



SMCIPMITool

User's Guide

Revision 2.27.3

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Manual Revision 2.27.3

Release Date: September 20, 2023

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Document Revision History

Date	Revision	Description
2016/01/20	2.15.0	Added document revision history. Revised the usage of the nvme command.
2017/03/20	2.18.0	Added the diagnostic command sets. Modified the description of the diag command.
2017/09/29	2.19.0	Added the watchdog commands. Modified the description of the nm status command.
2018/01/29	2.20.0	Added descriptions of the new nm commands in these sections. nm20: from 3.30.36 to 3.30.42. nm30: from 3.31.8 to 3.31.10. nm40: 3.32. Added port service command sets.
2018/10/29	2.21.0	Added the mdr commands. Added the file mode.
2019/05/23	2.22.0	Added the mel commands. Added Appendix G. Added IPv6 commands.
2019/12/02	2.23.0	Added the ipmi fd command.
2019/05/18	2.24.0	Added the ipmi flashrf command. Added the system lockdown command. Added the mel list command. Added the ipmi oem smbpbi commands. Added the redfish version command. Added the redfish firmwareInventory command sets. Added the ipmi uflash command. Added the bios rfupdate command.
2021/1/4	2.25.0	Added the redfish accountService commands. Added the redfish eventService alert commands. Added the redfish ipctrl commands. Added the hwinfo command. Added the microblade cmmdiag command. Added Appendix H.

Date	Revision	Description
2021/11/03	2.26.0	Added the redfish hostInterface command. Added the redfish accountService lockoutSetting command. Added the redfish kvm command. Added the redfish bpnCPLDUpdate command. Revised Appendix C.
2022/07/06	2.27.0	Added the redfish biosConfiguration command. Added the bladePosition command. Added the stunnel properties to Appendix E. Added the bladeCMMInfo command. Removed the dr command. Removed Appendix B.3.
2023/02/14	2.27.2	Added the Bios postCode command
2023/09/20	2.27.3	Removed TAS exec command Added microblade node systemModel command Revised the usage of the ipv6 dns command

Contents

Document Revision History.....	3
Contents.....	5
1 Introduction	25
1.1 Purpose.....	25
1.2 Third Party Software.....	25
1.2.1 JLine	25
1.3 Document Conventions	25
2 Usage and Mode	26
2.1 Command Line Mode	26
2.2 Shell Mode.....	26
2.2.1 Keyboard Shortcuts	27
2.2.2 prompt.....	27
2.2.3 ch	28
2.2.4 hostrun	28
2.2.4.1 hostrun found.....	29
2.2.4.2 hostrun curr.....	29
2.2.5 search	29
2.3 File Mode.....	29
3 Commands	31
3.1 Superblade.....	33
3.1.1 superblade system.....	33
3.1.2 superblade failure.....	34
3.1.3 superblade blade	34
3.1.3.1 superblade blade status	34
3.1.3.2 superblade blade index(es)	34
3.1.3.2.1 superblade blade <blade number> status	35
3.1.3.2.2 superblade blade <blade number> power	35
3.1.3.2.3 superblade blade <blade number> kvm	35
3.1.3.2.4 superblade blade <blade number> uid	35
3.1.3.2.5 superblade blade <blade number> sensor.....	35

3.1.3.2.6	superblade blade <blade number> bmc	36
3.1.3.2.7	superblade blade <blade number> config	37
3.1.3.2.8	superblade blade <blade number> sn	37
3.1.4	superblade gigabit	37
3.1.4.1	superblade gigabit status	37
3.1.4.2	superblade gigabit index(es)	37
3.1.4.2.1	superblade gigabit <gigabit number> status.....	37
3.1.4.2.2	superblade gigabit <gigabit number> power	38
3.1.4.2.3	superblade gigabit <gigabit number> wss.....	38
3.1.4.2.4	superblade gigabit <gigabit number> ipmode	39
3.1.4.2.5	superblade gigabit <gigabit number> boot.....	39
3.1.4.2.6	superblade gigabit <gigabit number> restart.....	39
3.1.4.2.7	superblade gigabit <gigabit number> fd	39
3.1.5	superblade power.....	39
3.1.5.1	superblade power status.....	39
3.1.5.2	superblade power index(es).....	39
3.1.5.2.1	superblade power <power number> status.....	39
3.1.5.2.2	superblade power <power number> power	40
3.1.5.2.3	superblade power <power number> fan	40
3.1.6	superblade ib	40
3.1.6.1	superblade ib status	40
3.1.6.2	superblade ib index(es)	40
3.1.6.2.1	superblade ib <ib number> status.....	40
3.1.6.2.2	superblade ib <ib number> power	40
3.1.7	superblade cmm	41
3.1.7.1	superblade cmm status.....	41
3.1.7.2	superblade cmm index.....	41
3.1.7.2.1	superblade cmm <cmm number> status	41
3.1.7.2.2	superblade cmm <cmm number> dtime.....	41
3.1.7.2.3	superblade cmm <cmm number> ntp.....	41
3.1.7.2.4	superblade cmm <cmm number> reset.....	42

3.1.7.2.5	superblade cmm <cmm number> flash	42
3.1.7.2.6	superblade cmm <cmm number> ver	42
3.1.7.2.7	superblade cmm <cmm number> ip	42
3.1.7.2.8	superblade cmm <cmm number> mac	42
3.1.7.2.9	superblade cmm <cmm number> gateway	42
3.1.7.2.10	superblade cmm <cmm number> netmask	42
3.1.7.2.11	superblade cmm <cmm number> syncfg	43
3.1.7.2.12	superblade cmm <cmm number> opmode	43
3.1.7.2.13	superblade cmm <cmm number> dhcp	43
3.1.8	superblade listtemp	43
3.1.9	superblade allsel <filename>	44
3.1.10	superblade burst	44
3.1.10.1	superblade burst allUp	44
3.1.10.2	superblade burst allDown	44
3.1.10.3	superblade burst allRest	44
3.1.10.4	superblade burst allSoftshutdown	44
3.1.10.5	superblade burst up	45
3.1.10.6	superblade burst down	45
3.1.10.7	superblade burst reset	45
3.1.10.8	superblade burst softshutdown	45
3.1.11	superblade listmac	45
3.1.12	superblade midPlaneFRU	45
3.1.13	superblade powerconsumption	45
3.2	microblade	45
3.2.1	microblade summary	46
3.2.2	microblade node	46
3.2.2.1	microblade node sensor	46
3.2.2.2	microblade node status	46
3.2.2.3	microblade node power	46
3.2.2.4	microblade node ip	47
3.2.2.5	microblade node dhcp	47

3.2.2.6	microblade node mac.....	47
3.2.2.7	microblade node mask.....	47
3.2.2.8	microblade node gateway	47
3.2.2.9	microblade node name	47
3.2.2.10	microblade node uid	48
3.2.2.11	microblade node systemModel.....	48
3.2.3	microblade switch	48
3.2.3.1	microblade switch info	48
3.2.3.2	microblade switch power	48
3.2.3.3	microblade switch username	48
3.2.3.4	microblade switch lan	48
3.2.3.4.1	microblade switch lan ip	48
3.2.3.4.2	microblade switch lan dhcp	49
3.2.3.4.3	microblade switch lan mask	49
3.2.3.4.4	microblade switch lan gateway	49
3.2.3.5	microblade switch getTime	49
3.2.4	microblade psu	49
3.2.4.1	microblade psu info.....	49
3.2.4.2	microblade psu power.....	49
3.2.4.3	microblade psu fanMode	50
3.2.4.4	microblade psu fanSpeed.....	50
3.2.5	microblade fru	50
3.2.5.1	microblade fru cmm.....	50
3.2.5.2	microblade fru midplane.....	50
3.2.5.3	microblade fru switch.....	51
3.2.5.4	microblade fru psu	51
3.2.6	microblade powerConsumption.....	51
3.2.7	microblade cmmdiag	51
3.2.8	microblade kvm	51
3.3	sel.....	52
3.3.1	sel info	52

3.3.2	sel list	52
3.3.3	sel csv	52
3.3.4	sel clear	52
3.3.5	sel time	52
3.4	user	53
3.4.1	user add	53
3.4.2	user list	53
3.4.3	user delete	54
3.4.4	user level	54
3.4.5	user test	54
3.4.6	user setpwd	54
3.4.7	user enableType	54
3.5	vm	55
3.5.1	vm status	55
3.5.2	vm stop	55
3.5.3	vm floppy	55
3.5.4	vm iso	55
3.6	ipmi	56
3.6.1	ipmi sensor	56
3.6.2	ipmi power	56
3.6.2.1	ipmi power status	57
3.6.2.2	ipmi power up	57
3.6.2.3	ipmi power down	57
3.6.2.4	ipmi power softshutdown	57
3.6.2.5	ipmi power reset	57
3.6.2.6	ipmi power cycle	57
3.6.2.7	ipmi power diag	57
3.6.2.8	ipmi power bootoption <Index>	57
3.6.3	ipmi acpi	58
3.6.4	ipmi lan	58
3.6.4.1	ipmi lan ip	58

3.6.4.2	ipmi lan mac	58
3.6.4.3	ipmi lan gateway.....	58
3.6.4.4	ipmi lan netmask	58
3.6.4.5	ipmi lan snmp	59
3.6.4.6	ipmi lan snmpcomm	59
3.6.4.7	ipmi lan arp	59
3.6.4.8	ipmi lan dhcp.....	59
3.6.4.9	ipmi lan vlan	60
3.6.4.10	ipmi lan dns	60
3.6.4.11	ipmi lan protocol	60
3.6.4.12	ipmi lan ipv6	60
3.6.4.12.1	ipmi lan ipv6 list	60
3.6.4.12.2	ipmi lan ipv6 add	60
3.6.4.12.3	ipmi lan ipv6 clear	61
3.6.4.12.4	ipmi lan ipv6 mode.....	61
3.6.4.12.5	ipmi lan ipv6 autoconfig.....	61
3.6.4.12.6	ipmi lan ipv6 dns	61
3.6.4.12.7	ipmi lan ipv6 route	61
3.6.4.12.8	ipmi lan ipv6 duid.....	62
3.6.4.13	ipmi lan linkStatus	62
3.6.5	ipmi fru	62
3.6.6	ipmi fru w.....	62
3.6.7	ipmi fru backup.....	63
3.6.8	ipmi fru restore.....	63
3.6.9	ipmi oem	63
3.6.9.1	ipmi oem clrint	63
3.6.9.2	ipmi oem id	63
3.6.9.3	ipmi oem uid	63
3.6.9.4	ipmi oem gethostname	64
3.6.9.5	ipmi oem sethostname	64
3.6.9.6	ipmi oem backup.....	64

3.6.9.7	ipmi oem restore	64
3.6.9.8	ipmi oem backupcfg	64
3.6.9.9	ipmi oem restorecfg	64
3.6.9.10	ipmi oem getcfg	65
3.6.9.11	ipmi oem setcfg	65
3.6.9.12	ipmi oem lani	65
3.6.9.13	ipmi oem mac	66
3.6.9.14	ipmi oem x10cfg ldap	66
3.6.9.15	ipmi oem x10cfg ad	67
3.6.9.16	ipmi oem x10cfg radius	67
3.6.9.17	ipmi oem x10cfg ipCtrl	68
3.6.9.18	ipmi oem x10cfg ntp	68
3.6.9.18.1	ipmi oem x10cfg ntp list	68
3.6.9.18.2	ipmi oem x10cfg ntp state	68
3.6.9.18.3	ipmi oem x10cfg ntp timezone	69
3.6.9.18.4	ipmi oem x10cfg ntp daylight	69
3.6.9.18.5	ipmi oem x10cfg ntp primary	69
3.6.9.18.6	ipmi oem x10cfg ntp secondary	69
3.6.9.19	ipmi oem x10cfg ddns	69
3.6.9.19.1	ipmi oem x10cfg ddns list	69
3.6.9.19.2	ipmi oem x10cfg ddns state	69
3.6.9.19.3	ipmi oem x10cfg ddns server	70
3.6.9.19.4	ipmi oem x10cfg ddns hostname	70
3.6.9.19.5	ipmi oem x10cfg ddns tsig	70
3.6.9.20	ipmi oem x10cfg alert	70
3.6.9.20.1	ipmi oem x10cfg alert list	70
3.6.9.20.2	ipmi oem x10cfg alert level	72
3.6.9.20.3	ipmi oem x10cfg alert ip	72
3.6.9.20.4	ipmi oem x10cfg alert mail	72
3.6.9.20.5	ipmi oem x10cfg alert subject	72
3.6.9.20.6	ipmi oem x10cfg alert message	72

3.6.9.20.7	ipmi oem x10cfg alert send	72
3.6.9.20.8	ipmi oem x10cfg alert delete	72
3.6.9.21	ipmi oem x10cfg smtp	73
3.6.9.21.1	ipmi oem x10cfg smtp list	73
3.6.9.21.2	ipmi oem x10cfg smtp ssl	73
3.6.9.21.3	ipmi oem x10cfg smtp server	73
3.6.9.21.4	ipmi oem x10cfg smtp port	73
3.6.9.21.5	ipmi oem x10cfg smtp user	73
3.6.9.21.6	ipmi oem x10cfg smtp password.....	74
3.6.9.21.7	ipmi oem x10cfg smtp sender	74
3.6.9.22	ipmi oem x10cfg dns	74
3.6.9.23	ipmi oem portService	74
3.6.9.23.1	ipmi oem portService http	74
3.6.9.23.2	ipmi oem portService https.....	74
3.6.9.23.3	ipmi oem portService ikvm	75
3.6.9.23.4	ipmi oem portService ssh.....	75
3.6.9.23.5	ipmi oem portService wsman	75
3.6.9.23.6	ipmi oem portService ssl	75
3.6.9.24	ipmi oem smbpbi	75
3.6.9.24.1	ipmi oem smbpbi gpu info	75
3.6.9.25	ipmi oem systemlockdown.....	75
3.6.9.26	ipmi oem summary	75
3.6.10	ipmi reset.....	76
3.6.11	ipmi fd.....	76
3.6.12	ipmi ver	76
3.6.13	ipmi flash	76
3.6.14	ipmi flashw.....	76
3.6.15	ipmi flashr	77
3.6.16	ipmi flashh	77
3.6.17	ipmi flasha	77
3.6.18	ipmi flashrf.....	78

3.6.19	ipmi uflash	79
3.6.20	ipmi raw	79
3.6.21	ipmi ipmb.....	79
3.6.22	ipmi ipmboem.....	80
3.6.23	ipmi delsdrr.....	80
3.6.24	ipmi session info	80
3.6.25	ipmi fan.....	80
3.6.26	ipmi watchdog	80
3.6.26.1	ipmi watchdog reset.....	81
3.6.26.2	ipmi watchdog set	81
3.6.26.3	ipmi watchdog info.....	81
3.7	ver.....	81
3.8	list	81
3.9	find.....	82
3.10	found	82
3.10.1	found list.....	82
3.10.2	found clear.....	82
3.10.3	found copy <index1> [index2] [...].	82
3.10.4	found copyall	82
3.10.5	found saveAs <filename>	82
3.10.6	found refresh.....	83
3.11	exec.....	83
3.12	host.....	83
3.12.1	host list	83
3.12.2	host reload.....	83
3.12.3	host add	83
3.12.4	host remove.....	84
3.12.5	host rename.....	84
3.12.6	host group.....	84
3.12.6.1	host group add	84
3.12.6.2	host group remove	84

3.12.6.3	host group rename.....	84
3.12.6.4	host group addhost	84
3.12.6.5	host group removehost.....	84
3.13	hostrun	85
3.14	sc.....	85
3.15	pminfo	85
3.16	psfruinfo	86
3.17	psbbplInfo.....	86
3.18	mdr	87
3.18.1	mdr smbios	87
3.18.1.1	mdr smbios biosInfo.....	87
3.18.1.2	mdr smbios systemInfo	87
3.18.1.3	mdr smbios baseboardInfo	87
3.18.1.4	mdr smbios processorInfo.....	87
3.18.1.5	mdr smbios memoryDevice	87
3.18.1.6	mdr smbios nicInfo.....	87
3.18.1.7	mdr smbios pciInfo.....	87
3.18.1.8	mdr smbios storageDevice	87
3.18.1.9	mdr smbios all	88
3.18.1.10	mdr smbios summary.....	88
3.18.1.11	mdr smbios dumpToFile	88
3.18.2	mdr cableID	88
3.19	bbp.....	89
3.19.1	bbp status	89
3.19.2	bbp autoDischarge.....	89
3.19.3	bbp discharge	89
2.19.4	bbp shutdown.....	89
2.19.5	bbp shutdownTimeout	90
3.20	nm.....	90
3.20.1	nm detect	90
3.20.2	nm ver.....	90

3.20.3	nm cap	90
3.20.4	nm status	91
3.20.5	nm stat	91
3.20.6	nm resetStat	91
3.20.7	nm pstate	91
3.20.8	nm tstate	91
3.20.9	nm ptstate	92
3.20.10	nm alert	92
3.20.11	nm scanPolicy	92
3.20.12	nm addPolicy	93
3.20.13	nm delPolicy	93
3.20.14	nm getPolicy	93
3.20.15	nm enablePolicy	93
3.20.16	nm disablePolicy	93
3.21	kvmwa	94
3.22	ukvm	94
3.23	vmwa	94
3.23.1	vmwa dev1list	94
3.23.2	vmwa dev1drv	95
3.23.3	vmwa dev1stop	95
3.23.4	vmwa dev2list	95
3.23.5	vmwa dev2cd	95
3.23.6	vmwa dev2iso	95
3.23.7	vmwa dev2stop	95
3.23.8	vmwa status	95
3.23.9	vmwa log	95
3.24	dcmi	96
3.24.1	dcmi find	96
3.24.2	dcmi cap	96
3.24.3	dcmi powerStatus	97
3.24.4	dcmi MCID	97

3.25	kvm	97
3.26	kvmw	97
3.27	kvmwx9.....	97
3.28	vmw	98
3.28.1	vmw floppy	98
3.28.2	vmw usbkey	98
3.28.3	vmw iso	98
3.28.4	vmw cd.....	98
3.28.5	vmw stopFloppy	98
3.28.6	vmw stopUsbkey	98
3.28.7	vmw stopISO	99
3.28.8	vmw stopCD.....	99
3.28.9	vmw status.....	99
3.29	sol	100
3.29.1	sol activate.....	100
3.29.2	sol deactivate.....	100
3.29.3	sol window.....	100
3.29.4	sol key	101
3.29.5	bitrate	101
3.29.6	retryCount	101
3.29.7	retryInterval.....	101
3.30	nm20.....	101
3.30.1	nm20 nmSDR	102
3.30.2	nm20 selTime	102
3.30.3	nm20 deviceId	103
3.30.4	nm20 reset.....	103
3.30.5	nm20 reset2Default.....	103
3.30.6	nm20 updateMode.....	103
3.30.7	nm20 powerOff	103
3.30.8	nm20 selfTest	103
3.30.9	nm20 mode.....	103

3.30.10	nm20 listImagesInfo	103
3.30.11	nm20 oemGetPower	104
3.30.12	nm20 oemGetTemp.....	104
3.30.13	nm20 globalEnable	104
3.30.14	nm20 globalDisable	104
3.30.15	nm20 domainEnable.....	104
3.30.16	nm20 domainDisable.....	104
3.30.17	nm20 policyEnable	104
3.30.18	nm20 policyDisable.....	104
3.30.19	nm20 addPowerPolicy.....	105
3.30.20	nm20 getPolicy	105
3.30.21	nm20 delPolicy	105
3.30.22	nm20 scanPolicy	105
3.30.23	nm20 addPolicy	106
3.30.24	nm20 statistics.....	106
3.30.25	nm20 resetStatistics	107
3.30.26	nm20 cap	108
3.30.27	nm20 ver.....	108
3.30.28	nm20 alert	108
3.30.29	nm20 pstate.....	108
3.30.30	nm20 tstate	109
3.30.31	nm20 ptstate	109
3.30.32	nm20 cpuCore	109
3.30.33	nm20 totalPower	109
3.30.34	nm20 cpuMemTemp	109
3.30.35	nm20 hostCpuData.....	110
3.30.36	nm20 getAlertThreshold.....	110
3.30.37	nm20 setAlertThreshold.....	110
3.30.38	nm20 setPowerDrawRange	111
3.30.39	nm20 policySuspendPeriod	111
3.30.39.1	nm20 policySuspendPeriod get.....	111

3.30.39.2nm20 policySuspendPeriod add.....	111
3.30.39.1nm20 policySuspendPeriod update	112
3.30.39.2nm20 policySuspendPeriod delete.....	113
3.30.39.3nm20 policySuspendPeriod clear.....	113
3.30.40 nm20 dcmi.....	113
3.30.40.1nm20 dcmi cap.....	113
3.30.40.2nm20 dcmi powerReading	114
3.30.40.3nm20 dcmi powerLimit	114
3.30.40.4nm20 dcmi powerLimitEnable	114
3.30.40.5nm20 dcmi powerLimitDisable	115
3.30.41 nm20 sensor	116
3.30.42 nm20 summary.....	117
3.31 nm30.....	118
3.31.1 nm30 cupsCap	118
3.31.2 nm30 cupsData.....	119
3.31.3 nm30 cupsConfig	119
3.31.4 nm30 cupsPolicy	120
3.31.5 nm30 cupsCore.....	121
3.31.6 nm30 cupsIO.....	121
3.31.7 nm30 cupsMem	121
3.31.8 nm30 setCupsPolicy.....	121
3.31.9 nm30 cupsPolicyEnable	122
3.31.10 nm30 cupsPolicyDisable	122
3.32 nm40.....	122
3.32.1 nm40 setTurboSyncRatio.....	122
3.32.2 nm40 getTurboSyncRatio	122
3.33 hdd.....	123
3.33.1 hdd map.....	123
3.33.2 hdd info.....	123
3.33.3 hdd disk.....	124
3.33.4 lmap.....	125

3.33.5	linfo.....	125
3.33.6	ldisk.....	125
3.34	bios	125
3.34.1	bios ver	125
3.34.2	bios image.....	126
3.34.3	bios update	126
3.34.4	bios rfupdate	126
3.34.5	bios setKey.....	127
3.34.6	bios getMACs.....	127
3.34.7	bios setKeys	128
3.34.8	bios postCode	128
3.35	mg.....	128
3.35.1	mg list	129
3.35.2	mg save	129
3.35.3	mg load	129
3.35.4	mg default.....	129
3.35.5	mg found.....	129
3.35.6	mg sort.....	129
3.35.7	mg clear	129
3.35.8	mg refresh.....	129
3.36	found	129
3.36.1	found list.....	130
3.36.2	found clear.....	130
3.36.3	found copy.....	130
3.36.4	found copyall	130
3.36.5	found saveAs	130
3.36.6	found refresh.....	130
3.37	task	130
3.37.1	task run	130
3.37.2	task command	131
3.37.3	task startTime	131

3.37.4	task endTime	131
3.37.5	task state	131
3.37.6	task exitcode.....	131
3.37.7	task message.....	131
3.37.8	task remove	132
3.37.9	task message2file	132
3.37.10	task removeAll.....	132
3.37.11	task getTaskIDs	132
3.37.12	task status.....	132
3.37.13	task limit	133
3.38	tp.....	134
3.38.1	tp info	134
3.38.2	tp nodeID	134
3.38.3	tp systemName.....	135
3.38.4	tp systemPN.....	135
3.38.5	tp systemSN	135
3.38.6	tp chassisPN.....	135
3.38.7	tp chassisSN	135
3.38.8	tp backPlanePN.....	135
3.38.9	tp backPlaneSN	135
3.38.10	tp chassisLocation.....	135
3.38.11	tp bpLocation.....	135
3.38.12	tp bpnID	136
3.38.13	tp bpnRevision	136
3.38.14	tp nodePN.....	136
3.38.15	tp nodeSN	136
3.38.16	tp configID	136
3.39	wsiso.....	136
3.39.1	wsiso status	137
3.39.2	wsiso mount	137
3.39.3	wsiso umount	137

3.40	tas	137
3.40.1	tas info	137
3.40.2	tas pause.....	139
3.40.3	tas resume	139
3.40.4	tas refresh.....	139
3.40.5	tas clear.....	139
3.40.6	tas period.....	139
3.41	nvme	140
3.41.1	nvme list	140
3.41.2	nvme info.....	140
3.41.3	nvme rescan.....	141
3.41.4	nvme insert.....	141
3.41.5	nvme locate	141
3.41.6	nvme stopLocate	141
3.41.7	nvme remove.....	141
3.41.8	nvme smartData	142
3.42	nodeKey.....	142
3.42.1	nodekey list.....	142
3.43	rsc	143
3.44	rko.....	143
3.45	diag	144
3.45.1	diag start.....	144
3.45.2	diag download	145
3.45.3	diag display	145
3.46	mel	146
3.46.1	mel list	146
3.46.2	mel download	146
3.46.3	mel clear	147
3.47	hwinfo.....	147
3.48	bladePosition	147
3.49	bladeCMMInfo.....	147

3.50	crashDump.....	147
3.50.1	crashDump generate	147
3.50.2	crashDump download.....	147
3.51	Redfish	147
3.51.1	redfish version	148
3.51.2	redfish accountService	148
3.51.2.1	redfish accountService ad	148
3.51.2.1.1	redfish accountService ad status.....	148
3.51.2.1.2	redfish accountService ad list.....	148
3.51.2.1.3	redfish accountService ad addAddress	148
3.51.2.1.4	redfish accountService ad deleteAddress	148
3.51.2.1.5	redfish accountService ad addRole	148
3.51.2.1.6	redfish accountService ad deleteRole	148
3.51.2.2	redfish accountService ldap	149
3.51.2.2.1	redfish accountService ldap info	149
3.51.2.2.2	redfish accountService ldap status.....	149
3.51.2.2.3	redfish accountService ldap username	149
3.51.2.2.4	redfish accountService ldap group.....	149
3.51.2.2.5	redfish accountService ldap addAddress	149
3.51.2.2.6	redfish accountService ldap deleteAddress	149
3.51.2.2.7	redfish accountService ldap addSearchBase.....	149
3.51.2.2.8	redfish accountService ldap deleteSearchBase.....	149
3.51.2.2.9	redfish accountService ldap addRole	149
3.51.2.2.10	redfish accountService ldap deleteSearchBase.....	150
3.51.2.3	redfish accountService radius	150
3.51.2.4	redfish accountService lockoutSetting.....	150
3.51.3	redfish eventService	150
3.51.3.1	redfish eventService alert	150
3.51.3.1.1	redfish eventService alert list.....	150
3.51.3.1.2	redfish eventService alert setSNMPv1	151
3.51.3.1.3	redfish eventService alert setSNMPv3	151

3.51.3.1.4	redfish eventService alert setSMTP	151
3.51.3.1.5	redfish eventService alert setRedfish.....	152
3.51.3.1.6	redfish eventService alert delete	152
3.51.3.1.7	redfish eventService alert sendTest	152
3.51.3.2	redfish eventService smtp.....	152
3.51.3.2.1	redfish eventService smtp list	152
3.51.3.2.2	redfish eventService smtp server	152
3.51.3.2.3	redfish eventService smtp port	152
3.51.3.2.4	redfish eventService smtp protocol	152
3.51.3.2.5	redfish eventService smtp authentication	153
3.51.3.2.6	redfish eventService smtp user	153
3.51.3.2.7	redfish eventService smtp password	153
3.51.3.2.8	redfish eventService smtp sender	153
3.51.3.3	redfish eventService snmp	153
3.51.3.3.1	redfish eventService snmp status	153
3.51.3.3.2	redfish eventService snmp list	153
3.51.3.3.3	redfish eventService snmp snmpv2	154
3.51.3.3.4	redfish eventService snmp snmpv3	155
3.51.4	redfish ipctrl.....	155
3.51.4.1	Redfish ipctrl status	155
3.51.4.2	Redfish ipctrl list.....	155
3.51.4.3	Redfish ipctrl add	156
3.51.4.4	Redfish ipctrl edit	156
3.51.4.5	Redfish ipctrl delete	156
3.51.5	redfish firmwareInventory	156
3.51.5.1	Redfish firmwareInventory info	156
3.51.5.2	Redfish firmwareInventory install	156
3.51.6	redfish hostInterface status.....	157
3.51.7	redfish bpnCPLDUpdate	157
3.51.8	redfish kvm	157
3.51.9	redfish biosConfiguration	158

3.51.9.1 Redfish biosConfiguration get	158
3.51.9.2 Redfish biosConfiguration set	158
3.51.9.3 Redfish biosConfiguration menu	158
3.51.9.4 Redfish biosConfiguration list	159
3.51.9.5 Redfish biosConfiguration reset	159
3.51.9.6 Redfish biosConfiguration search.....	160
3.51.9.7 Redfish biosConfiguration save	160
3.51.9.8 Redfish biosConfiguration load	160
Appendix A Command Categories	161
Appendix B VM Command Examples	163
B.1 AMI IPMI Firmware	163
B.2 ATEN IPMI Firmware	165
Appendix C Trap Receiver	167
Appendix D Node Product Key Functions	172
Appendix E Stunnel Properties	173
Appendix F Exit Codes	174
Appendix G List of Supported BMCs	175
Appendix H SMC RAKP	176
Appendix I Third-Party Software.....	177
Appendix J Properties	178
Contacting Supermicro	179

1 Introduction

1.1 Purpose

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

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

1.2 Third Party Software

1.2.1 JLine

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

Please refer to <https://github.com/jline/jline2> for more information.

1.3 Document Conventions

- The syntax of the CLI command is given in **Courier New 11 bold**.
- Elements in (< >) indicate the field required as input along with a CLI command, e.g.,
< 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, e.g.,

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

2 2 Usage and Mode

Three kinds of user modes are provided when you start the SMCIPMITool: Command Line Mode, Shell Mode and File 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 ... ]
```

* IP can be replaced by hostname if the DNS setting is correct.

* Please note that it is better to use SMCIPMITool original bundle java or equivalent version if directly run with jar file.

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.

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

Usage:

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

Example Output:

```
SMC IPMI Tool V2.1.2 (Build 120320) - Super Micro Computer, Inc.
Press Ctrl+D or "exit" to exit
Press "?" or "help" for help
Press TAB for command completion
Press UP and DOWN key for command history
```

```
Trap Receiver Started
Managed hosts loaded.
Found hosts loaded.
192.168.23.100 X9SCD (S0/G0,13w) 13:55 SIM(WA)>
```

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

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 Current time
all <on|off>      : show/hide all information
* The change will be stored to config file
```

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

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

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

(H) IPMI firmware type

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

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

Prompt in SMCIPMITool shell mode	IPMI Firmware Type
CMM>	Peppercon Firmware (KIRA) for Blade CMM
SIM(W)>	AMI Firmware for Nuvoton WPCM450 BMC
SIM(WA)>	ATEN Firmware for Nuvoton WPCM450 BMC
SIMBL(W)>	AMI Firmware for Nuvoton WPCM450 BMC on Blade SIMBL
SIMBL>	Peppercon Firmware (KIRA) for Blade SIMBL
SIM-IPMI>	Peppercon Firmware (KIRA) without KVM
SIM-KVM-IPMI>	Peppercon Firmware (KIRA) with KVM
SUPERO-IPMI>	OSA Firmware for Renesas 2167 BMC
SIM(X9)>	AMI Firmware for Renesas SH7757 BMC
ASPD_T>	ATEN ASPEED Firmware for early X10 MBs
MicroCMM>	MicroBlade CMM
MicroNode>	MicroBlade Node
SuperBlade>	SuperBlade Node
AST2400	ASPEED AST2400 BMC
AST2500	ASPEED AST2500 BMC
IPMI>	Others

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.

Usage: **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 [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 [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:

Search "FAN" from sensor list.

```
SIM(X9)>ipmi sr | FAN
OK      | (6) FAN1          |          N/A |    600 RPM | 12550 RPM |
        | (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 |
```

2.3 File Mode

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

Usage:

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

Supported parameters description:

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

```
ex: file.txt
-----
username=ADMIN
password=ADMIN
```

* IP can be replaced by hostname if the DNS setting is correct

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 (13)
microblade	MicroBlade & 8U/4U SuperBlade blade management (6)
ipmi	IPMI device management (30)
sel	IPMI system event log (5)
user	IPMI user management (7)
nm	Node Management V1.5 (16)
nm20	Node Management V2.0/V3.0(Romley platform or
later) (42)	
nm30	Node Management V3.0 (Grantley platform or later) (10)
nm40	Node Management V4.0 (2)
dcmi	DCMI Management (4)
bios	BIOS update (9)
pminfo [<busId> <SlaAddr>]	Power supply PMBus health
psfruinfo [<busId> <SlaAddr>]	Power supply FRU health
psbbpInfo [<busId> <SlaAddr>]	Battery Backup Power status
ver	SMCIPMITool version
ch	Change managed device in shell mode
list [keyword]	List all or find available commands
exec <file> [loop] [delay]	Execute commands from file
execm <file> [loop] [delay]	Execute commands from file for TaskRun
find [<Start> <End> <netMask>]	Find IPMI device from local or IP range
found	found IPMI devices (6)
host	Host management (6)
hostrun <host group> <command>	Run a command on host or group
mg	Manage group command (8)
trap	IPMI SNMP Trap receiver management (11)
sc	Execute shell command
ukvm	KVM launcher for all platform
kvm	SIM KVM console (graphic mode)
kvmw	SIM(W) KVM console (graphic mode)
kvmwa	SIM(WA) KVM console (graphic mode)
kvmwx9	SIM(X9) KVM console (graphic mode)
vm	SIM Virtual Media Management (4)
vmw	SIM(W) Virtual Media
vmwa	SIM(WA) Virtual Media
prompt <type> <on off>	Config information displayed on prompt
sol	SOL Commands
hdd	HDD status (6)
bbp	Battery Backup Power Management (5)
task	Background Task (13)
tp	TwinPro MCU Information (19)
wsiso	Mount ISO file via Windows Share or SAMBA (for X9 and
later) (3)	
tas	TAS settings (7)

nvme	NVMe (Non-Volatile Memory Express) (8)
nodekey	Node Product Key (1)
rsc [filename.ext]	iKVM remote screen capture(X9 or later) ext:png jpg
rko [filepath]	iKVM remote keyboard operation(X9 or later)
diag	Super Diagnostics (3)
mel	Maintenance Event Log (For X11DP or later) (3)
hwinfo	Display processor and memory information
bladePosition	Display current blade/node position in CMM
bladeCmmInfo	Display cmm information which current blade located
crashDump	Trouble shooting file download (2)
redfish	redfish API management (9)

3.1 Superblade

This command set is supported on Super CMM modules (SBx-xxx-xxx), e.g., SBI-4129P-T3N and SBM-XEM-X10SM.

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

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

Usage: superblade **failure**

3.1.3 superblade blade

Use this command to bring up the following subcommands.

3.1.3.1 superblade blade status

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

Usage: superblade **blade status**

Example Output:

```

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

```

3.1.3.2 superblade blade index(es)

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

3.1.3.2.1 superblade blade <blade number> status

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

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

Example Output:

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

3.1.3.2.2 superblade blade <blade number> power

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

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

Example Output:

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

3.1.3.2.3 superblade blade <blade number> kvm

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

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

3.1.3.2.4 superblade blade <blade number> uid

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

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

3.1.3.2.5 superblade blade <blade number> sensor

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

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

Example Output:

Status	Sensor	Reading	Low Limit	High Limit
OK	CPU1 Temp	1C/ 34F	N/A	80C/176F
OK	CPU2 Temp	1C/ 34F	N/A	80C/176F
OK	System Temp	64C/147F	N/A	80C/176F
OK	CPU1 Vcore	0.95 V	0.6 V	1.38 V

OK	CPU2 Vcore		0.96 V		0.6 V		1.38 V	
OK	CPU1 DIMM		1.53 V		1.2 V		1.65 V	
OK	CPU2 DIMM		1.53 V		1.2 V		1.65 V	
OK	1.5V		1.52 V		1.34 V		1.65 V	
OK	3.3V		3.16 V		2.96 V		3.63 V	
OK	3.3VSB		3.36 V		2.96 V		3.63 V	
OK	5V		5.06 V		4.49 V		5.5 V	
OK	12V		12.19 V		10.75 V		13.25 V	
OK	VBAT		3.36 V		2.96 V		3.63 V	

3.1.3.2.6 *superblade blade <blade number> bmc*

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

3.1.3.2.6.1 *superblade blade <blade number> ip*

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

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

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

3.1.3.2.6.2 *superblade blade <blade number> mac*

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

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

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

3.1.3.2.6.3 *superblade blade <blade number> gateway*

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

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

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

3.1.3.2.6.4 *superblade blade <blade number> netmask*

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

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

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

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*

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

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

3.1.3.2.6.7 *superblade blade <blade number> ipmb*

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

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

3.1.3.2.7 *superblade blade <blade number> config*

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

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

Example Output:

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

3.1.3.2.8 *superblade blade <blade number> sn*

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

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

3.1.4 *superblade gigabit*

Use this command to bring up the following subcommands.

3.1.4.1 *superblade gigabit status*

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

Usage: **superblade gigabit status**

Example Output:

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

3.1.4.2 *superblade gigabit index(es)*

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

3.1.4.2.1 *superblade gigabit <gigabit number> status*

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

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

Example Output:

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

3.1.4.2.2 superblade gigabit <gigabit number> power

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

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

3.1.4.2.3 superblade gigabit <gigabit number> wss

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

3.1.4.2.3.1 superblade gigabit <gigabit number> wss ip

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

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

3.1.4.2.3.2 superblade gigabit <gigabit number> wss netmask

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

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

3.1.4.2.3.3 superblade gigabit <gigabit number> wss gateway

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

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

3.1.4.2.3.4 superblade gigabit <gigabit number> wss datetime

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

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

Example Output:

12/29/2010 02:56:02

3.1.4.2.3.5 superblade gigabit <gigabit number> wss username

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

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

3.1.4.2.3.6 superblade gigabit <gigabit number> wss password

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

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

3.1.4.2.4 superblade gigabit <gigabit number> ipmode

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

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

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

3.1.4.2.5 superblade gigabit <gigabit number> boot

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

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

3.1.4.2.6 superblade gigabit <gigabit number> restart

Use this command to soft restart the gigabit switch specified.

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

3.1.4.2.7 superblade gigabit <gigabit number> fd

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

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

3.1.5 superblade power

Use this command to bring up the following subcommands.

3.1.5.1 superblade power status

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

Usage: superblade **power** **status**

Example Output:

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

3.1.5.2 superblade power index(es)

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

3.1.5.2.1 superblade power <power number> status

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

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

Example Output:

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

3.1.5.2.2 superblade power <power number> power

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

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

3.1.5.2.3 superblade power <power number> fan

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

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

3.1.6 superblade ib

Use this command to command bring up the following subcommands.

3.1.6.1 superblade ib status

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

Usage: superblade **ib** **status**

Example Output:

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

3.1.6.2 superblade ib index(es)

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

3.1.6.2.1 superblade ib <ib number> status

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

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

Example Output:

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

3.1.6.2.2 superblade ib <ib number> power

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

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

3.1.7 superblade cmm

Use this command to bring up the following subcommands.

3.1.7.1 superblade cmm status

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

Usage: superblade **cmm** **status**

Example Output:

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

CMM 1 is being managed now

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

3.1.7.2 superblade cmm index

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

3.1.7.2.1 superblade cmm <cmm number> status

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

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

Example Output:

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

CMM 1 is being managed now
```

3.1.7.2.2 superblade cmm <cmm number> dtime

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

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

Example Output:

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

3.1.7.2.3 superblade cmm <cmm number> ntp

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

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

3.1.7.2.4 superblade cmm <cmm number> reset

Use this command to reset the specified CMM.

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

3.1.7.2.5 superblade cmm <cmm number> flash

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

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

3.1.7.2.6 superblade cmm <cmm number> ver

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

Usage: superblade **cmm** **ver**

Example Output:

```
Version:2.2.64  build 5420
```

3.1.7.2.7 superblade cmm <cmm number> ip

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

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

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

3.1.7.2.8 superblade cmm <cmm number> mac

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

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

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

3.1.7.2.9 superblade cmm <cmm number> gateway

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

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

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

3.1.7.2.10 superblade cmm <cmm number> netmask

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

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

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

3.1.7.2.11 superblade cmm <cmm number> syncfg

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

3.1.7.2.12 superblade cmm <cmm number> opmode

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

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

Mode Choices: 0 = Enterprise 1 = Office

3.1.7.2.13 superblade cmm <cmm number> dhcp

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

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

3.1.8 superblade listtemp

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

Usage: superblade **listtemp**

Example Output:

Status	Module	Sensor	Reading	High Limit
-----	-----	-----	-----	-----
OK	Blade 3	CPU1 Temp	Low	N/A
OK	Blade 3	CPU2 Temp	Low	N/A
OK	Blade 3	System Temp	56C/133F	80C/176F
OK	Blade 4	CPU1 Temp	Low	N/A
OK	Blade 4	CPU2 Temp	Low	N/A
OK	Blade 4	System Temp	57C/135F	80C/176F
OK	Blade 5	CPU1 Temp	Low	N/A
OK	Blade 5	CPU2 Temp	Low	N/A
OK	Blade 5	System Temp	63C/145F	80C/176F
OK	Blade 6	CPU1 Temp	Low	N/A
OK	Blade 6	CPU2 Temp	Low	N/A
OK	Blade 6	System Temp	64C/147F	80C/176F
OK	Blade 7	CPU1 Temp	Medium	N/A
OK	Blade 7	CPU2 Temp	Low	N/A
OK	Blade 7	System Temp	62C/144F	80C/176F
OK	Blade 8	CPU1 Temp	Low	N/A
OK	Blade 8	CPU2 Temp	Low	N/A
OK	Blade 8	System Temp	63C/145F	80C/176F
OK	Blade 9	CPU1 Temp	Medium	N/A
OK	Blade 9	CPU2 Temp	Low	N/A
OK	Blade 9	System Temp	62C/144F	80C/176F
OK	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>

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

Usage: **superblade allsel <filename>**

3.1.10 superblade burst

Use this command to 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

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

Usage: superblade powerconsumption

3.2 microblade

This command set is supported on Micro CMM modules (MBx-xxx-xxx), e.g., MBE-628EB-422D and MBM-GEM-001.

3.2.1 microblade summary

Use this command to display the MicroBlade system summary.

Usage: **microBlade summary**

Example Output:

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

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

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

3.2.2 microblade node

3.2.2.1 microblade node sensor

Use this command to display the MicroBlade node sensor information.

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

3.2.2.2 microblade node status

Use this command to display the MicroBlade node status.

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

3.2.2.3 microblade node power

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

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

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

3.2.2.4 *microblade node ip*

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

Usage:

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

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

3.2.2.5 *microblade node dhcp*

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

Usage:

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

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

3.2.2.6 *microblade node mac*

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

Usage:

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

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

3.2.2.7 *microblade node mask*

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

Usage:

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

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

3.2.2.8 *microblade node gateway*

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

Usage:

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

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

3.2.2.9 *microblade node name*

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

Usage:

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

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

3.2.2.10 microblade node uid

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

Usage:

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

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

3.2.2.11 microblade node systemModel

Use this command to display the MicroBlade node system model name.

Usage: microBlade node systemModel [<bladeIndex> [nodeIndex]]

3.2.3 microblade switch

3.2.3.1 microblade switch info

Use this command to display information about the MicroBlade switch.

Usage: microBlade switch info [switch index]

3.2.3.2 microblade switch power

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

Usage:

(to get) microBlade switch power <switch index>

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

3.2.3.3 microblade switch username

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

Usage:

(to get) microBlade switch username <switch index>

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

3.2.3.4 microblade switch lan

3.2.3.4.1 microblade switch lan ip

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

Usage:

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

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

3.2.3.4.2 microblade switch lan dhcp

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

Usage:

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

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

3.2.3.4.3 microblade switch lan mask

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

Usage:

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

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

3.2.3.4.4 microblade switch lan gateway

Use this command 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

Use this command to display the MicroBlade switch time.

Usage: `microBlade switch getTime <switch index>`

3.2.4 microblade psu

3.2.4.1 microblade psu info

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

Usage: `microBlade psu info [psu index]`

3.2.4.2 microblade psu power

Use this command to provide power supply power control.

Usage:

(to get) **microBlade psu power [psu index]**

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

3.2.4.3 microblade psu fanMode

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

Usage:

(to get) **microBlade psu fanMode**

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

3.2.4.4 microblade psu fanSpeed

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

Usage:

(to get) **microBlade psu fanSpeed**

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

3.2.5 microblade fru

3.2.5.1 microblade fru cmm

Use this command to provide FRU information of the CMM.

Usage: **microBlade fru cmm**

3.2.5.2 microblade fru midplane

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

Usage: **microBlade fru 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*

Use this command to provide FRU information of the switch.

Usage: **microBlade fru switch**

3.2.5.4 *microblade fru psu*

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

Usage: **microBlade fru psu**

3.2.6 microblade powerConsumption

Use this command to access microblade system enclosure power consumption.

Usage: **microBlade powerConsumption**

3.2.7 microblade cmmdia

Use this command to diagnose the health of CMM and blades, including sensor reading, throttling and LED status. The result is shown on the console. A log file is generated to detail any failed items.

Usage: **microBlade cmmdia [input filename]**

A file name is an optional parameter. If you want to diagnose multiple CMMs, you can list file names in the given file.

Example Output:

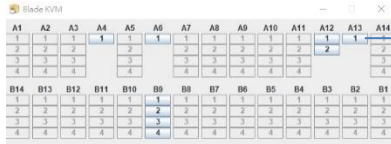
```
Diagnosing 172.30.150.62...Critical  
Analysis Result filepath: 172.30.150.62_2021-01-06-153544_Diag_Result.log  
Diagnosing Pass: 0/1
```

Input file example:

```
172.3.0.1  
172.3.0.2
```

3.2.8 microblade kvm

Use this command to launch the Blade KVM panel. You can click the available buttons on the panel to launch the blade KVM Viewer to manage the associated blades.



Available buttons on the KVM panel

Usage: **microBlade kvm**

3.3sel

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

3.3.1 sel info

Use this command to display the information on the system event log.

Usage: **sel info**

Example Output:

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

3.3.2 sel list

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

Usage: **sel list**

3.3.3 sel csv

Use this command to 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

Use this command to clear the system event log.

Usage: **sel clear**

3.3.5 sel time

Use this command to get/set system SEL time.

Usage: **sel time [YYYYMMDDhhmmss]**

3.4 user

Use this command to list the following user management subcommands.

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

Follow the rules to set up passwords:

A password must be 8 to 19 characters long.

A password cannot be a reverse of the user name.

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

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>

Example:

```
>user add 5 user05 Test1234 4
Done
```

3.4.2 user list

Use this command to list the users. To get more information by specifying user id.

Note that account type is only available on motherboard X12 series and later.

Usage: **user list** [user id]

Example Output:

```
>user list
Maximum number of Users          : 16
Count of currently enabled Users : 1
  User ID | User Name      | Privilege Level   | Enable | Account Types
  ----- | -
           | 2 | ADMIN          | Administrator    | Yes    | Redfish/IPMI,SNMP

>user list 2
User Information
-----
User ID           : 2
User Name         : ADMIN
Privilege Level   : Administrator
Enable            : Yes
Account Types     : Redfish/IPMI,SNMP
Auth Protocol     : HMAC_MD5
Private Protocol  : CBC_DES
```

3.4.3 user delete

Use this command to delete a user.

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

3.4.4 user level

Use this command to update the level of a user.

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

The following levels may be assigned:

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

3.4.5 user test

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

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

3.4.6 user setpwd

Use this command to set the password.

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

3.4.7 user enableType

Use this command to enable account type. It supports X12/H12 and later platforms.

Usage: **user enableType** <user ID> <type> <status> [options]

```
For necessary parameters:
  User ID: 2-16
  Type: 0-SNMP
  Status: 0-Disable, 1-Enable
For options:
  -ap: authentication protocol (MD5:0, SHA:1)
  -pp: private protocol (DES:0, AES:1)
  -ak: authentication key
  -pk: private key
```

Example:

```
>user enableType 2 0 1 -ap 0 -pp 0 -ak Test1234 -pk Test1234
Done
```

3.5 vm

Use this command to list the following virtual media management subcommands. For more details on VM commands, see [Appendix B VM Command Examples](#).



Note: This command only works properly in shell mode.

3.5.1 vm status

Use this command to list the status of the drives present in the system.

Usage: **vm status**

Example Output:

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

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

3.5.2 vm stop

Use this command to stop the specified drive.

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

3.5.3 vm floppy

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

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

3.5.4 vm iso

Use this command to share virtual media via Windows.

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

Example:

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

3.6 ipmi

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

3.6.1 ipmi sensor

Use this command to display the sensor status and data.

Usage: **ipmi sensor**

Example Output:

```
Getting SDR data ...
Getting sensors ...
```

Status	(#)Sensor	Reading	Low Limit	High Limit
-----	-----	-----	-----	-----
OK	(7) CPU1 Temp	Low		
OK	(8) CPU2 Temp	Low		
OK	(9) System Temp	63C/145F	-5C/23F	75C/167F
OK	(10) CPU1 Vcore	0.92 V	0.82 V	1.35 V
OK	(11) CPU2 Vcore	0.88 V	0.82 V	1.35 V
OK	(12) +5V	5.12 V	4.48 V	5.53 V
OK	(13) +5VSB	5.12 V	4.48 V	5.53 V
OK	(14) +12V	12.19 V	10.7 V	13.25 V
OK	(15) -12V	-11.99 V	-12.58 V	-11.22 V
OK	(16) +3.3V	3.26 V	2.92 V	3.64 V
OK	(17) +3.3VSB	3.24 V	2.92 V	3.64 V
OK	(18) VBAT	3.21 V	2.92 V	3.64 V
OK	(19) Fan1	4320 RPM	675 RPM	34155 RPM
	(20) Fan2	0 RPM	675 RPM	34155 RPM
OK	(21) Fan3	4320 RPM	675 RPM	34155 RPM
OK	(22) Fan4	4185 RPM	675 RPM	34155 RPM
	(23) Fan5	0 RPM	675 RPM	34155 RPM
	(24) Fan6	0 RPM	675 RPM	34155 RPM
	(25) Fan7	0 RPM	675 RPM	34155 RPM
	(26) Fan8	0 RPM	675 RPM	34155 RPM
OK	(27) P1-DIMM1A Temp	47C/117F	-5C/23F	75C/167F
	(28) P1-DIMM1B Temp	N/A	-5C/23F	75C/167F
OK	(29) P1-DIMM2A Temp	48C/118F	-5C/23F	75C/167F
	(30) P1-DIMM2B Temp	N/A	-5C/23F	75C/167F
OK	(31) P1-DIMM3A Temp	46C/115F	-5C/23F	75C/167F
	(32) P1-DIMM3B Temp	N/A	-5C/23F	75C/167F
OK	(33) P2-DIMM1A Temp	38C/100F	-5C/23F	75C/167F
	(34) P2-DIMM1B Temp	N/A	-5C/23F	75C/167F
OK	(35) P2-DIMM2A Temp	37C/99F	-5C/23F	75C/167F
	(36) P2-DIMM2B Temp	N/A	-5C/23F	75C/167F
OK	(37) P2-DIMM3A Temp	37C/99F	-5C/23F	75C/167F
	(38) P2-DIMM3B Temp	N/A	-5C/23F	75C/167F
OK	(39) Intrusion	00 C0 00 00	N/A	N/A
OK	(40) PS Status	00 C0 00 00	N/A	N/A

3.6.2 ipmi power

Use this command to list the following power control options.

3.6.2.1 *ipmi power status*

Use this command to display system power status.

Usage: **ipmi power status**

3.6.2.2 *ipmi power up*

Use this command to power up a system.

Usage: **ipmi power up**

3.6.2.3 *ipmi power down*

Use this command to power down a system.

Usage: **ipmi power down**

3.6.2.4 *ipmi power softshutdown*

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

Usage: **ipmi power softshutdown**

3.6.2.5 *ipmi power reset*

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

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

3.6.2.6 *ipmi power cycle*

Use this command to power cycle a system.

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

3.6.2.7 *ipmi power diag*

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

Usage: **ipmi power diag**

3.6.2.8 *ipmi power bootoption <Index>*

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

Usage: **ipmi power bootoption**

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

3.6.3 ipmi acpi

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

Usage: **ipmi acpi**

3.6.4 ipmi lan

Use this command to list the following LAN (Local Area Network) management subcommands.

Usage: **ipmi lan**

Example Output:

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

3.6.4.1 ipmi lan ip

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

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

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

3.6.4.2 ipmi lan mac

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

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

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

3.6.4.3 ipmi lan gateway

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

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

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

3.6.4.4 ipmi lan netmask

Use this command to get or set the specified Netmask.

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

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

3.6.4.5 *ipmi lan snmp*

Use this command to get or set the specified SNMP destination.

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

Example Output:

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



Note: This is a standard command for IPMI snmpv1 and snmpv3. The first destination is for "Alert immediate command" and it is a volatile destination. We do not support it in SMCIPMITool. For other types of protocols, "N/A" is displayed in both the IP and MAC columns. To retrieve the full information of those protocols, use the "redfish eventService alert list" command.

3.6.4.6 *ipmi lan snmpcomm*

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

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

Example Output:

public

3.6.4.7 *ipmi lan arp*

Use this command to enable BMC-generated gratuitous ARPs.

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

3.6.4.8 *ipmi lan dhcp*

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

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

3.6.4.9 *ipmi lan vlan*

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

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

3.6.4.10 *ipmi lan dns*

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

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

3.6.4.11 *ipmi lan protocol*

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

0: IPv4 only

1: IPv6 only

2: Dual

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

3.6.4.12 *ipmi lan ipv6*

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



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

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

3.6.4.12.1 *ipmi lan ipv6 list*

List all IPv6 static IP addresses.

Usage: **ipmi lan ipv6 list**

3.6.4.12.2 *ipmi lan ipv6 add*

Add an IPv6 static IP address to list.

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

3.6.4.12.3 ipmi lan ipv6 clear

Delete an IPv6 static IP address from list.

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

3.6.4.12.4 ipmi lan ipv6 mode

Use this command to get/set IPv6 mode. In this command, we use 0 to represent stateless, 1 to represent stateful and 2 to represent disabled.

Usage: **ipmi lan ipv6 mode [stateless:0 | stateful:1 | disabled:2]**

3.6.4.12.5 ipmi lan ipv6 autoconfig

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

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

3.6.4.12.6 ipmi lan ipv6 dns

Use this command to check or set IPv6 DNS server setting.

Usage:

To set DNS : **ipmi lan ipv6 dns <ip> [number (1 to 2)]**

To clear DNS: **ipmi lan ipv6 dns clear [number (1 to 2)]**

3.6.4.12.7 ipmi lan ipv6 route

IPv6 static route settings.

3.6.4.12.7.1 ipmi lan ipv6 route status

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

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

3.6.4.12.7.2 ipmi lan ipv6 route list

Use this command to list IPv6 static route.

Usage: **ipmi lan ipv6 route list**

3.6.4.12.7.3 ipmi lan ipv6 route add

Use this command to add IPv6 static route.

Usage:

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

3.6.4.12.7.4 ipmi lan ipv6 route clear

Use this command to clear the specified IPv6 static route.

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

3.6.4.12.8 ipmi lan ipv6 duid

Use this command to show IPv6 DUID.

Usage: **ipmi lan ipv6 duid**

3.6.4.13 ipmi lan linkStatus

Use this command to display a summary table about LAN connecting status, including VLAN, Interface, Dedicated, Share and so on.

Usage: **ipmi lan linkStatus**

3.6.5 ipmi fru

Use this command to list the information on the FRU (Field Replaceable Unit).

Usage: **ipmi fru**

Example Output:

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

3.6.6 ipmi fruw

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

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

Example Output:

```
192.168.23.157 X9SCD (S0/G0,6w,v01.39) 14:19 SIM(WA)>ipmi fruw BDT "201210101200"
Board mfg. Date/Time (BDT) = 2012/10/10 12:00:00 (30 A3 86)
```

```
Board Manufacturer Name (BM) = Supermicro
Board Product Name (BPN) =
Board Serial Number (BS) =
Board Part Number (BP) =
Board FRU File ID =
Product Manufacturer Name (PM) =
Product Name (PN) =
Product PartModel Number (PPM) =
Product Version (PV) =
Product Serial Number (PS) =
Product Asset Tag (PAT) =
Product FRU File ID =
```

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

3.6.7 ipmi frubackup

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

Usage: **ipmi frubackup <filename>**

3.6.8 ipmi frurestore

Use this command to restore FRU information from a file.

Usage: **ipmi frurestore <filename>**

3.6.9 ipmi oem

Use this command to list the following subcommands.

3.6.9.1 *ipmi oem clrnt*

Use this command to clear the chassis intrusion detection switch.

Usage: **ipmi oem clrnt**

3.6.9.2 *ipmi oem id*

Use this command to display the motherboard ID.

Usage: **ipmi oem id**

3.6.9.3 *ipmi oem uid*

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

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

3.6.9.4 *ipmi oem gethostname*

Get IPMI host name.

Usage: **ipmi oem gethostname**

3.6.9.5 *ipmi oem sethostname*

Set IPMI host name.

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

3.6.9.6 *ipmi oem backup*

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

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

3.6.9.7 *ipmi oem restore*

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

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

3.6.9.8 *ipmi oem backupcfg*

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

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

Example Output:

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

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

3.6.9.9 *ipmi oem restorecfg*

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

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

Example Output:

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

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

3.6.9.10 *ipmi oem getcfg*

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

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

Example Output:

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

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

3.6.9.11 *ipmi oem setcfg*

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

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

Example Output:

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

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

3.6.9.12 *ipmi oem lani*

Use this command to interface with the IPMI LAN.

Usage: **ipmi oem lani [0|1|2|3|4|5|6|7|8]**

Example Output:

```
10.147.160.14 X12DPU (S0/G0,127w) 17:51 X12 AST2600RoT>ipmi oem lani 2
done

10.147.160.14 X12DPU (S0/G0,127w) 17:51 X12 AST2600RoT>ipmi oem lani
Current LAN interface is [ Failover ]

Parameter for setting:
0:Dedicated
1:Shared
2:Failover
3:Share-AIOM
4:Share-AOC
5:Failover-AIOM
6:Failover-AOC
7:Share-Onboard
8:Failover-Onboard
```



Note: Parameters 3 to 8 are only supported on X13 platform and later.

3.6.9.13 *ipmi oem mac*

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

Usage: **ipmi oem mac**

Example Output:

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



Notes:

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

3.6.9.14 *ipmi oem x10cfg ldap*

Use this command to configure the LDAP authentication. Note that the available mode options may vary depending on the type of motherboard. For X12 generations and above, this ipmi command is not available for use in BMC. Instead, you can use the [redfish ldap command](#) to configure LDAP settings.

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

3.6.9.15 *ipmi oem x10cfg ad*

Use this command to configure the active directory authentication. Note that the available mode options may vary depending on the type of motherboard. For X12 generations and above, this ipmi command is not available for use in BMC. Instead, you can use [the redfish ad command](#) to configure the active directory settings.

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
```

3.6.9.16 *ipmi oem x10cfg radius*

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

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

Example Output:

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

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

Example:

```
ASPD_T>ipmi oem x10cfg radius 0 1812 10.132.161.101 test
Done
```

3.6.9.17 *ipmi oem x10cfg ipCtrl*

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

Usage: **ipmi oem x10cfg ipCtrl**

Example Output:

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

3.6.9.18 *ipmi oem x10cfg ntp*

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

Usage: **ipmi oem x10cfg ntp**

Example Output:

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

3.6.9.18.1 *ipmi oem x10cfg ntp list*

Use this command to display the NTP settings.

Usage: **ipmi oem x10cfg ntp list**

Example Output:

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

3.6.9.18.2 *ipmi oem x10cfg ntp state*

Use this command to get or set the NTP state.

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

3.6.9.18.3 ipmi oem x10cfg ntp timezone

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

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

Example:

```
>ipmi oem x10cfg ntp timezone +1200
Done
```

3.6.9.18.4 ipmi oem x10cfg ntp daylight

Use this command to get or set NTP daylight.

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

3.6.9.18.5 ipmi oem x10cfg ntp primary

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

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

3.6.9.18.6 ipmi oem x10cfg ntp secondary

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

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

3.6.9.19 ipmi oem x10cfg ddns

Use this command to list the following DDNS management subcommands.

Usage: **ipmi oem x10cfg ddns**

Example Output:

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

3.6.9.19.1 ipmi oem x10cfg ddns list

Use this command to display the DDNS settings.

Usage: **ipmi oem x10cfg ddns list**

Example Output:

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

3.6.9.19.2 ipmi oem x10cfg ddns state

Use this command to get or set the DDNS state.

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

3.6.9.19.3 ipmi oem x10cfg ddns server

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

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

3.6.9.19.4 ipmi oem x10cfg ddns hostname

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

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

3.6.9.19.5 ipmi oem x10cfg ddns tsig

Use this command to get or set the TSIG authentication.

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

3.6.9.20 ipmi oem x10cfg alert

Use this command to list the following alert management subcommands. For X12 generations and above, this ipmi command is not available for use in BMC. Instead, you can use the [redfish alert command](#) to configure the alert settings.

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

3.6.9.20.1 ipmi oem x10cfg alert list

Use this command to display the alert settings.

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

Example Output:

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

3.	Event Severity	: Disable All
	Destination Address	: 0.0.0.0 & N/A
	Subject	: N/A
	Message	: N/A
<hr/>		
4.	Event Severity	: Disable All
	Destination Address	: 0.0.0.0 & N/A
	Subject	: N/A
	Message	: N/A
<hr/>		
5.	Event Severity	: Disable All
	Destination Address	: 0.0.0.0 & N/A
	Subject	: N/A
	Message	: N/A
<hr/>		
6.	Event Severity	: Disable All
	Destination Address	: 0.0.0.0 & N/A
	Subject	: N/A
	Message	: N/A
<hr/>		
7.	Event Severity	: Disable All
	Destination Address	: 0.0.0.0 & N/A
	Subject	: N/A
	Message	: N/A
<hr/>		
8.	Event Severity	: Disable All
	Destination Address	: 0.0.0.0 & N/A
	Subject	: N/A
	Message	: N/A
<hr/>		
9.	Event Severity	: Disable All
	Destination Address	: 0.0.0.0 & N/A
	Subject	: N/A
	Message	: N/A
<hr/>		
10.	Event Severity	: Disable All
	Destination Address	: 0.0.0.0 & N/A
	Subject	: N/A
	Message	: N/A
<hr/>		
11.	Event Severity	: Disable All
	Destination Address	: 0.0.0.0 & N/A
	Subject	: N/A
	Message	: N/A
<hr/>		
12.	Event Severity	: Disable All
	Destination Address	: 0.0.0.0 & N/A
	Subject	: N/A
	Message	: N/A
<hr/>		
13.	Event Severity	: Disable All
	Destination Address	: 0.0.0.0 & N/A
	Subject	: N/A
	Message	: N/A
<hr/>		
14.	Event Severity	: Disable All
	Destination Address	: 0.0.0.0 & N/A
	Subject	: N/A
	Message	: N/A
<hr/>		
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

3.6.9.20.2 ipmi oem x10cfg alert level

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

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

The following levels may be assigned:

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

3.6.9.20.3 ipmi oem x10cfg alert ip

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

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

3.6.9.20.4 ipmi oem x10cfg alert mail

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

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

3.6.9.20.5 ipmi oem x10cfg alert subject

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

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

3.6.9.20.6 ipmi oem x10cfg alert message

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

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

3.6.9.20.7 ipmi oem x10cfg alert send

Use this command to send a specific alert.

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

3.6.9.20.8 ipmi oem x10cfg alert delete

Use this command to delete a specific alert.

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

3.6.9.21 ipmi oem x10cfg smtp

Use this command to list the following SMTP management subcommands.

Usage: **ipmi oem x10cfg smtp**

Example Output:

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

3.6.9.21.1 ipmi oem x10cfg smtp list

Use this command to display the SMTP settings.

Usage: **ipmi oem x10cfg smtp list**

Example Output:

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

3.6.9.21.2 ipmi oem x10cfg smtp ssl

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

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

3.6.9.21.3 ipmi oem x10cfg smtp server

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

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

3.6.9.21.4 ipmi oem x10cfg smtp port

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

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

3.6.9.21.5 ipmi oem x10cfg smtp user

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

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

3.6.9.21.6 ipmi oem x10cfg smtp password

Use this command to get or set the SMTP password.

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

3.6.9.21.7 ipmi oem x10cfg smtp sender

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

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

3.6.9.22 ipmi oem x10cfg dns

Use this command to get or set the DNS server's IP.

Usage: **ipmi oem x10cfg dns [<IP> [number]]**

IP: IPv4/IPv6 format

Number:

DNS1 : 1 (Default)

DNS2 : 2

Example:

```
>ipmi oem x10cfg dns
-----
IPv4 DNS1      : 10.12.176.160
      DNS2      : 10.12.176.161
-----
IPv6 DNS1      : 2001:db8:3333:4444:5555:6666:7777:8888
      DNS2      : 2002:db8:3333:4444:5555:6666:7777:8888

>ipmi oem x10cfg dns 10.12.176.162 2
Done
```



Note: DNS2/IPv6 is supported on X12 generation platforms and later.

3.6.9.23 ipmi oem portService

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

3.6.9.23.1 ipmi oem portService http

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

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

3.6.9.23.2 ipmi oem portService https

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

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

3.6.9.23.3 ipmi oem portService ikvm

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

Usage: `ipmi oem portService ikvm [port]`

3.6.9.23.4 ipmi oem portService ssh

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

Usage: `ipmi oem portService ssh [port]`

3.6.9.23.5 ipmi oem portService wsman

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

Usage: `ipmi oem portService wsman [port]`

3.6.9.23.6 ipmi oem portService ssl

Use this command to enable or disable the SSL service.

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

3.6.9.24 ipmi oem smbpbi

Use this command to list the following smbpbi subcommands.

Usage: `ipmi oem smbpbi`

Example Output:

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

3.6.9.24.1 ipmi oem smbpbi gpu info

Use this command to list the GPU information.

3.6.9.25 ipmi oem systemlockdown

Use this command to enable or disable system lockdown mode. Please note that this feature requires the SFT-DCMS-SINGLE license and is not supported on X11 and prior platforms.

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

3.6.9.26 ipmi oem summary

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

Usage: `ipmi oem summary`

Example Output:

Summary

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

3.6.10 ipmi reset

Use this command to perform a BMC cold reset.

Usage: **ipmi reset**

3.6.11 ipmi fd

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

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

Usage: **ipmi fd <option>**

3.6.12 ipmi ver

Use this command to display the versions of IPMI.

Usage: **ipmi ver**

Example Output:

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

3.6.13 ipmi flash

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

Usage: **ipmi flash <filename>**

3.6.14 ipmi flashw

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

Usage: **ipmi flashw <filename>**

3.6.15 ipmi flashr

Use this command to flash the Renesas (X9 and B9) IPMI firmware.

Usage: **ipmi flashr**

Example Output:

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

3.6.16 ipmi flashh

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

Usage: **ipmi flashh <filename>**

Example Output:

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

3.6.17 ipmi flasha

Use this command to flash the ASPEED IPMI firmware (motherboard series X10 and X11 UP, *.bin). The option of keeping the previous configurations is also provided.

0: Do not preserve config

1: Preserve config

Note that this function is only available on firmware version 1.04 or later.

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

Example Output:

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

3.6.18 ipmi flashrf

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

Following preserve options are provided:

- cfg Preserve Configuration (Will restore to factory default if not preserved.)
- sdr Preserve SDR (Will restore the SDR defaults if not preserved.)
- ssl Preserve SSL certificate (Will restore the default SSL certificate if not preserved.)
- backup Backup image (Rot only)

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

The parameters of three options can be appended in any order. For example, “ipmi flashrf <filename> -sdr -ssl” is equal to “ipmi flashrf -ssl -sdr.”

Example Output:

```
10.147.160.26 X12SPZ (S0/G0) 16:19 X12 AST2500>ipmi flashrf
D:/firmware/SMT_X12AST2500_ROT_RSA4K.bin
*****
WARNING!
Firmware upgrade must not be interrupted once it is started.
Once you get error after Upgrading, please use local KCS tool
for recovery.
*****
Check firmware file... Done (ver:1.23.00)
Check BMC status... Done (ver:1.24.00)
Uploading file.....Done
```

```
Updating >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>100%  
Resetting BMC  
Done  
Total Elapsed Time: 2 min 54 sec(s)
```

3.6.19 ipmi uflash

Like ukvm being a universal KVM for different platforms, this command is used to update different Supermicro platforms. It is supported by X10 to X12 and later platforms. If you do not know the right command to update BMC, use this command.

The following preserve options are provided:

0: Do not preserve config

1: Preserve config

Usage: **ipmi uflash** <filename> [Preserve opt]

Example Output:

3.6.20 ipmi raw

Use this command to send an IPMI raw command.

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

3.6.20 ipmi raw

Use this command to send an IPMI raw command.

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

3.6.21 ipmi ipmb

Use this command to send an IPMI raw command.

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

Example Output:

SMCIPMITool User's Guide 79

```
Return data = 50 01 04 44 02 21 57 01 00 0F 0B 04 06 20 01
```

3.6.22 **ipmi ipmboem**

Use this command to send an IPMI raw command.

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

3.6.23 **ipmi delsdrr**

Use this command to delete the SDR.

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

3.6.24 **ipmi session info**

Use this command to view the information.

Usage: **ipmi sessioninfo**

Example Output:

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

3.6.25 **ipmi fan**

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

Usage: **ipmi fan**

Example Output:

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

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

3.6.26 **ipmi watchdog**

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

3.6.26.1 ipmi watchdog reset

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

Usage: **ipmi watchdog reset**

3.6.26.2 ipmi watchdog set

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

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

Example Output:

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

3.6.26.3 ipmi watchdog info

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

Usage: **ipmi watchmple Odog info**

Exaoutput:

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

3.7 ver

Use this command to list the version and build of the SMCIPMITool application being used.

Usage: **ver**

Example Output:

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

3.8 list

Use this command to display all available commands.

Usage: **list**

3.9 find

Use this command to search for and display all IPMI devices.

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

Example Output:

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

3.10 found

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

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

3.10.1 found list

Use this command to list all found IPMI devices.

Usage: **found list**

3.10.2 found clear

Use this 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

Use this command to 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

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

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

Loop = 0 is for an infinite loop

Delay is in seconds

3.12 host

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

3.12.1 host list

Use this command to list the host group and host data.

Usage: **host list**

Example Output:

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

Host Group:
      Group Name          Host
      -----
      1                   1.112
                        1.119
      bl                  bl1
                        bl2
```

3.12.2 host reload

Use this command to reload the host data.

Usage: **host reload**

3.12.3 host add

Use this command to add a host. Currently only ipv4 address is allowed.

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

3.12.4 **host remove**

Use this command to remove a host.

Usage: **host remove** <host>

3.12.5 **host rename**

Use this command to rename a host.

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

3.12.6 **host group**

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

3.12.6.1 host group add

Use this command to add a host group.

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

3.12.6.2 host group remove

Use this command to remove a host group.

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

3.12.6.3 host group rename

Use this command to rename a host group.

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

3.12.6.4 host group addhost

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

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

3.12.6.5 host group removehost

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

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

3.13 hostrun

Use this command to run a command on an entire host or group.

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

Example Output:

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

[bl2:192.168.10.244]
Done
```

3.14 sc

Use this command to execute a DOS or Linux shell command.

Usage: **sc** <command>

Example Output:

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

3.15 pminfo

Use this command to display information on the health of the PMBus.

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

Example Output:

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

3.16 psfruinfo

Use this command to display the FRU health information of a power supply. This command can be replaced by the pminfo command in X10 and later generation.

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 mdr

This command for IPMI Rack Scale extensions is only available on some of the Intel Xeon Processor Scalable family platforms of the Intel RSD. Use this command to list the following managed data region subcommands.

3.18.1 mdr smbios

3.18.1.1 *mdr smbios biosInfo*

Use this command to display the BIOS information.

Usage: **mdr smbios biosInfo**

3.18.1.2 *mdr smbios systemInfo*

Use this command to display the system information.

Usage: **mdr smbios systemInfo**

3.18.1.3 *mdr smbios baseboardInfo*

Use this command to display the baseboard/module information.

Usage: **mdr smbios baseboardInfo**

3.18.1.4 *mdr smbios processorInfo*

Use this command to display the processor information.

Usage: **mdr smbios processorInfo**

3.18.1.5 *mdr smbios memoryDevice*

Use this command to display the memory devices.

Usage: **mdr smbios memoryDevice**

3.18.1.6 *mdr smbios nicInfo*

Use this command to display the NIC information.

Usage: **mdr smbios nicInfo**

3.18.1.7 *mdr smbios pciInfo*

Use this command to display the PCIe information.

Usage: **mdr smbios pciInfo**

3.18.1.8 *mdr smbios storageDevice*

Use this command to display the storage device information.

Usage: **mdr smbios storageDevice**

3.18.1.9 *mdr smbios all*

Use this command to display all information.

Usage: **mdr smbios all**

3.18.1.10 *mdr smbios summary*

Use this command to display summary information.

Usage: **mdr smbios summary**

Example Output:

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

3.18.1.11 *mdr smbios dumpToFile*

Use this command to dump SMBIOS data to file.

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

3.18.2 *mdr cableID*

Use this command to display PCIe Cable EEPROM Data.

Usage: **mdr cableID**

3.19 bbp

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

3.19.1 bbp status

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

Usage: **bbp status**

Example Output:

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

3.19.2 bbp autoDischarge

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

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

3.19.3 bbp discharge

Use this command to manually discharge the battery.

Usage: **discharge <module>**

2.19.4 bbp shutdown

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

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

2.19.5 **bbp shutdownTimeout**

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

Usage: **bbp shutdownTimeout**

3.20 **nm**

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

3.20.1 **nm detect**

Use this command to detect if ME is present.

Usage: **nm detect**

Example Output:

```
This device supports Node Manager
```

3.20.2 **nm ver**

Use this command to display the node manager version.

Usage: **nm ver**

Example Output:

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

3.20.3 **nm cap**

Use this command to display the node manager capabilities.

Usage: **nm cap**

Example Output:

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

3.20.4 nm status

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

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

Example Output:

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

3.20.5 nm stat

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

Usage: **nm stat [ID]**

Example Output:

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

3.20.6 nm resetStat

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

Usage: **nm resetStat [ID]**

3.20.7 nm pstate

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

Usage: **nm pstate [value]**

Example Output:

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

3.20.8 nm tstate

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

Usage: **nm tstate [value]**

Example Output:

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

3.20.9 nm ptstate

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

Usage: **nm ptstate**

Example Output:

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

3.20.10 nm alert

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

Usage: **nm alert [destination]**

Example Output:

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

3.20.11 nm scanPolicy

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

Usage: **nm scanPolicy [end]**

Example Output:

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

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

3.20.12 nm addPolicy

Use this command to add a new policy.

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

Example Output:

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

3.20.13 nm delPolicy

Use this command to delete a policy.

Usage: **nm delPolicy** <ID>

3.20.14 nm getPolicy

Use this command to get a policy.

Usage: **nm getPolicy** <ID>

Example:

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

3.20.15 nm enablePolicy

Use this command to enable a policy.

Usage: **nm disablepolicy** <ID>

3.20.16 nm disablePolicy

Use this command to disable a policy.

Usage: **nm disablePolicy** <ID>

3.21 kvmwa

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

Usage: **kvmwa**

3.22 ukvm

Use this command to auto-detect the firmware and launch the correct KVM (keyboard/video/mouse) window console. KVM console will be disconnected if users perform FW update or BIOS update.

Administrative privileges are required (Linux: sudo, Windows: run as administrator) to perform virtual storage mounting function.

Usage: **ukvm** [-html5]



Notes:

- To launch the java version of KVM console, use the ukvm command.
 - To launch the HTML 5 KVM, use either the ukvm -html5 command or the “redfish kvm” command.
 - For more details, please refer to [redfish kvm](#).
-

3.23 vmwa

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

Usage: **vmwa**



Notes:

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

3.23.1 vmwa dev1list

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

Usage: **vmwa dev1list**

3.23.2 **vmwa dev1drv**

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

Usage: **vmwa dev1drv <index>**

3.23.3 **vmwa dev1stop**

Use this command to stop the virtual device 1.

Usage: **vmwa dev1stop**

3.23.4 **vmwa dev2list**

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

Usage: **vmwa dev2list**

3.23.5 **vmwa dev2cd**

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

Usage: **vmwa dev2cd <index>**

3.23.6 **vmwa dev2iso**

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

Usage: **vmwa dev2iso <filename>**

3.23.7 **vmwa dev2stop**

Use this command to stop the virtual device 2.

Usage: **vmwa dev2stop**

3.23.8 **vmwa status**

Use this command to show the status.

Usage: **vmwa status**

Example Output:

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

3.23.9 **vmwa log**

Use this command to show the log.

Usage: **vmwa log**

3.24 dcmi

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

3.24.1 dcmi find

Use this command to search for and display all DCMI devices.

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

Example Output:

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

3.24.2 dcmi cap

Use this command to list the DCMI capabilities.

Usage: **dcmi cap**

Example Output:

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

Optional Platform capabilities
Power Management         :Not Compliant

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

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

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

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

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

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

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

3.24.3 **dcmi powerStatus**

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

Usage: **dcmi powerStatus**

Example Output:

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

3.24.4 **dcmi MCID**

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

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

3.25 **kvm**

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

Usage: **kvm**

3.26 **kvmw**

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

Usage: **kvmw**

3.27 **kvmwx9**

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

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

Example Output:

3.28 vmw

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

Usage: **vmw**



Note: This command only works properly in shell mode.

3.28.1 vmw floppy

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

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

3.28.2 vmw usbkey

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

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

3.28.3 vmw iso

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

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

3.28.4 vmw cd

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

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

3.28.5 vmw stopFloppy

Use this command to stop the connected floppy.

Usage: **vmw stopFloppy**

3.28.6 vmw stopUsbkey

Use this command to stop the connected USB key.

Usage: **vmw stopUsbkey**

3.28.7 **vmw stopISO**

Use this command to stop the connected ISO.

Usage: **vmw stopISO**

3.28.8 **vmw stopCD**

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

Usage: **vmw stopCD**

3.28.9 **vmw status**

Use this command to view the Virtual Media status.

Usage: **vmw status3.35 sol**

3.29 sol

Use this command to list the following SOL subcommands.

3.29.1 sol activate

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

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

Usage: **sol activate**



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

3.29.2 sol deactivate

Use this command to stop SOL.

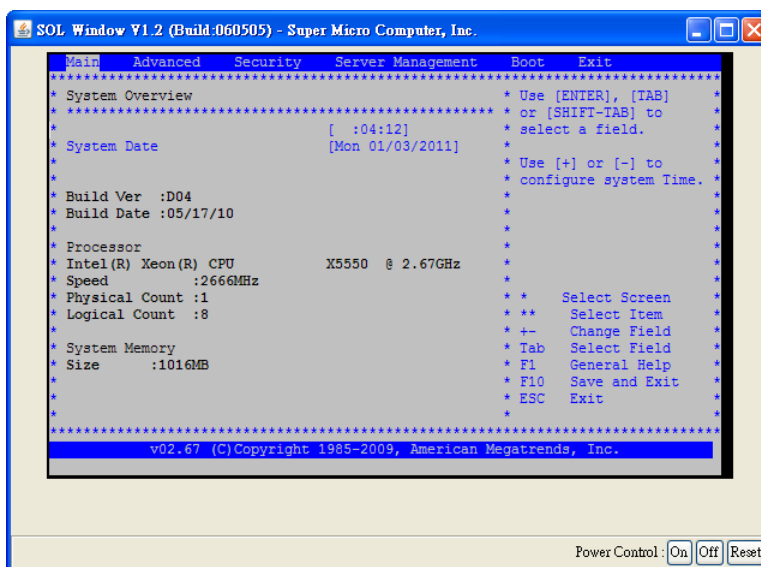
Usage: **sol deactivate**

3.29.3 sol window

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

Usage: **sol window**

Example Output:



3.29.4 sol key

Use this command to key map for Linux or Windows.

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

3.29.5 bitrate

Use this command to configure the SOL transmission bit rate.

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

3.29.6 retryCount

Use this command to configure the SOL retry counts.

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

3.29.7 retryInterval

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

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

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 or newer. Use this command to run tests.

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

Usage: **nm20**

Example Output:

nmSDR	Display NM SDR
selTime	Get SEL time
deviceId	Get ME Device ID
reset	Reboots ME
reset2Default	Force ME reset to Default
updateMode	Force ME to Update Mode
powerOff	Set ME power state off
selfTest	Get Self Test Results
mode	Get ME running Mode
listImagesInfo	List ME Images information
oemGetPower	OEM Power command for ME
oemGetTemp	OEM Temp. command for ME
globalEnable	Global Enable NM policy control
globalDisable	Global Disable NM policy control
domainEnable <domain ID>	per Domain Enable NM policies
domainDisable <domain ID>	per Domain Disable NM policies
policyEnable <domain ID> <policy ID>	per Policy Enable NM policy
policyDisable <domain ID> <policy ID>	per Policy Disable NM policy

```

addPowerPolicy <pID> <limit> <t> <p> [<ca>]    Add Power Policy
getPolicy <domain ID> <policy ID>            Get Policy
delPolicy <domain ID> <policy ID>            Delete Policy
scanPolicy                                     Scan all presented Policies
addPolicy <dID> <pID> <ptt> <agg> <a> <l> <t> <tl> <p> [<ca>] Add Policy
statistics <mode> <domainID> <policy ID>      NM statistics
resetStatistics <mode> <domain ID> <policy ID> Reset NM statistics
cap <domain ID> <Trigger Type>                NM Capabilities
ver                                           NM Version
alert [dest]                                NM Alert
pstate [value]                              Get/Set Max allowed CPU P-State
tstate [value]                              Get/Set Max allowed CPU T-State
ptstate                                     Show CPU P-State and T-State
cpuCore [cores]                             Get/Set max allowed logical processors
totalPower <domainID> [watts]                Get/Set Total Power Budget
policySuspendPeriod                         Policy Suspend Periods (5)
dcmi                                         DCMI Power Management Commands (5)
sensor                                       Get Sensor
summary                                     Summary

```

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 Capabilities 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, you cannot turn off ME immediately. It will display a "not support in present state" message.

To power off ME, you should turn off the chassis power first.

Usage: **nm20 powerOff**

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> [<ca>]

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

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

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

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

```
Suspend Periods:
Number Of Periods = 0
```

```
Total Policies = 1
```

3.30.23 nm20 addPolicy

Use this command to add policy.

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

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

Example:

```
>nm20 addPolicy 0 6 0 0 1 250 100000 30 15 0
Done
```

3.30.24 nm20 statistics

Use this command to display statistics.

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

```
mode:
    1(01h) - Global power statistics in [Watts]
    2(02h) - Global inlet temperature statistics in [Celsius]
    3(03h) - Global throttling statistics [%] (NM3.0)
```

```
4(04h) - Global volumetric airflow statistics [1/10th of CFM] (NM3.0)
5(05h) - Global outlet airflow temperature statistics [Celsius] (NM3.0)
6(06h) - Global chassis power statistics [Watts] (NM3.0)
17(11h) - Per policy power statistics in [Watts]
18(12h) - Per policy trigger statistics in [Celsius]
19(13h) - Per policy throttling statistics in [%] (NM3.0)
27(1Bh) - Global Host Unhandled Requests statistics
28(1Ch) - Global Host Response Time statistics
29(1Dh) - Global CPU throttling statistics
30(1Eh) - Global memory throttling statistics
31(1Fh) - Global Host Communication Failure statistics
domainID:
0 - Entire platform
1 - CPU subsystem
2 - Memory subsystem
3 - HW Protection (NM3.0)
4 - High Power I/O subsystem
For mode in a range 1Bh to 1Fh Domain ID must be set to 00h
Policy ID:
Apply for mode 11h or 12h. otherwise set to 0
```

Example:

```
>nm20 statistics 1 0 0
Current = 146 w
Minimum = 144 w
Maximum = 150 w
Average = 147 w
Time = 2023/05/29 08:03:09
Reporting Period = 65864 sec
Domain ID:
Entire platform
Policy/Global Administrative state:
NM Policy Control is Globally Enabled
Measurements state:
Measurements in progress
raw = 57 01 00 92 00 90 00 96 00 93 00 3D 5C 74 64 48 01 01 00 50
```

3.30.25 nm20 resetStatistics

Use this command to reset NM statistics.

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

mode:

```
0 (00h) - reset global statistics including power and inlet temp
1 (01h) - per policy statistics including power and trigger statistics
27 (1Bh) - global Host Unhandled Requests statistics
28 (1Ch) - global Host Response Time statistics
29 (1Dh) - global CPU throttling statistics
30 (1Eh) - global memory throttling statistics
31 (1Fh) - global Host Communication Failure statistics
Domain ID:
0 - Entire platform
1 - CPU subsystem
2 - Memory subsystem
```

```
3 - HW Protection (NM3.0)
4 - High Power I/O subsystem
Policy ID:
  ignored if field Mode is 0h, Set to 0
```

Example:

```
>nm20 resetStatistics 0 0 0
Done
```

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 [nm 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 totalPower

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

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

3.30.34 nm20 cpuMemTemp

Use this command to view the CPU or memory temperature.

Usage: **nm20 cpuMemTemp**

Example Output:

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

```
[CPU#1]CHANNEL#1, DIMM#0 (P2_DIMMF1) = 26(c)
[CPU#1]CHANNEL#2, DIMM#0 (P2_DIMMG1) = 26(c)
[CPU#1]CHANNEL#3, DIMM#0 (P2_DIMMH1) = 26(c)
```

3.30.35 nm20 hostCpuData

Use this command to display the host CPU data.

Usage: **nm20 hostCpuData**

Example Output:

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

3.30.36 nm20 getAlertThreshold

Use this command to get the Policy Alert Thresholds.

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

Example Output:

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

3.30.37 nm20 setAlertThreshold

Use this command to set the Policy Alert Thresholds.

Usage:

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

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

Example:

```
>nm20 setAlertThreshold 0 6 3 10 30 60
```

Done

3.30.38 nm20 setPowerDrawRange

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

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

3.30.39 nm20 policySuspendPeriod

List the commands related to the policy suspend period.

```
Command(s):
get <domainId> <policyId>           Get Policy Suspend Periods
add <domainId> <policyId> <startTime> <stopTime> <days>      Set Policy Suspend Periods
update <domainId> <policyId> <periodId> [start=<startTime> stop=<stopTime> days=<days>]
delete <domainId> <policyId> <periodId>           Update Policy Suspend Periods
clear <domainId> <policyId>           Delete Policy Suspend Periods
```

3.30.39.1 nm20 policySuspendPeriod get

Use this command to get the Policy Suspend Periods.

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

Example Output:

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

3.30.39.2 nm20 policySuspendPeriod add

Use this command to add the Policy Suspend Periods.

Usage:

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

```
domainId :
0 - Entire platform
1 - CPU subsystem
2 - Memory subsystem
3 - HW Proection (NM3.0)
4 - High Power I/O subsystem
```

```

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

```

Example:

```

>nm20 policySuspendPeriod add 0 6 1200 1300 1
Done
=====
Domain ID = 0 , Policy ID = 6
=====
Number Of Periods = 1
[Suspend Periods 1]
    Start = 12:00
    Stop  = 13:00
    Days  = Monday

```

3.30.39.1 nm20 policySuspendPeriod update

Use this command to update the policy suspend periods.

Usage:

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

```

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

```

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

3.30.39.2 *nm20 policySuspendPeriod delete*

Use this command to delete the Policy Suspend Periods.

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

3.30.39.3 *nm20 policySuspendPeriod clear*

Use this command to clear policy suspend periods.

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

3.30.40 **nm20 dcmi**

List the commands which relate to node manager DCMi

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

3.30.40.1 *nm20 dcmi cap*

Use this command to get DCMi Capability Information.

Usage: **nm20 dcmi cap**

Example Output:

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

3.30.40.2 *nm20 dcmi powerReading*

Use this command to get Power Reading.

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

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

Example Output:

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

3.30.40.3 *nm20 dcmi powerLimit*

Use this command to get or set the Power Limit.

Usage: To get the Power Limit :

nm20 dcmi powerLimit

To set the Power Limit:

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

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

Example Output:

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

3.30.40.4 *nm20 dcmi powerLimitEnable*

Use this command to enable the Power Limit.

Usage: **nm20 dcmi powerLimitEnable**

3.30.40.5 ***nm20 dcmi powerLimitDisable***

Use this command to disable the Power Limit.

Usage: **nm20 dcmi powerLimitDisable**

3.30.41 nm20 sensor

Use this command to get the sensors of Node Manager.

Usage: **nm20 sensor**

Example Output:

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

3.30.42 nm20 summary

Use this command to get the information of Node Manager.

Usage: **nm20 summary**

```

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

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

Total Power Budget: Not set

DCMI Power Limit (W):   300

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

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

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

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

3.31 nm30

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

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

Usage: **nm30**

Example Output:

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

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
```

3.31.8 nm30 setCupsPolicy

Use this command to set the CUPS Policy.

Usage:

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

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

Example:

```
>nm30 setCupsPolicy 1 0 1 100 30
Done.
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           : 100
Averaging Window in sec  : 30
```

3.31.9 nm30 cupsPolicyEnable

Use this command to enable the CUPS policy.

Usage: **nm30 cupsPolicyEnable <domainId>**

3.31.10 nm30 cupsPolicyDisable

Use this command to disable the CUPS policy.

Usage: **nm30 cupsPolicyDisable <domainId>**

3.32 nm40

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

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

3.32.1 nm40 setTurboSyncRatio

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

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

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

3.32.2 nm40 getTurboSyncRatio

Use this command to get the current turbo ratio limit.

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

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

Example Output:

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

3.33 hdd

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



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

3.33.1 hdd map

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

Usage: **hdd map**

Example Output:

```
172.31.11.86 X9DR3-LN4F+ (S0/G0) 17:22 SIM(WA)>hdd map
Device: 0, Enclosure Set: 1
0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2
-----
O O O O O O O O O O O O O O O O O O O O O O O O O O O O - -

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

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

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

3.33.2 hdd info

Use this command to display HDD information.

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

device id: option (Default = 0)

Example Output:

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

Device ID: 0

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

3.33.3 hdd disk

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

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

device id: option (Default = 0)

Example Output:

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

Device ID: 0

Field	Value
-----	-----
Vendor	SEAGATE
Name	ST31000424SS
revision	0003
Media Err Count	0
Other Err Count	0
Pred Fail Count	0
last Pred Fail Seq	0
FW state	Unconfigured good drive
link Speed	6.0Gb/s
Coerced Size	930.4 GB

```

Temperature          | N/A
Enclosure ID         | 4

172.31.11.86 X10DSC+ (S0/G0,750w) 18:28 ASPD_T>hdd disk 0 1
Device ID: 1
Field                | Value
-----             | -----
Vendor               | HGST
Name                 | HUH721008AL4200
revision             | A21D
Media Err Count      | 0
Other Err Count      | 0
Pred Fail Count      | 0
last Pred Fail Seq   | 0
FW state              | drive is exposed and controlled by host
link Speed           | 12.0Gb/s
Coerced Size          | 7.3 TB
Temperature          | 31C/ 88F
Enclosure ID         | 1

```

3.33.4 lmap

Use this command to display logical HDD present status.

Usage: **hdd lmap**

3.33.5 linfo

Use this command to display logical HDD information.

Usage: **hdd linfo**

3.33.6 ldisk

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

Usage: **hdd ldisk <index>**

3.34 bios

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

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

Usage: **bios**

3.34.1 bios ver

Use this command to check the BIOS version.

Usage: **bios ver**

Use this command to check the BIOS image file.

Usage: **bios image <filename>**

Use this command to update BIOS via IPMI.

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

Options:

-N: Program NVRAM

-R: Preserve SMBIOS

-MER: Program ME Firmware ME Region

-FORCEREBOOT: Force to reboot after BIOS update

Example Output:

[illegible]

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

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

-me	Preserve ME
-smbios	Preserve SMBIOS
-nvram	Preserve NVRAM
-backup	Backup image (Rot only)
-reboot	Force power down to proceed update

[illegible]

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

Key format example for X11 and prior:

Key format example for X12 and later:

Example file content:

Use this command to collect all MAC addresses in ipv4 network and save them in files.

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

Example Output:

```
>bios getMACs 10.147.160.1 10.147.160.255 255.255.255.0 outputMACs.txt
Finding BIOS update available Devices ...
0CC47AF4D2B8 ; 10.147.160.3 AST2500
AC1F6B3DEACB ; 10.147.160.8 X12 AST2600RoT
AC1F6B3DEAAB ; 10.147.160.15 X12 AST2600RoT
003048F4692B ; 10.147.160.58 IPMI 2.0 SIM(WA) IPMI+KVM
4 device(s) found. outputMACs.txt was created
```

3.34.7 bios setKeys

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

Usage: **bios setKeys** <file>

Example file content:

1. for X11 and prior

```
0CC47AF4D2B8;10.147.160.2;E66F-5F17-7AF6-99D8-C303-C15E
```

2. for X12 and later

```
0CC47AF4D2B8;10.147.160.3;{"ProductKey":{"Node":{"LicenseID":"1","LicenseName":"SF
TOOBLIC","CreateDate":"20200514"},"Signature":"YB1quU1c8MV3VmMNSbXcivoS1bO9X5s52i
IH1F1mvx3vArJykX5WH52AUy3DzMnWNruwd00bF3Bq2kExdxwQrbb73q19fDoL53ZrUld5NsEn+ESV7i00
jR9HQBYr4qokKiAn8Ec0iAzWmqAzmUuUzT+fc1LLnsXEWvW5DuQhAI+FeBMOXRsk7Tx51GLra5kDOc4N/r
QHeQHWXaYrQ851VTqcsMJ9PcdSKCNbYqv31/sQKP7znElRzQRwHS4oFbTGd1KltpN/ARxmUObkTJGlgIMJ
4RmgRHCne4dF4MDwObMa+Q3R71K5Le4EtZdPPcefGkrhezWpLr4fXLdZrc+Iw=="}}
```



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

3.34.8 bios postCode

Use this command to do post snooping. This command will get latest BIOS POST codes.

Usage: **bios postCode**

3.35 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.

3.35.1 **mg list**

Use this command to list the current managed devices.

Usage: **mg list**

3.35.2 **mg save**

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

Usage: **mg save <filename>**

3.35.3 **mg load**

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

Usage: **mg load <filename>**

3.35.4 **mg default**

Use this command to manage the default group.

Usage: **mg default**

3.35.5 **mg found**

Use this command to manage the found group.

Usage: **mg found**

3.35.6 **mg sort**

Use this command to sort the currently managed devices.

Usage: **mg sort**

3.35.7 **mg clear**

Use this command to clear all currently managed devices.

Usage: **mg clear**

3.35.8 **mg refresh**

Use this command to refresh the managed devices.

Usage: **mg refresh**

3.36 **found**

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

3.36.1 found list

Use this command to list the found IPMI devices.

Usage: **found list**

3.36.2 found clear

Use this command to clear the found IPMI devices.

Usage: **found clear**

3.36.3 found copy

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

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

3.36.4 found copyall

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

Usage: **found copyall**

3.36.5 found saveAs

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

Usage: **found saveAs** <filename>

3.36.6 found refresh

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

Usage: **found refresh**

3.37 task

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

Usage: **task**



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

3.37.1 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
```

3.37.2 task command

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

Usage: **task command** <taskID>

3.37.3 task startTime

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

Usage: **task startTime** <taskID>

3.37.4 task endTime

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

Usage: **task endTime** <taskID>

3.37.5 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>

3.37.6 task exitcode

Use this command to get the exit code of a task. For a complete list of exit codes, see [Appendix F Exit Codes](#).

Usage: **task exitcode** <taskID>

3.37.7 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 ]
```

```
3 | 03/28 11:54:09 | | 00:00:04 | RUNNING | | 10.133.99.70 ADMIN ***** bios  
update C:\x9drw3.219
```

3.37.13 task limit

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

Usage: **task limit** <number>

3.38 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
```

3.38.1 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
```

3.38.2 tp nodeID

Use this command to get the Node ID.

Usage: **tp nodeID**

3.38.3 **tp systemName**

Use this command to get/set the system name.

Usage: **tp systemName [data]**

3.38.4 **tp systemPN**

Use this command to get the system product number.

Usage: **tp systemPN**

3.38.5 **tp systemSN**

Use this command to get the system serial number.

Usage: **tp systemSN**

3.38.6 **tp chassisPN**

Use this command to get the chassis product number.

Usage: **tp chassisPN**

3.38.7 **tp chassisSN**

Use this command to get the chassis serial number.

Usage: **tp chassisSN**

3.38.8 **tp backPlanePN**

Use this command to get the plane product number.

Usage: **tp backPlanePN**

3.38.9 **tp backPlaneSN**

Use this command to get the plane serial number.

Usage: **tp backPlaneSN**

3.38.10 **tp chassisLocation**

Use this command to get the chassis location value.

Usage: **tp chassisLocation [data]**

3.38.11 **tp bpLocation**

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

Usage: **tp bpLocation**

3.38.12 **tp bpnID**

Use this command to get the BPN ID.

Usage: **tp bpnID**

3.38.13 **tp bpnRevision**

Use this command to get the BPN revision.

Usage: **tp bpnRevision**

3.38.14 **tp nodePN**

Use this command to get the node product number.

Usage: **tp nodePN**

3.38.15 **tp nodeSN**

Use this command to get the node serial number.

Usage: **tp nodeSN**

3.38.16 **tp configID**

Use this command to get/set the config ID.

Usage: **tp configID [ID]**

3.39 **wiso**

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



Notes:

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

Usage: **wiso**

Example Output:

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

3.39.1 wsiso status

Use this command to display the virtual media status.

Usage: **wsiso status**

3.39.2 wsiso mount

Use this command to mount an ISO file.

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

Some X12 and X13 platforms support the certificate option, for this kind of usage as follows.

**Usage: wsiso mount <IP> <path> [username] [password] [certificate]
[self-signed]**

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)
certificate: 0(Disable) or 1(Enable), verify the certificate on the server (optional),
note: This option only works with HTTPS file server. The default is 0.
self-signed: 0(Disable) or 1(Enable), accept the self-signed certificate (optional),
it requires enabling certificate. The default is 0.

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
Ex 3: mount linux.iso with certificate and self-signed
 wsiso mount https://192.168.1.200 /iso/linux.iso 1 1
Ex 4: mount linux.iso with username, password, and certificate
 wsiso mount https://192.168.1.200 /iso/linux.iso admin admin 1 0

* 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

3.39.3 wsiso umount

Use this command to unmount an ISO file.

Usage: **wsiso umount**

3.40 tas

3.40.1 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

3.40.2 **tas pause**

Use this command to pause the TAS service.

Usage: **tas pause**

3.40.3 **tas resume**

Use this command to resume the TAS service.

Usage: **tas resume**

3.40.4 **tas refresh**

Use this command to trigger TAS to recollect data.

Usage: **tas refresh**

3.40.5 **tas clear**

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

Usage: **tas clear**

3.40.6 **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]**

3.41 nvme

The NVMe command set provides NVMe information and management. Please note that the command does not support M.2 NVMe.

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

3.41.1 nvme list

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

Usage: **nvme list**

3.41.2 nvme info

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

Usage: **nvme info**

Example Output:

```
10.163.55.95 (S0/G0) 17:56 ASPD_T>nvme info
[AOC Number:0] [Firmware Info:E8 05]
```

Item	Value
----	-----
Slot	0
Located	No
Temperature	34 C
Class Code	02 08 01
ID	80 86
Serial Number	CVFT4182001K400GGN
Model Number	INTEL SSDPE2MD400G4
Port0 Max Link Speed	8.0 GT/s
Port0 Max Link Width	x4
Port1 Max Link Speed	8.0 GT/s
Port1 Max Link Width	x4
Init Power Requirement	10 Watts
Max Power Requirement	25 Watts

Item	Value
----	-----
Slot	1
Located	No
Temperature	35 C
Class Code	02 08 01

ID		80 86
Serial Number		CVFT41820018400GGN
Model Number		INTEL SSDPE2MD400G4
Port0 Max Link Speed		8.0 GT/s
Port0 Max Link Width		x4
Port1 Max Link Speed		8.0 GT/s
Port1 Max Link Width		x4
Init Power Requirement		10 Watts
Max Power Requirement		25 Watts

3.41.3 nvme rescan

Use this command to rescan all NVMe devices from OS.

Usage: **nvme rescan**

3.41.4 nvme insert

Use this command to insert an SSD.

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

3.41.5 nvme locate

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

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

nvme locate <aoc> <group> <slot>

3.41.6 nvme stopLocate

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

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

nvme stoplocate <aoc> <group> <slot>

3.41.7 nvme remove

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

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

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

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

nvme remove <aoc> <group> <slot>

3.41.8 nvme smartData

Use this command to display the NVMe in band details.

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

Example Output:

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

3.42 nodeKey

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

Usage: **nodekey**

Example Output:

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

3.42.1 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
```

3.43 rsc

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

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

Example Output:

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



Notes:

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

3.44 rko

Use this command to send a series of keyboard actions to a managed system. (This function is available on X9, X10 and later ATEN boards). Write a keyboard script in a file and use the rko command to send it. Administrative privilege is required for Windows: (run as administrator)

Usage: **rko** [filepath]

Please refer following help for keyboard definition.

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

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

**Notes:**

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

3.45 diag

Use this command 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

3.45.1 diag start

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

diag start iso <ISO Image>

There are two methods to run the SMCIPMITool remotely. You can run the tool with either a pen drive or an ISO image. The SMCIPMITool can be run on different platforms, and refer to the commands below to start the SMCIPMITool in shell mode. Administrative privilege is required for Windows: (run as administrator)

With a Pen Drive:

1. Download and unzip the file “SuperDiag_version_date.zip” from <https://www.supermicro.com/en/support/resources/downloadcenter/smsdownload>, you will have the SuperDiag_version_date folder at the download path.
2. Unzip the “USBForSuperDiag.zip” from the SuperDiag_version_date\Diagnose_Remotely subfolder
3. Save the file to a pen drive and insert it in the system.
4. Type “vmwa dev1list” to locate the pen drive.
5. Type “diag start drv <index>” to start the tool.

Example output:

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

With an ISO Image

-
1. Download and unzip the file “SuperDiag_version_date.zip” from <https://www.supermicro.com/en/support/resources/downloadcenter/smsdownload>, you will have the SuperDiag_version_date folder at the download path.
 2. Unzip the “ISOForSuperDiag.zip” from the SuperDiag_version_date\Diagnose_Remotely subfolder.
 3. Type “diag start iso <image>” to start the Tool.

The following steps illustrate how this command is executed

1. Virtual Media is started to mount the diagnostics image.
2. The boot option is set to UEFI.
3. The remote system is powered off.
4. About 10 seconds later, the remote system is powered on.
5. The diagnostics tool is started to run the check-up.
6. SMCIPMITool will monitor the diagnostics. Once it is finished, “done” is shown on the screen of the local system.



Note: This command only works properly in shell mode.

3.45.2 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 is saved in the local system.

3.45.3 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 displaying lines, you can use the additional parameter “line” as following:

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

Usage Examples:

Diag display <JSON file> line 15

Diag display <JSON file> info line 20

3.46 mel

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

3.46.1 mel list

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

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

Usage Examples:

```
mel list
mel list 5 10
[list the events from 5th to 10th]
mel list 20
[list the last 20 events]
mel list -m 3
[list events within the last 3 months]
```

3.46.2 mel download

Usage: **mel download** <filename>

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

3.46.3 **mel clear**

Usage: **mel clear**

This command can clear BMC maintenance event log.

3.47 **hwinfo**

Usage: **hwinfo [--more]**

Use this command to check the asset information on X12/B12/H12 and above platforms via Redfish. Adding the “--more” parameter will display detail information for each component.

3.48 **bladePosition**

Usage: **bladePosition**

Use this command to identify the position where a CMM is inserted in a blade system.

3.49 **bladeCMMInfo**

Usage: **bladeCmmInfo**

Use this command to check the CMM information on a blade system.

Example output:

```
CMM IP Address: 192.168.2.1
CMM FW Version: 03.73
```

3.50 **crashDump**

This command set is for trouble shooting purpose. It can be supported on X12/B12/H12 and above platforms via Redfish. Please note that the SFT-DCMS-single license is required.

3.50.1 **crashDump generate**

Usage: **crashDump generate**

Use this command to generate a report regarding to HW component.

3.50.2 **crashDump download**

Usage: **crashDump download**

Use this command to download current trouble shooting report.

3.51 **Redfish**

Use this command set to retrieve data from BMC via redfish. X12 and later platforms are supported. Platforms prior to X11 may have limited support due to BMC redfish URL implementation.

3.51.1 redfish version

Usage: **redfish version**

Use this command to display the current Redfish version of BMC.

3.51.2 redfish accountService

3.51.2.1 redfish accountService ad

The following command set is used to configure the Active Directory settings.

3.51.2.1.1 redfish accountService ad status

Usage: **redfish accountService ad status [enabled]**

enable:1 disable:0

Use this command to enable and disable Active Directory Service.

3.51.2.1.2 redfish accountService ad list

Usage: **redfish accountService ad list**

Use this command to list the active directory servers and role groups.

3.51.2.1.3 redfish accountService ad addAddress

Usage: **redfish accountService ad addAddress <IP> <Port>**

Use this command to add a new server address.

3.51.2.1.4 redfish accountService ad deleteAddress

Usage: **redfish accountService ad deleteAddress <number>**

Use this command to delete an existing server address.

3.51.2.1.5 redfish accountService ad addRole

Usage: **redfish accountService ad addRole <group> <user> <role>**

Use this command to add a remote role map in the active directory.

Example:

```
>redfish accountService ad addRole group1 user1 4
Done
```

3.51.2.1.6 redfish accountService ad deleteRole

Usage: **redfish accountService ad deleteRole <number>**

Use this command to delete an existing remote role map in the active directory.

3.51.2.2 *redfish accountService ldap*

The following set of commands is used to configure the LDAP settings.

3.51.2.2.1 *redfish accountService ldap info*

Usage: **redfish accountService ldap info**

Use this command to display the LDAP information.

3.51.2.2.2 *redfish accountService ldap status*

Usage: **redfish accountService ldap status [enabled]**

Use this command is to enable or disable the LDAP service.

3.51.2.2.3 *redfish accountService ldap username*

Usage: **redfish accountService ldap username [username]**

Use command to get or set the LDAP username attribute.

3.51.2.2.4 *redfish accountService ldap group*

Usage: **redfish accountService ldap group [group attribute]**

Use this command is to get or set the LDAP group attribute

3.51.2.2.5 *redfish accountService ldap addAddress*

Usage: **redfish accountService ldap addAddress <IP> <Port>**

Use this command is to add a new server address.

3.51.2.2.6 *redfish accountService ldap deleteAddress*

Usage: **redfish accountService ldap deleteAddress <number>**

Use this command to delete an existing server address by specifying its index number.

3.51.2.2.7 *redfish accountService ldap addSearchBase*

Usage: **redfish accountService ldap addSearchBase <search base>**

Use this command to add a search base.

3.51.2.2.8 *redfish accountService ldap deleteSearchBase*

Usage: **redfish accountService ldap deleteSearchBase <number>**

Use this command to delete the search base by specifying its index number.

3.51.2.2.9 *redfish accountService ldap addRole*

Usage: **redfish accountService ldap addRole <group> <user> <role>**

Use this command to add a remote LDAP role map.

3.51.2.2.10 *redfish accountService ldap deleteSearchBase*

Usage: **redfish accountService ldap deleteRole <number>**

Use this command to delete a remote LDAP role map by specifying its index number.

3.51.2.3 *redfish accountService radius*

Usage: **redfish accountService radius [<authentication> <port> <ip address> <secret>]**

Use this command to get or set the radius configuration via Redfish.

Example:

```
> redfish accountService radius 1 1812 127.0.0.1 test
Done
```

3.51.2.4 *redfish accountService lockoutSetting*

Usage: **redfish accountService lockoutSetting [<threshold> <duration> <resetCounter>]**

Use this command to manage the account lockout settings.

Allowable Thresholds: 0, 1, 2, 3, 4, 5

Duration and resetCounter index

0: Never

1: 10s

2: 30s

3: 1m

4: 5m

5: 10m

6: 30m

3.51.3 *redfish eventService*

3.51.3.1 *redfish eventService alert*

3.51.3.1.1 *redfish eventService alert list*

Usage: **redfish eventService alert list**

Use this command to list all alert settings.

3.51.3.1.2 redfish eventService alert setSNMPv1

Usage: **redfish eventService alert setSNMPv1** <number> <severity>
<destination> <trap community>

Severity:

Information : 0
Warning : 1
Critical : 2

Destination:

IPv4/IPv6 format

Use this command to set an alert by SNMPv1.

Example:

```
>redfish eventService alert setSNMPv1 1 0 10.147.160.3 test
Done
```

3.51.3.1.3 redfish eventService alert setSNMPv3

Usage: **redfish eventService alert setSNMPv3** <number> <severity>
<destination> <username> <authenticationProtocol> <authenticationKey>
<encryptionProtocol> <encryptionKey>

Severity:

Information : 0
Warning : 1
Critical : 2

Destination:

IPv4/IPv6 format

AuthenticationProtocol:

MD5 : 0
SHA96 : 1

EncryptionKeyProtocol:

DES : 0
AES128 : 1

AuthenticationKey/EncryptionKey:

Need lowercase, uppercase and numbers. Should be in the range of 8-65 characters

Use this command to set an alert by SNMPv3.

Example:

```
>redfish eventService alert setSNMPv3 6 2 10.130.50.51 user01 0 Test1234 0
Test4321
Done
```

3.51.3.1.4 redfish eventService alert setSMTP

Usage: **redfish eventService alert setSMTP** <number> <severity> <email>
<subject> <message>

Severity:

Information : 0
Warning : 1
Critical : 2

Use this command to set an alert by SMTP.

Example:

```
>redfish eventService alert setSMTP 6 2 user03@email.com subject test
Done
```

3.51.3.1.5 redfish eventService alert setRedfish

Usage: **redfish event alert setRedfish** <number> <destination> <message>

Destination:

start with http or https and also need port. [ex.https://smc.com:443]

Use this command to set an alert by Redfish.

Example:

```
> redfish eventService alert setRedfish 6 https://smc.com:443 test
Done
```

3.51.3.1.6 redfish eventService alert delete

Usage: **redfish eventService alert delete** <Number>

Use this command to delete an alert setting by specifying its index number.

3.51.3.1.7 redfish eventService alert sendTest

Usage: **redfish eventService alert sendTest**

Use this command to send a test alert to the designated receiver set up by the commands above.

3.51.3.2 redfish eventService smtp

3.51.3.2.1 redfish eventService smtp list

Usage: **redfish eventService smtp list**

Use this command to list SMTP mail server configuration.

3.51.3.2.2 redfish eventService smtp server

Usage: **redfish eventService smtp server** [server name]

Use this command to get or set SMTP server name.

3.51.3.2.3 redfish eventService smtp port

Usage: **redfish eventService smtp port** [number]

Use this command to get or set SMTP port number.

3.51.3.2.4 redfish eventService smtp protocol

Usage: **redfish eventService smtp protocol** [mode]

Use this command to get or set SMTP connection protocol.

Mode:

None	: 0
AutoDetect	: 1
StartTLS	: 2
TLS_SSL	: 3

3.51.3.2.5 redfish eventService smtp authentication

Usage: **redfish eventService smtp authentication [mode]**

Use this command to get or set SMTP authentication protocol.

Mode:

None	: 0
AutoDetect	: 1
CRAM_MD5	: 2
Login	: 3
Plain	: 4

3.51.3.2.6 redfish eventService smtp user

Usage: **redfish eventService smtp user [name]**

Use this command to get or set SMTP username.

3.51.3.2.7 redfish eventService smtp password

Usage: **redfish eventService smtp password <password>**

Use this command to set SMTP password.

3.51.3.2.8 redfish eventService smtp sender

Usage: **redfish eventService smtp sender [mail]**

Use this command to get or set SMTP sender's mail address.

3.51.3.3 redfish eventService snmp

3.51.3.3.1 redfish eventService snmp status

Usage: **redfish eventService snmp status [enabled]**

Use this command to enable or disable the SNMP service. Please note that SNMPv2 and SNMPv3 will be disabled at the time SNMP disable.

Enabled:

Disable:	0
Enable :	1

3.51.3.3.2 redfish eventService snmp list

Usage: **redfish eventService snmp list**

Use this command to list all SNMP setting.

Example:

```
>redfish eventService snmp list
+-----+
| SNMP                | on                |
+-----+

+-----+
| SNMPv2              | on                |
+-----+
| ID | Name          | Community String [SHOW] | Access Mode |
+=====+
| 0  | user01        | test                    | ReadWrite   |
+-----+

+-----+
| SNMPv3              | on                |
+-----+
| Auth Protocol      | MD5               |
| Private Protocol   | DES               |
+-----+
```

3.51.3.3.3 redfish eventService snmp snmpv2

Please note that SNMPv2 command is only available when SNMP enabled.

3.51.3.3.3.1 redfish eventService snmp snmpv2 status

Usage: **redfish eventService snmp snmpv2 status [enabled]**

Use this command to enable or disable SNMPv2 service.

```
Enabled:
  Disable: 0
  Enable : 1
```

3.51.3.3.3.2 redfish eventService snmp snmpv2 add

Usage: **redfish eventService snmp snmpv2 add <name> <community string> <mode>**

Use this command to add new community setting.

```
Mode:
  ReadOnly : 0
  ReadWrite: 1
```

3.51.3.3.3.3 redfish eventService snmp snmpv2 edit

Usage: **redfish eventService snmp snmpv2 edit <id> <name> <community string> <mode>**

Use this command to edit community setting.

```
Mode:
  ReadOnly : 0
  ReadWrite: 1
```

3.51.3.3.3.4 redfish eventService snmp snmpv2 delete

Usage: **redfish eventService snmp snmpv2 delete [id]**

Use this command to delete one or all settings.

3.51.3.3.3.5 redfish eventService snmp snmpv2 communityString

Usage: **redfish eventService snmp snmpv2 communityString [mode]**

Use this command to hide or show communityString.

Mode:

Hide : 0
Show : 1

3.51.3.3.4 redfish eventService snmp snmpv3

Please note that SNMPv3 command is only available when SNMP enabled.

3.51.3.3.4.1 redfish eventService snmp snmpv3 status

Usage: **redfish eventService snmp snmpv3 status [enabled]**

Use this command to enable or disable SNMPv3 service.

Enabled:

Disable: 0
Enable : 1

3.51.3.3.4.2 redfish eventService snmp snmpv3 authentication

Usage: **redfish eventService snmp snmpv3 authentication [mode]**

Use this command to get or set SNMPv3 authentication protocol.

Mode:

MD5 : 0
SHA1 : 1
Account : 2

3.51.3.3.4.3 redfish eventService snmp snmpv3 private

Usage: **redfish eventService snmp snmpv3 private [mode]**

Use this command to get or set SNMPv3 private protocol.

Mode:

None : 0
DES : 1
AES : 2
Account : 3

3.51.4 redfish ipctrl

3.51.4.1 Redfish ipctrl status

Usage: **redfish ipctrl status [enabled]**

enable : 1
disable : 0

Use this command to enable or disable IP access control.

3.51.4.2 Redfish ipctrl list

Usage: **redfish ipctrl list**

Use this command to list IP access control options.

Example Output:

```
>redfish ipctrl list
Rule No      | IP Address/Prefix      | Policy
-----|-----|-----
1            | 10.135.50.51/32        | Accept
```

3.51.4.3 Redfish ipctrl add

Usage: **redfish ipctrl add** <IP> <Prefix> <Policy>

Policy:

```
enable = 1
disable =0
```

Use this command to add an IP access control policy.

Example:

```
>redfish ipctrl add 10.135.50.51 32 1
Done
```

3.51.4.4 Redfish ipctrl edit

Usage: **redfish ipctrl edit** <rule no> <IP> <Prefix> <Policy>

Policy:

```
enable = 1
disable =0
```

Use this command to edit an IP access control policy.

3.51.4.5 Redfish ipctrl delete

Usage: **redfish ipctrl delete** <rule no>

Use this command to delete an IP access control policy.

3.51.5 redfish firmwareInventory

3.51.5.1 Redfish firmwareInventory info

Usage: **redfish firmwareInventory info**

Use this command to get firmware inventory information.

3.51.5.2 Redfish firmwareInventory install

Use this command to update the last known good image or recover from the backup image.

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

Target:

BMC

BIOS

Action:

0: Recover

1: UpdateGolden

Use this command to perform firmware inventory actions. You can recover or updateGolden for BMC or the BIOS image.

3.51.6 **redfish hostInterface status**

Usage: **redfish hostInterface status [enabled]**

Use this command to get/set the hostInterface status when the system lockdown mode is off.

3.51.7 **redfish bpnCPLDUpdate**

Usage: **redfish bpnCPLDUpdate <CPLD file>**

Use this command to update the backplane CPLD on X12DPT-B6.

3.51.8 **redfish kvm**

Usage: **redfish kvm [Switch only interface]**

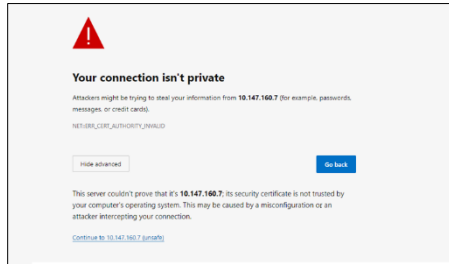
Use this command to launch the HTML 5 version of KVM or to switch to the current KVM interface only.

Switch only interface:

-switchOnlyJava

-switchOnlyHTML5

A warning message appears when a new connection to the BMC is established for the first time. Click the **Continue to “BMC IP address” (unsafe)** link to proceed.



Notes:

- An SFT-DCMS-single license is required to run the command on X10 and X11 generation motherboards.
- The command is supported on X10 platforms and later.
- "Switch only interface" will not launch the KVM console.

3.51.9 redfish biosConfiguration

Use this command to get or set BIOS configuration via Redfish. It supports X12/H12/B12 and later platforms. Please note that the SFT-DCMS-single license is required.

3.51.9.1 Redfish biosConfiguration get

Usage: **redfish biosConfiguration get [name]**

Use this command to list one or all BIOS properties.

Example Output:

```
>redfish biosConfiguration get QuietBoot
Description: Enables or disables Quiet Boot option
Type: Boolean
False: 0
True: 1
-----
Current value: true
```

3.51.9.2 Redfish biosConfiguration set

Usage: **redfish biosConfiguration set <name> <value>**

Use this command to set one BIOS property. It supports the ability to set the value with enum or text.

Example:

```
>redfish biosConfiguration set QuietBoot 0
Done
```

3.51.9.3 Redfish biosConfiguration menu

Usage: **redfish biosConfiguration menu**

Use this command to access the BIOS configuration hierarchical menu and properties. Please note that menu commands may be varied on different platform.

Example Output:

```
>redfish biosConfiguration menu
Command:redfish biosConfiguration menu
Command(s):
Advanced                                (12)
Boot                                    (14)
EventLogs                               (1)
SMCIKMIPMAIN                            (8)
Security                                (4)

> redfish biosConfiguration menu Advanced
Command:redfish biosConfiguration menu Advanced
Command(s):
ACPISettings                            (4)
BootFeature                             (11)
ChipsetConfiguration                    (2)
HTTPBootConfiguration                   (5)
NetworkConfiguration                    (7)
PCHSATAConfiguration                    (27)
PCHsSATAConfiguration                   (21)
PCIe/PCI/PnPConfiguration                (29)
ProcessorConfiguration                  (15)
SMCIKMSServerConfiguration               (7)
SerialPortConsoleRedirection             (6)
SuperIOConfiguration                    (2)
TrustedComputing                         (10)
```

3.51.9.4Redfish biosConfiguration list

Usage: **redfish biosConfiguration list**

Use this command to get BIOS properties on the pending list. Properties in the pending list will be applied to BIOS in next boot-up.

Example Output:

```
>redfish biosConfiguration list
----- | ----- | -----
Command name | Current value | Pending value
----- | ----- | -----
QuietBoot    | true          | false
----- | ----- | -----
Total attributes |          | 1
```

3.51.9.5Redfish biosConfiguration reset

Usage: **redfish biosConfiguration reset [--reboot]**

Use this command to reset BIOS to default setting and clear BIOS properties on the pending list.



Notes:

- All BIOS attributes will be reset after next reboot.
 - Remember to reboot to proceed BIOS reset if no “--reboot” parameter.
-

3.51.9.6 Redfish biosConfiguration search

Usage: **redfish biosConfiguration search [keyword]**

Use this command to search for a property name or a value by a keyword.

Example Output:

```
>redfish biosConfiguration search lan
-----|-----|
Command name|Current value|
-----|-----|
AOC-URN6-i2XTLAN1OPROM|EFI|
BootOption#7|UEFI USB Lan|
HTTPBootPolicy|Apply to each LAN|
-----|-----|
Total attributes|3|
```

3.51.9.7 Redfish biosConfiguration save

Usage: **redfish biosConfiguration save [<filename> [option]]**

For options:

0: Save all current settings to file (default)

1: Save all settings in the pending list to file

2: Only save settings with different values from current BIOS in the pending list to file

Use this command to save properties to a file.

3.51.9.8 Redfish biosConfiguration load

Usage: **redfish biosConfiguration load <filename>**

Use this command to load properties from a file.

Appendix A Command Categories

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

V: Supported

O: Supported and IPMI FW dependent.

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

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

Category	Commands
Superblade Management	superblade
Microblade Management	microblade
IPMI Management	sel, user, ipmi, ver, sol
KVM and Virtual Media for Peppercon, AMI, ATEN	Peppercon: dr, kvm, vm AMI: kvmw, vmw, kvmwx9 ATEN: kvmwa, vmwa, wsiso, rsc, rko
Group Management	host, hostrun
Shell and Command Mode	ch
Trap Receiver	trap
Node Management for ME- enabled MB	nm, nm20, nm30
DCMI Management	dcmi
Power Supply Health	pminfo, psfruInfo, bbp, psbbpinfo
IPMI Device Discovery	find, found
Script	exec, task
Hdd	hdd, nvme
Firmware Update	bios, ipmi flash (w, r, h, a)
Twin MultiNode	tp
Node Product Key	nodekey
Auxiliary	shell, list, mg, sc, prompt

Appendix B VM Command Examples

B.1 AMI IPMI Firmware

Available commands:

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

<code>vmwa dev1list</code>	List available devices for virtual device 1
<code>vmwa dev1drv <index></code>	Mount drive for virtual device 1
<code>vmwa dev1stop</code>	Stop virtual device 1
<code>vmwa dev2list</code>	List available devices for virtual device 2
<code>vmwa dev2cd <index></code>	Mount CD/DVD for virtual device 2
<code>vmwa dev2iso <filename></code>	Mount ISO file for virtual device 2
<code>vmwa dev2stop</code>	Stop virtual device 2
<code>vmwa status</code>	Show status
<code>vmwa log</code>	Show log



Notes:

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

Examples of using a USB key as virtual media:

SIM(WA)>vmwa dev1list

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

SIM(WA)>vmwa dev1drv 2

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

SIM(WA)>vmwa dev1stop

done

Examples of using a CD-ROM as virtual media:

SIM(WA)>vmwa dev2list

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

SIM(WA)>vmwa dev2cd 2

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

Examples of using an ISO image file as virtual media:

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

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

SIM(WA)>vmwa dev2stop

```
Done
```

Examples of showing all VMWA status and log:

SIM(WA)>vmwa status

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

SIM(WA)>vmwa log

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

Appendix C Trap Receiver

The Trap Receiver is a utility used for receiving traps from the BMC. In the event of a sensor error or a sensor reading that exceeds a threshold, the BMC will send SNMPv1/v3 traps to the destinations set in the BMC. The Trap Receiver is executed on the destination site and receives the SNMPv1/v3 trap from multiple senders (BMCs).



Note: SNMPv3 trap is supported on X12 generation motherboards and above.

The available commands are:

SNMPv1 and SNMPv3:

trap start	Start trap receiver
trap stop	Stop trap receiver
trap status(st)	Trap receiver status
trap clear	Clear the received traps

SNMPv1 only:

trap list	List the received SNMPv1 traps
trap save <filename>	Save the received SNMPv1 traps to file
trap savepet	Save as the IPMIView TrapReceiver PET format

SNMPv3 only:

trap listV3 [..]	List the received SNMPv3 traps
trap saveV3 <filename> [..]	Save the received and decrypted SNMPv3 traps to file
trap savepetV3	Save as the IPMIView TrapReceiver PET V3 format
trap userTable list	List the user table of SNMPv3
trap userTable add <..>	Add new configuration to user table
trap userTable delete <number>	Delete the configuration of user table

Examples of using Trap Receiver:

SIM(WA)>ipmi lan snmp

(Note that the full information of SNMPv1 is displayed when this command is executed.)

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

X12 AST2600RoT>redfish eventService alert list

(Note that the full information of SNMPv1 and SNMPv3 protocols are displayed when this command is executed.)

```
-----
1. Enable:                true
   Protocol:              SNMPv3
   Destination:           10.147.160.14
   EventTypes:            Alert
   Severity:              Information
   User Name:             User1
   Authentication Protocol: HMAC_MD5
   Encryption Protocol:   CBC_DES
-----
2. Enable:                false
   Protocol:              SNMPv1
   Destination:           0.0.0.0
   Severity:              Information
-----
3. Enable:                false
   Protocol:              SNMPv1
   Destination:           0.0.0.0
   Severity:              Information
-----
4. Enable:                false
   Protocol:              SNMPv1
   Destination:           0.0.0.0
   Severity:              Information
-----
5. Enable:                false
   Protocol:              SNMPv1
   Destination:           0.0.0.0
   Severity:              Information
-----
```

6. Enable:	false
Protocol:	SNMPv1
Destination:	0.0.0.0
Severity:	Information

7. Enable:	false
Protocol:	SNMPv1
Destination:	0.0.0.0
Severity:	Information

8. Enable:	false
Protocol:	SNMPv1
Destination:	0.0.0.0
Severity:	Information

9. Enable:	false
Protocol:	SNMPv1
Destination:	0.0.0.0
Severity:	Information

10. Enable:	false
Protocol:	SNMPv1
Destination:	0.0.0.0
Severity:	Information

11. Enable:	false
Protocol:	SNMPv1
Destination:	0.0.0.0
Severity:	Information

12. Enable:	false
Protocol:	SNMPv1
Destination:	0.0.0.0
Severity:	Information

13. Enable:	true
Protocol:	SNMPv1
Destination:	0.0.0.0
Severity:	Information

14. Enable:	false
Protocol:	SNMPv1
Destination:	0.0.0.0
Severity:	Information

15. Enable:	false
Protocol:	SNMPv1
Destination:	0.0.0.0
Severity:	Information

16. Enable:	false
Protocol:	SNMPv1
Destination:	0.0.0.0
Severity:	Information

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
Traps Received: 0

X12 AST2600RoT [!TrapV3(1)]>Info: Use "trap" command for detail.

X12 AST2600RoT [!TrapV3(1)]>trap listV3

Trap (1)

```
SenderIP: 10.147.160.14
SensorType: Components Changed
SensorName: OEM
Time Stamp: 2021/08/27 00:25:32 Mon
raw data: 50 20 03
Description: HDD removed on PCH HDD Slot3 on SATA controller 0 - Assertion
-----
```

(Parameters are optional.)

(This command will combine parameters and the user table configuration to decrypt SNMPv3 traps.)

```
X12 AST2600RoT [!TrapV3(1)]>trap saveV3 snmpV3.txt
```

```
"snmpv3.txt" file saved
```

(Parameters are optional.)

(This command will combine parameters and the user table configuration to decrypt SNMPv3 traps.)

```
X12 AST2600RoT [!TrapV3(1)]>trap savepetV3 snmpV3.pet
```

```
"snmpv3.pet" file saved
```

```
X12 AST2600RoT>trap usertable list
```

---		-----		-----		-----		-----		-----		-----
No.		Username		Authetication Model		Password		Privacy Protocol		Privacy Password		-----
---		-----		-----		-----		-----		-----		-----
1		User1		MD5		Test1234		DES		Test5678		-----
2		User2		SHA-1		Test1111		AES128		Test2222		-----

(Trap receiver loads the user table configuration to decrypt SNMPv3 traps. See snmpUserTable.properties)

```
X12 AST2600RoT>trap usertable add User3 0 Test1234 0 Test5678
```

```
Done
```

```
X12 AST2600RoT>trap usertable delete 1
```

```
Done
```

Appendix D Node Product Key Functions

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

Commands requiring SFT-OOB-LIC (or SFT-DCMS-Single):

- BIOS update (for platforms before X11)
- wsiso mount
- wsiso status
- wsiso umount
- rsc
- rko
- X10cfg commands

Commands requiring SFT-DCMS-Single

- Redfish accountService AD
- Redfish accountService LDAP
- Redfish firmwareInventory install
- Redfish kvm
- Ukvm -html5
- Redfish biosConfiguration

Appendix E Stunnel Properties

When running the `kvmwa`, `rsc`, `rko`, or `vmwa` commands with SMCIPMITool, stunnel proxy is used to establish encrypted connection. The first non-loopback IP address by default is used for a UNIX system. You can change your own NIC IP address by setting the “`proxy_ip`” in the `stunnel.properties` file.

```
proxy_ip=1.2.3.4
~
~
~
~
~
"stunnel.properties" 1L, 17C
```

Appendix F 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 G List of Supported BMCs

- ASPEED AST2500 BMC on-Board (e.g., X11SPL-F, X11DPU, X11DGQ and, B11DPT)
- ASPEED AST2400 BMC on-Board (e.g., X10, X11SSH-F, B10 and B1)
- Renesas SH7757 BMC on-Board (e.g., X9 and B9 series)
- Nuvoton WPCM450 BMC on-Board (e.g., X9 series)
- Winbond WPCM450 BMC on-Board (e.g., X8 series)




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

Appendix H SMC RAKP

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

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

 **SMC RAKP**

You can enable/disable SMC RAKP on this page.

Current RAKP status: **ON**

☐ Enable

☒ Disable

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

Appendix I Third-Party Software

The following open source libraries are used in the SMCIPMITool package.

Library	License
httpClient	Apache 2.0
Jline	BSD
Dnsjava	BSD
Jackson	Apache 2.0
Jna	LGPL
openssl	OpenSSL
run-as-root	Apache 2.0
out-process	Apache 2.0
jsoup	MIT
Stunnel	LGPL

Appendix J Properties

Following properties can be configured in the SMCIPMITool.properties file to change SMCIPMITool settings. Please note that all the properties are optional.

Property name	Setting value	Comment
debug_level	0	No raw displayed
	1	Human read raw data
	2	IPMI Message raw format
	3	IPMI Message raw format with detailed field list
history	on	Allows to enable command history
https_port	Integer	HTTPS default port is 443
no_prompt	on	Allows to hide prompt information
oem_rakp	on	Allows to apply SMC RAKP connection
prompt_acpi	on	Allows to show ACPI state in prompt
prompt_fwVer	on	Allows to show firmware version in prompt
prompt_ip	on	Allows to show IP address in prompt
prompt_mb_name	on	Allows to show motherboard name in prompt
prompt_powerW	on	Allows to show power consumption in prompt
prompt_time	on	Allows to show current time in prompt
prompt_username	on	Allows to show login username in prompt
record	on	Record command executed result to log file
retry	Integer	Reconnection times
rmcp_port	Integer	RMCP default port is 623
sol_key_linux	on	Allows to apply SOL key mapping of LINUX
timeout	Integer	Connection timeout seconds
trap	on	Enable trap receiver

Example format:

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

Contacting Supermicro

Headquarters

Address: Super Micro Computer, Inc.
980 Rock Ave.
San Jose, CA 95131 U.S.A.

Tel: +1 (408) 503-8000

Fax: +1 (408) 503-8008

Email: marketing@supermicro.com (General Information)
Sales-USA@supermicro.com (Sales Inquiries)
Government_Sales-USA@supermicro.com (Gov. Sales Inquiries)
support@supermicro.com (Technical Support)
RMA@supermicro.com (RMA Support)

Website: www.supermicro.com

Europe

Address: Super Micro Computer B.V.
Het Sterrenbeeld 28, 5215 ML
's-Hertogenbosch, The Netherlands

Tel: +31 (0) 73-6400390

Fax: +31 (0) 73-6416525

Email: Sales_Europe@supermicro.com (Sales Inquiries)
Support_Europe@supermicro.com (Technical Support)
RMA_Europe@supermicro.com (RMA Support)

Website: www.supermicro.nl

Asia-Pacific

Address: Super Micro Computer, Inc.
3F, No. 150, Jian 1st Rd.
Zhonghe Dist., New Taipei City 235
Taiwan (R.O.C)

Tel: +886-(2) 8226-3990

Fax: +886-(2) 8226-3992

Email: Sales-Asia@supermicro.com.tw (Sales Inquiries)
Support@supermicro.com.tw (Technical Support)
RMA@supermicro.com.tw (RMA Support)

Website: www.supermicro.com.tw