage: **vmw stopFloppy**

3.28.6 vmw stopUsbkey

This command is used to stop the connected USB key.

Usage: **vmw stopUsbkey**

3.28.7 vmw stopISO

This command is used to stop the connected ISO.

Usage: **vmw stopISO**

3.28.8 vmw stopCD

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

Usage: **vmw stopCD**

3.28.9 vmw status

This command is used to view the Virtual Media status.

Usage: **vmw status3.35 sol**

3.29 sol

Entering the sol command will list the following SOL subcommands.

3.29.1 sol activate

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

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

Usage: **`sol activate`**

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

3.29.2 sol deactivate

Use the sol deactivate command to stop SOL.

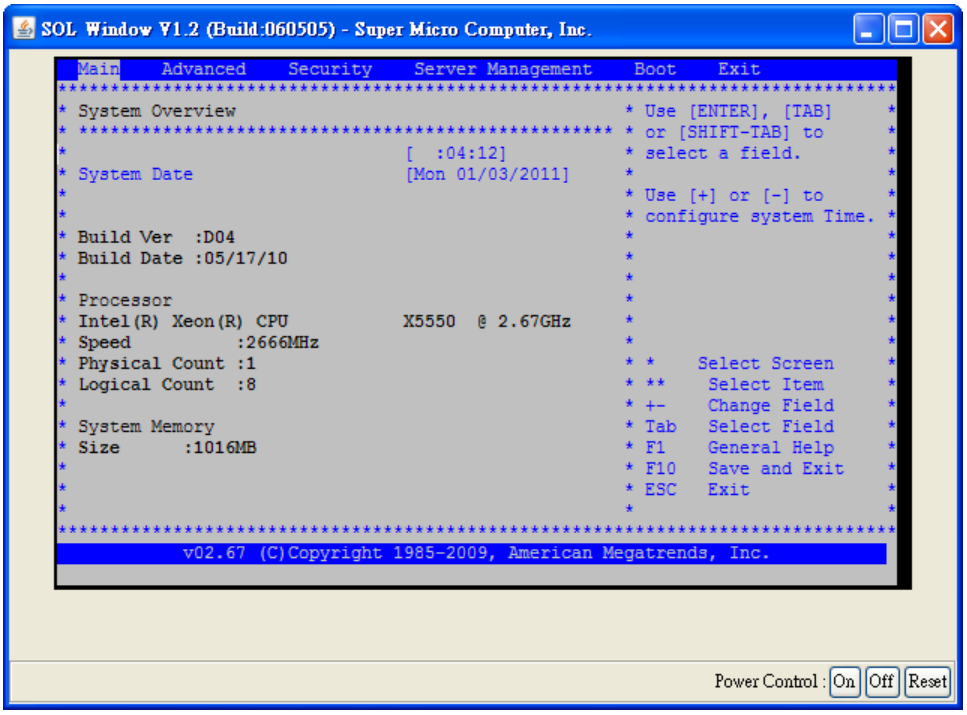
Usage: **`sol deactivate`**

3.29.3 sol window

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

Usage: **`sol window`**

Example Output:



3.29.4 sol key

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

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

3.29.5 bitrate

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

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

3.29.6 retryCount

Use the sol bitrate command to configure the SOL retry counts.

Usage: **`sol retryCount [Number]`**

3.29.7 retryInternal

Use the sol bitrate command to configure the SOL retry interval. Retry Interval in 10 ms increments. Sets the time that the BMC will wait before the first retry and the time between retries when sending SOL packets to the remote console.

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

3.30 nm20

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

Usage: **nm20**

Example Output:

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

3.30.1 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
```

3.30.2 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
```

3.30.3 nm20 deviceID

Use this command to get the ME Device ID.

3.30.4 nm20 reset

Use this command to reboot ME.

3.30.5 nm20 reset2Default

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

3.30.6 nm20 updateMode

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

3.30.7 nm20 powerOff

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

Usage: **nm20 powerOff**

3.30.8 nm20 selfTest

Use this command to get the Self Test results.

3.30.9 nm20 mode

Use this command to get the ME running mode.

Usage: **nm20 mode**

Example Output:

```
ME is in NORMAL mode
```

3.30.10 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
```

3.30.11 nm20 oemGetPower

Use this command to get power.

Usage: **nm20 oemGetPower**

Example Output:

```
56 watts
```

3.30.12 nm20 oemGetTemp

Use this command to run temporary commands.

Usage: **nm20 oemGetTemp**

Example Output:

```
56 (c)
```

3.30.13 nm20 globalEnable

Use this command for Global Enable NM policy control.

3.30.14 nm20 globalDisable

Use this command for Global Disable NM policy control.

3.30.15 nm20 domainEnable

Use this command for per Domain Enable NM policies.

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

3.30.16 nm20 domainDisable

Use this command for per Domain Disable NM policies.

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

3.30.17 nm20 policyEnable

Use this command for per Policy Enable NM policy.

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

3.30.18 nm20 policyDisable

Use this command for per Policy Disable NM policy.

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

3.30.19 nm20 addPowerPolicy

Use this command to add power policy.

Usage: **addPowerPolicy <pID> <limit> <t> <p>**

```
pID: Policy ID
limit: Policy Target Limit
t: Correction Time Limit (ms)
p: Statistics Reporting Period in seconds
* domainID will be 0(Entire platform) for this command
ex: nm20 addPowerPolicy  1 100 6000 10
```

3.30.20 nm20 getPolicy

Use this command to get policy.

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

3.30.21 nm20 delPolicy

Use this command to delete policy.

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

3.30.22 nm20 scanPolicy

Use this command to scan all presented policies.

Usage: **nm20 scanPolicy**

Example Output:

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

    Total Policies = 1
```

3.30.23 nm20 addPolicy

Use this command to add policy.

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

```
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
```

3.30.24 nm20 statistics

Use this command to display statistics.

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

3.30.25 nm20 resetStatistics

Use this command to reset NM statistics.

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

3.30.26 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
```

3.30.27 nm20 ver

Use this command to show the version.

Usage: **nm20 ver**

Example Output:

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

3.30.28 nm20 alert

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

Usage: **nm20 alert [dest]**

3.30.29 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
```

3.30.30 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
```

3.30.31 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)
```

3.30.32 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
```

3.30.33 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)
```

3.30.34 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
```

3.30.35 nm20 totalPower

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

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

3.31 nm30

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

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
```

3.31.1 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
```

3.31.2 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 )
```

3.31.3 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
```

3.31.4 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
```

3.31.5 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
```

3.31.6 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
```

3.31.7 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
```

3.32 hdd

Enter the hdd command to display the physical and logical HDD status . Please note that the command is hardware-dependent.

Notes:
* These set of commands only works with mega RAID 2108,2208 and 3108 devices.

3.32.1 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
Enclosure Set :1
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23
------------------------------------------------------------------------
 O  O  O  O  O  O  O  O  O  O  O  O  O  O  O  O  O  O  O  O  O  O  O  O
Enclosure Set :2
```

```
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23
-----------------------------------------------------------------------
 O  O  O  O  O  O  O  O  O  O  O  O  -  -  -  -  -  -  -  -  -  -  -  -
Enclosure Set :6
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23
-----------------------------------------------------------------------
 O  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -
O: OK
X: Error
```

3.32.2 hdd info

Use this command to display HDD information.

Usage: **`hdd info`**

Example Output:

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

```
    18 | TOSHIBA   | MBF2600RC        | 0108 | 6.0Gb/s   | 557.9 GB | 31   |   2 |
UNCONFIG_GOOD
    19 | TOSHIBA   | MBF2600RC        | 0107 | 6.0Gb/s   | 557.9 GB | 31   |   2 |
UNCONFIG_GOOD
    20 | TOSHIBA   | MBF2600RC        | 0108 | 6.0Gb/s   | 557.9 GB | 31   |   2 |
UNCONFIG_GOOD
    21 | TOSHIBA   | MBF2600RC        | 0107 | 6.0Gb/s   | 557.9 GB | 32   |   2 |
UNCONFIG_GOOD
    22 | TOSHIBA   | MBF2600RC        | 0107 | 6.0Gb/s   | 557.9 GB | 31   |   2 |
UNCONFIG_GOOD
    23 | TOSHIBA   | MBF2600RC        | 0108 | 6.0Gb/s   | 557.9 GB | 32   |   2 |
UNCONFIG_GOOD
```

3.32.3 hdd disk

Use this command to display detailed HDD information by index.

Usage: **hdd disk <index>**

Example Output:

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

3.32.4 lmap

Use this command to display logical HDD present status.

Usage: **hdd lmap**

3.32.5 linfo

Use this command to display logical HDD information.

Usage: **hdd linfo**

3.32.6 ldisk

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

Usage: **hdd ldisk <index>**

3.33 bios

This command is set to update X9, X10, X11 and B1 BIOS and activate the product key. It is required to activate the product key before use. Please contact your Supermicro sales representative for details.

Usage: **bios**

3.33.1 bios ver

Use this command to check the BIOS version.

Usage: bios **ver**

3.33.2 bios image

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

Usage: bios **image <filename>**

3.33.3 bios update

Use this command to update BIOS.

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)
```

3.33.4 bios setKey

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

Usage: bios **setKey <ProductKey>**

3.33.5 bios getMACs

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

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

3.33.6 bios setKeys

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

Usage: bios **setKeys <file>**

3.34 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.

3.34.1 mg list

Use this command to list the current managed devices.

Usage: mg **list**

3.34.2 mg save

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

Usage: mg **save <filename>**

3.34.3 mg load

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

Usage: mg **load <filename>**

3.34.4 mg default

Use this command to manage the default group.

Usage: mg **`default`**

3.34.5 mg found

Use this command to manage the found group.

Usage: mg **found**

3.34.6 mg sort

Use this command to sort the currently managed devices.

Usage: mg **sort**

3.34.7 mg clear

Use this command to clear all currently managed devices.

Usage: mg **clear**

3.34.8 mg refresh

Use this command to refresh the managed devices.

Usage: mg **refresh**

3.35 found

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

3.35.1 found list

Use this command to list the found IPMI devices.

Usage: found **list**

3.35.2 found clear

Use this command to clear the found IPMI devices.

Usage: found **clear**

3.35.3 found copy

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

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

3.35.4 found copyall

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

Usage: found **copyall**

3.35.5 found saveAs

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

Usage: found **saveAs <filename>**

3.35.6 found refresh

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

Usage: found **refresh**

3.36 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**

Notes:

* This command set only works properly in shell mode.

3.36.1 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
```

3.36.2 task command

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

Usage: task **command <taskID>**

3.36.3 task startTime

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

Usage: task **startTime <taskID>**

3.36.4 task endTime

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

Usage: task **endTime <taskID>**

3.36.5 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>**

3.36.6 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>**

3.36.7 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]
```

3.36.8 task remove

Use this command to remove a task.

Usage: task **remove <taskID>**

3.36.9 task message2file

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

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

3.36.10 task removeAll

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

Usage: task **removeAll**

3.36.11 task getTaskIDs

Use this command to get all task IDs.

Usage: task **getTaskIDs**

3.36.12 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
```

3.36.13 task limit

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

Usage: task **limit <number>**

3.37 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
mcuUpdate <filename>              Update MCU firmware (Twin Backplane)
```

3.37.1 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
```

3.37.2 tp nodeID

Use this command to get the Node ID.

Usage: **`tp nodeID`**

3.37.3 tp systemName

Use this command to get/set the system name.

Usage: **`tp systemName [data]`**

3.37.4 tp systemPN

Use this command to get the system product number.

Usage: **tp systemPN**

3.37.5 tp systemSN

Use this command to get the system serial number.

Usage: **tp systemSN**

3.37.6 tp chassisPN

Use this command to get the chassis product number.

Usage: **tp chassisPN**

3.37.7 tp chassisSN

Use this command to get the chassis serial number.

Usage: **tp chassisSN**

3.37.8 tp backPlanePN

Use this command to get the plane product number.

Usage: **tp backPlanePN**

3.37.9 tp backPlaneSN

Use this command to get the plane serial number.

Usage: **tp backPlaneSN**

3.37.10 tp chassisLocation

Use this command to get the chassis location value.

Usage: **tp chassisLocation [data]**

3.37.11 tp bpLocation

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

Usage: **tp bpLocation**

3.37.12 tp bpnID

Use this command to get the BPN ID.

Usage: **tp bpnID**

3.37.13 tp bpnRevision

Use this command to get the BPN revision.

Usage: **tp bpnRevision**

3.37.14 tp nodePN

Use this command to get the node product number.

Usage: **tp nodePN**

3.37.15 tp nodeSN

Use this command to get the node serial number.

Usage: **tp nodeSN**

3.37.16 tp configID

Use this command to get/set the config ID.

Usage: **tp configID [ID]**

3.37.17 tp mcuUpdate

Use this command to update the MCU firmware.

Usage: **tp mcuUpdate <filename>**

Example Output:

```
java -jar SMCIPMITool.jar 10.133.176.159 ADMIN ADMIN mcuUpdate
c:\twinpro_1.05_0408.srec
MCU Firmware :1.05
Enter to update mode ...OK
Progress:|>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>| 100%
Upload Time: 0 min 23 sec(s)
Done
```

3.38 wsiso

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

Notes:

* this command requires a node product key.
* This command works on 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
```

3.38.1 wsiso status

Use this command to display the virtual media status.

Usage: **wsiso status**

3.38.2 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
```

3.38.3 wsiso umount

Use this command to unmount an ISO file.

Usage: **wsiso umount**

3.39 tas

3.39.1 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
```

3.39.2 tas pause

Use this command to pause the TAS service.

Usage: **tas pause**

3.39.3 tas resume

Use this command to resume the TAS service.

Usage: **tas resume**

3.39.4 tas refresh

Use this command to trigger TAS to recollect data.

Usage: **tas refresh**

3.39.5 tas clear

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

Usage: **tas clear**

3.39.6 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]

3.39.7 tas exec

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

Usage: **tas exec <cmd>**

3.40 nvme

This is a NVMe command set which provide 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
```

3.40.1 nvme list

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

Usage: **nvme list**

3.40.2 nvme info

Use this command to display the nvme out of band detail

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
```

3.40.3 nvme rescan

This command will rescan all nvme device by rescanning from OS.

Usage: **nvme rescan**

3.40.4 nvme insert

Use this command to insert SSD

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

3.40.5 nvme locate

Use this command to locate SSD. This command can specify HDD name or slot location

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

nvme locate <aoc> <group> <slot>

3.40.6 nvme stopLocate

Use this command to stop locate SSD. This command can specify HDD name or slot location

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

nvme stoplocate <aoc> <group> <slot>

3.40.7 nvme remove

Use this command to remove SSD This command can specify HDD name or slot location

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

option 0: Do eject after remove (Default)

option 1: Do not eject after remove

nvme remove <aoc> <group> <slot>

3.40.8 nvme smartData

Use this command to display the nvme in band detail

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
```

3.41 nodeKey

This command manages 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
```

3.41.1 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
```

3.42 rsc

This command allows capturing remote screenshots of a managed system and saving the image file locally. (Available on X9 ,X10 and X11 series 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 on command mode.

3.43 rko

This command allows sending series of keyboard action to a managed system. (Available on X9 ,X10 and X11 series ATEN boards). Writing a keyboard script in a file and send by rko command.

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 on command mode.

3.44 diag

Diag command sets allow user to run 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
```

3.44.1 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 a 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 a ISO Image

- Download and unzip the file "ISOForSuperDiag.zip" from https://www.supermicro.com/sms in the system .
- 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.

Notes:

* This command only works properly in shell mode.

3.44.2 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.

3.44.3 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 additional parameter “line” as following:

Parameter	Description
line	Limit display lines. Press any key to scroll pages and ctrl+d to terminate the display console.

Usage Examples:

Diag display <JSON file> line 15

Diag display <JSON file> info line 20

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, tagloc

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 allstatus             Show all VMWA status
vmwa status                Show status
vmwa log                   Show log
```

Notes:
* Supports two virtual devices (device 1 & device 2)
Device 1 will be Hard Disk, USB or floppy
Device 2 will be CD,DVD or ISO file
* List available devices before mounting virtual media.

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 allstatus

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

SIM(WA)>vmwa status

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

SIM(WA)>vmwa log
Device 1 :Don't access file on Local storage device
Device 1 :VM Plug-In OK!!
Device 1 :VM Plug-Out OK!! Stop!!
Device 2 :VM Plug-In OK!!
Device 2 :VM Plug-Out OK!! Stop!!
Device 2 :VM Plug-In OK!!
```

B.3 Peppercon IPMI Firmware

Available commands for ISO / drive redirection:

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

Example of using 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

Available commands:

```
trap start              Start trap receiver
trap stop               Stop trap receiver
trap status(st)         Trap receiver status
trap list               List the received traps
trap clear              Clear the received traps
trap save               Save the received traps to file
trap savepet            Save as the IPMIView TrapReceiver PET format
```

Examples of using Trap Receiver:

SIM(WA)>ipmi lan snmp

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

SIM(WA)>trap status

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

SIM(WA)>trap start

```
Trap Receiver Started
```

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

(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, SFT-SUM-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 Software compability matrix

Model	version
A1SA2-2750F	V2.14.0
A1SA7-2550F	V2.14.0
A1SA7-2750F	V2.14.0
A1SAI-2550F	V2.14.0
A1SAI-2750F	V2.14.0
A1SAM-2550F	V2.14.0
A1SAM-2750F	V2.14.0
A1SRI-2558F	V2.14.0
A1SRI-2758F	V2.14.0
A1SRM-2558F	V2.14.0
A1SRM-2758F	V2.14.0
A1SRM-LN5F-2358	V2.14.0
A1SRM-LN7F-2358	V2.14.0
A1SRM-LN7F-2758	V2.14.0
B10DRC	V2.14.0 (SuperCMM)
B10DRI	V2.14.0 (SuperCMM)
B10DRT-IBF	V2.14.0 (SuperCMM)
B10DRT-IBF2	V2.14.0 (SuperCMM)
B10DRT-TP	V2.14.0 (SuperCMM)
B1DRI	V2.14.0 (MicroCMM)
B1SA4-2550F	V2.14.0 (MicroCMM)
B1SA4-2750F	V2.14.0 (MicroCMM)
B1SA4-F	V2.14.0 (MicroCMM)
B1SL1-F	V2.14.0 (MicroCMM)
B9DR7	V2.13.0 (SuperCMM)
B9DRG	V2.13.0 (SuperCMM)
B9DRG-3M	V2.13.0 (SuperCMM)
B9DRG-E	V2.13.0 (SuperCMM)
B9DRI	V2.13.0 (SuperCMM)
B9DRP	V2.13.0 (SuperCMM)
B9DRT	V2.13.0 (SuperCMM)
B9QR7	V2.13.0 (SuperCMM)
B9QR7-TP	V2.13.0 (SuperCMM)
C7X99-OCE-F	V2.14.0
C7Z97-M	V2.14.0
C7Z97-MF	V2.14.0

X10DBT-T	V2.14.0
X10DDW-I	V2.14.0
X10DDW-I3	V2.14.0
X10DDW-IN	V2.14.0
X10DGQ	V2.14.0
X10DRC-LN4+	V2.14.0
X10DRC-T4+	V2.14.0
X10DRD-I	V2.14.0
X10DRD-INT	V2.14.0
X10DRD-INTP	V2.14.0
X10DRD-IT	V2.14.0
X10DRD-ITP	V2.14.0
X10DRD-L	V2.14.0
X10DRD-LT	V2.14.0
X10DRD-LTP	V2.14.0
X10DRFF	V2.14.0
X10DRFF-C	V2.14.0
X10DRFR	V2.14.0
X10DRFR-N	V2.14.0
X10DRFR-NT	V2.14.0
X10DRFR-T	V2.14.0
X10DRG-H	V2.14.0
X10DRG-HT	V2.14.0
X10DRG-O+-CPU	V2.14.0
X10DRG-OT+-CPU	V2.14.0
X10DRG-Q	V2.14.0
X10DRH-C	V2.14.0
X10DRH-CT	V2.14.0
X10DRH-I	V2.14.0
X10DRH-IT	V2.14.0
X10DRI	V2.14.0
X10DRI-LN4+	V2.14.0
X10DRI-T	V2.14.0
X10DRI-T4+	V2.14.0
X10DRL-C	V2.14.0
X10DRL-CT	V2.14.0
X10DRL-I	V2.14.0
X10DRL-IT	V2.14.0
X10DRS	V2.14.0
X10DRT-H	V2.14.0
X10DRT-HIBF	V2.14.0
X10DRT-L	V2.14.0
X10DRT-LIBF	V2.14.0
X10DRT-LIBQ	V2.14.0

X10DRT-P	V2.14.0
X10DRT-PIBF	V2.14.0
X10DRT-PIBQ	V2.14.0
X10DRT-PT	V2.14.0
X10DRU-I+	V2.14.0
X10DRU-X	V2.14.0
X10DRU-XLL	V2.14.0
X10DRW-E	V2.14.0
X10DRW-ET	V2.14.0
X10DRW-I	V2.14.0
X10DRW-IT	V2.14.0
X10DRW-N	V2.14.0
X10DRW-NT	V2.14.0
X10DRX	V2.14.0
X10QBI	V2.14.0
X10SDV-4C-TLN2F	V2.14.0
X10SDV-8C+-LN2F	V2.14.0
X10SDV-8C-TLN4F	V2.14.0
X10SDV-F	V2.14.0
X10SDV-TLN4F	V2.14.0
X10SL7-F	V2.14.0
X10SLA-F	V2.14.0
X10SLD-F	V2.14.0
X10SLD-HF	V2.14.0
X10SLE-DF	V2.14.0
X10SLE-F	V2.14.0
X10SLE-HF	V2.14.0
X10SLH-F	V2.14.0
X10SLL+-F	V2.14.0
X10SLL-F	V2.14.0
X10SLL-S	V2.14.0
X10SLL-SF	V2.14.0
X10SLL-SF	V2.14.0
X10SLM+-F	V2.14.0
X10SLM+-LN4F	V2.14.0
X10SLM-F	V2.14.0
X10SLQ-L	V2.14.0
X10SLV-Q	V2.14.0
X10SRA-F	V2.14.0
X10SRD-F	V2.14.0
X10SRG-F	V2.14.0
X10SRH-CF	V2.14.0
X10SRH-CLN4F	V2.14.0
X10SRI-F	V2.14.0

X10SRL-F	V2.14.0
X10SRW-F	V2.14.0
X11SAE-F	V2.14.0
X11SAT-F	V2.14.0
X11SBA-F	V2.14.0
X11SBA-LN4F	V2.14.0
X11SSA-F	V2.14.0
X11SSH-F	V2.14.0
X11SSH-LN4F	V2.14.0
X11SSH-TF	V2.14.0
X11SSI-LN4F	V2.14.0
X11SSL-CF	V2.14.0
X11SSL-F	V2.14.0
X11SSL-F	V2.14.0
X11SSL-NF	V2.14.0
X11SSM-F	V2.14.0
X11SSW-F	V2.14.0
X11SSZ-F	V2.14.0
X11SSZ-QF	V2.14.0
X11SSZ-TLN4F	V2.14.0
X9DAX-7F	V2.13.0
X9DAX-7F-HFT	V2.13.0
X9DAX-7TF	V2.13.0
X9DAX-IF	V2.13.0
X9DAX-IF-HFT	V2.13.0
X9DAX-ITF	V2.13.0
X9DB3-F	V2.13.0
X9DB3-TPF	V2.13.0
X9DBI-F	V2.13.0
X9DBI-TPF	V2.13.0
X9DBL-3F	V2.13.0
X9DBL-IF	V2.13.0
X9DBS-F	V2.13.0
X9DBS-F-2U	V2.13.0
X9DBU-3F	V2.13.0
X9DBU-IF	V2.13.0
X9DR3-F	V2.13.0
X9DR3-LN4F+	V2.13.0
X9DR7-JLN4F	V2.13.0
X9DR7-LN4F	V2.13.0
X9DR7-LN4F-JBOD	V2.13.0
X9DR7-TF+	V2.13.0
X9DRD-7JLN4F	V2.13.0
X9DRD-7LN4F	V2.13.0

X9DRD-7LN4F-JBOD	V2.13.0
X9DRD-7LN4F-SSG	V2.13.0
X9DRD-CNT+	V2.13.0
X9DRD-CT+	V2.13.0
X9DRD-CT+	V2.13.0
X9DRD-EF	V2.13.0
X9DRD-IF	V2.13.0
X9DRD-IT+	V2.13.0
X9DRD-IT+	V2.13.0
X9DRD-LF	V2.13.0
X9DRE-LN4F	V2.13.0
X9DRE-TF+	V2.13.0
X9DRFF	V2.13.0
X9DRFF-7	V2.13.0
X9DRFF-7	V2.13.0
X9DRFF-7+	V2.13.0
X9DRFF-7G+	V2.13.0
X9DRFF-7T+	V2.13.0
X9DRFF-7TG+	V2.13.0
X9DRFF-I+	V2.13.0
X9DRFF-IG+	V2.13.0
X9DRFF-IT+	V2.13.0
X9DRFF-ITG+	V2.13.0
X9DRFR	V2.13.0
X9DRG-HF	V2.13.0
X9DRG-HF+	V2.13.0
X9DRG-HF+II	V2.13.0
X9DRG-HF-CLG	V2.13.0
X9DRG-HTF	V2.13.0
X9DRG-HTF+	V2.13.0
X9DRG-HTF+II	V2.13.0
X9DRG-OF-CPU	V2.13.0
X9DRG-O-PCIE	V2.13.0
X9DRG-OTF-CPU	V2.13.0
X9DRG-QF	V2.13.0
X9DRH-7F	V2.13.0
X9DRH-7TF	V2.13.0
X9DRH-IF	V2.13.0
X9DRH-IF-NV	V2.13.0
X9DRH-ITF	V2.13.0
X9DRI-F	V2.13.0
X9DRI-LN4F+	V2.13.0
X9DRL-3F	V2.13.0
X9DRL-7F	V2.13.0

X9DRL-EF	V2.13.0
X9DRL-IF	V2.13.0
X9DRT-F	V2.13.0
X9DRT-H6F	V2.13.0
X9DRT-H6IBFF	V2.13.0
X9DRT-H6IBQF	V2.13.0
X9DRT-HF	V2.13.0
X9DRT-HF+	V2.13.0
X9DRT-HIBFF	V2.13.0
X9DRT-HIBQF	V2.13.0
X9DRT-IBFF	V2.13.0
X9DRT-IBQF	V2.13.0
X9DRT-P	V2.13.0
X9DRW-3F	V2.13.0
X9DRW-3LN4F+	V2.13.0
X9DRW-3TF+	V2.13.0
X9DRW-7TPF	V2.13.0
X9DRW-7TPF+	V2.13.0
X9DRW-CF31	V2.13.0
X9DRW-CTF31	V2.13.0
X9DRW-ITPF	V2.13.0
X9DRW-ITPF+	V2.13.0
X9DRX+-F	V2.13.0
X9QR7-TF	V2.13.0
X9QR7-TF+	V2.13.0
X9QR7-TF-JBOD	V2.13.0
X9QRI-F	V2.13.0
X9QRI-F+	V2.13.0
X9SBAA-F	V2.13.0
X9SCA	V2.13.0
X9SCD+-F	V2.13.0
X9SCE-F	V2.13.0
X9SCFF-F	V2.13.0
X9SCL+-F	V2.13.0
X9SCM-IIF	V2.13.0
X9SPU-F	V2.13.0
X9SPV-F	V2.13.0
X9SRD-F	V2.13.0
X9SRE-3F	V2.13.0
X9SRE-F	V2.13.0
X9SRG-F	V2.13.0
X9SRH-7F	V2.13.0
X9SRH-7TF	V2.13.0
X9SRI-3F	V2.13.0

X9SRI-F	V2.13.0
X9SRL-F	V2.13.0
X9SRW-F	V2.13.0

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