AGS8200
AI Server

BMC System User Guide

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AI Server

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How to Use This Guide

This guide includes detailed information on how to access the AGS8200 AI Server's Baseboard Management Controller (BMC) system.

Who Should Read this Guide?

This guide is for system administrators who are responsible for managing and troubleshooting the AGS8200 AI Server.

How this Guide is Organized

The organization of this guide is based on the different user interface (UI) options available for accessing the BMC system.

The guide includes these sections:

- Chapter 1 "BMC Introduction" — Lists the BMC features supported and how to get started using the BMC.
- Chapter 2 "Command-Line Interface (CLI)" — Provides a full description of BMC functions that can be executed through CLI access.
- Chapter 3 "Intelligent Platform Management Interface (IPMI)" — Provides a full description of BMC functions based on IPMI.
- Chapter 4 "Redfish API" — Includes information on how to use the Redfish API to manage the BMC system.
- Chapter 5 "Web Interface" — Includes information on how to use the web interface to manage the BMC system.
- Chapter 6 "System Event Log (SEL)" — Lists SEL entries currently supported by the BMC system.

Conventions

The following conventions are used throughout this guide to show information:

Note: Emphasizes important information or calls your attention to related features or instructions.

Caution: Alerts you to a potential hazard that could cause loss of data, or damage the system or equipment.

Warning: Alerts you to a potential hazard that could cause personal injury.

Revision History

This section summarizes the changes in each revision of this guide.

August 2024 Revision

This is the first revision of this guide.

Contents

Figures

Tables

1 BMC Introduction

This chapter includes the following sections:

BMC User Guide Overview

This guide describes functional specifications for the Baseboard Management Controller (BMC) system on the AGS8200 AI Server. You can quickly understand how to use the BMC system and its supported features through the descriptions in this guide.

This guide covers different user interface (UI) options that can be used to access the same BMC function. The following UI options are available:

- Command-Line Interface (CLI)
- Intelligent Platform Management Interface (IPMI)
- Redfish API
- Web Interface

Feature List

The following table summarizes the features supported on the AGS8200 and the UI categories available for each feature.

Table 1: BMC System Feature List

Category	Function	Description	CLI	IPMI	Redfish	Web
Reliability	Primary/Secondary BMC Image Flash	Supports dual BMC Flash. If the primary BMC Flash fails to boot, it automatically switches to boot from the secondary BMC Flash. Also supports a manual switch.	Y	N	N	N
	Watchdog	(1) BMC SoC watchdog is used to protect the runtime working of the BMC.	Y	N	N	N
		(2) IPMI watchdog, a software watchdog for the OS by the ipmitool command.	N	Y	N	N
	RTC & Time Synchronization	(1) Supports adjustment of the RTC time when the platform boots-up.	Y	N	N	N
		(2) Has an external RTC with battery to keep time when platform is powered off.	N	N	N	N
		(3) Supports timezone setting.	Y	N	N	N

Table 1: BMC System Feature List (Continued)

Category	Function	Description	CLI	IPMI	Redfish	Web
Platform Management	Power Control	(1) Power on, off, reset the host CPU.	Y	Y	Y	Y
		(2) Power cycle entire machine.	Y	N	N	N
		(3) Reset BMC.	Y	Y	Y	Y
	Remote Console (SOL)	(1) Allow users to interact with the host CPU remotely from the BMC.	N	Y	N	Y
		(2) This feature is also referred to as Serial-over-LAN or SOL.	Y	Y	N	Y
	Firmware Information/ Update	(1) Show platform component firmware information.	Y	N	N	Y
		(2) Program platform component firmware.	Y	N	N	N
	FRU EEPROMs R/W	(1) Read platform FRU EEPROMs information.	Y	Y	N	Y
		(2) Update platform FRU EEPROM content (locked by default).	Y	N	N	N
	Platform Health/ Peripheral Monitoring	(1) Monitor host CPU and DIMM health status.	Y	Y	N	N
		(2) Monitor PSU, fan, and thermal sensor information.	Y	Y	Y	Y
		(3) Record SEL when detecting abnormal status.	N	Y	N	Y
		(4) Lighten peripheral LEDs per platform status.	Y	N	N	Y
	Fan Controller	(1) Auto adjust fan speed per information of thermal sensors and fan status.	N	N	N	N
		(2) Adjust fan speed manually.	Y	Y	Y	Y
Platform Troubleshooting	Logging	(1) Platform SEL (System Event Log).	N	Y	Y	Y
		(2) BMC system event and error logging.	Y	N	N	N
		(3) Log storing in NV-RAM and rotating mechanism.	N	N	N	N
		(4) Supports log packaging and storage to eMMC.	N	N	N	N
	Host CPU Status	(1) Host CPU boot-up status (I/O port 80h decode).	Y	N	N	Y
		(2) Show CPU console log.	Y	N	N	N
		(3) Record CPU MSA bank registers when detecting host CPU abnormal.	Y	N	N	N

Table 1: BMC System Feature List (Continued)

Category	Function	Description	CLI	IPMI	Redfish	Web
BMC System Management	BMC UI (User Interface)	(1) CLI: Console, SSH.	Y	N	N	N
		(2) IPMI (includes Lanplus).	N	Y	N	N
		(3) REST API.	N	N	Y	Y
	Network Interface Control	(1) Management IP interface (setting, query)	Y	N	N	Y
		(2) In-band IP interface between BMC and host CPU.	Y	N	N	N
		(3) IPv4/IPv6.	Y	Y	Y	Y
		(4) DHCP IPv4/IPv6 client.	Y	Y	N	Y
		(5) ICMP IPv4/IPv6.	Y	N	N	N
		(6) NTP.	Y	N	Y	Y
		(7) VLAN.	N	Y	N	N
	Security	(1) SSH.	Y	N	N	N
		(2) SSL.	Y	N	N	N
		(3) Authentication for management user interface.	N	Y	Y	N
		(4) User Account Management (add, delete, change password, query users, permission).	Y	Y	Y	Y

Getting Started

The BMC firmware comes from OpenBMC (community branch: 2.16.0-dev) and supports both a serial console login and SSH login by default. The default credentials for login is **root/0penBmc** (the first character in the password is a zero).

By default, the baud rate for the RJ-45 console port is 115200, and the console port screen is connected to the device BMC CLI. You can use the hotkey “Ctrl-u 1” to switch the console screen from the BMC CLI to the host CPU CLI, and “Ctrl-u 2” to switch from the host CPU CLI to the BMC CLI.

2 Command-Line Interface (CLI)

This chapter includes the following sections:

CLI Overview

This chapter contains a full description of functions that can be executed through the CLI and involves shell script execution. Each command is shown by a simple description, command syntax, and an example.

Table 2: CLI Commands

Command	Function
BMC System Management	
cmd_list.sh	Lists BMC script commands.
Firmware Inventory	
show_version.sh	Displays version information for various components.
boot_util.sh	Switches the SPI flash or queries the selected SPI flash.
fwupd_util.sh	Updates specified individual components.
Network Service	
ifconfig	Displays IP interface information.
ping	Checks the connection to a remote IPv4 computer or local computer by sending an ICMP response message.
ping6	Checks the connection to a remote IPv6 computer or local computer by sending an ICMPv6 response message.
udhcpc	Enables a client to acquire an IP address from a DHCP server.
Platform Health and Peripheral Monitoring	
fan_util.sh	Queries fan status or changes fan speed.
Platform Management	
power_util.sh	Displays platform power status and controls platform power.
timedatectl	Queries or sets time, timezone, and NTP.
Platform Troubleshooting	
journalctl	Queries the Syslog of BMC.
Show CPU Console Log	Displays the CPU console log file.
Remote Control Host	
sol.sh	Switches BMC console to host CPU console.
Security Service	
ssh	Creates a secure SSH connection over the network.
openssl	Creates a secure OpenSSL connection over the network.
useradd	Adds a new user account.

BMC System Management

The commands listed in this section include the command list function.

cmd_list.sh

Lists BMC script commands.

Syntax

cmd_list.sh

Example

```
root@obmc:~# cmd_list.sh

    User commands:
        boot_util.sh           --Show and set the BMC or BIOS boot sequence
        fan_util.sh            --Show and set the FAN and PWM
        fwupd_util.sh          --Update the all kind of component
        oam_util.sh            --Show and set OAM modules
        power_util.sh          --Show and control platform power
        show_version.sh        --Show the component version information
        sol.sh                 --Switch BMC uart to host CPU uart
        ubb_util.sh            --Show and set UBB board

root@obmc:~#
```

Firmware Inventory

The commands listed in this section include component update methods and firmware version information.

show_version.sh

Displays version information for various components.

Syntax

show_version.sh

Example

```
root@obmc:~# show_version.sh
Machine model             : AGS8200
BMC Version               : V00.00.06h
BIOS Version              : v102.0A.00.05
System CPLD Version       : V0a.02
PCIe Switch CPLD Version  : V0a.03
HSBP1 CPLD Version        : V0b.01
HSBP2 CPLD Version        : V0b.01
HSBP3 CPLD Version        : V0b.01
root@obmc:~#
```

boot_util.sh

Switches the SPI flash or queries the selected SPI flash.

Syntax

boot_util.sh [-h] [bmc | bios] [primary | secondary]

-h – Display help and exit.

bmc – Show the BMC boot status.

bios – Show the BIOS boot status.

primary – Set the device to boot from the primary after a reboot.

secondary – Set the device to boot from the secondary after a reboot.

Example

```
root@obmc:~# show_version.sh
Machine model              : AGS8200
BMC Version                : V00.00.06h
BIOS Version               : v102.0A.00.05
System CPLD Version        : V0a.02
PCIe Switch CPLD Version   : V0a.03
HSBP1 CPLD Version         : V0b.01
HSBP2 CPLD Version         : V0b.01
HSBP3 CPLD Version         : V0b.01
root@obmc:~#
```

fwupd_util.sh

Updates specified individual components.

Syntax

fwupd_util.sh [-h] [bmc | bios | cpld] [primary | secondary] [sys | ps | hsbp1 | hsbp2 | hsbp3] <*file*>

-h – Display help and exit.

bmc – Update a BMC component.

bios – Update a BIOS component.

cpld – Update a CPLD component.

primary – Update the primary of the boot flash.

secondary – Update the backup of the boot flash.

sys – Specifies the system CPLD.

ps – Specifies the PCIe Switch CPLD.

hsbp1 – Specifies the HSBP1 CPLD.

hsbp2 – Specifies the HSBP2 CPLD.

hsbp3 – Specifies the HSBP3 CPLD.

file – The upgrade file name.

Example

```
fwupd_util.sh bmc primary <file>          # upgrade BMC primary image.
fwupd_util.sh bmc secondary <file>        # upgrade BMC secondary image.
fwupd_util.sh bios primary <file>         # upgrade BIOS primary image.
fwupd_util.sh bios secondary <file>       # upgrade BIOS secondary image.
fwupd_util.sh cpld sys <file>             # upgrade SYS CPLD image.
fwupd_util.sh cpld ps <file>              # upgrade PCIe Switch CPLD image.
fwupd_util.sh cpld hsbp1 <file>           # upgrade HSBP1 CPLD image.
fwupd_util.sh cpld hsbp2 <file>           # upgrade HSBP2 CPLD image.
fwupd_util.sh cpld hsbp3 <file>           # upgrade HSBP3 CPLD image.
```

Network Service

The commands listed in this section include IP protocol functions.

ifconfig

Displays IP interface information.

Syntax

ifconfig [**-a**] [*IFACE*] [*ADDRESS*]

-a – Display all interfaces.

IFACE – The network interface.

ADDRESS – The IP address.

Command Usage

The IP that is set up with the **ifconfig** command is not retained after a reboot. Refer to ipmitool lan set for how to set an IP for the system.

Example

```
root@obmc:~# ifconfig eth0
eth0      Link encap:Ethernet  HWaddr 52:42:00:45:5C:F6
          inet addr:169.254.200.181 Bcast:169.254.255.255  Mask:255.255.0.0
          inet6 addr: fe80::5042:ff:fe45:5cf6/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
          RX packets:167349 errors:0 dropped:0 overruns:0 frame:0
          TX packets:82 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:21638442 (20.6 MiB) TX bytes:6048 (5.9 KiB)
           interrupt:34
root@obmc:~#
```

ping

Checks the connection to a remote IPv4 computer or local computer by sending an ICMP response message.

Syntax

ping [options] host

Example

```
root@obmc:~# ping 172.21.150.254
PING 172.21.150.254 (172.21.150.254): 56 data bytes
64 bytes from 172.21.150.254: seq=0 ttl=64 time=0.547 ms
64 bytes from 172.21.150.254: seq=6 ttl=64 time=0.489 ms
```

ping6

Checks the connection to a remote IPv6 computer or local computer by sending an ICMPv6 response message.

Syntax

ping6 [**-I** *IFACE*] *ADDRESS*

-I *IFACE* – The network interface.

ADDRESS – The IPv6 address.

Example

```
root@obmc:~# ping6 -I eth0 fe80::1644:8fff:fe6d:a05
PING fe80::1644:8fff:fe6d:a05 (fe80::1644:8fff:fe6d:a05): 56 data bytes
64 bytes from fe80::1644:8fff:fe6d:a05: seq=0 ttl=64 time=0.281 ms
64 bytes from fe80::1644:8fff:fe6d:a05: seq=4 ttl=64 time=0.250 ms
64 bytes from fe80::1644:8fff:fe6d:a05: seq=5 ttl=64 time=0.266 ms
^C
--- fe80::1644:8fff:fe6d:a05 ping statistics ---
```

udhcpc

Enables a client to acquire an IP address from a DHCP server.

Syntax

udhcpc

Example

```
root@obmc:~# udhcpc
udhcpc: started, v1.34.1
udhcpc: broadcasting discover
udhcpc: broadcasting select for 172.21.150.74, server 172.21.150.254
udhcpc: lease of 172.21.150.74 obtained from 172.21.150.254, lease time 28800
/etc/udhcpc.d/50default: Adding DNS 221.6.4.66
/etc/udhcpc.d/50default: Adding DNS 114.114.114.114
root@obmc:~#
```

Platform Health and Peripheral Monitoring

The commands listed in this section include displaying fan controller and LED related information.

fan_util.sh

Queries the fan status or changes fan speed.

Syntax

fan_util.sh [**status**|**get**|**set**|**switch**] [**manu**|**auto**] <*fan*, **all**> <*pwm*>

-h – Display help and exit.

status – Keyword to display status information.

get – Keyword to display a parameter.

set – Keyword to change a parameter.

switch – Keyword to change to manual or automatic fan speed.

manu – Sets fan speed manually. ONLY for a **switch** command.

auto – Sets fan speed automatically. ONLY for a **switch** command.

fan – The fan number (1-6). ONLY for a **set** command.

all – Specifies all fans.

pwm – Fan speed percentage (30-100). ONLY for a **set** command.

Command Usage

It is not recommended that users manually change the fan speed.

Example

```
root@obmc:~# fan_util.sh set 3 60
root@obmc:~# fan_util.sh get
Fan 1 RPMs: 22375, 20406, (30%)
Fan 2 RPMs: 22554, 20406, (30%)
Fan 3 RPMs: 18795, 16647, (60%)
Fan 4 RPMs: 22375, 20227, (30%)
Fan 5 RPMs: 22375, 20227, (30%)
Fan 6 RPMs: 22375, 20406, (30%)
root@obmc:~#
```

Platform Management

The commands listed in this section include component power control, FRU EEPROM information, and time setting functions.

power_util.sh

Displays platform power status and controls platform power.

Syntax

power_util.sh [**-h**] [**cpu**|**bmc**|**machine**] [**status**|**reset**|**on**|**off**|**cycle**]

-h – Display help and exit.

bmc – Keyword for the BMC component.

cpu – Keyword for the CPU component.

machine – Keyword for the whole of the machine.

status – Shows host CPU status information.

reset – Reset the host CPU or BMC.

on – Power on the host CPU.

off – Power off the host CPU.

cycle – Power cycle the whole machine (ONLY for a **machine** command).

Example

```
power_util.sh machine cycle    --Power cycle whole machine
power_util.sh cpu status       --Show host CPU status
power_util.sh cpu on           --Power on host CPU
power_util.sh bmc reset        --Reboot for BMC
```

timedatectl

Query or set time, timezone, and NTP.

Syntax

timedatectl [**-h**] [*options*] [*command*]

-h – Display help and exit. (Lists valid options and commands.)

Example

```
root@obmc:~# timedatectl show
Timezone=Asia/Shanghai
LocalRTC=no
CanNTP=yes
NTP=yes
NTPSynchronized=no
TimeUSec=Tue 2024-01-09 11:57:07 CST
```

```
RTCTimeUSec=Tue 2024-01-09 11:57:07 CST
root@obmc:~#
```

Platform Troubleshooting

The commands listed in this section include Syslog, console log, and post code functions.

journalctl

Queries the Syslog entries of the BMC.

Syntax

journalctl [*OPTIONS*...] [*MATCHES*...]

-h – Display help and exit. (Lists valid options for this command.)

Example

```
root@obmc:~# journalctl -k -n 10
Jul 29 08:03:16 obmc kernel: EXT4-fs (mmcblk0p1): recovery complete
Jul 29 08:03:16 obmc kernel: EXT4-fs (mmcblk0p1): mounted filesystem with
  ordered data mode. Opts: (null). Quota mode: disabled.
Jul 29 08:04:07 obmc kernel: pcie_retimer: bad vermagic: kernel tainted.
Jul 29 08:04:07 obmc kernel: Disabling lock debugging due to kernel taint
Jul 29 08:04:07 obmc kernel: pcie_retimer: loading out-of-tree module taints
  kernel.
Jul 29 08:04:07 obmc kernel: pcie_retimer 35-0019: virt_adap i2c registered.
Jul 29 08:04:15 obmc kernel: 8021q: adding VLAN 0 to HW filter on device eth0
Jul 29 08:04:37 obmc kernel: ftgmac100 1e670000.ftgmac eth0: NCSI: 'bad'
  packet ignored for type 0x8a
Jul 29 08:05:25 obmc kernel: i2c i2c-34: new_device: Instantiated device
  eeprom at 0x50
Jul 29 08:05:43 obmc kernel: ftgmac100 1e670000.ftgmac eth0: NCSI: 'bad'
  packet ignored for type 0x8a

root@obmc:~#
```

Show CPU Console Log

Displays the CPU console log file.

Syntax

cat /media/card/log/obmc-console.log

Example

```
root@obmc:~# root@obmc:~# cat /media/card/log/obmc-console.log
 ci-info: |  enp203s0d22  | False |             .             |      .
  |   .    | 68:93:2e:06:5b:88 |
[  OK  ] Started Discard unused blocks once a week.
[   92.024860] cloud-init[4491]: ci-info: |  enp203s0d23  | False |
  .              |       .       |   .    | 68:93:2e:06:5b:89 |
[  OK  ] Started Refresh fwupd metadata regularly.
```

```
[   92.056984] cloud-init[4491]: ci-info: |   enp203s0d8  | False |
  .               |       .       |   .    | 68:93:2e:06:5b:7a |
[  OK  ] Started Daily rotation of log files.
[   92.088938] cloud-init[4491]: ci-info: |   enp34s0d22  | False |
  .               |       .       |   .    | 68:93:2e:06:75:c8 |
[  OK  ] Started Daily man-db regeneration.
[   92.121868] cloud-init[4491]: ci-info: |   enp34s0d23  | False |
  .               |       .       |   .    | 68:93:2e:06:75:c9 |
[  OK  ] Started Message of the Day.
[   92.153008] cloud-init[4491]: ci-info: |   enp34s0d8   | False |
  .               |       .       |   .    | 68:93:2e:06:75:ba |
[  OK  ] Started Daily Cleanup of Temporary Directories.
[   92.184961] cloud-init[4491]: ci-info: |   enp37s0d22  | False |
  .               |       .       |   .    | 68:93:2e:06:92:18 |
[  OK  ] Started Download data for …ailed at package install time.
[   92.236363] cloud-init[4491]: ci-info: |   enp37s0d23  | False |
  .               |       .       |   .    | 68:93:2e:06:92:19 |
[  OK  ] Started Check to see wheth…w version of Ubuntu available.
[   92.272378] cloud-init[4491]: ci-info: |   enp37s0d8   | False |
  .               |       .       |   .    | 68:93:2e:06:92:0a |
[   92.308380] cloud-init[4491]: ci-info: |   enp75s0d22  | False |
  .               |       .       |   .    | 68:93:2e:06:8c:48 |
[  OK  ] Reached target Path Units.
[  OK  ] Reached target Timer Units.
[   92.308877] cloud-init[4491]: ci-info: |   enp75s0d23  | False |
  .               |       .       |   .    | 68:93:2e:06:8c:49 |
[   92.372376] cloud-init[4491]: ci-info: |   enp75s0d8   | False |
  .               |       .       |   .    | 68:93:2e:06:8c:3a |
[  OK  ] Listening on cloud-init hotplug hook socket.
[   92.372859] cloud-init[4491]: ci-info: |   enp78s0d22  | False |
  .               |       .       |   .    | 68:93:2e:06:74:d8 |
[  OK  ] Listening on D-Bus System Message Bus Socket.
[   92.419779] cloud-init[4491]: ci-info: |   enp78s0d23  | False |
  .               |       .       |   .    | 68:93:2e:06:74:d9 |
         Starting Docker Socket for the API...
[   92.443340] cloud-init[4491]: ci-info: |   enp78s0d8   | False |
  .               |       .       |   .    | 68:93:2e:06:74:ca |
[   92.472374] cloud-init[4491]: ci-info: |    ens11f0    | False |
  .               |       .       |   .    | b4:96:91:a4:06:d0 |
[  OK  ] Listening on Open-iSCSI iscsid Socket.
[   92.472875] cloud-init[4491]: ci-info: |    ens11f1    | False |
  .               |       .       |   .    | b4:96:91:a4:06:d1 |
[  OK  ] Listening on Socket unix for snap application lxd.daemon.
[   92.519590] cloud-init[4491]: ci-info: |   ens1f0np0   | False |
  .               |       .       |   .    | 0c:42:a1:ad:17:02 |
[   92.552416] cloud-init[4491]: ci-info: |   ens1f1np1   | False |
  .               |       .       |   .    | 0c:42:a1:ad:17:03 |
[  OK  ] Listening on Socket unix f…p application lxd.user-daemon.
[   92.552929] cloud-init[4491]: ci-info: |  ens255f0np0  | False |
  .               |       .       |   .    | 10:70:fd:87:8b:50 |
         Starting Socket activation for snappy daemon...
[   92.603890] cloud-init[4491]: ci-info: |  ens255f1np1  | False |
  .               |       .       |   .    | 10:70:fd:87:8b:51 |
[  OK  ] Listening on UUID daemon activation socket.
[   92.636064] cloud-init[4491]: ci-info: |   ens3f0np0   | False |
  .               |       .       |   .    | 0c:42:a1:84:0b:e4 |
[  OK  ] Finished Availability of block devices.
[   92.668941] cloud-init[4491]: ci-info: |   ens3f1np1   | False |
  .               |       .       |   .    | 0c:42:a1:84:0b:e5 |
[  OK  ] Listening on Docker Socket for the API.
[   92.699952] cloud-init[4491]: ci-info: |     ens4f0    | False |
  .               |       .       |   .    | 6c:b3:11:21:33:20 |
[  OK  ] Listening on Socket activation for snappy daemon.
[   92.732424] cloud-init[4491]: ci-info: |     ens4f1    | False |
  .               |       .       |   .    | 6c:b3:11:21:33:21 |
```

```
[  OK  ] Reached target Socket Units.
[   92.768428] cloud-init[4491]: ci-info: |       lo      |  True |
 127.0.0.1           |   255.0.0.0   |  host  |         .         |
[  OK  ] Reached target Basic System.
[   92.800372] cloud-init[4491]: ci-info: |       lo      |  True |
 ::1/128             |       .       |  host  |         .         |
[   92.832415] cloud-init[4491]: ci-info: |     usb0     | False |
 .               |       .       |   .    | ee:40:31:4a:a9:d0 |
         Starting containerd container runtime...
[   92.832923] cloud-init[4491]: ci-info: +---------------+-------+----------
 -------------------+---------------+--------+-------------------+
[  OK  ] Started D-Bus System Message Bus.
[   92.869866] cloud-init[4491]: ci-info:
 ++++++++++++++++++++++++++++++Route IPv4
 info++++++++++++++++++++++++++++++
[   92.896373] cloud-init[4491]: ci-info: +-------+-------------+----------
 -----+---------------+-----------+-------+
[  OK  ] Started Save initial kernel messages after boot.
[  92.896914] cloud-init[4491]: ci-info: | Route | Destination  |   Gateway
 |    Genmask    | Interface | Flags |
[   92.952331] cloud-init[4491]: ci-info: +-------+-------------+----------
 -----+---------------+-----------+-------+
         Starting Remove Stale Onli…t4 Metadata Check Snapshots...
[   92.952904] cloud-init[4491]: ci-info: |   0   |   0.0.0.0    |
 172.21.150.254 |    0.0.0.0    |    eno1   |   UG  |
         Starting Record successful boot for GRUB...
[  93.008359] cloud-init[4491]: ci-info: |   1   | 172.21.150.0 |   0.0.0.0
 | 255.255.255.0 |    eno1   |   U   |
[  OK  ] Started irqbalance daemon.
[   93.040325] cloud-init[4491]: ci-info: +-------+-------------+----------
 -----+---------------+-----------+-------+
[   93.068321] cloud-init[4491]: ci-info: ++++++++++++++++++Route IPv6
 info++++++++++++++++++
         Starting Initialize hardware monitoring sensors...
[   93.068840] cloud-init[4491]: ci-info: +-------+-------------+---------+--
 ---------+-------+
         Starting Dispatcher daemon for systemd-networkd...
[   93.116302] cloud-init[4491]: ci-info: | Route | Destination | Gateway |
 Interface | Flags |
         Starting Connect NVMe-oF s…s automatically during boot...
[   93.144162] cloud-init[4491]: ci-info: +-------+-------------+---------+--
 ---------+-------+
[   93.172300] cloud-init[4491]: ci-info: |   1   |  fe80::/64  |    ::   |
 eno1   |   U   |
         Starting Authorization Manager...
[   93.172861] cloud-init[4491]: ci-info: |   3   |    local    |    ::   |
 eno1   |   U   |
[   93.206608] cloud-init[4491]: ci-info: |   4   |  multicast  |    ::   |
 eno1   |   U   |
         Starting System Logging Service...
[   93.206936] cloud-init[4491]: ci-info: +-------+-------------+---------+--
 ---------+-------+
         Starting Self Monitoring a…g Technology (SMART) Daemon...
         Starting Service for snap application lxd.activate...
[  OK  ] Reached target Preparation for Logins.
         Starting Snap Daemon...
         Starting OpenBSD Secure Shell server...
         Starting User Login Management...
         Starting Thermal Daemon Service...
         Starting Ubuntu FAN network setup...
         Starting Disk Manager...
[  OK  ] Started Dispatcher daemon for systemd-networkd.
[  OK  ] Started Self Monitoring an…ing Technology (SMART) Daemon.
[  OK  ] Finished Remove Stale Onli…ext4 Metadata Check Snapshots.
[  OK  ] Started Thermal Daemon Service.
```

```
[  OK  ] Started User Login Management.
[  OK  ] Started System Logging Service.
[  OK  ] Started OpenBSD Secure Shell server.
[  OK  ] Finished Connect NVMe-oF s…ems automatically during boot.
[  OK  ] Finished Record successful boot for GRUB.
[  OK  ] Finished Ubuntu FAN network setup.
[  OK  ] Started Authorization Manager.
[  OK  ] Started Disk Manager.
[  OK  ] Reached target Preparation for Remote File Systems.
[  OK  ] Reached target Remote File Systems.
         Starting Modem Manager...
[  OK  ] Started Regular background program processing daemon.
         Starting GRUB failed boot detection...
         Starting LSB: OpenIPMI Driver init script...
         Starting Permit User Sessions...
[  OK  ] Started Unattended Upgrades Shutdown.
[  OK  ] Finished Permit User Sessions.
[  OK  ] Finished GRUB failed boot detection.
[  OK  ] Started Modem Manager.
         Starting Hold until boot process finishes up...
         Starting Terminate Plymouth Boot Screen...
[  OK  ] Started LSB: OpenIPMI Driver init script.
[  OK  ] Finished Hold until boot process finishes up.
[  OK  ] Started containerd container runtime.
[  OK  ] Finished Terminate Plymouth Boot Screen.
         Starting Docker Application Container Engine...
[  OK  ] Started Serial Getty on ttyS0.
         Starting Set console scheme...
[  OK  ] Finished Set console scheme.
[  OK  ] Created slice Slice /system/getty.
[  OK  ] Started Getty on tty1.
[  OK  ] Reached target Login Prompts.
[   99.233096] habanalabs hl2: F/W failed processing CPU packet 5
[   99.240420] habanalabs hl2: Failed to get current from sensor 1, error -5
[   99.259071] habanalabs hl2: F/W failed processing CPU packet 5
[   99.266142] habanalabs hl2: Failed to get current from sensor 1, error -5
[  OK  ] Started Docker Application Container Engine.
[  OK  ] Finished Initialize hardware monitoring sensors.
[  OK  ] Started Snap Daemon.
         Starting Wait until snapd is fully seeded...
         Starting Time & Date Service...
[  OK  ] Started Time & Date Service.
[  OK  ] Finished Wait until snapd is fully seeded.
         Starting Apply the settings specified in cloud-config...
[  OK  ] Finished Service for snap application lxd.activate.
[   97.021831] cloud-init[5093]: Cloud-init v. 23.3.3-0ubuntu0~22.04.1
 running 'modules:config' at Mon, 29 Jul 2024 08:16:29 +0000. Up 96.97
 seconds.
[  OK  ] Finished Apply the settings specified in cloud-config.
[  OK  ] Reached target Multi-User System.
[  OK  ] Reached target Graphical Interface.
         Starting Execute cloud user/final scripts...
         Starting Record Runlevel Change in UTMP...
[  OK  ] Finished Record Runlevel Change in UTMP.
[   97.523197] cloud-init[5104]: Cloud-init v. 23.3.3-0ubuntu0~22.04.1
 running 'modules:final' at Mon, 29 Jul 2024 08:16:30 +0000. Up 97.47
 seconds.
[   97.575837] cloud-init[5104]: Cloud-init v. 23.3.3-0ubuntu0~22.04.1
 finished at Mon, 29 Jul 2024 08:16:30 +0000. Datasource DataSourceNone.  Up
 97.57 seconds
[   97.604381] cloud-init[5104]: 2024-07-29 08:16:30,163 -
 cc_final_message.py[WARNING]: Used fallback datasource
[  OK  ] Finished Execute cloud user/final scripts.
[  OK  ] Reached target Cloud-init target.
```

```
Ubuntu 22.04.4 LTS AGS8200 ttyS0

AGS8200 login:

root@obmc:~#
```

Remote Control Host

The commands listed in this section include the SOL function.

sol.sh

Switch the BMC console to the host CPU console.

Syntax

sol.sh

Example

```
root@obmc:~# sol.sh
You are in OBMC SOL session.
Use ~. to quit.
-----------------------


ubuntu@AGS8200:~$
ubuntu@AGS8200:~$

-----------------------
Exit from OBMC SOL session.

root@obmc:~#
```

Security Service

The commands listed in this section include SSH, SSL, and account management functions.

ssh

SSH realizes a connection between the SSH client and a server by establishing a secure tunnel over the network.

Syntax

ssh [*username*]@[*remote-host*]

username – The user login name on the remote host.

remote-host – The IP address of the remote host.

Example

```
root@obmc:~# ssh root@172.21.150.11
Host '172.21.150.11' is not in the trusted hosts file.
(ssh-rsa fingerprint SHA256:tdZ4qtH5J6GGc8T5bpjH4iZsnHb1DPXijyOINbQgEHc)
Do you want to continue connecting? (y/n) y
root@172.21.150.11's password:
```

openssl

The OpenSSL software is a robust, commercial-grade, full-featured toolkit for general-purpose cryptography and secure communication.

Syntax

openssl

Example

```
root@obmc:~# openssl version -a
OpenSSL 1.1.1l 24 Aug 2021
built on: Wed Aug 23 06:19:28 2023 UTC
platform: linux-armv4
options:  bn(64,32) des(long)
compiler: arm-openbmc-linux-gnueabi-gcc -march=armv7-a -mfpu=vfpv4-d16 -
  mfloat-
abi=hard -fstack-protector-strong-O2 -D_FORTIFY_SOURCE=2 -Wformat -Wformat-
  sec
urity -Werror=format-security --sysroot=recipe-sysroot -O2 -pipe -g -
  feliminate-
unused-debug-types -fmacro-prefix-map= -fdebug-prefix-map= -fdebug-prefix-
  map= -fdebug-prefix-map
= -DOPENSSL_USE_NODELETE -DOPENSSL_PIC -DOPENSSL_CPUID_OBJ -
  DOPENSSL_BN_ASM_MON
T -DOPENSSL_BN_ASM_GF2m -DSHA1_ASM -DSHA256_ASM -DSHA512_ASM -DKECCAK1600_ASM
  -D
AES_ASM -DBSAES_ASM -DGHASH_ASM -DECP_NISTZ256_ASM -DPOLY1305_ASM -DNDEBUG
OPENSSLDIR: "/usr/lib/ssl-1.1"
ENGINESDIR: "/usr/lib/engines-1.1"
Seeding source: os-specific

root@obmc:~#
```

useradd

Adds new user account.

Syntax

useradd [*options*] <*username*>

options – Linux options that apply to this command.

username – The user account name to add.

Example

```
root@obmc:~# useradd guest

root@obmc:~#
```

3 Intelligent Platform Management Interface (IPMI)

This chapter includes the following sections:

IPMI Overview

This chapter contains a full description of functions based on the Intelligent Platform Management Interface (IPMI) Specification v2.0. After installing **ipmitool** on the X86 (CPU) OS, you can execute BMC's IPMI functions on the X86 (CPU) OS via the in-band Enhanced Serial Peripheral Interface (eSPI) interface between X86 (CPU) and BMC. Each command is shown by a simple description, command syntax, and example.

Table 3: IPMI Commands

Command	Function
BMC System Management	
ipmitool mc selftest	Instructs the BMC to perform a self test.
ipmitool chassis selftest	Instructs the BMC to perform a self test.
ipmitool session info	Returns RMCP+ session information.
Firmware Inventory	
ipmitool mc info	Displays general system information.
Network Service	
ipmitool lan print	Displays the current configuration for a given channel.
ipmitool lan set	Sets parameters for the specified channel.
Platform Health and Peripheral Monitoring	
ipmitool sensor list	Lists sensors and thresholds in a wide table format.
ipmitool sensor get	Displays information for sensors specified by name.
ipmitool sensor reading	Displays the assigned sensor's value.
ipmitool sdr	Displays Sensor Data Repository (SDR) entries.
ipmitool sensor threshold	Sets sensor thresholds.
ipmitool chassis identify	Sets the UID LED to on/off.
Platform Management	
ipmitool mc watchdog	Configures the watchdog function of the BMC system.
ipmitool fru list	Displays all FRU EEPROM information.
ipmitool chassis bootdev	Sets the boot sequence for the host CPU.
ipmitool mc getsysinfo	Displays a list of host system information.
ipmitool mc setsysinfo	Sets a list of the host system information.
ipmitool mc reset	Instructs the BMC to perform a reset.
ipmitool chassis status	Displays information about the high-level status of the system chassis and main power subsystem.
ipmitool chassis poh	Displays the Power-On Hours counter.
ipmitool chassis restart_cause	Shows the restart cause of the x86 host.

Table 3: IPMI Commands (Continued)

Command	Function
ipmitool chassis policy	Configures and displays power restore policies.
ipmitool chassis power	Controls the x86 host power and displays the power status.
ipmitool power	Controls the x86 host power and displays the power status.
ipmitool sel time	Accesses the BMC's system time.
Platform Troubleshooting	
ipmitool sel info	Displays the SEL information.
ipmitool sel list|elist	Displays SEL information and SEL log entries.
ipmitool sel save	Saves SEL records to a text file.
ipmitool sel clear	Clears all SEL logs.
Remote Control Host	
ipmitool sol	Activates sessions of Serial-over-LAN (SOL).
Security Service	
ipmitool user summary	Displays a summary of user ID information.
ipmitool user list	Displays a list of user information for the specified channel.
ipmitool set name	Sets the user name associated with the specified user ID.
ipmitool user set password	Sets the password for the specified user ID.
ipmitool user disable	Disables the user account with specified user ID.
ipmitool user enable	Enables the user account with specified user ID.
ipmitool user test	Determines whether a password complies with the rules.
ipmitool channel info	Displays information for the specified channel.
ipmitool channel getaccess	Displays user access information for a specified channel.
ipmitool channel setaccess	Configure user access information for the specified channel and user ID.
ipmitool channel getciphers	Displays the list of cipher suites supported for the specified application.

BMC System Management

The commands listed in this section include self test and session info.

ipmitool mc selftest

Instructs the BMC to perform a self test. This command will return "passed" if the BMC successfully boots from the primary flash.

Syntax

ipmitool mc selftest

Example

```
root@obmc:~# ipmitool mc selftest
Selftest: passed

root@obmc:~#
```

ipmitool chassis selftest

Instructs the BMC to perform a self test. This command will return "passed" if the BMC successfully boots from the primary flash.

Syntax

ipmitool chassis selftest

Example

```
root@obmc:~# ipmitool chassis selftest
Self Test Results    : passed

root@obmc:~#
```

ipmitool session info

This command will return RMCP+ session information. Please use ipmitool with LAN to get session info.

Syntax

ipmitool session info <**active** | **all** | **id** *0xnnnnnnnn* | **handle** *0xnn*>

active – Display active session.

all – Display all sessions.

id – Display specified session id information.

0xnnnnnnnn – Session ID number.

handle – Display specified session handle id information.

0xnn – Session handle ID number.

Example

```
root@obmc:~# ipmitool -U root -P 0penBmc -I lanplus -H 10.102.8.111 session
  info active
session handle                  : 1
slot count                      : 30
active sessions                 : 1
user id                         : 1
privilege level                 : ADMINISTRATOR
session type                    : IPMIv2/RMCP+
channel number                  : 0x01
console ip                      : 10.102.8.111
console mac                     : 00:00:00:00:00:00
console port                    : 36607
root@obmc:~#
root@obmc:~#  ipmitool -U root -P 0penBmc -I lanplus -H 10.102.8.111 session
  info all
session handle                  : 1
slot count                      : 30
active sessions                 : 1
user id                         : 1
privilege level                 : ADMINISTRATOR
session type                    : IPMIv2/RMCP+
channel number                  : 0x01
console ip                      : 10.102.8.111
console mac                     : 00:00:00:00:00:00
console port                    : 50070
root@obmc:~#
root@obmc:~# ipmitool -U root -P 0penBmc -I lanplus -H 10.102.8.111 session id
  0x0f7a57ab
session handle                  : 1
slot count                      : 30
active sessions                 : 2
user id                         : 2
privilege level                 : ADMINISTRATOR
session type                    : IPMIv2/RMCP+
channel number                  : 0x01
console ip                      : 10.102.8.111
console mac                     : 00:00:00:00:00:00
console port                    : 50230
root@obmc:~#
root@obmc:~# ipmitool -U root -P 0penBmc -I lanplus -H 10.102.8.111 session
  info handle 0x01
session handle                  : 1
slot count                      : 30
active sessions                 : 1
user id                         : 1
privilege level                 : ADMINISTRATOR
session type                    : IPMIv2/RMCP+
channel number                  : 0x01
console ip                      : 10.102.8.111
console mac                     : 00:00:00:00:00:00
console port                    : 39566
root@obmc:~#
```

Firmware Inventory

The commands listed in this section display firmware version and product information.

ipmitool mc info

Display information including device revision, firmware revision, IPMI version supported, manufacturer ID, and information on additional device support.

Syntax

ipmitool mc info

Example

```
root@obmc:~# ipmitool mc info
Device ID                 : 1
Device Revision           : 1
Firmware Revision         : 0.00
IPMI Version              : 2.0
Manufacturer ID           : 52587
Manufacturer Name         : Edgecore Networks Corporation
Product ID                : 2 (0x0002)
Product Name              : AGS8200
Device Available          : yes
Provides Device SDRs      : no
Additional Device Support :
    Sensor Device
    SDR Repository Device
    FRU Inventory Device
Aux Firmware Rev Info     :
    0x05
    0x00
    0x00
    0x00

root@obmc:~#
```

Network Service

The commands listed in this section include IP and network protocol functions.

ipmitool lan print

Displays the current configuration for a given channel.

Syntax

ipmitool lan print <*channel*>

channel – The channel number.

Example

```
root@obmc:~# ipmitool lan print 1
Set in Progress         : Set Complete
Auth Type Support       :
Auth Type Enable        : Callback :
                        : User     :
                        : Operator :
                        : Admin    :
                        : OEM      :
IP Address Source       : Static Address
IP Address              : 172.20.0.42
Subnet Mask             : 255.255.0.0
MAC Address             : 5e:51:34:ba:36:e6
BMC ARP Control         : ARP Responses Enabled, Gratuitous ARP Disabled
Default Gateway IP      : 0.0.0.0
Default Gateway MAC     : 00:00:00:00:00:00
802.1q VLAN ID          : Disabled
RMCP+ Cipher Suites     : 17
Cipher Suite Priv Max   : aaaaaaaaaaaaaaa
                        :     X=Cipher Suite Unused
                        :     c=CALLBACK
                        :     u=USER
                        :     o=OPERATOR
                        :     a=ADMIN
                        :     O=OEM
Bad Password Threshold  : Not Available

root@obmc:~#
```

ipmitool lan set

Sets parameters for the specified channel.

Syntax

ipmitool lan set <*channel*> <*Parameter*>

channel – The channel number.

Parameter –

ipaddr *ip-address* – Sets the IP address.

netmask *netmask* – Sets the network mask.

macaddr *mac-address* – Sets the MAC address.

defgw ipaddr *ip-address* – Sets the default gateway IP address.

defgw macaddr *mac-address* – Sets the default gateway MAC address.

ipsrc <**static** | **dhcp**> –

static – Manually configured static IP address.

dhcp – Address obtained by DHCP.

vlan id <**off**|*id*> –

off – Disable the VLAN function.

id – Enable the VLAN function and set the VLAN ID (1 to 4094).

vlan priority <priority> – Set the priority associated with VLAN frames.

priority – The priority of the VLAN frames (0 to 7).

Example

```
root@obmc:~# ipmitool lan set 1 ipaddr 172.20.0.111
Setting LAN IP Address to 172.20.0.111
root@obmc:~# ipmitool lan set 1 netmask 255.255.255.0
Setting LAN Subnet Mask to 255.255.255.0
root@obmc:~# ipmitool lan set 1 macaddr 14:44:8f:6d:09:66
Setting LAN MAC Address to 14:44:8f:6d:09:66
root@obmc:~# ipmitool lan set 1 defgw ipaddr 172.20.0.254
Setting LAN Default Gateway IP to 172.20.0.254
root@obmc:~# ipmitool lan set 1 defgw macaddr a4:bf:01:89:9a:59
Setting LAN Default Gateway MAC to a4:bf:01:89:9a:59
root@obmc:~# ipmitool lan set 1 ipsrc dhcp
root@obmc:~# ipmitool lan set 1 ipsrc static
root@obmc:~# ipmitool lan set 1 vlan id 1
root@obmc:~# ipmitool lan set 1 vlan id off
root@obmc:~# ipmitool lan set 1 vlan priority 7
root@obmc:~#
```

Platform Health and Peripheral Monitoring

The commands listed in this section include UID LED lighting, fan controller, sensors, PSU, and UCD-related information.

ipmitool sensor list

Lists sensors and thresholds in a wide table format.

Syntax

ipmitool sensor list

Example

```
root@obmc:~# ipmitool sensor
CPU0_FIVRA_Iout  | 90.800     | Amps       | ok    | na        | na        |
  na         | na         | na         | na
CPU0_PVCCD_Iin   | 1.716      | Amps       | ok    | na        | na        |
  na         | na         | na         | na
CPU0_PVCCIN_Iout | 254.240    | Amps       | ok    | na        | na        |
  na         | na         | na         | na
CPU1_FIVRA_Iout  | 90.800     | Amps       | ok    | na        | na        |
  na         | na         | na         | na
CPU1_PVCCD_Iin   | 1.716      | Amps       | ok    | na        | na        |
  na         | na         | na         | na
CPU1_PVCCIN_Iout | 45.400     | Amps       | ok    | na        | na        |
  na         | na         | na         | na
FAON_CPU0_Iout   | 22.700     | Amps       | ok    | na        | na        |
  na         | 70.370     | 72.640     | na
FAON_CPU1_Iout   | 20.430     | Amps       | ok    | na        | na        |
  na         | 70.370     | 72.640     | na
P54V_Iout        | 88.530     | Amps       | ok    | na        | na        |
  na         | na         | na         | na
```

```
PSU4_54VSB_Iin   | 1.560      | Amps        | ok    | na        | na        |
  na         | 12.012    | 14.040    | na
PSU4_54VSB_Iout  | 4.540      | Amps        | ok    | na        | na        |
  na         | 70.370    | 72.640    | na
PSU5_54VSB_Iin   | 1.638      | Amps        | ok    | na        | na        |
  na         | 12.012    | 14.040    | na
PSU5_54VSB_Iout  | 6.810      | Amps        | ok    | na        | na        |
  na         | 70.370    | 72.640    | na
PSU6_54VSB_Iin   | 1.950      | Amps        | ok    | na        | na        |
  na         | 12.012    | 14.040    | na
PSU6_54VSB_Iout  | 6.810      | Amps        | ok    | na        | na        |
  na         | 70.370    | 72.640    | na
PSU7_54VSB_Iin   | 0.000      | Amps        | ok    | na        | na        |
  na         | 12.012    | 14.040    | na
PSU7_54VSB_Iout  | 0.000      | Amps        | ok    | na        | na        |
  na         | 70.370    | 72.640    | na
PSU8_54VSB_Iin   | 2.496      | Amps        | ok    | na        | na        |
  na         | 12.012    | 14.040    | na
PSU8_54VSB_Iout  | 43.130     | Amps        | ok    | na        | na        |
  na         | 70.370    | 72.640    | na
SW12_0V8_Iout    | 83.990     | Amps        | ok    | na        | na        |
  na         | na        | na        | na
SW34_0V8_Iout    | 90.800     | Amps        | ok    | na        | na        |
  na         | na        | na        | na
Pwm_1            | 19.600     | unspecified | ok    | na        | na        |
  na         | na        | na        | na
Pwm_2            | 19.600     | unspecified | ok    | na        | na        |
  na         | na        | na        | na
Pwm_3            | 19.600     | unspecified | ok    | na        | na        |
  na         | na        | na        | na
Pwm_4            | 19.600     | unspecified | ok    | na        | na        |
  na         | na        | na        | na
Pwm_5            | 19.600     | unspecified | ok    | na        | na        |
  na         | na        | na        | na
Pwm_6            | 19.600     | unspecified | ok    | na        | na        |
  na         | na        | na        | na
Pwm_7            | 19.600     | unspecified | ok    | na        | na        |
  na         | na        | na        | na
Pwm_8            | 19.600     | unspecified | ok    | na        | na        |
  na         | na        | na        | na
Pwm_9            | 19.600     | unspecified | ok    | na        | na        |
  na         | na        | na        | na
Pwm_10           | 19.600     | unspecified | ok    | na        | na        |
  na         | na        | na        | na
Pwm_11           | 19.600     | unspecified | ok    | na        | na        |
  na         | na        | na        | na
Pwm_12           | 19.600     | unspecified | ok    | na        | na        |
  na         | na        | na        | na
Pwm_13           | 19.600     | unspecified | ok    | na        | na        |
  na         | na        | na        | na
Pwm_14           | 19.600     | unspecified | ok    | na        | na        |
  na         | na        | na        | na
Pwm_15           | 19.600     | unspecified | ok    | na        | na        |
  na         | na        | na        | na
Pwm_PSU4_54VSB_F | 30.184     | unspecified | ok    | na        | na        |
  na         | na        | na        | na
Pwm_PSU5_54VSB_F | 30.184     | unspecified | ok    | na        | na        |
  na         | na        | na        | na
Pwm_PSU6_54VSB_F | 30.184     | unspecified | ok    | na        | na        |
  na         | na        | na        | na
Pwm_PSU7_54VSB_F | 16.072     | unspecified | ok    | na        | na        |
  na         | na        | na        | na
Pwm_PSU8_54VSB_F | 16.072     | unspecified | ok    | na        | na        |
  na         | na        | na        | na
```

```
Fan_front_1      | 7154.000   | RPM        | ok    | na        | 1764.000  |
  1960.000  | na        | na        | na
Fan_front_2      | 7154.000   | RPM        | ok    | na        | 1764.000  |
  1960.000  | na        | na        | na
Fan_front_3      | 7154.000   | RPM        | ok    | na        | 1764.000  |
  1960.000  | na        | na        | na
Fan_front_4      | 7154.000   | RPM        | ok    | na        | 1764.000  |
  1960.000  | na        | na        | na
Fan_front_5      | 7350.000   | RPM        | ok    | na        | 1764.000  |
  1960.000  | na        | na        | na
Fan_front_6      | 7350.000   | RPM        | ok    | na        | 1764.000  |
  1960.000  | na        | na        | na
Fan_front_7      | 7154.000   | RPM        | ok    | na        | 1764.000  |
  1960.000  | na        | na        | na
Fan_front_8      | 7154.000   | RPM        | ok    | na        | 1764.000  |
  1960.000  | na        | na        | na
Fan_front_9      | 7154.000   | RPM        | ok    | na        | 1764.000  |
  1960.000  | na        | na        | na
Fan_front_10     | 7154.000   | RPM        | ok    | na        | 1764.000  |
  1960.000  | na        | na        | na
Fan_front_11     | 7154.000   | RPM        | ok    | na        | 1764.000  |
  1960.000  | na        | na        | na
Fan_front_12     | 7154.000   | RPM        | ok    | na        | 1764.000  |
  1960.000  | na        | na        | na
Fan_front_13     | 7350.000   | RPM        | ok    | na        | 1764.000  |
  1960.000  | na        | na        | na
Fan_front_14     | 7350.000   | RPM        | ok    | na        | 1764.000  |
  1960.000  | na        | na        | na
Fan_front_15     | 7154.000   | RPM        | ok    | na        | 1764.000  |
  1960.000  | na        | na        | na
Fan_rear_1       | 8624.000   | RPM        | ok    | na        | 1764.000  |
  1960.000  | na        | na        | na
Fan_rear_2       | 8428.000   | RPM        | ok    | na        | 1764.000  |
  1960.000  | na        | na        | na
Fan_rear_3       | 8428.000   | RPM        | ok    | na        | 1764.000  |
  1960.000  | na        | na        | na
Fan_rear_4       | 8428.000   | RPM        | ok    | na        | 1764.000  |
  1960.000  | na        | na        | na
Fan_rear_5       | 8232.000   | RPM        | ok    | na        | 1764.000  |
  1960.000  | na        | na        | na
Fan_rear_6       | 8624.000   | RPM        | ok    | na        | 1764.000  |
  1960.000  | na        | na        | na
Fan_rear_7       | 8624.000   | RPM        | ok    | na        | 1764.000  |
  1960.000  | na        | na        | na
Fan_rear_8       | 8428.000   | RPM        | ok    | na        | 1764.000  |
  1960.000  | na        | na        | na
Fan_rear_9       | 8624.000   | RPM        | ok    | na        | 1764.000  |
  1960.000  | na        | na        | na
Fan_rear_10      | 8624.000   | RPM        | ok    | na        | 1764.000  |
  1960.000  | na        | na        | na
Fan_rear_11      | 8820.000   | RPM        | ok    | na        | 1764.000  |
  1960.000  | na        | na        | na
Fan_rear_12      | 8624.000   | RPM        | ok    | na        | 1764.000  |
  1960.000  | na        | na        | na
Fan_rear_13      | 8624.000   | RPM        | ok    | na        | 1764.000  |
  1960.000  | na        | na        | na
Fan_rear_14      | 8624.000   | RPM        | ok    | na        | 1764.000  |
  1960.000  | na        | na        | na
Fan_rear_15      | 8624.000   | RPM        | ok    | na        | 1764.000  |
  1960.000  | na        | na        | na
PSU4_54VSB_Fan_S | 8968.000   | RPM        | ok    | na        | na        |
  na        | na        | na        | na
PSU5_54VSB_Fan_S | 8968.000   | RPM        | ok    | na        | na        |
  na        | na        | na        | na
```

```
PSU6_54VSB_Fan_S | 8968.000   | RPM        | ok    | na        | na        |
  na         | na         | na         | na
PSU7_54VSB_Fan_S | 0.000      | RPM        | ok    | na        | na        |
  na         | na         | na         | na
PSU8_54VSB_Fan_S | 10974.000  | RPM        | ok    | na        | na        |
  na         | na         | na         | na
CPU0_FIVRA_Pout  | 165.200    | Watts      | ok    | na        | na        |
  na         | na         | na         | na
CPU0_PVCCD_Pin   | 23.600     | Watts      | ok    | na        | na        |
  na         | na         | na         | na
CPU0_PVCCIN_Pout | 495.600    | Watts      | ok    | na        | na        |
  na         | na         | na         | na
CPU1_FIVRA_Pout  | 153.400    | Watts      | ok    | na        | na        |
  na         | na         | na         | na
CPU1_PVCCD_Pin   | 23.600     | Watts      | ok    | na        | na        |
  na         | na         | na         | na
CPU1_PVCCIN_Pout | 82.600     | Watts      | ok    | na        | na        |
  na         | na         | na         | na
FAON_CPU0_Pout   | 23.600     | Watts      | ok    | na        | na        |
  na         | na         | na         | na
FAON_CPU1_Pout   | 23.600     | Watts      | ok    | na        | na        |
  na         | na         | na         | na
PSU4_54VSB_Pin   | 354.000    | Watts      | ok    | na        | na        |
  na         | 849.600    | 896.800    | na
PSU4_54VSB_Pout  | 295.000    | Watts      | ok    | na        | na        |
  na         | 849.600    | 896.800    | na
PSU5_54VSB_Pin   | 365.800    | Watts      | ok    | na        | na        |
  na         | 849.600    | 896.800    | na
PSU5_54VSB_Pout  | 330.400    | Watts      | ok    | na        | na        |
  na         | 849.600    | 896.800    | na
PSU6_54VSB_Pin   | 448.400    | Watts      | ok    | na        | na        |
  na         | 849.600    | 896.800    | na
PSU6_54VSB_Pout  | 401.200    | Watts      | ok    | na        | na        |
  na         | 849.600    | 896.800    | na
PSU7_54VSB_Pin   | 0.000      | Watts      | ok    | na        | na        |
  na         | 849.600    | 896.800    | na
PSU7_54VSB_Pout  | 0.000      | Watts      | ok    | na        | na        |
  na         | 849.600    | 896.800    | na
PSU8_54VSB_Pin   | 566.400    | Watts      | ok    | na        | na        |
  na         | 849.600    | 896.800    | na
PSU8_54VSB_Pout  | 542.800    | Watts      | ok    | na        | na        |
  na         | 849.600    | 896.800    | na
PSU_Power_Total  | 566.400    | Watts      | ok    | na        | na        |
  na         | 1699.200   | 1805.400   | na
SW12_0V8_Pout    | 70.800     | Watts      | ok    | na        | na        |
  na         | na         | na         | na
SW34_0V8_Pout    | 70.800     | Watts      | ok    | na        | na        |
  na         | na         | na         | na
CPU0_FIVRA_Temp  | 36.000     | degrees C  | ok    | na        | 5.000     |
  10.000     | 60.000     | 70.000     | na
CPU0_PVCCD_Temp  | 42.000     | degrees C  | ok    | na        | 5.000     |
  10.000     | 60.000     | 70.000     | na
CPU0_PVCCIN_Temp | 33.000     | degrees C  | ok    | na        | 5.000     |
  10.000     | 60.000     | 70.000     | na
CPU1_FIVRA_Temp  | 37.000     | degrees C  | ok    | na        | 5.000     |
  10.000     | 60.000     | 70.000     | na
CPU1_PVCCD_Temp  | 39.000     | degrees C  | ok    | na        | 5.000     |
  10.000     | 60.000     | 70.000     | na
CPU1_PVCCIN_Temp | 31.000     | degrees C  | ok    | na        | 5.000     |
  10.000     | 60.000     | 70.000     | na
FAON_CPU0_Temp   | 41.000     | degrees C  | ok    | na        | 5.000     |
  10.000     | 60.000     | 70.000     | na
FAON_CPU1_Temp   | 42.000     | degrees C  | ok    | na        | 5.000     |
  10.000     | 60.000     | 70.000     | na
```

```
HSBP1_Temp        | 27.000     | degrees C  | ok    | na        | 7.000     |
  12.000    | 52.000    | 57.000    | na
HSBP2_Temp        | 26.000     | degrees C  | ok    | na        | 7.000     |
  12.000    | 52.000    | 57.000    | na
HSBP3_Temp        | 26.000     | degrees C  | ok    | na        | 7.000     |
  12.000    | 52.000    | 57.000    | na
LM75BD_MB         | 29.000     | degrees C  | ok    | na        | 0.000     |
  5.000     | 110.000   | 115.000   | na
P54V_Temp         | 56.000     | degrees C  | ok    | na        | 5.000     |
  10.000    | 68.000    | 70.000    | na
PDB_Temp          | 27.000     | degrees C  | ok    | na        | 7.000     |
  12.000    | 52.000    | 57.000    | na
PSU4_54VSB_Temp   | 31.000     | degrees C  | ok    | na        | 5.000     |
  10.000    | 60.000    | 70.000    | na
PSU5_54VSB_Temp   | 33.000     | degrees C  | ok    | na        | 5.000     |
  10.000    | 60.000    | 70.000    | na
PSU6_54VSB_Temp   | 32.000     | degrees C  | ok    | na        | 5.000     |
  10.000    | 60.000    | 70.000    | na
PSU7_54VSB_Temp   | 28.000     | degrees C  | ok    | na        | 5.000     |
  10.000    | 60.000    | 70.000    | na
PSU8_54VSB_Temp   | 26.000     | degrees C  | ok    | na        | 5.000     |
  10.000    | 60.000    | 70.000    | na
RISER2_Temp       | 29.000     | degrees C  | ok    | na        | 7.000     |
  12.000    | 52.000    | 57.000    | na
RISER3_Temp       | 27.000     | degrees C  | ok    | na        | 7.000     |
  12.000    | 52.000    | 57.000    | na
SW12_0V8_Temp     | 42.000     | degrees C  | ok    | na        | 5.000     |
  10.000    | 60.000    | 70.000    | na
SW34_0V8_Temp     | 37.000     | degrees C  | ok    | na        | 5.000     |
  10.000    | 60.000    | 70.000    | na
SWB_Temp          | 34.000     | degrees C  | ok    | na        | 7.000     |
  12.000    | 52.000    | 57.000    | na
nvme0             | 28.884     | degrees C  | ok    | na        | 0.000     |
  4.980     | 70.218    | 80.178    | na
nvme1             | 29.880     | degrees C  | ok    | na        | 0.000     |
  4.980     | 70.218    | 80.178    | na
nvme2             | 29.880     | degrees C  | ok    | na        | 0.000     |
  4.980     | 70.218    | 80.178    | na
nvme3             | 29.880     | degrees C  | ok    | na        | 0.000     |
  4.980     | 70.218    | 80.178    | na
nvme4             | 29.880     | degrees C  | ok    | na        | 0.000     |
  4.980     | 70.218    | 80.178    | na
nvme5             | 29.880     | degrees C  | ok    | na        | 0.000     |
  4.980     | 70.218    | 80.178    | na
nvme6             | 29.880     | degrees C  | ok    | na        | 0.000     |
  4.980     | 70.218    | 80.178    | na
nvme7             | 30.876     | degrees C  | ok    | na        | 0.000     |
  4.980     | 70.218    | 80.178    | na
CPU0_FIVRA_Vout   | 1.180      | Volts      | ok    | na        | 1.180     |
  1.180     | 2.360     | 2.360     | na
CPU0_PVCCD_Vout   | 1.180      | Volts      | ok    | na        | 1.180     |
  1.180     | 1.180     | 1.180     | na
CPU0_PVCCIN_Vout  | 2.360      | Volts      | ok    | na        | 1.180     |
  1.180     | 2.360     | 2.360     | na
CPU1_FIVRA_Vout   | 2.360      | Volts      | ok    | na        | 1.180     |
  1.180     | 2.360     | 2.360     | na
CPU1_PVCCD_Vout   | 1.180      | Volts      | ok    | na        | 1.180     |
  1.180     | 1.180     | 1.180     | na
CPU1_PVCCIN_Vout  | 2.360      | Volts      | ok    | na        | 1.180     |
  1.180     | 2.360     | 2.360     | na
EHV_CPU0_Vout     | 1.794      | Volts      | ok    | na        | 1.248     |
  1.404     | 2.184     | 2.340     | na
EHV_CPU1_Vout     | 1.794      | Volts      | ok    | na        | 1.248     |
  1.404     | 2.184     | 2.340     | na
```

```
FAON_CPU0_Vout   | 1.180      | Volts      | ok    | na        | 1.180     |
  1.180     | 1.180     | 1.180     | na
FAON_CPU1_Vout   | 1.180      | Volts      | ok    | na        | 1.180     |
  1.180     | 1.180     | 1.180     | na
P54V_Vout        | 11.800     | Volts      | ok    | na        | 1.180     |
  1.180     | 11.800    | 11.800    | na
PSU4_54VSB_Vin   | 227.740    | Volts      | ok    | na        | 88.500    |
  89.680    | 240.720   | 264.320   | na
PSU4_54VSB_Vout  | 54.280     | Volts      | ok    | na        | 50.740    |
  50.740    | 59.000    | 59.000    | na
PSU5_54VSB_Vin   | 226.560    | Volts      | ok    | na        | 88.500    |
  89.680    | 240.720   | 264.320   | na
PSU5_54VSB_Vout  | 54.280     | Volts      | ok    | na        | 50.740    |
  50.740    | 59.000    | 59.000    | na
PSU6_54VSB_Vin   | 226.560    | Volts      | ok    | na        | 88.500    |
  89.680    | 240.720   | 264.320   | na
PSU6_54VSB_Vout  | 54.280     | Volts      | ok    | na        | 50.740    |
  50.740    | 59.000    | 59.000    | na
PSU7_54VSB_Vin   | 0.000      | Volts      | cr    | na        | 0.000     |
  0.000     | 240.720   | 264.320   | na
PSU7_54VSB_Vout  | 0.000      | Volts      | cr    | na        | 0.000     |
  0.000     | 12.980    | 14.160    | na
PSU8_54VSB_Vin   | 227.740    | Volts      | ok    | na        | 88.500    |
  89.680    | 240.720   | 264.320   | na
PSU8_54VSB_Vout  | 11.800     | Volts      | ok    | na        | 10.620    |
  11.800    | 12.980    | 14.160    | na
PVNN_MAIN_CPU0   | 1.009      | Volts      | ok    | na        | 0.696     |
  0.970     | 1.029     | 1.303     | na
PVNN_MAIN_CPU1   | 1.009      | Volts      | ok    | na        | 0.696     |
  0.970     | 1.029     | 1.303     | na
PVNN_PCH         | 0.902      | Volts      | ok    | na        | 0.627     |
  0.853     | 0.941     | 1.166     | na
PVPP_HBM_CPU0    | 0.098      | Volts      | ok    | na        | 0.000     |
  0.000     | 2.744     | 15.582    | na
PVPP_HBM_CPU1    | 0.098      | Volts      | ok    | na        | 0.000     |
  0.000     | 2.744     | 15.582    | na
SW12_0V8_Vout    | 1.180      | Volts      | ok    | na        | 1.180     |
  1.180     | 1.180     | 1.180     | na
SW34_0V8_Vout    | 1.180      | Volts      | ok    | na        | 1.180     |
  1.180     | 1.180     | 1.180     | na
VBATT            | 2.803      | Volts      | ok    | na        | 2.097     |
  2.391     | 3.606     | 3.900     | na
VCC1V05_PCH      | 1.049      | Volts      | ok    | na        | 0.735     |
  1.000     | 1.078     | 1.362     | na
VCC1V8_PCH       | 1.823      | Volts      | ok    | na        | 1.254     |
  1.725     | 1.862     | 2.332     | na
VCC3V3           | 3.332      | Volts      | ok    | na        | 2.313     |
  3.136     | 3.469     | 4.292     | na
VCC3V3_RISER     | 3.332      | Volts      | ok    | na        | 2.313     |
  2.999     | 3.606     | 4.292     | na
VCC3V3_SB        | 3.312      | Volts      | ok    | na        | 2.313     |
  3.214     | 3.391     | 4.292     | na
VCC5V            | 6.102      | Volts      | ok    | na        | 3.510     |
  4.752     | 6.264     | 6.480     | na
VCC12V_CPU0_DIMM | 12.838     | Volts      | ok    | na        | 8.428     |
  4.214     | 14.994    | 15.582    | na
VCC12V_CPU1_DIMM | 12.740     | Volts      | ok    | na        | 8.428     |
  4.214     | 14.994    | 15.582    | na
VCC12V_HSBP      | 12.740     | Volts      | ok    | na        | 8.428     |
  11.074    | 13.622    | 15.582    | na
VCC12V_RISER     | 12.838     | Volts      | ok    | na        | 8.428     |
  11.074    | 13.622    | 15.582    | na
root@obmc:~#
```

ipmitool sensor get

Displays information for sensors specified by name.

Syntax

ipmitool sensor get <*id*> ... [*id*]

id – The ID of the specified sensor.

Example

```
root@obmc:~# ipmitool sensor get VCC12V_RISER
Locating sensor record...
Sensor ID              : VCC12V_RISER (0xa7)
Entity ID             : 0.1
Sensor Type (Threshold)  : Voltage
Sensor Reading        : 12.838 (+/- 0) Volts
Status                : ok
Lower Non-Recoverable : na
Lower Critical        : 8.428
Lower Non-Critical    : 11.074
Upper Non-Critical    : 13.622
Upper Critical        : 15.582
Upper Non-Recoverable : na
Positive Hysteresis   : Unspecified
Negative Hysteresis   : Unspecified
Assertion Events      :
Event Enable          : Event Messages Disabled
Assertions Enabled    : lnc- lcr- unc+ ucr+
Deassertions Enabled  : lnc+ lcr+ unc- ucr-
root@obmc:~#
```

ipmitool sensor reading

Display the assigned sensor's value.

Syntax

ipmitool sensor reading <*id*> ... [*id*]

id – The ID of the specified sensor.

Example

```
root@obmc:~# ipmitool sensor reading VCC12V_RISER
VCC12V_RISER     | 12.838
root@obmc:~#
```

ipmitool sdr

Displays Sensor Data Repository (SDR) entries.

Syntax

ipmitool sdr <*command*> [*options*]

list | **elist** [*option*]

all – all SDR Records

full – full Sensor record

fru – FRU Locator Record

type [*option*]

Sensor_Type – Retrieve the state of the specified sensor. *Sensor_Type* can be specified either as a string or a hex value.

list – Get a list of available sensor types.

get <*Sensor_ID*> – Retrieve state of the first sensor matched by *Sensor_ID*.

info – Display information about the repository itself.

Example

```
root@obmc:~# ipmitool sdr info
SDR Version                       : 0x51
Record Count                      : 202
Free Space                        : unspecified
Most recent Addition              : NA
Most recent Erase                 : NA
SDR overflow                      : yes
SDR Repository Update Support     : unspecified
Delete SDR supported              : no
Partial Add SDR supported         : no
Reserve SDR repository supported  : yes
SDR Repository Alloc info supported : yes
root@obmc:~#
root@obmc:~# ipmitool sdr elist
CPU0_FIVRA_Iout  | 00h | ok  |  0.1 | 90.80 Amps
CPU0_PVCCD_Iin   | 01h | ok  |  0.1 | 1.72 Amps
CPU0_PVCCIN_Iout | 02h | ok  |  0.1 | 165.71 Amps
CPU1_FIVRA_Iout  | 03h | ok  |  0.1 | 83.99 Amps
CPU1_PVCCD_Iin   | 04h | ok  |  0.1 | 1.72 Amps
CPU1_PVCCIN_Iout | 05h | ok  |  0.1 | 31.78 Amps
FAON_CPU0_Iout   | 06h | ok  |  0.1 | 20.43 Amps
FAON_CPU1_Iout   | 07h | ok  |  0.1 | 20.43 Amps
P54V_Iout        | 08h | ok  |  0.1 | 102.15 Amps
PSU4_54VSB_Iin   | 09h | ok  |  0.1 | 2.03 Amps
PSU4_54VSB_Iout  | 0Ah | ok  |  0.1 | 6.81 Amps
PSU5_54VSB_Iin   | 0Bh | ok  |  0.1 | 2.11 Amps
PSU5_54VSB_Iout  | 0Ch | ok  |  0.1 | 9.08 Amps
PSU6_54VSB_Iin   | 0Dh | ok  |  0.1 | 2.42 Amps
PSU6_54VSB_Iout  | 0Eh | ok  |  0.1 | 9.08 Amps
PSU7_54VSB_Iin   | 0Fh | ok  |  0.1 | 0 Amps
PSU7_54VSB_Iout  | 10h | ok  |  0.1 | 0 Amps
PSU8_54VSB_Iin   | 11h | ok  |  0.1 | 2.26 Amps
PSU8_54VSB_Iout  | 12h | ok  |  0.1 | 38.59 Amps
SW12_0V8_Iout    | 13h | ok  |  0.1 | 83.99 Amps
SW34_0V8_Iout    | 14h | ok  |  0.1 | 90.80 Amps
Pwm_1            | 15h | ok  |  0.1 | 19.60 unspecifi
Pwm_2            | 16h | ok  |  0.1 | 19.60 unspecifi
Pwm_3            | 17h | ok  |  0.1 | 19.60 unspecifi
Pwm_4            | 18h | ok  |  0.1 | 19.60 unspecifi
Pwm_5            | 19h | ok  |  0.1 | 19.60 unspecifi
Pwm_6            | 1Ah | ok  |  0.1 | 19.60 unspecifi
Pwm_7            | 1Bh | ok  |  0.1 | 19.60 unspecifi
Pwm_8            | 1Ch | ok  |  0.1 | 19.60 unspecifi
Pwm_9            | 1Dh | ok  |  0.1 | 19.60 unspecifi
Pwm_10           | 1Eh | ok  |  0.1 | 19.60 unspecifi
Pwm_11           | 1Fh | ok  |  0.1 | 19.60 unspecifi
Pwm_12           | 20h | ok  |  0.1 | 19.60 unspecifi
Pwm_13           | 21h | ok  |  0.1 | 19.60 unspecifi
Pwm_14           | 22h | ok  |  0.1 | 19.60 unspecifi
```

```
Pwm_15           | 23h | ok  |  0.1 | 19.60 unspecifi
Pwm_PSU4_54VSB_F | 24h | ok  |  0.1 | 30.18 unspecifi
Pwm_PSU5_54VSB_F | 25h | ok  |  0.1 | 30.18 unspecifi
Pwm_PSU6_54VSB_F | 26h | ok  |  0.1 | 30.18 unspecifi
Pwm_PSU7_54VSB_F | 27h | ok  |  0.1 | 16.07 unspecifi
Pwm_PSU8_54VSB_F | 28h | ok  |  0.1 | 16.07 unspecifi
Fan_front_1      | 29h | ok  |  0.1 | 7154 RPM
Fan_front_2      | 2Ah | ok  |  0.1 | 7154 RPM
Fan_front_3      | 2Bh | ok  |  0.1 | 7154 RPM
Fan_front_4      | 2Ch | ok  |  0.1 | 7350 RPM
Fan_front_5      | 2Dh | ok  |  0.1 | 7350 RPM
Fan_front_6      | 2Eh | ok  |  0.1 | 7154 RPM
Fan_front_7      | 2Fh | ok  |  0.1 | 7154 RPM
Fan_front_8      | 30h | ok  |  0.1 | 7154 RPM
Fan_front_9      | 31h | ok  |  0.1 | 7350 RPM
Fan_front_10     | 32h | ok  |  0.1 | 7154 RPM
Fan_front_11     | 33h | ok  |  0.1 | 7350 RPM
Fan_front_12     | 34h | ok  |  0.1 | 7350 RPM
Fan_front_13     | 35h | ok  |  0.1 | 7350 RPM
Fan_front_14     | 36h | ok  |  0.1 | 7154 RPM
Fan_front_15     | 37h | ok  |  0.1 | 7154 RPM
Fan_rear_1       | 38h | ok  |  0.1 | 8624 RPM
Fan_rear_2       | 39h | ok  |  0.1 | 8428 RPM
Fan_rear_3       | 3Ah | ok  |  0.1 | 8428 RPM
Fan_rear_4       | 3Bh | ok  |  0.1 | 8232 RPM
Fan_rear_5       | 3Ch | ok  |  0.1 | 8428 RPM
Fan_rear_6       | 3Dh | ok  |  0.1 | 8624 RPM
Fan_rear_7       | 3Eh | ok  |  0.1 | 8624 RPM
Fan_rear_8       | 3Fh | ok  |  0.1 | 8624 RPM
Fan_rear_9       | 40h | ok  |  0.1 | 8624 RPM
Fan_rear_10      | 41h | ok  |  0.1 | 8624 RPM
Fan_rear_11      | 42h | ok  |  0.1 | 8624 RPM
Fan_rear_12      | 43h | ok  |  0.1 | 8624 RPM
Fan_rear_13      | 44h | ok  |  0.1 | 8624 RPM
Fan_rear_14      | 45h | ok  |  0.1 | 8624 RPM
Fan_rear_15      | 46h | ok  |  0.1 | 8624 RPM
PSU4_54VSB_Fan_S | 47h | ok  |  0.1 | 8968 RPM
PSU5_54VSB_Fan_S | 48h | ok  |  0.1 | 8968 RPM
PSU6_54VSB_Fan_S | 49h | ok  |  0.1 | 8968 RPM
PSU7_54VSB_Fan_S | 4Ah | ok  |  0.1 | 0 RPM
PSU8_54VSB_Fan_S | 4Bh | ok  |  0.1 | 10148 RPM
CPU0_FIVRA_Pout  | 4Ch | ok  |  0.1 | 165.20 Watts
CPU0_PVCCD_Pin   | 4Dh | ok  |  0.1 | 23.60 Watts
CPU0_PVCCIN_Pout | 4Eh | ok  |  0.1 | 318.60 Watts
CPU1_FIVRA_Pout  | 4Fh | ok  |  0.1 | 153.40 Watts
CPU1_PVCCD_Pin   | 50h | ok  |  0.1 | 23.60 Watts
CPU1_PVCCIN_Pout | 51h | ok  |  0.1 | 59 Watts
FAON_CPU0_Pout   | 52h | ok  |  0.1 | 23.60 Watts
FAON_CPU1_Pout   | 53h | ok  |  0.1 | 23.60 Watts
PSU4_54VSB_Pin   | 54h | ok  |  0.1 | 448.40 Watts
PSU4_54VSB_Pout  | 55h | ok  |  0.1 | 413 Watts
PSU5_54VSB_Pin   | 56h | ok  |  0.1 | 483.80 Watts
PSU5_54VSB_Pout  | 57h | ok  |  0.1 | 448.40 Watts
PSU6_54VSB_Pin   | 58h | ok  |  0.1 | 554.60 Watts
PSU6_54VSB_Pout  | 59h | ok  |  0.1 | 495.60 Watts
PSU7_54VSB_Pin   | 5Ah | ok  |  0.1 | 0 Watts
PSU7_54VSB_Pout  | 5Bh | ok  |  0.1 | 0 Watts
PSU8_54VSB_Pin   | 5Ch | ok  |  0.1 | 507.40 Watts
PSU8_54VSB_Pout  | 5Dh | ok  |  0.1 | 483.80 Watts
PSU_Power_Total  | 5Eh | ok  |  0.1 | 507.40 Watts
SW12_0V8_Pout    | 5Fh | ok  |  0.1 | 70.80 Watts
SW34_0V8_Pout    | 60h | ok  |  0.1 | 70.80 Watts
CPU0_FIVRA_Temp  | 61h | ok  |  0.1 | 36 degrees C
CPU0_PVCCD_Temp  | 62h | ok  |  0.1 | 41 degrees C
CPU0_PVCCIN_Temp | 63h | ok  |  0.1 | 30 degrees C
```

```
CPU1_FIVRA_Temp  | 64h | ok  |  0.1 | 37 degrees C
CPU1_PVCCD_Temp  | 65h | ok  |  0.1 | 38 degrees C
CPU1_PVCCIN_Temp | 66h | ok  |  0.1 | 29 degrees C
FAON_CPU0_Temp   | 67h | ok  |  0.1 | 41 degrees C
FAON_CPU1_Temp   | 68h | ok  |  0.1 | 42 degrees C
HSBP1_Temp       | 69h | ok  |  0.1 | 27 degrees C
HSBP2_Temp       | 6Ah | ok  |  0.1 | 26 degrees C
HSBP3_Temp       | 6Bh | ok  |  0.1 | 26 degrees C
LM75BD_MB        | 6Ch | ok  |  0.1 | 28 degrees C
P54V_Temp        | 6Dh | ok  |  0.1 | 57 degrees C
PDB_Temp         | 6Eh | ok  |  0.1 | 27 degrees C
PSU4_54VSB_Temp  | 6Fh | ok  |  0.1 | 32 degrees C
PSU5_54VSB_Temp  | 70h | ok  |  0.1 | 33 degrees C
PSU6_54VSB_Temp  | 71h | ok  |  0.1 | 32 degrees C
PSU7_54VSB_Temp  | 72h | ok  |  0.1 | 28 degrees C
PSU8_54VSB_Temp  | 73h | ok  |  0.1 | 26 degrees C
RISER2_Temp      | 74h | ok  |  0.1 | 29 degrees C
RISER3_Temp      | 75h | ok  |  0.1 | 27 degrees C
SW12_0V8_Temp    | 76h | ok  |  0.1 | 42 degrees C
SW34_0V8_Temp    | 77h | ok  |  0.1 | 37 degrees C
SWB_Temp         | 78h | ok  |  0.1 | 34 degrees C
nvme0            | 79h | ok  |  0.1 | 28.88 degrees C
nvme1            | 7Ah | ok  |  0.1 | 29.88 degrees C
nvme2            | 7Bh | ok  |  0.1 | 30.88 degrees C
nvme3            | 7Ch | ok  |  0.1 | 30.88 degrees C
nvme4            | 7Dh | ok  |  0.1 | 29.88 degrees C
nvme5            | 7Eh | ok  |  0.1 | 29.88 degrees C
nvme6            | 7Fh | ok  |  0.1 | 29.88 degrees C
nvme7            | 80h | ok  |  0.1 | 30.88 degrees C
CPU0_FIVRA_Vout  | 81h | ok  |  0.1 | 1.18 Volts
CPU0_PVCCD_Vout  | 82h | ok  |  0.1 | 1.18 Volts
CPU0_PVCCIN_Vout | 83h | ok  |  0.1 | 2.36 Volts
CPU1_FIVRA_Vout  | 84h | ok  |  0.1 | 2.36 Volts
CPU1_PVCCD_Vout  | 85h | ok  |  0.1 | 1.18 Volts
CPU1_PVCCIN_Vout | 86h | ok  |  0.1 | 2.36 Volts
EHV_CPU0_Vout    | 87h | ok  |  0.1 | 1.79 Volts
EHV_CPU1_Vout    | 88h | ok  |  0.1 | 1.79 Volts
FAON_CPU0_Vout   | 89h | ok  |  0.1 | 1.18 Volts
FAON_CPU1_Vout   | 8Ah | ok  |  0.1 | 1.18 Volts
P54V_Vout        | 8Bh | ok  |  0.1 | 11.80 Volts
PSU4_54VSB_Vin   | 8Ch | ok  |  0.1 | 226.56 Volts
PSU4_54VSB_Vout  | 8Dh | ok  |  0.1 | 54.28 Volts
PSU5_54VSB_Vin   | 8Eh | ok  |  0.1 | 226.56 Volts
PSU5_54VSB_Vout  | 8Fh | ok  |  0.1 | 54.28 Volts
PSU6_54VSB_Vin   | 90h | ok  |  0.1 | 226.56 Volts
PSU6_54VSB_Vout  | 91h | ok  |  0.1 | 54.28 Volts
PSU7_54VSB_Vin   | 92h | lcr |  0.1 | 0 Volts
PSU7_54VSB_Vout  | 93h | lcr |  0.1 | 0 Volts
PSU8_54VSB_Vin   | 94h | ok  |  0.1 | 227.74 Volts
PSU8_54VSB_Vout  | 95h | ok  |  0.1 | 11.80 Volts
PVNN_MAIN_CPU0   | 96h | ok  |  0.1 | 1.01 Volts
PVNN_MAIN_CPU1   | 97h | ok  |  0.1 | 1.01 Volts
PVNN_PCH         | 98h | ok  |  0.1 | 0.90 Volts
PVPP_HBM_CPU0    | 99h | ok  |  0.1 | 0.10 Volts
PVPP_HBM_CPU1    | 9Ah | ok  |  0.1 | 0.10 Volts
SW12_0V8_Vout    | 9Bh | ok  |  0.1 | 1.18 Volts
SW34_0V8_Vout    | 9Ch | ok  |  0.1 | 1.18 Volts
VBATT            | 9Dh | ok  |  0.1 | 2.80 Volts
VCC1V05_PCH      | 9Eh | ok  |  0.1 | 1.05 Volts
VCC1V8_PCH       | 9Fh | ok  |  0.1 | 1.82 Volts
VCC3V3           | A0h | ok  |  0.1 | 3.31 Volts
VCC3V3_RISER     | A1h | ok  |  0.1 | 3.33 Volts
VCC3V3_SB        | A2h | ok  |  0.1 | 3.31 Volts
VCC5V            | A3h | ok  |  0.1 | 6.10 Volts
VCC12V_CPU0_DIMM | A4h | ok  |  0.1 | 12.84 Volts
```

```
VCC12V_CPU1_DIMM | A5h | ok  |  0.1 | 12.84 Volts
VCC12V_HSBP      | A6h | ok  |  0.1 | 12.74 Volts
VCC12V_RISER     | A7h | ok  |  0.1 | 12.84 Volts
root@obmc:~#
```

ipmitool sensor threshold

Sets sensor thresholds.

Syntax

ipmitool sensor threshold *<id> <threshold> <setting>*

id – The name of the sensor for which threshold is to be set.

threshold – The threshold to set:

unr = upper non-recoverable

ucr = upper critical

unc = upper non-critical

lnc = lower non-critical

lcr = lower critical

lnr = lower non-recoverable

setting – The value of the sensor threshold setting.

Example

```
root@obmc:~# ipmitool sensor threshold VCC12V_RISER unc 12
Locating sensor record 'VCC12V_RISER'...
Setting sensor "VCC12V_RISER" Upper Non-Critical threshold to 12.000
root@obmc:~#
```

ipmitool chassis identify

Sets the UID LED to on/off.

Syntax

ipmitool chassis identify [**force** | *time*]

force – No timeout value is specified (indefinite).

time – Sets the timeout to the specified value of time in seconds.

Default

15 seconds (when **force** or *time* are not specified)

Example

```
root@obmc:~# ipmitool chassis identify
Chassis identify interval: default (15 seconds)
root@obmc:~#
root@obmc:~# ipmitool chassis identify force
Chassis identify interval: indefinite
```

```
root@obmc:~#
root@obmc:~# ipmitool chassis identify 5
Chassis identify interval: 5 seconds
root@obmc:~#
```

Platform Management

The commands listed in this section include Watchdog, FRU EEPROM, Boot Setting, sysinfo, power control, restart cause, and time setting functions.

ipmitool mc watchdog

Configures the watchdog function of the BMC system.

Syntax

ipmitool mc watchdog [*command*]<**get**|**reset**|**set**>

get – Get current settings.

reset – Restart watchdog timer based on the most recent settings.

set <*option*[=*value*]> [<*option*[=*value*]> ...] – Set watchdog settings.

timeout=<1-6553> – Initial countdown value in seconds.

use=<**frb2**|**post**|**osload**|**sms**|**oem**>– Timer use.

clear=<**frb2**|**post**|**osload**|**sms**|**oem**>– Clear timer use expiration flag, can be specified multiple times.

action=<**reset**|**poweroff**|**cycle**|**none**>– Timer action.

nolog – Don't log the timer use.

dontstop – Don't stop the timer while applying settings.

Example

```
root@obmc:~# ipmitool mc watchdog set timeout=10 use=sms action=none nolog
  dontstop
Watchdog Timer was successfully configured
root@obmc:~#
root@obmc:~# ipmitool mc watchdog get
Watchdog Timer Use:     SMS/OS (0x84)
Watchdog Timer Is:      Stopped
Watchdog Timer Logging: Off
Watchdog Timer Action:  No action (0x00)
Pre-timeout interrupt:  None
Pre-timeout interval:   0 seconds
Timer Expiration Flags: None (0x00)
Initial Countdown:      10.0 sec
Present Countdown:      10.0 sec
root@obmc:~#
root@obmc:~# ipmitool mc watchdog reset
IPMI Watchdog Timer Reset -  countdown restarted!
root@obmc:~#
```

ipmitool fru list

Displays all FRU EEPROM information.

Syntax

ipmitool fru list

Example

```
root@obmc:~# ipmitool fru list
FRU Device Description : Builtin FRU Device (ID 0)
Device not present (Requested sensor, data, or record not found)

FRU Device Description : UNKNOWN (ID 3)
Chassis Type          : Other
Board Mfg Date        : Sun Dec 24 19:01:00 2023 UTC
Board Mfg             : Habana labs
Board Product         : HL-225
Board Serial          : AN51009197
Board Part Number     : N08GL0AIG029A
Board Extra           : vendor accton
Product Manufacturer  : Habana labs
Product Name          : HL-225
Product Part Number   : F08GL0AIG032A
Product Version       : R0F V3A
Product Serial        : AN51009197

FRU Device Description : RISER-3 Board (ID 5)
Board Mfg Date        : Thu Jun 27 08:00:00 2024 UTC
Board Mfg             : Edgecore
Board Product         : RISER-3 Board
Board Serial          : RD00000039
Board Part Number     : 142000003308A
Board Extra           : R0A
Board Extra           : N/A
Board Extra           : N/A
Board Extra           : N/A
Product Manufacturer  : N/A
Product Name          : N/A
Product Part Number   : N/A
Product Version       : N/A
Product Serial        : N/A
Product Asset Tag     : N/A
Product Extra         : N/A
Product Extra         : N/A
Product Extra         : N/A

FRU Device Description : Fan15 Board (ID 9)
Board Mfg Date        : Thu Jun 27 08:00:00 2024 UTC
Board Mfg             : Edgecore
Board Product         : Fan Board
Board Serial          : RD00000057
Board Part Number     : 142000003750H
Board Extra           : R0A
Board Extra           : N/A
Board Extra           : N/A
Board Extra           : N/A
Product Manufacturer  : N/A
Product Name          : N/A
Product Part Number   : N/A
Product Version       : N/A
Product Serial        : N/A
Product Asset Tag     : N/A
Product Extra         : N/A
Product Extra         : N/A
```

```
Product Extra         : N/A

FRU Device Description : Fan5 Board (ID 23)
Board Mfg Date        : Thu Jun 27 08:00:00 2024 UTC
Board Mfg             : Edgecore
Board Product         : Fan Board
Board Serial          : RD00000047
Board Part Number     : 142000003750H
Board Extra           : R0A
Board Extra           : N/A
Board Extra           : N/A
Board Extra           : N/A
Product Manufacturer  : N/A
Product Name          : N/A
Product Part Number   : N/A
Product Version       : N/A
Product Serial        : N/A
Product Asset Tag     : N/A
Product Extra         : N/A
Product Extra         : N/A
Product Extra         : N/A

FRU Device Description : UNKNOWN (ID 28)
Chassis Type          : Other
Board Mfg Date        : Mon Dec 25 09:15:00 2023 UTC
Board Mfg             : Habana labs
Board Product         : HL-225
Board Serial          : AN51009270
Board Part Number     : N08GL0AIG029A
Board Extra           : vendor accton
Product Manufacturer  : Habana labs
Product Name          : HL-225
Product Part Number   : F08GL0AIG032A
Product Version       : R0F V3A
Product Serial        : AN51009270

FRU Device Description : Fan2 Board (ID 34)
Board Mfg Date        : Thu Jun 27 08:00:00 2024 UTC
Board Mfg             : Edgecore
Board Product         : Fan Board
Board Serial          : RD00000044
Board Part Number     : 142000003750H
Board Extra           : R0A
Board Extra           : N/A
Board Extra           : N/A
Board Extra           : N/A
Product Manufacturer  : N/A
Product Name          : N/A
Product Part Number   : N/A
Product Version       : N/A
Product Serial        : N/A
Product Asset Tag     : N/A
Product Extra         : N/A
Product Extra         : N/A
Product Extra         : N/A

FRU Device Description : UNKNOWN (ID 35)
Chassis Type          : Other
Board Mfg Date        : Mon Dec 25 01:57:00 2023 UTC
Board Mfg             : Habana labs
Board Product         : HL-225
Board Serial          : AN51009208
Board Part Number     : N08GL0AIG029A
Board Extra           : vendor accton
Product Manufacturer  : Habana labs
```

```
Product Name          : HL-225
Product Part Number   : F08GL0AIG032A
Product Version       : R0F V3A
Product Serial        : AN51009208

FRU Device Description : Fan4 Board (ID 36)
Board Mfg Date        : Thu Jun 27 08:00:00 2024 UTC
Board Mfg             : Edgecore
Board Product         : Fan Board
Board Serial          : RD00000046
Board Part Number     : 142000003750H
Board Extra           : R0A
Board Extra           : N/A
Board Extra           : N/A
Board Extra           : N/A
Product Manufacturer  : N/A
Product Name          : N/A
Product Part Number   : N/A
Product Version       : N/A
Product Serial        : N/A
Product Asset Tag     : N/A
Product Extra         : N/A
Product Extra         : N/A
Product Extra         : N/A

FRU Device Description : HSBP F1-2 Board (ID 38)
Board Mfg Date        : Thu Jun 27 08:00:00 2024 UTC
Board Mfg             : Edgecore
Board Product         : HSBP-F1 Board
Board Serial          : RD00000041
Board Part Number     : 142000003246H
Board Extra           : R0B
Board Extra           : N/A
Board Extra           : N/A
Board Extra           : N/A
Product Manufacturer  : N/A
Product Name          : N/A
Product Part Number   : N/A
Product Version       : N/A
Product Serial        : N/A
Product Asset Tag     : N/A
Product Extra         : N/A
Product Extra         : N/A
Product Extra         : N/A

FRU Device Description : HSBP Adapter BRD (ID 39)
Board Mfg Date        : Thu Jun 27 08:00:00 2024 UTC
Board Mfg             : Edgecore
Board Product         : HSBP Adapter Board
Board Serial          : RD00000033
Board Part Number     : 142000003746H
Board Extra           : R0A
Board Extra           : N/A
Board Extra           : N/A
Board Extra           : N/A
Product Manufacturer  : N/A
Product Name          : N/A
Product Part Number   : N/A
Product Version       : N/A
Product Serial        : N/A
Product Asset Tag     : N/A
Product Extra         : N/A
Product Extra         : N/A
Product Extra         : N/A
```

```
FRU Device Description : PDB Board (ID 42)
Board Mfg Date        : Thu Jun 27 08:00:00 2024 UTC
Board Mfg             : Edgecore
Board Product         : PDB Board
Board Serial          : RD00000035
Board Part Number     : 142000003749H
Board Extra           : R0A
Board Extra           : N/A
Board Extra           : N/A
Board Extra           : N/A
Product Manufacturer  : N/A
Product Name          : N/A
Product Part Number   : N/A
Product Version       : N/A
Product Serial        : N/A
Product Asset Tag     : N/A
Product Extra         : N/A
Product Extra         : N/A
Product Extra         : N/A

FRU Device Description : Fan8 Board (ID 45)
Board Mfg Date        : Thu Jun 27 08:00:00 2024 UTC
Board Mfg             : Edgecore
Board Product         : Fan Board
Board Serial          : RD00000050
Board Part Number     : 142000003750H
Board Extra           : R0A
Board Extra           : N/A
Board Extra           : N/A
Board Extra           : N/A
Product Manufacturer  : N/A
Product Name          : N/A
Product Part Number   : N/A
Product Version       : N/A
Product Serial        : N/A
Product Asset Tag     : N/A
Product Extra         : N/A
Product Extra         : N/A
Product Extra         : N/A

FRU Device Description : HSBP F1-1 Board (ID 53)
Board Mfg Date        : Thu Jun 27 08:00:00 2024 UTC
Board Mfg             : Edgecore
Board Product         : HSBP-F1 Board
Board Serial          : RD00000040
Board Part Number     : 142000003246H
Board Extra           : R0B
Board Extra           : N/A
Board Extra           : N/A
Board Extra           : N/A
Product Manufacturer  : N/A
Product Name          : N/A
Product Part Number   : N/A
Product Version       : N/A
Product Serial        : N/A
Product Asset Tag     : N/A
Product Extra         : N/A
Product Extra         : N/A
Product Extra         : N/A

FRU Device Description : Fan6 Board (ID 57)
Board Mfg Date        : Thu Jun 27 08:00:00 2024 UTC
Board Mfg             : Edgecore
Board Product         : Fan6 Board
Board Serial          : RD00000048
```

```
Board Part Number     : 142000003750H
Board Extra           : R0A
Board Extra           : N/A
Board Extra           : N/A
Board Extra           : N/A
Product Manufacturer  : N/A
Product Name          : N/A
Product Part Number   : N/A
Product Version       : N/A
Product Serial        : N/A
Product Asset Tag     : N/A
Product Extra         : N/A
Product Extra         : N/A
Product Extra         : N/A

FRU Device Description : Fan13 Board (ID 63)
Board Mfg Date        : Thu Jun 27 08:00:00 2024 UTC
Board Mfg             : Edgecore
Board Product         : Fan Board
Board Serial          : RD00000055
Board Part Number     : 142000003750H
Board Extra           : R0A
Board Extra           : N/A
Board Extra           : N/A
Board Extra           : N/A
Product Manufacturer  : N/A
Product Name          : N/A
Product Part Number   : N/A
Product Version       : N/A
Product Serial        : N/A
Product Asset Tag     : N/A
Product Extra         : N/A
Product Extra         : N/A
Product Extra         : N/A

FRU Device Description : Main Board (ID 77)
Board Mfg Date        : Thu Jun 27 08:00:00 2024 UTC
Board Mfg             : Edgecore
Board Product         : Main Board
Board Serial          : RD00000031
Board Part Number     : 142000003751H
Board Extra           : R0A
Board Extra           : N/A
Board Extra           : N/A
Board Extra           : N/A
Product Manufacturer  : Edgecore
Product Name          : AGS8200
Product Part Number   : F0ODC8280001H
Product Version       : R0A
Product Serial        : RD00000060
Product Asset Tag     : N/A
Product Extra         : A8:27:C8:BF:FF:78
Product Extra         : 2
Product Extra         : N/A

FRU Device Description : HLS-2H-Universal (ID 79)
Board Mfg Date        : Wed Dec 13 10:59:00 2023 UTC
Board Mfg             : WIWYNN
Board Product         : HLS-2H-Universal Baseboard
Board Serial          : B9104B10000G33900056N001
Board Part Number     : B91.04B10.000G
Board Extra           : NA

FRU Device Description : Fan12 Board (ID 87)
Board Mfg Date        : Thu Jun 27 08:00:00 2024 UTC
```

```
Board Mfg             : Edgecore
Board Product         : Fan Board
Board Serial          : RD00000054
Board Part Number     : 142000003750H
Board Extra           : R0A
Board Extra           : N/A
Board Extra           : N/A
Board Extra           : N/A
Product Manufacturer  : N/A
Product Name          : N/A
Product Part Number   : N/A
Product Version       : N/A
Product Serial        : N/A
Product Asset Tag     : N/A
Product Extra         : N/A
Product Extra         : N/A
Product Extra         : N/A

FRU Device Description : Middle BP Board (ID 93)
Board Mfg Date        : Thu Jun 27 08:00:00 2024 UTC
Board Mfg             : Edgecore
Board Product         : Middle BP Board
Board Serial          : RD00000034
Board Part Number     : 142000003748H
Board Extra           : R0A
Board Extra           : N/A
Board Extra           : N/A
Board Extra           : N/A
Product Manufacturer  : N/A
Product Name          : N/A
Product Part Number   : N/A
Product Version       : N/A
Product Serial        : N/A
Product Asset Tag     : N/A
Product Extra         : N/A
Product Extra         : N/A
Product Extra         : N/A

FRU Device Description : Fan7 Board (ID 95)
Board Mfg Date        : Thu Jun 27 08:00:00 2024 UTC
Board Mfg             : Edgecore
Board Product         : Fan Board
Board Serial          : RD00000049
Board Part Number     : 142000003750H
Board Extra           : R0A
Board Extra           : N/A
Board Extra           : N/A
Board Extra           : N/A
Product Manufacturer  : N/A
Product Name          : N/A
Product Part Number   : N/A
Product Version       : N/A
Product Serial        : N/A
Product Asset Tag     : N/A
Product Extra         : N/A
Product Extra         : N/A
Product Extra         : N/A

FRU Device Description : Fan14 Board (ID 103)
Board Mfg Date        : Thu Jun 27 08:00:00 2024 UTC
Board Mfg             : Edgecore
Board Product         : Fan Board
Board Serial          : RD00000056
Board Part Number     : 142000003750H
Board Extra           : R0A
```

```
Board Extra           : N/A
Board Extra           : N/A
Board Extra           : N/A
Product Manufacturer  : N/A
Product Name          : N/A
Product Part Number   : N/A
Product Version       : N/A
Product Serial        : N/A
Product Asset Tag     : N/A
Product Extra         : N/A
Product Extra         : N/A
Product Extra         : N/A

FRU Device Description : UNKNOWN (ID 107)
Board Mfg Date        : Thu Jun 27 08:00:00 2024 UTC
Board Mfg             : Edgecore
Board Product         : RISER-2 Board
Board Serial          : RD00000037
Board Part Number     : 142000003307A
Board Extra           : R0A
Board Extra           : N/A
Board Extra           : N/A
Board Extra           : N/A
Product Manufacturer  : N/A
Product Name          : N/A
Product Part Number   : N/A
Product Version       : N/A
Product Serial        : N/A
Product Asset Tag     : N/A
Product Extra         : N/A
Product Extra         : N/A
Product Extra         : N/A

FRU Device Description : Intel(R) Etherne (ID 116)
Board Mfg Date        : Tue Aug  9 12:00:00 2022 UTC
Board Mfg             : Intel Corporation
Board Product         : Intel(R) Ethernet Network Adapter E810-CQDA2 for OCP
  3.0
Board Serial          : 6CFE54340760
Board Part Number     : MM#983094
Board Extra           : M12947-007
Board Extra           : E810CQDA2OCPV3G
Product Manufacturer  : Intel Corporation
Product Name          : Intel(R) Ethernet Network Adapter E810-CQDA2 for OCP
  3.0
Product Part Number   : MM#983094
Product Version       : M12947-007
Product Serial        : 6CFE54340760
Product Asset Tag     : 01

FRU Device Description : UNKNOWN (ID 122)
Chassis Type          : Other
Board Mfg Date        : Mon Dec 25 13:47:00 2023 UTC
Board Mfg             : Habana labs
Board Product         : HL-225
Board Serial          : AN51009142
Board Part Number     : N08GL0AIG029A
Board Extra           : vendor accton
Product Manufacturer  : Habana labs
Product Name          : HL-225
Product Part Number   : F08GL0AIG032A
Product Version       : R0F V3A
Product Serial        : AN51009142

FRU Device Description : Fan11 Board (ID 125)
```

```
Board Mfg Date        : Thu Jun 27 08:00:00 2024 UTC
Board Mfg             : Edgecore
Board Product         : Fan Board
Board Serial          : RD00000053
Board Part Number     : 142000003750H
Board Extra           : R0A
Board Extra           : N/A
Board Extra           : N/A
Board Extra           : N/A
Product Manufacturer  : N/A
Product Name          : N/A
Product Part Number   : N/A
Product Version       : N/A
Product Serial        : N/A
Product Asset Tag     : N/A
Product Extra         : N/A
Product Extra         : N/A
Product Extra         : N/A

FRU Device Description : Fan9 Board (ID 134)
Board Mfg Date        : Thu Jun 27 08:00:00 2024 UTC
Board Mfg             : Edgecore
Board Product         : Fan Board
Board Serial          : RD00000051
Board Part Number     : 142000003750H
Board Extra           : R0A
Board Extra           : N/A
Board Extra           : N/A
Board Extra           : N/A
Product Manufacturer  : N/A
Product Name          : N/A
Product Part Number   : N/A
Product Version       : N/A
Product Serial        : N/A
Product Asset Tag     : N/A
Product Extra         : N/A
Product Extra         : N/A
Product Extra         : N/A

FRU Device Description : BMC Card (ID 135)
Board Mfg Date        : Thu Jun 27 08:00:00 2024 UTC
Board Mfg             : Edgecore
Board Product         : BMC Card
Board Serial          : RD00000036
Board Part Number     : 142000003309A
Board Extra           : R0A
Board Extra           : N/A
Board Extra           : N/A
Board Extra           : N/A
Product Manufacturer  : N/A
Product Name          : N/A
Product Part Number   : N/A
Product Version       : N/A
Product Serial        : N/A
Product Asset Tag     : N/A
Product Extra         : N/A
Product Extra         : N/A
Product Extra         : N/A

FRU Device Description : Fan1 Board (ID 140)
Board Mfg Date        : Thu Jun 27 08:00:00 2024 UTC
Board Mfg             : Edgecore
Board Product         : Fan Board
Board Serial          : RD00000043
Board Part Number     : 142000003750H
```

```
Board Extra           : R0A
Board Extra           : N/A
Board Extra           : N/A
Board Extra           : N/A
Product Manufacturer  : N/A
Product Name          : N/A
Product Part Number   : N/A
Product Version       : N/A
Product Serial        : N/A
Product Asset Tag     : N/A
Product Extra         : N/A
Product Extra         : N/A
Product Extra         : N/A

FRU Device Description : UNKNOWN (ID 146)
Chassis Type          : Other
Board Mfg Date        : Mon Dec 25 09:43:00 2023 UTC
Board Mfg             : Habana labs
Board Product         : HL-225
Board Serial          : AN51009067
Board Part Number     : N08GL0AIG029A
Board Extra           : vendor accton
Product Manufacturer  : Habana labs
Product Name          : HL-225
Product Part Number   : F08GL0AIG032A
Product Version       : R0F V3A
Product Serial        : AN51009067

FRU Device Description : DPS-2700AB-1 A (ID 153)
Product Manufacturer  : DELTA
Product Name          : DPS-2700AB-1 A
Product Part Number   : 00000000000000
Product Version       : S1
Product Serial        : KPID444025U

FRU Device Description : Fan10 Board (ID 181)
Board Mfg Date        : Thu Jun 27 08:00:00 2024 UTC
Board Mfg             : Edgecore
Board Product         : Fan Board
Board Serial          : RD00000052
Board Part Number     : 142000003750H
Board Extra           : R0A
Board Extra           : N/A
Board Extra           : N/A
Board Extra           : N/A
Product Manufacturer  : N/A
Product Name          : N/A
Product Part Number   : N/A
Product Version       : N/A
Product Serial        : N/A
Product Asset Tag     : N/A
Product Extra         : N/A
Product Extra         : N/A
Product Extra         : N/A

FRU Device Description : UNKNOWN (ID 183)
Chassis Type          : Other
Board Mfg Date        : Sun Dec 24 21:16:00 2023 UTC
Board Mfg             : Habana labs
Board Product         : HL-225
Board Serial          : AN51009221
Board Part Number     : N08GL0AIG029A
Board Extra           : vendor accton
Product Manufacturer  : Habana labs
Product Name          : HL-225
```

```
Product Part Number   : F08GL0AIG032A
Product Version       : R0F V3A
Product Serial        : AN51009221

FRU Device Description : HSBP F1-3 Board (ID 194)
Board Mfg Date        : Thu Jun 27 08:00:00 2024 UTC
Board Mfg             : Edgecore
Board Product         : HSBP-F1 Board
Board Serial          : RD00000042
Board Part Number     : 142000003246H
Board Extra           : R0B
Board Extra           : N/A
Board Extra           : N/A
Board Extra           : N/A
Product Manufacturer  : N/A
Product Name          : N/A
Product Part Number   : N/A
Product Version       : N/A
Product Serial        : N/A
Product Asset Tag     : N/A
Product Extra         : N/A
Product Extra         : N/A
Product Extra         : N/A

FRU Device Description : DPS-2700AB-1 A (ID 204)
Product Manufacturer  : DELTA
Product Name          : DPS-2700AB-1 A
Product Part Number   : 00000000000000
Product Version       : S1
Product Serial        : KPID444025T

FRU Device Description : Fan3 Board (ID 213)
Board Mfg Date        : Thu Jun 27 08:00:00 2024 UTC
Board Mfg             : Edgecore
Board Product         : Fan Board
Board Serial          : RD00000045
Board Part Number     : 142000003750H
Board Extra           : R0A
Board Extra           : N/A
Board Extra           : N/A
Board Extra           : N/A
Product Manufacturer  : N/A
Product Name          : N/A
Product Part Number   : N/A
Product Version       : N/A
Product Serial        : N/A
Product Asset Tag     : N/A
Product Extra         : N/A
Product Extra         : N/A
Product Extra         : N/A

FRU Device Description : PCIe Switch BRD. (ID 215)
Board Mfg Date        : Thu Jun 27 08:00:00 2024 UTC
Board Mfg             : Edgecore
Board Product         : PCIe Switch Board
Board Serial          : RD00000032
Board Part Number     : 142000003752H
Board Extra           : R0A
Board Extra           : N/A
Board Extra           : N/A
Board Extra           : N/A
Product Manufacturer  : N/A
Product Name          : N/A
Product Part Number   : N/A
Product Version       : N/A
```

```
Product Serial        : N/A
Product Asset Tag     : N/A
Product Extra         : N/A
Product Extra         : N/A
Product Extra         : N/A

FRU Device Description : HL-225 (ID 217)
Chassis Type          : Other
Board Mfg Date        : Mon Dec 25 12:21:00 2023 UTC
Board Mfg             : Habana labs
Board Product         : HL-225
Board Serial          : AN51009112
Board Part Number     : N08GL0AIG029A
Board Extra           : vendor accton
Product Manufacturer  : Habana labs
Product Name          : HL-225
Product Part Number   : F08GL0AIG032A
Product Version       : R0F V3A
Product Serial        : AN51009112

FRU Device Description : UNKNOWN (ID 243)
Chassis Type          : Other
Board Mfg Date        : Mon Dec 25 01:59:00 2023 UTC
Board Mfg             : Habana labs
Board Product         : HL-225
Board Serial          : AN51009205
Board Part Number     : N08GL0AIG029A
Board Extra           : vendor accton
Product Manufacturer  : Habana labs
Product Name          : HL-225
Product Part Number   : F08GL0AIG032A
Product Version       : R0F V3A
Product Serial        : AN51009205

FRU Device Description : RISER-2 Board (ID 248)
Board Mfg Date        : Thu Jun 27 08:00:00 2024 UTC
Board Mfg             : Edgecore
Board Product         : RISER-2 Board
Board Serial          : RD00000038
Board Part Number     : 142000003307A
Board Extra           : R0A
Board Extra           : N/A
Board Extra           : N/A
Board Extra           : N/A
Product Manufacturer  : N/A
Product Name          : N/A
Product Part Number   : N/A
Product Version       : N/A
Product Serial        : N/A
Product Asset Tag     : N/A
Product Extra         : N/A
Product Extra         : N/A
Product Extra         : N/A
root@obmc:~#
```

ipmitool chassis bootdev

Sets the boot sequence for the host CPU. Currently, only PXE and BIOS options are supported.

Syntax

ipmitool chassis bootdev <*device*>

device –

pxe – Force PXE boot.

bios – Force boot into BIOS Setup.

Example

```
root@obmc:~# ipmitool chassis bootdev pxe options=efiboot
Set Boot Device to pxe
root@obmc:~# ipmitool chassis bootdev bios
Set Boot Device to bios
root@obmc:~#
```

ipmitool mc getsysinfo

Displays a list of host system information.

Syntax

ipmitool mc getsysinfo <*argument*> <*string*>

argument –

system_fw_version – System firmware (e.g. BIOS) version.

primary_os_name – Primary operating system name.

os_name – Operating system name.

system_name – System Name of server (vendor dependent).

Example

```
root@obmc:~# ipmitool mc getsysinfo system_fw_version
v102.0a.00.02
root@obmc:~#
root@obmc:~# ipmitool mc getsysinfo primary_os_name
accton
root@obmc:~#
root@obmc:~# ipmitool mc getsysinfo os_name
ubuntu-accton
root@obmc:~#
root@obmc:~# ipmitool mc getsysinfo system_name
ags8200-obmc
root@obmc:~#
```

ipmitool mc setsysinfo

Sets a list of the host system information.

Syntax

ipmitool mc setsysinfo *<argument>*

argument –

system_fw_version – System firmware (e.g. BIOS) version.

primary_os_name – Primary operating system name.

os_name – Operating system name.

system_name – System Name of server (vendor dependent).

Example

```
root@obmc:~# ipmitool mc setsysinfo system_fw_version v102.0a.00.02
root@obmc:~#
root@obmc:~# ipmitool mc setsysinfo primary_os_name accton
root@obmc:~#
root@obmc:~# ipmitool mc setsysinfo os_name ubuntu-accton
root@obmc:~#
root@obmc:~# ipmitool mc setsysinfo system_name ags8200-obmc
root@obmc:~#
```

ipmitool mc reset

Instructs the BMC to perform a reset.

Syntax

ipmitool mc reset cold

cold – Cold reset.

Example

```
root@obmc:~# ipmitool mc reset cold
Sent cold reset command to MC
root@obmc:~#
```

ipmitool chassis status

Displays information about the high-level status of the system chassis and main power subsystem.

Syntax

ipmitool chassis status

Command Usage

There are many hard-coded, unsupported fields, which are set to “false” or 0 and are listed as follows:

- Power Overload
- Power Interlock

- Main Power Fault
- Power Control Fault
- Last Power Event
- Chassis Intrusion
- Front-Panel Lockout
- Drive Fault
- Cooling/Fan Fault
- Front Panel Control

Example

```
root@obmc:~# ipmitool chassis status
System Power         : off
Power Overload       : false
Power Interlock      : inactive
Main Power Fault     : false
Power Control Fault  : false
Power Restore Policy : previous
Last Power Event     :
Chassis Intrusion    : inactive
Front-Panel Lockout  : inactive
Drive Fault          : false
Cooling/Fan Fault    : false
Front Panel Control  : none
root@obmc:~#
```

ipmitool chassis poh

This command displays the Power-On Hours counter.

Syntax

ipmitool chassis poh

Example

```
root@obmc:~# ipmitool chassis poh
POH Counter  : 0 days, 2 hours
root@obmc:~#
```

ipmitool chassis restart_cause

Shows the restart cause of the x86 host.

Syntax

ipmitool chassis restart_cause

Command Usage

The supported restart causes are:

- Unknown
- RemoteCommand
- ResetButton
- PowerButton

- WatchdogTimer
- PowerPolicyAlwaysOn
- PowerPolicyPreviousState
- SoftReset

Example

```
root@obmc:~# ipmitool chassis power status
Chassis Power is on
root@obmc:~# ipmitool chassis power off
Chassis Power Control: Down/Off
root@obmc:~# ipmitool chassis power status
Chassis Power is off
root@obmc:~# ipmitool chassis restart_cause
System restart cause: chassis power control command
root@obmc:~#
```

ipmitool chassis policy

This command can configure and display the supported power restore policies.

Syntax

ipmitool chassis policy *<policy>*

policy –

list – Return supported policies.

always-on – Turn on when power is restored.

always-off – Stay off after power is restored.

previous – Return to previous state when power is restored.

Example

```
root@obmc:~# ipmitool chassis policy list
Supported chassis power policy:  always-off always-on previous
root@obmc:~#
root@obmc:~# ipmitool chassis policy always-on
Set chassis power restore policy to always-on
root@obmc:~#
root@obmc:~# ipmitool chassis policy always-off
Set chassis power restore policy to always-off
root@obmc:~#
root@obmc:~# ipmitool chassis policy previous
Set chassis power restore policy to previous
root@obmc:~#
```

ipmitool chassis power

This command can control the x86 host power and display the power status.

Syntax

ipmitool chassis power *<argument>*

argument –

status – Show the current x86 host power status.

on – Power on the x86 host.

off – Power off the x86 host into the S5 state.

cycle – Powers off the x86 host and then powers on. This command will be no action while the power sequence is in the S5 state.

reset – Resets the x86 host. This command will be no action while the power sequence is in the S5 state.

Example

```
root@obmc:~# ipmitool chassis power status
Chassis Power is on
root@obmc:~#
root@obmc:~# ipmitool chassis power on
Chassis Power Control: Up/On
root@obmc:~#
root@obmc:~# ipmitool chassis power off
Chassis Power Control: Down/Off
root@obmc:~#
root@obmc:~# ipmitool chassis power cycle
Chassis Power Control: Cycle
root@obmc:~#
root@obmc:~# ipmitool chassis power reset
Chassis Power Control: Reset
root@obmc:~#
```

ipmitool power

This command can control the x86 host power and display the power status.

Syntax

ipmitool power *<argument>*

argument –

status – Show the current x86 host power status.

on – Power on the x86 host.

off – Power off the x86 host into the S5 state.

cycle – Powers off the x86 host and then powers on. This command will be no action while the power sequence is in the S5 state.

reset – Resets the x86 host. This command will be no action while the power sequence is in the S5 state.

Example

```
root@obmc:~# ipmitool power status
Chassis Power is on
root@obmc:~#
root@obmc:~# ipmitool power on
Chassis Power Control: Up/On
root@obmc:~#
root@obmc:~# ipmitool power off
```

```
Chassis Power Control: Down/Off
root@obmc:~#
root@obmc:~# ipmitool power cycle
Chassis Power Control: Cycle
root@obmc:~#
root@obmc:~# ipmitool power reset
Chassis Power Control: Reset
root@obmc:~#
```

ipmitool sel time

This command accesses the BMC's system time. (Note: This feature is supported since version V00.00.06.)

Syntax

ipmitool sel time <get | set>

get – Display the BMC's system time.

set "*mm/dd/yyyy hh:mm:ss*" – Sets the time.

Example

```
root@obmc:~# ipmitool sel time get
06/26/2024 07:01:52
root@obmc:~#
root@obmc:~# hwclock -w
root@obmc:~# timedatectl set-ntp false
root@obmc:~# ipmitool sel time set "07/29/2024 18:48:24"
07/29/24 18:48:24 UTC
root@obmc:~#
```

Platform Troubleshooting

The commands listed in this section are for System Event Log (SEL) functions.

ipmitool sel info

This command displays the SEL information.

Syntax

ipmitool sel info

Example

```
root@obmc:~# ipmitool sel info
SEL Information
Version          : 1.5 (v1.5, v2 compliant)
Entries          : 3
Free Space       : 65535 bytes or more
Percent Used     : unknown
Last Add Time    : 06/26/2024 06:59:26
Last Del Time    : 06/26/2024 06:58:34
Overflow         : false
```

```
Supported Cmds   : 'Reserve'
root@obmc:~#
```

ipmitool sel list|elist

This command displays SEL information and SEL log entries.

Syntax

ipmitool sel [**list** | **elist**] [**first** | **last**] [*count*]

list – Dispaly SEL content.

elist – Dispaly SEL detail content.

count – Display the number of SEL logs.

first <*count*> – The displayed log entries are selected starting from the smallest ID number, and specifies how many logs to display by count parameter.

last <*count*> – The displayed log entries are selected starting from the largest ID number, and specifies how many logs to display by count parameter.

Example

```
root@obmc:~# ipmitool sel
SEL Information
Version          : 1.5 (v1.5, v2 compliant)
Entries          : 5
Free Space       : 65535 bytes or more
Percent Used     : unknown
Last Add Time    : 06/28/2024 09:27:04
Last Del Time    : 06/28/2024 08:47:58
Overflow         : false
Supported Cmds   : 'Reserve'
root@obmc:~#
root@obmc:~# ipmitool sel list
   1 | 06/28/2024 | 08:47:58 | Event Logging Disabled | Log area reset/cleared
  | Asserted
   2 | 06/28/2024 | 08:48:13 | FRU State | Deactivation Requested | Asserted
   3 | 06/28/2024 | 08:48:23 | FRU State | Activation Requested | Asserted
   4 | 06/28/2024 | 09:26:59 | Voltage #0x5c | Upper Non-critical going high
  | Asserted
   5 | 06/28/2024 | 09:27:04 | Voltage #0x5c | Upper Non-critical going high
  | Deasserted
root@obmc:~# ipmitool sel elist
   1 | 06/28/2024 | 08:47:58 | Event Logging Disabled | Log area reset/cleared
  | Asserted
   2 | 06/28/2024 | 08:48:13 | FRU State | Deactivation Requested | Asserted
   3 | 06/28/2024 | 08:48:23 | FRU State | Activation Requested | Asserted
   4 | 06/28/2024 | 09:26:59 | Voltage SERVER_5V | Upper Non-critical going
  high | Asserted | Reading 5.02 > Threshold 5.02 Volts
   5 | 06/28/2024 | 09:27:04 | Voltage SERVER_5V | Upper Non-critical going
  high | Deasserted | Reading 5.02 > Threshold 5.99 Volts
root@obmc:~#
root@obmc:~# ipmitool sel list 2
   1 | 06/28/2024 | 08:47:58 | Event Logging Disabled | Log area reset/cleared
  | Asserted
   2 | 06/28/2024 | 08:48:13 | FRU State | Deactivation Requested | Asserted
```

```
root@obmc:~# ipmitool sel elist 3
   1 | 06/28/2024 | 08:47:58 | Event Logging Disabled | Log area reset/cleared
  | Asserted
   2 | 06/28/2024 | 08:48:13 | FRU State | Deactivation Requested | Asserted
   3 | 06/28/2024 | 08:48:23 | FRU State | Activation Requested | Asserted
root@obmc:~#
root@obmc:~# ipmitool sel elist first 3
   1 | 06/26/2024 | 06:58:34 | Event Logging Disabled | Log area reset/cleared
  | Asserted
   2 | 06/26/2024 | 06:59:22 | Voltage SERVER_5V | Upper Non-critical going
  high | Asserted | Reading 5.02 > Threshold 5.02 Volts
   3 | 06/26/2024 | 06:59:25 | Voltage SERVER_5V | Upper Non-critical going
  high | Deasserted | Reading 5.02 > Threshold 5.99 Volts
root@obmc:~#
root@obmc:~# ipmitool sel list last 2
   2 | 06/26/2024 | 06:59:22 | Voltage #0x6c | Upper Non-critical going high
  | Asserted
   3 | 06/26/2024 | 06:59:25 | Voltage #0x6c | Upper Non-critical going high
  | Deasserted
root@obmc:~#
```

ipmitool sel save

This command saves SEL records to a text file.

Syntax

ipmitool sel save *<file>*

file – Sets the path and filename for saving a file.

Example

```
root@obmc:~# ipmitool sel save /tmp/ipmi_temp.txt
   1 | 06/26/2024 | 06:58:34 | Event Logging Disabled | Log area reset/cleared
  | Asserted
   2 | 06/26/2024 | 06:59:22 | Voltage #0x6c | Upper Non-critical going high
  | Asserted
   3 | 06/26/2024 | 06:59:25 | Voltage #0x6c | Upper Non-critical going high
  | Deasserted
root@obmc:~#
```

ipmitool sel clear

This command clears all SEL logs.

Syntax

ipmitool sel clear

Example

```
root@obmc:~# ipmitool sel clear
Clearing SEL.  Please allow a few seconds to erase.
root@obmc:~#
```

Remote Control Host

The commands listed in this section include the Serial-over-LAN (SOL) function.

ipmitool sol

This command can activate or deactivate the sessions of Serial-over-LAN (SOL) and allow remote access to the x86 host operating system.

Syntax

ipmitool -I lanplus -H *bmcip* **-U** *user* **-P** *pwd* **sol activate|deactive**

-H *bmcip* – The BMC IP address.

-U *user* – User name.

-P *pwd* – User password.

activate – Create a SOL session to access the x86 host operating system.

deactivate – Delete the existing SOL session.

Example

```
root@obmc:~# ipmitool -I lanplus -C 17 -H 172.21.150.3 -U root -P 0penBmc sol
  activate
[SOL Session operational.  Use ~? for help]

root@AGS8200:~# ~. [terminated ipmitool]
root@obmc:~#
```

```
(SSH Session 1)
root@obmc:~# ipmitool -I lanplus -C 17 -H 10.102.8.111 -U root -P 0penBmc sol
  deactivate
root@obmc:~#

(SSH Session 2)
root@obmc:~# ipmitool -I lanplus -C 17 -H 10.102.8.111 -U root -P 0penBmc sol
  activate
[SOL Session operational.  Use ~? for help]

(base) root@AGS8200:~#
(base) root@AGS8200:~#
(base) root@AGS8200:~# SOL session closed by BMC
```

Security Service

The commands listed in this section include user management, permission, and channel-related functions.

ipmitool user summary

Displays a summary of user ID information, including maximum number of user IDs, the number of enabled users, and the number of fixed names defined.

Syntax

ipmitool user summary [<*channel number*>]

channel number – The index of the specified channel.

Example

```
root@obmc:~# ipmitool user summary 1
Maximum IDs         : 15
Enabled User Count  : 1
Fixed Name Count    : 0
root@obmc:~#
```

ipmitool user list

Displays a list of user information for the specified channel.

Syntax

ipmitool user list [<*channel number*>]

channel number – The index of the specified channel.

Example

```
root@obmc:~# ipmitool user list 1
ID  Name             Callin  Link Auth  IPMI Msg   Channel Priv Limit
1   root             false   true       true       ADMINISTRATOR
2                    true    false      false      NO ACCESS
3                    true    false      false      NO ACCESS
4                    true    false      false      NO ACCESS
5                    true    false      false      NO ACCESS
6                    true    false      false      NO ACCESS
7                    true    false      false      NO ACCESS
8                    true    false      false      NO ACCESS
9                    true    false      false      NO ACCESS
10                   true    false      false      NO ACCESS
11                   true    false      false      NO ACCESS
12                   true    false      false      NO ACCESS
13                   true    false      false      NO ACCESS
14                   true    false      false      NO ACCESS
15                   true    false      false      NO ACCESS
root@obmc:~#
```

ipmitool set name

Sets the user name associated with the specified user ID.

Syntax

ipmitool user set name *<user-id> <username>*

user-id – Specifies the user ID.

username – Specifies the user name.

Example

```
root@obmc:~# ipmitool user set name 3 debuguser2
root@obmc:~# ipmitool user list 1
ID  Name             Callin  Link Auth  IPMI Msg   Channel Priv Limit
1   root             false   true       true       ADMINISTRATOR
2                    true    false      false      NO ACCESS
3   debuguser2       true    false      false      NO ACCESS
4                    true    false      false      NO ACCESS
5                    true    false      false      NO ACCESS
6                    true    false      false      NO ACCESS
7                    true    false      false      NO ACCESS
8                    true    false      false      NO ACCESS
9                    true    false      false      NO ACCESS
10                   true    false      false      NO ACCESS
11                   true    false      false      NO ACCESS
12                   true    false      false      NO ACCESS
13                   true    false      false      NO ACCESS
14                   true    false      false      NO ACCESS
15                   true    false      false      NO ACCESS
root@obmc:~#
```

ipmitool user set password

Sets the password for the specified user ID.

Syntax

ipmitool user set password *<user-id>* [*<password>* <16|20>]

user-id – Specifies the user ID.

password – Specifies the maximum password length for the user password to be 16 or 20 characters.

Command Usage

- If no password is specified, the password is cleared (set to a NULL password). Be careful of removing the passwords of administrator-level accounts.
- The rules for passwords are as follows:
  - Minimum acceptable size: 14
  - At least 1 upper case letter
  - At least 1 lower case letter
  - At least 1 other character
  - At least 1 digit
  - Cannot include the username

- Cannot include over 5 sequence characters
- At least 5 different characters

Example

```
root@obmc:~# ipmitool user set password 3 0penBmcAccton123#
Set User Password command successful (user 3)
root@obmc:~#
```

ipmitool user disable

Disables the user account with specified user ID.

Syntax

ipmitool user disable *<user-id>*

user-id – Specifies the user ID.

Example

```
root@obmc:~# ipmitool user summary 1
Maximum IDs         : 15
Enabled User Count  : 2
Fixed Name Count    : 0
root@obmc:~# ipmitool user disable 3
root@obmc:~# ipmitool user summary 1
Maximum IDs         : 15
Enabled User Count  : 1
Fixed Name Count    : 0
root@obmc:~#
```

ipmitool user enable

Enables the user account with specified user ID.

Syntax

ipmitool user enable *<user-id>*

user-id – Specifies the user ID.

Example

```
root@obmc:~# ipmitool user summary 1
Maximum IDs         : 15
Enabled User Count  : 1
Fixed Name Count    : 0
root@obmc:~# ipmitool user enable 3
root@obmc:~# ipmitool user summary 1
Maximum IDs         : 15
Enabled User Count  : 2
Fixed Name Count    : 0
root@obmc:~#
```

ipmitool user test

Determines whether a password complies with the rules.

Syntax

ipmitool user test <*user-id*> <16|20> [<*password*>]

user-id – Specifies the user ID.

16|20 – The maximun length of the password.

password – Specifies the user password.

Example

```
root@obmc:~# ipmitool user test 3 20 0penBmcAccton123#
Success
root@obmc:~#
```

ipmitool channel info

Displays information for the specified channel.

Syntax

ipmitool channel info [*channel-number*]

channel-number – The index of the specified channel.

Command Usage

- If no channel is specified, information is displayed for the currently used channel.
- Channels can be used to support multiple IPMI, LAN, and serial etc., connections to the BMC.

Example

```
root@obmc:~# ipmitool channel info 1
Channel 0x1 info:
  Channel Medium Type   : 802.3 LAN
  Channel Protocol Type : IPMB-1.0
  Session Support       : multi-session
  Active Session Count  : 0
  Protocol Vendor ID    : 7154
  Volatile(active) Settings
    Alerting            : enabled
    Per-message Auth    : enabled
    User Level Auth     : enabled
    Access Mode         : always available
  Non-Volatile Settings
    Alerting            : enabled
    Per-message Auth    : enabled
    User Level Auth     : enabled
    Access Mode         : always available
root@obmc:~#
```

ipmitool channel getaccess

Displays user access information for the given channel and the specified user ID.

Syntax

ipmitool channel getaccess <*channel-number*> [*user-id*]

channel-number – The index of the specified channel.

user-id – Specifies the user ID.

Example

```
root@obmc:~# ipmitool channel getaccess 1 3
Maximum User IDs     : 15
Enabled User IDs     : 2

User ID              : 3
User Name            : debuguser2
Fixed Name           : No
Access Available     : call-in / callback
Link Authentication  : disabled
IPMI Messaging       : disabled
Privilege Level      : NO ACCESS
Enable Status        : enabled
root@obmc:~#
```

ipmitool channel setaccess

Configure user access information for the specified channel and user ID.

Syntax

ipmitool channel setaccess <*channel-number*> <*user-id*> [**callin=on**|**off**] [**ipmi=on**|**off**] [**link=on**|**off**] [**privilege=***level*]

channel-number – The index of the specified channel.

user-id – Specifies the user ID.

callin – Controls the callback function.

ipmi – Controls IPMI message send and receive.

link – Controls a link's authentication.

privilege – Controls the privilege limitation.

level – The privilege level (1-15).

Command Usage

The possible privilege levels are:

- 1 Callback level
- 2 User level
- 3 Operator level
- 4 Administrator level
- 5 OEM Proprietary level
- 15 No access

Example

```
root@obmc:~# ipmitool user list 1
ID  Name             Callin  Link Auth  IPMI Msg   Channel Priv Limit
1   root             false   true       true       ADMINISTRATOR
2                    true    false      false      NO ACCESS
3   debuguser2       true    false      false      NO ACCESS
4                    true    false      false      NO ACCESS
5                    true    false      false      NO ACCESS
6                    true    false      false      NO ACCESS
7                    true    false      false      NO ACCESS
8                    true    false      false      NO ACCESS
9                    true    false      false      NO ACCESS
10                   true    false      false      NO ACCESS
11                   true    false      false      NO ACCESS
12                   true    false      false      NO ACCESS
13                   true    false      false      NO ACCESS
14                   true    false      false      NO ACCESS
15                   true    false      false      NO ACCESS
root@obmc:~# ipmitool channel setaccess 1 3 callin=on ipmi=on link=on
  privilege=4
Set User Access (channel 1 id 3) successful.
root@obmc:~# ipmitool user list 1
ID  Name             Callin  Link Auth  IPMI Msg   Channel Priv Limit
1   root             false   true       true       ADMINISTRATOR
2                    true    false      false      NO ACCESS
3   debuguser2       true    true       true       ADMINISTRATOR
4                    true    false      false      NO ACCESS
5                    true    false      false      NO ACCESS
6                    true    false      false      NO ACCESS
7                    true    false      false      NO ACCESS
8                    true    false      false      NO ACCESS
9                    true    false      false      NO ACCESS
10                   true    false      false      NO ACCESS
11                   true    false      false      NO ACCESS
12                   true    false      false      NO ACCESS
13                   true    false      false      NO ACCESS
14                   true    false      false      NO ACCESS
15                   true    false      false      NO ACCESS
root@obmc:~#
```

ipmitool channel getciphers

Displays the list of cipher suites supported for the specified application (IPMI or SOL) on the specified channel.

Syntax

ipmitool channel getciphers <**ipmi**|**sol**> [*channel-number*]

ipmi - Specifies the IPMI application.

sol - Specifies the SOL application.

channel-number – The index of the specified channel.

Example

```
root@obmc:~# ipmitool channel getciphers ipmi 1
ID   IANA    Auth Alg        Integrity Alg   Confidentiality Alg
```

```
17    N/A      hmac_sha256      sha256_128       aes_cbc_128
root@obmc:~#
```

4 Redfish API

This chapter includes the following sections:

Redfish API Overview

The AGS8200 supports Redfish API to manage the BMC system. Redfish API is presented in the form of a URL and communicates interactively through the HTTPS protocol. Users can access Redfish nodes through a **curl** tool. For further information on Redfish, refer to https://www.dmtf.org/standards/redfish.

In the examples in this chapter, you will see two parameters, **$token** and **$bmc_ip**. The parameter **$token** means "X-Auth-Token" and **$bmc_ip** means the BMC's interface IP, both of which require environment settings in advance. Refer to the following example for the set up.

Example

If the BMC's interface IP is "192.168.10.1", the user name is "debuguser", and the password is "acctonOpenBmc#123". Set the **$token** and **$bmc_ip** environment parameters in advance before accessing Redfish nodes.

- export bmc_ip= 192.168.10.1
- export token=`curl -k -H "Content-Type: application/json" -X POST https://${bmc_ip}/login -d '{"username": "debuguser", "password": "acctonOpenBmc#123"}' | grep token | awk '{print $2;}' | tr -d ""`

Note: Users cannot use the BMC default account "root" and password "0penBmc" to access Redfish nodes. For information on how to create account and password, see section "Security Service" on page 69.

Table 4: Redfish Commands

Command	Function
Login	
login	Access Redfish and log in to get a token.
logout	Logs out from the BMC web.
Redfish	
redfish	Gets basic redfish information.
redfish/v1	Gets basic redfish information.
BMC System Management	
redfish/v1/JsonSchemas	Shows the resource of the Json schema files collection.
redfish/v1/JsonSchemas/<str>	Shows the information of the specified Json schema file.
redfish/v1/Managers	Shows the resource of the manager collection
redfish/v1/Managers/bmc	Gets the resources of the BMC manager.

Table 4: Redfish Commands (Continued)

Command	Function
redfish/v1/Managers/bmc/Actions/Manager.ResetToDefaults	Restores factory default settings for the BMC.
Firmware Inventory	
redfish/v1/UpdateService	Shows the resource of the UpdateService collection.
redfish/v1/UpdateService/update	Uploads and upgrades a new image.
redfish/v1/UpdateService/FirmwareInventory	Shows the resource of the Firmware Inventory collection.
redfish/v1/UpdateService/FirmwareInventory/<str>	Shows the information of the specified firmware.
Network Service	
redfish/v1/Managers/bmc/EthernetInterfaces	Shows the information of the specified firmware.
redfish/v1/Managers/bmc/EthernetInterfaces/<ethernetinterface_id>	Gets the properties of the specified Ethernet interface.
redfish/v1/Managers/bmc/EthernetInterfaces/<ethernetinterface_id>/VLANs	Gets the collection of VLAN interfaces for the specified Ethernet interface.
redfish/v1/Managers/bmc/EthernetInterfaces/<ethernetinterface_id>/VLANs/<vlan_id>	Gets the collection of VLAN interfaces for the specified Ethernet interface.
redfish/v1/Managers/bmc/NetworkProtocol	Gets the protocols of the manager network service.
Platform Health and Peripheral Monitoring	
redfish/v1/Chassis/	Gets the chassis information.
redfish/v1/Chassis/Baseboard	Gets the properties of the chassis resource.
redfish/v1/Chassis/Baseboard/Power	Gets the properties of the chassis power.
redfish/v1/Chassis/Baseboard/Thermal	Gets the properties of the thermal sensor resource.
redfish/v1/Chassis/Baseboard/Sensors	Gets the properties of the sensors resource.
Platform Management	
redfish/v1/Managers/bmc/ResetActionInfo	Gets the information of the reset action resource for the BMC.
redfish/v1/Managers/bmc/Actions/Manager.Reset	Resets the BMC based on the reset type.
redfish/v1/SessionService/	Gets the properties of the sessions resource.
redfish/v1/SessionService/Sessions/	Reads the sessions information.
redfish/v1/SessionService/Sessions/<str>	Deletes a session by session ID.
redfish/v1/Systems	Gets system information.
redfish/v1/Systems/system	Gets the properties of systems resource.
redfish/v1/Systems/system/ResetActionInfo	Gets the properties of systems resource.

Table 4: Redfish Commands (Continued)

Command	Function
redfish/v1/Systems/system/Actions/ComputerSystem.Reset	Resets the system based on the reset type.
Platform Troubleshooting	
redfish/v1/Systems/system/LogServices	Displays the log type.
redfish/v1/Systems/system/LogServices/EventLog	Displays the event log type.
redfish/v1/Systems/system/LogServices/EventLog/Entries	Gets the properties of the SEL entries resource.
redfish/v1/Systems/system/LogServices/EventLog/Entries/<str>	Gets the properties of one SEL entry resource.
redfish/v1/Systems/system/LogServices/EventLog/Actions/LogService.ClearLog	Executes a SEL clear action.
redfish/v1/Systems/system/LogServices/PostCodes/Actions/LogService.ClearLog	Executes a PostCode log clear action.
redfish/v1/Systems/system/LogServices/PostCodes/Entries	Gets a collection of PostCode log entries.
Security Service	
redfish/v1/AccountService	Gets the properties of the account resource.
redfish/v1/AccountService/Roles	Gets the information of account roles.
redfish/v1/AccountService/Accounts	Gets the information of accounts.
redfish/v1/AccountService/Accounts/<str>	Gets the information of an account.
redfish/v1/AccountService/LDAP/Certificates	Gets the information of LDAP certificates.
redfish/v1/CertificateService/CertificateLocations	Defines a resource that can be used to locate all certificates installed on a given service.
redfish/v1/Managers/bmc/NetworkProtocol/HTTPS/Certificates	Gets a collection of HTTPS certificate instances.
redfish/v1/Managers/bmc/NetworkProtocol/HTTPS/Certificates/<str>	Gets an HTTPS certificate.
redfish/v1/Managers/bmc/Truststore/Certificates	Gets a collection of HTTPS certificate instances.
redfish/v1/CertificateService/Actions/CertificateService.ReplaceCertificate	Replaces HTTPS certificate instances.
redfish/v1/CertificateService/Actions/CertificateService.GenerateCSR	Generates a CSR file.

Login Commands

The commands listed in this section are about logging in and out of Redfish.

login

Access Redfish and log in to get a token.

URL

/login

Method

POST

Parameters

“username”
“password”

Request Example

```
export bmc_ip=<bmc_ip>
curl -k -H "Content-Type: application/json" -X POST https://${bmc_ip}/login -
  d '{"username": "root", "password": "0penBmc"}'
```

Response Example

```
{
  "token": "2FjFuo4mvm2OhflcA8be"
}
```

logout

Logs out from the BMC web.

URL

/logout

Method

POST

Request Example

```
curl -k -H "X-Auth-Token: $token" -H "Content-Type: application/json" -X POST
  https://${bmc_ip}/logout
```

Response Example

```
{
  "data": "User 'root' logged out",
  "message": "200 OK",
  "status": "ok"
}
```

Redfish Commands

The commands listed in this section include Redfish-related information.

redfish

Gets basic Redfish information.

URL

/redfish

Method

GET

Request Example

```
curl -k -H "X-Auth-Token: $token" -X GET https://${bmc_ip}/redfish
```

Response Example

```
{
  "v1": "/redfish/v1/"
}
```

redfish/v1

Gets basic Redfish information.

URL

/redfish/v1

Method

GET

Request Example

```
curl -k -H "X-Auth-Token: $token" -X GET https://${bmc_ip}/redfish/v1
```

Response Example


```
{
  "@odata.id": "/redfish/v1",
  "@odata.type": "#ServiceRoot.v1_5_0.ServiceRoot",
  "AccountService": {
    "@odata.id": "/redfish/v1/AccountService"
  },
  "CertificateService": {
    "@odata.id": "/redfish/v1/CertificateService"
  },
  "Chassis": {
    "@odata.id": "/redfish/v1/Chassis"
  },
  "EventService": {
    "@odata.id": "/redfish/v1/EventService"
  },
  "Id": "RootService",
  "JsonSchemas": {
    "@odata.id": "/redfish/v1/JsonSchemas"
  },
  "Links": {
    "Sessions": {
      "@odata.id": "/redfish/v1/SessionService/Sessions"
    }
  },
  "Managers": {
    "@odata.id": "/redfish/v1/Managers"
  },
  "Name": "Root Service",
  "RedfishVersion": "1.9.0",
  "Registries": {
    "@odata.id": "/redfish/v1/Registries"
  },
  "SessionService": {
    "@odata.id": "/redfish/v1/SessionService"
  },
  "Systems": {
    "@odata.id": "/redfish/v1/Systems"
  },
  "Tasks": {
    "@odata.id": "/redfish/v1/TaskService"
  },
  "TelemetryService": {
    "@odata.id": "/redfish/v1/TelemetryService"
  },
  "UUID": "01afd680-54dc-4d70-917b-df33c358d8ca",
  "UpdateService": {
    "@odata.id": "/redfish/v1/UpdateService"
  }
```

BMC System Management

The commands listed in this section include Json Schemas, BMC system information, and setting related functions.

redfish/v1/JsonSchemas

Show the resource of the Json schema files collection.

URL

/redfish/v1/JsonSchemas

Method

GET

Request Example

```
curl -k -H "X-Auth-Token: $token" -X GET https://${bmc_ip}/redfish/v1/
  JsonSchemas
```

Response Example


```
{
  "@odata.id": "/redfish/v1/JsonSchemas",
  "@odata.type": "#JsonSchemaFileCollection.JsonSchemaFileCollection",
  "Description": "Collection of JsonSchemaFiles",
  "Members": [
    {
      "@odata.id": "/redfish/v1/JsonSchemas/AccountService"
    },
    {
      "@odata.id": "/redfish/v1/JsonSchemas/ActionInfo"
    },
    {
      "@odata.id": "/redfish/v1/JsonSchemas/AggregationService"
    },
    {
      "@odata.id": "/redfish/v1/JsonSchemas/AggregationSource"
    },
    {
      "@odata.id": "/redfish/v1/JsonSchemas/AggregationSourceCollection"
    },
    {
      "@odata.id": "/redfish/v1/JsonSchemas/Assembly"
    },
    {
      "@odata.id": "/redfish/v1/JsonSchemas/AttributeRegistry"
    },
    {
      "@odata.id": "/redfish/v1/JsonSchemas/Bios"
    },
    {
      "@odata.id": "/redfish/v1/JsonSchemas/Cable"
    },
    {
```

```
    "@odata.id": "/redfish/v1/JsonSchemas/CableCollection"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/Certificate"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/CertificateCollection"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/CertificateLocations"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/CertificateService"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/Chassis"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/ChassisCollection"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/ComponentIntegrity"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/ComponentIntegrityCollection"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/ComputerSystem"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/ComputerSystemCollection"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/Drive"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/DriveCollection"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/EnvironmentMetrics"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/EthernetInterface"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/EthernetInterfaceCollection"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/Event"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/EventDestination"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/EventDestinationCollection"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/EventService"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/FabricAdapter"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/FabricAdapterCollection"
  },
```

```
{
  "@odata.id": "/redfish/v1/JsonSchemas/Fan"
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/FanCollection"
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/IPAddresses"
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/JsonSchemaFile"
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/JsonSchemaFileCollection"
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/LogEntry"
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/LogEntryCollection"
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/LogService"
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/LogServiceCollection"
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/Manager"
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/ManagerAccount"
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/ManagerAccountCollection"
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/ManagerCollection"
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/ManagerDiagnosticData"
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/ManagerNetworkProtocol"
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/Memory"
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/MemoryCollection"
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/Message"
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/MessageRegistry"
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/MessageRegistryCollection"
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/MessageRegistryFile"
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/MessageRegistryFileCollection"
```

```
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/MetricDefinition"
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/MetricDefinitionCollection"
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/MetricReport"
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/MetricReportCollection"
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/MetricReportDefinition"
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/MetricReportDefinitionCollection"
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/odata"
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/odata-v4"
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/OperatingConfig"
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/OperatingConfigCollection"
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/PCIeDevice"
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/PCIeDeviceCollection"
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/PCIeFunction"
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/PCIeFunctionCollection"
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/PCIeSlots"
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/PhysicalContext"
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/Port"
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/PortCollection"
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/Power"
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/PowerSubsystem"
},
{
  "@odata.id": "/redfish/v1/JsonSchemas/PowerSupply"
},
{
```

```
    "@odata.id": "/redfish/v1/JsonSchemas/PowerSupplyCollection"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/Privileges"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/Processor"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/ProcessorCollection"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/redfish-error"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/redfish-payload-annotations"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/redfish-schema"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/redfish-schema-v1"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/Redundancy"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/Resource"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/Role"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/RoleCollection"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/Sensor"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/SensorCollection"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/ServiceRoot"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/Session"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/SessionCollection"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/SessionService"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/Settings"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/SoftwareInventory"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/SoftwareInventoryCollection"
  },
  {
    "@odata.id": "/redfish/v1/JsonSchemas/Storage"
  },
```

```
    {
      "@odata.id": "/redfish/v1/JsonSchemas/StorageCollection"
    },
    {
      "@odata.id": "/redfish/v1/JsonSchemas/StorageController"
    },
    {
      "@odata.id": "/redfish/v1/JsonSchemas/StorageControllerCollection"
    },
    {
      "@odata.id": "/redfish/v1/JsonSchemas/Task"
    },
    {
      "@odata.id": "/redfish/v1/JsonSchemas/TaskCollection"
    },
    {
      "@odata.id": "/redfish/v1/JsonSchemas/TaskService"
    },
    {
      "@odata.id": "/redfish/v1/JsonSchemas/TelemetryService"
    },
    {
      "@odata.id": "/redfish/v1/JsonSchemas/Thermal"
    },
    {
      "@odata.id": "/redfish/v1/JsonSchemas/ThermalMetrics"
    },
    {
      "@odata.id": "/redfish/v1/JsonSchemas/ThermalSubsystem"
    },
    {
      "@odata.id": "/redfish/v1/JsonSchemas/Triggers"
    },
    {
      "@odata.id": "/redfish/v1/JsonSchemas/TriggersCollection"
    },
    {
      "@odata.id": "/redfish/v1/JsonSchemas/UpdateService"
    },
    {
      "@odata.id": "/redfish/v1/JsonSchemas/VirtualMedia"
    },
    {
      "@odata.id": "/redfish/v1/JsonSchemas/VirtualMediaCollection"
    },
    {
      "@odata.id": "/redfish/v1/JsonSchemas/OemManager"
    },
    {
      "@odata.id": "/redfish/v1/JsonSchemas/OemComputerSystem"
    },
    {
      "@odata.id": "/redfish/v1/JsonSchemas/OemVirtualMedia"
    },
    {
      "@odata.id": "/redfish/v1/JsonSchemas/OpenBMCAccountService"
    }
  ],
  "Members@odata.count": 115,
  "Name": "JsonSchemaFile Collection"
}
```

redfish/v1/JsonSchemas/<str>

Shows the information of the specified Json schema file.

URL

/redfish/v1/JsonSchemas/*<str>*

Method

GET

Request Example

```
curl -k -H "X-Auth-Token: $token" -X GET https://${bmc_ip}/redfish/v1/
  JsonSchemas/AccountService
```

Response Example

```
{
  "@odata.id": "/redfish/v1/JsonSchemas/AccountService",
  "@odata.type": "#JsonSchemaFile.v1_0_2.JsonSchemaFile",
  "Description": "AccountService Schema File Location",
  "Id": "AccountService",
  "Languages": [
    "en"
  ],
  "Languages@odata.count": 1,
  "Location": [
    {
      "Language": "en",
      "PublicationUri": "http://redfish.dmtf.org/schemas/v1/
  AccountService.json",
      "Uri": "/redfish/v1/JsonSchemas/AccountService/AccountService.json"
    }
  ],
  "Location@odata.count": 1,
  "Name": "AccountService Schema File",
  "Schema": "#AccountService.AccountService"
}
```

redfish/v1/Managers

Shows the resource of the manager collection.

URL

/redfish/v1/Managers

Method

GET

Request Example

```
curl -k -H "X-Auth-Token: $token" -X GET https://${bmc_ip}/redfish/v1/
  Managers
```

Response Example

```
{
  "@odata.id": "/redfish/v1/Managers",
  "@odata.type": "#ManagerCollection.ManagerCollection",
  "Members": [
    {
      "@odata.id": "/redfish/v1/Managers/bmc"
    }
  ],
  "Members@odata.count": 1,
  "Name": "Manager Collection"
}
```

redfish/v1/Managers/bmc

Gets the resources of the BMC manager.

URL

/redfish/v1/Managers/bmc

Method

GET

Request Example

```
curl -k -H "X-Auth-Token: $token" -X GET https://${bmc_ip}/redfish/v1/
  Managers/bmc
```

Response Example

```
{
  "@odata.id": "/redfish/v1/Managers/bmc",
  "@odata.type": "#Manager.v1_14_0.Manager",
  "Actions": {
    "#Manager.Reset": {
      "@Redfish.ActionInfo": "/redfish/v1/Managers/bmc/ResetActionInfo",
      "target": "/redfish/v1/Managers/bmc/Actions/Manager.Reset"
    },
    "#Manager.ResetToDefaults": {
      "ResetType@Redfish.AllowableValues": [
        "ResetAll"
      ],
      "target": "/redfish/v1/Managers/bmc/Actions/Manager.ResetToDefaults"
```

```
  }
},
"DateTime": "2024-07-01T12:11:29+00:00",
"DateTimeLocalOffset": "+00:00",
"Description": "Baseboard Management Controller",
"EthernetInterfaces": {
  "@odata.id": "/redfish/v1/Managers/bmc/EthernetInterfaces"
},
"FirmwareVersion": "v00.00.05h-3-ga29b6a95c2",
"GraphicalConsole": {
  "ConnectTypesSupported": [
    "KVMIP"
  ],
  "MaxConcurrentSessions": 4,
  "ServiceEnabled": true
},
"Id": "bmc",
"LastResetTime": "2023-09-21T08:24:19+00:00",
"Links": {
  "ActiveSoftwareImage": {
    "@odata.id": "/redfish/v1/UpdateService/FirmwareInventory/8a3689eb"
  },
  "ManagerForChassis": [
    {
      "@odata.id": "/redfish/v1/Chassis/GBaseboard"
    }
  ],
  "ManagerForChassis@odata.count": 1,
  "ManagerForServers": [
    {
      "@odata.id": "/redfish/v1/Systems/system"
    }
  ],
  "ManagerForServers@odata.count": 1,
  "ManagerInChassis": {
    "@odata.id": "/redfish/v1/Chassis/Baseboard"
  },
  "SoftwareImages": [
    {
      "@odata.id": "/redfish/v1/UpdateService/FirmwareInventory/8a3689eb"
    }
  ],
  "SoftwareImages@odata.count": 1
},
"LogServices": {
  "@odata.id": "/redfish/v1/Managers/bmc/LogServices"
},
"ManagerDiagnosticData": {
  "@odata.id": "/redfish/v1/Managers/bmc/ManagerDiagnosticData"
},
"ManagerType": "BMC",
"Manufacturer": "Accton",
"Model": "BMC Card",
"Name": "OpenBmc Manager",
"NetworkProtocol": {
  "@odata.id": "/redfish/v1/Managers/bmc/NetworkProtocol"
},
"Oem": {
  "@odata.id": "/redfish/v1/Managers/bmc#/Oem",
  "@odata.type": "#OemManager.Oem",
  "OpenBmc": {
    "@odata.id": "/redfish/v1/Managers/bmc#/Oem/OpenBmc",
    "@odata.type": "#OemManager.OpenBmc",
    "Certificates": {
      "@odata.id": "/redfish/v1/Managers/bmc/Truststore/Certificates"
```

```
      }
    }
  },
  "PartNumber": "N0OMX2280002H ",
  "PowerState": "On",
  "SerialConsole": {
    "ConnectTypesSupported": [
      "IPMI",
      "SSH"
    ],
    "MaxConcurrentSessions": 15,
    "ServiceEnabled": true
  },
  "SerialNumber": "AM47034318",
  "ServiceEntryPointUUID": "246eff51-f47d-44b0-826e-6b127f558795",
  "Status": {
    "Health": "OK",
    "State": "Starting"
  },
  "UUID": "53b16cd0-5e47-4ad7-86aa-2e1350691bad"
}
```


Method
PATCH

Parameters
DateTime

Request Example

```
curl -k -H "Content-Type: application/json" -H "X-Auth-Token: $token" -X
  PATCH https://${bmc}/redfish/v1/Managers/bmc/ -d '{"DateTime": "2024-05-
  29T17:48:00.000Z"}'
```

Response Example


```
{
  "DateTime": "2024-06-29T17:48:00.000Z"
}
```


redfish/v1/Managers/bmc/Actions/Manager.ResetToDefaults

Restores factory default settings for the BMC.

URL
/redfish/v1/Managers/bmc/Actions/Manager.ResetToDefaults

Method
POST

Parameters

"ResetToDefaultsType"
- ResetAll

Request Example

```
curl -k -H "X-Auth-Token: $token" -X POST https://${bmc_ip}/redfish/v1/
  Managers/bmc/Actions/Manager.ResetToDefaults/ -d '{"ResetToDefaultsType":
  "ResetAll"}'
```

Response Example

```
{
  "@Message.ExtendedInfo": [
    {
      "@odata.type": "#Message.v1_1_1.Message",
      "Message": "The request completed successfully.",
      "MessageArgs": [],
      "MessageId": "Base.1.16.0.Success",
      "MessageSeverity": "OK",
      "Resolution": "None"
    }
  ]
}

The following is the log of the BMC factory reset.
root@obmc:~# [  OK  ] Removed slice Slice /system/modprobe.
[  OK  ] Removed slice Slice /system/systemd-coredump.
[  OK  ] Removed slice Slice /system/xyz.openbmc_project.Hwmon.
[  OK  ] Stopped target Host and Network Name Lookups.
[  OK  ] Stopped target RPC Port Mapper.
[  OK  ] Stopped target Timer Units.
[  OK  ] Stopped Daily rotation of log files.
[  OK  ] Stopped Daily Cleanup of Temporary Directories.
[  OK  ] Stopped target System Time Set.
[  OK  ] Stopped target Hardware activated USB gadget.
         Stopping Start bmcweb server...
         Stopping IPMB bridge...
[  OK  ] Removed slice Slice /system/obmc-led-
......
[    7.893101] Checked W+X mappings: passed, no W+X pages found
[    7.899494] Run /init as init process
rofs = mtd4 squashfs   rwfs = mtd5 jffs2
factory-reset
Factory reset requested.
No files will be selected for save.
update: --no-restore-files --no-save-files
Skipping empty update of rwfs.
Clearing read-write overlay filesystem.
Erasing 64 Kibyte @ 1200000 - 100% complete.
Restoring saved files to read-write overlay filesystem.
update: --no-save-files --clean-saved-files
Skipping empty update of rwfs.
[   78.860245] jffs2: notice: (217) jffs2_build_xattr_subsystem: complete
  building xattr subsystem, 0 of xdatum (0 unchecked, 0 orphan) and 0 of xref
  (0 dead, 0 orphan) found.
find: run/initramfs/rw/cow/var/lib/systemd/random-seed: No such file or
  directory
[   80.222388] overlayfs: upper fs does not support tmpfile
```

.....

Firmware Inventory

The commands listed in this section include displayed firmware information and firmware update functions.

redfish/v1/UpdateService

Shows the resource of the UpdateService collection.

URL

/redfish/v1/UpdateService

Method

GET

Request Example

```
curl -k -H "X-Auth-Token: $token" -X GET https://${bmc_ip}/redfish/v1/
  UpdateService
```

Response Example

```
{
  "@odata.id": "/redfish/v1/UpdateService",
  "@odata.type": "#UpdateService.v1_11_1.UpdateService",
  "Description": "Service for Software Update",
  "FirmwareInventory": {
    "@odata.id": "/redfish/v1/UpdateService/FirmwareInventory"
  },
  "HttpPushUri": "/redfish/v1/UpdateService/update",
  "HttpPushUriOptions": {
    "HttpPushUriApplyTime": {
      "ApplyTime": "OnReset"
    }
  },
  "Id": "UpdateService",
  "MaxImageSizeBytes": 276824064,
  "MultipartHttpPushUri": "/redfish/v1/UpdateService/update",
  "Name": "Update Service",
  "ServiceEnabled": true
}
```

Method

PATCH

Parameters
"ApplyTime"
- Immediate
- OnReset

Request Example
Configures when the newly applied software image will be activated.

```
curl -k -H "X-Auth-Token: $token" -X PATCH https://${bmc_ip}/redfish/v1/
  UpdateService -d '{"HttpPushUriOptions": {"HttpPushUriApplyTime":
  {"ApplyTime": "OnReset"}}}'
```

Response Example

```
{
  "@Message.ExtendedInfo": [
    {
      "@odata.type": "#Message.v1_1_1.Message",
      "Message": "The request completed successfully.",
      "MessageArgs": [],
      "MessageId": "Base.1.16.0.Success",
      "MessageSeverity": "OK",
      "Resolution": "None"
    }
  ]
}
```

redfish/v1/UpdateService/update

Uploads and upgrades the new image.

URL

/redfish/v1/UpdateService/update

Method
POST

Parameters
Image path

Request Example

```
curl -k -H "X-Auth-Token: $token" -X POST https://${bmc_ip}/redfish/v1/
  UpdateService/update -T "/home/ubuntu/obmc-phosphor-image-ast2600-
  ags8200.static.mtd.tar"
```

Response Example

```
{
  "@odata.id": "/redfish/v1/TaskService/Tasks/0",
  "@odata.type": "#Task.v1_4_3.Task",
  "Id": "0",
  "TaskState": "Running",
  "TaskStatus": "OK"
}
```

redfish/v1/UpdateService/FirmwareInventory

Shows the resource of the Firmware Inventory collection.

URL

/redfish/v1/UpdateService/FirmwareInventory

Method

GET

Request Example

```
curl -k -H "X-Auth-Token: $token" -X GET https://${bmc_ip}/redfish/v1/
  UpdateService/FirmwareInventory
```

Response Example

```
{
  "@odata.id": "/redfish/v1/UpdateService/FirmwareInventory",
  "@odata.type": "#SoftwareInventoryCollection.SoftwareInventoryCollection",
  "Members": [
    {
      "@odata.id": "/redfish/v1/UpdateService/FirmwareInventory/05fd15c6"
    }
  ],
  "Members@odata.count": 1,
  "Name": "Software Inventory Collection"
}
```

redfish/v1/UpdateService/FirmwareInventory/<str>

Shows the information of the specified firmware.

URL

/redfish/v1/UpdateService/FirmwareInventory/<str>

Method

GET

Request Example

```
curl -k -H "X-Auth-Token: $token" -X GET https://${bmc_ip}/redfish/v1/
  UpdateService/FirmwareInventory/05fd15c6
```

Response Example

```
{
  "@odata.id": "/redfish/v1/UpdateService/FirmwareInventory/05fd15c6",
  "@odata.type": "#SoftwareInventory.v1_1_0.SoftwareInventory",
  "Description": "BMC image",
  "Id": "05fd15c6",
  "Name": "Software Inventory",
  "RelatedItem": [
    {
      "@odata.id": "/redfish/v1/Managers/bmc"
    }
  ],
  "RelatedItem@odata.count": 1,
  "Status": {
    "Health": "OK",
    "HealthRollup": "OK",
    "State": "Enabled"
  },
  "Updateable": true,
  "Version": "v00.00.05h-3-ga29b6a95c2"
}
```

Network Service

The commands listed in this section include IP and network protocol functions.

redfish/v1/Managers/bmc/EthernetInterfaces

Shows the information of the specified firmware.

URL

/redfish/v1/Managers/bmc/EthernetInterfaces

Method

GET

Request Example

```
curl -k -H "X-Auth-Token: $token" -X GET https://${bmc_ip}/redfish/v1/
  Managers/bmc/EthernetInterfaces
```

Response Example

```
{
  "@odata.id": "/redfish/v1/Managers/bmc/EthernetInterfaces",
  "@odata.type": "#EthernetInterfaceCollection.EthernetInterfaceCollection",
  "Description": "Collection of EthernetInterfaces for this Manager",
  "Members": [
    {
      "@odata.id": "/redfish/v1/Managers/bmc/EthernetInterfaces/bond0"
    },
    {
      "@odata.id": "/redfish/v1/Managers/bmc/EthernetInterfaces/eth0"
    },
    {
      "@odata.id": "/redfish/v1/Managers/bmc/EthernetInterfaces/eth1"
    },
    {
      "@odata.id": "/redfish/v1/Managers/bmc/EthernetInterfaces/usb0"
    }
  ],
  "Members@odata.count": 4,
  "Name": "Ethernet Network Interface Collection"
}
```

redfish/v1/Managers/bmc/EthernetInterfaces/<ethernetinterface_id>

Gets the properties of the specified Ethernet interface.

URL

/redfish/v1/Managers/bmc/EthernetInterfaces/<ethernetinterface_id>

Method

GET

Parameters

ethernetinterface_id: Network interface name

Request Example

```
curl -k -H "X-Auth-Token: $token" -X GET https://${bmc_ip}/redfish/v1/
  Managers/bmc/EthernetInterfaces/eth0
```

Response Example

```
{
  "@odata.id": "/redfish/v1/Managers/bmc/EthernetInterfaces/eth0",
  "@odata.type": "#EthernetInterface.v1_9_0.EthernetInterface",
  "DHCPv4": {
    "DHCPEnabled": true,
    "UseDNSServers": true,
    "UseDomainName": true,
    "UseNTPServers": true
```

```
  },
  "DHCPv6": {
    "OperatingMode": "Enabled",
    "UseDNSServers": true,
    "UseDomainName": true,
    "UseNTPServers": true
  },
  "Description": "Management Network Interface",
  "EthernetInterfaceType": "Physical",
  "FQDN": "ast2600-ags8200",
  "HostName": "ast2600-ags8200",
  "IPv4Addresses": [
    {
      "Address": "10.102.4.51",
      "AddressOrigin": "DHCP",
      "Gateway": "10.102.110.254",
      "SubnetMask": "255.255.0.0"
    },
    {
      "Address": "10.102.8.111",
      "AddressOrigin": "Static",
      "Gateway": "10.102.110.254",
      "SubnetMask": "255.255.0.0"
    }
  ],
  "IPv4StaticAddresses": [
    {
      "Address": "10.102.8.111",
      "AddressOrigin": "Static",
      "Gateway": "10.102.110.254",
      "SubnetMask": "255.255.0.0"
    }
  ],
  "IPv6AddressPolicyTable": [],
  "IPv6Addresses": [
    {
      "Address": "fe80::44a:bcff:fe45:5570",
      "AddressOrigin": "LinkLocal",
      "PrefixLength": 64
    }
  ],
  "IPv6DefaultGateway": "0:0:0:0:0:0:0:0",
  "IPv6StaticAddresses": [],
  "Id": "eth0",
  "InterfaceEnabled": true,
  "LinkStatus": "LinkUp",
  "MACAddress": "06:4a:bc:45:55:70",
  "MTUSize": 1500,
  "Name": "Manager Ethernet Interface",
  "NameServers": [
    "8.8.8.8"
  ],
  "SpeedMbps": 0,
  "StatelessAddressAutoConfig": {
    "IPv6AutoConfigEnabled": false
  },
  "StaticNameServers": [],
  "Status": {
    "State": "Enabled"
  }
}
```

Method
PATCH

Parameters
HostName"(option)
"FQDN"(option)
"IPv4StaticAddresses":{"Address","SubnetMask","Gateway"}(option)
"MACAddress"(option)
"StaticNameServers"(option)
"IPv6StaticAddresses":{"Address","PrefixLength"}(option)
"DHCPv4":{"DHCPEnabled","UseDNSServers",
"UseNTPServers","UseDomainName"}(option)
"DHCPv6":{"OperatingMode","UseDNSServers",
"UseNTPServers","UseDomainName"}(option)
"InterfaceEnabled"(option)

Request Example
Set the properties of the specified Ethernet interface.

```
curl -k -H "X-Auth-Token: $token" -X PATCH -d '{"IPv4StaticAddresses":
  ["Address": "10.7.8.7","SubnetMask": "255.255.0.0","Gateway":"10.7.8.1"}]}'
  https://${bmc_ip}/redfish/v1/Managers/bmc/EthernetInterfaces/eth0/
```

redfish/v1/Managers/bmc/EthernetInterfaces/<ethernetinterface_id>/VLANs

Gets the collection of VLAN interfaces for the specified Ethernet interface.

URL
/redfish/v1/Managers/bmc/EthernetInterfaces/<ethernetinterface_id>/VLANs

Method
GET

Parameters
ethernetinterface_id: Network interface name

Request Example

```
curl -k -H "X-Auth-Token: $token" -X GET https://${bmc_ip}/redfish/v1/
  Managers/bmc/EthernetInterfaces/eth0/VLANs/
```

Response Example

```
{
"@odata.id": "/redfish/v1/Managers/bmc/EthernetInterfaces/eth0/VLANs",
```

```
  "@odata.type":
  "#VLanNetworkInterfaceCollection.VLanNetworkInterfaceCollection",
  "Members": [],
  "Members@odata.count": 0,
  "Name": "VLAN Network Interface Collection"
}

Description:Create the vlan interface for the specified Ethernet interface.
Method:                                                    Post
Parameter:
1.  ethernetinterface_id: Network interface name
Request Example:
curl -k -H "X-Auth-Token: $token" -X POST -d @eth0.json https://${bmc_ip}/
  redfish/v1/Managers/bmc/EthernetInterfaces/eth0/VLANs/
Response
Example:
{
  "@Message.ExtendedInfo": [
    {
      "@odata.type": "#Message.v1_1_1.Message",
      "Message": "The resource has been created successfully",
      "MessageArgs": [],
      "MessageId": "Base.1.8.1.Created",
      "MessageSeverity": "OK",
      "Resolution": "None"
    }
  ]
}
```

redfish/v1/Managers/bmc/EthernetInterfaces/<ethernetinterface_id>/VLANs/<vlan_id>

Gets the collection of VLAN interfaces for the specified Ethernet interface.

URL

/redfish/v1/Managers/bmc/EthernetInterfaces/<ethernetinterface_id>/VLANs/<vlan_id>

Method

GET

Parameters

ethernetinterface_id: Network interface name
vlan_id: vlan identify number

Request Example

```
curl -k -H "X-Auth-Token: $token" -X GET
https://${bmc_ip}/ redfish/v1/Managers/bmc/EthernetInterfaces/eth0/VLANs/
  eth0_1
```

Response Example

```
{
```

```
  "@odata.id": "/redfish/v1/Managers/bmc/EthernetInterfaces/eth0/VLANs/
  eth0_1",
  "@odata.type": "#VLanNetworkInterface.v1_1_0.VLanNetworkInterface",
  "DHCPv4": {
    "DHCPEnabled": false,
    "UseDNSServers": true,
    "UseDomainName": true,
    "UseNTPServers": true
  },
  "DHCPv6": {
    "OperatingMode": "Disabled",
    "UseDNSServers": true,
    "UseDomainName": true,
    "UseNTPServers": true
  },
  "IPv4Addresses": [
    {
      "Address": "169.254.218.194",
      "AddressOrigin": "IPv4LinkLocal",
      "Gateway": "0.0.0.0",
      "SubnetMask": "255.255.0.0"
    }
  ],
  "IPv4StaticAddresses": [],
  "IPv6AddressPolicyTable": [],
  "IPv6Addresses": [
    {
      "Address": "fe80::1644:8fff:fe6d:a06",
      "AddressOrigin": "LinkLocal",
      "AddressState": null,
      "PrefixLength": 64
    }
  ],
  "IPv6DefaultGateway": "0:0:0:0:0:0:0:0",
  "IPv6StaticAddresses": [],
  "Id": "eth0_1",
  "Name": "VLAN Network Interface",
  "StaticNameServers": [],
  "VLANEnable": true,
  "VLANId": 1
}
```


Method
PATCH

Parameters
"VLANId"
"VLANEnable"
"IPv4StaticAddresses":{"Address","SubnetMask","Gateway"}(option)
"StaticNameServers"(option)
"IPv6StaticAddresses":{"Address","PrefixLength"}(option)
"DHCPv4":{"DHCPEnabled","UseDNSServers","UseNTPServers",
"UseDomainName"}(option)
"DHCPv6":{"OperatingMode","UseDNSServers","UseNTPServers",
"UseDomainName"}(option)

Request Example

Set the properties of the specified VLAN interface.

```
curl -k -H "X-Auth-Token: $token" -X PATCH -d @vlan.json
https://${bmc_ip}/ redfish/v1/Managers/bmc/EthernetInterfaces/eth0/VLANs/
  eth0_1
```

Method

DELETE

Request Example

Delete the specified VLAN interface.

```
curl -k -H "X-Auth-Token: $token" -X DELETE
https://${bmc_ip}/ redfish/v1/Managers/bmc/EthernetInterfaces/eth0/VLANs/
  eth0_1
```

redfish/v1/Managers/bmc/NetworkProtocol

Gets the protocols of the manager network service.

URL

/redfish/v1/Managers/bmc/NetworkProtocol

Method

GET

Request Example

```
curl -k -H "X-Auth-Token: $token" -X GET https://${bmc_ip}/redfish/v1/
  Managers/bmc/NetworkProtocol
```

Response Example

```
{
  "@odata.id": "/redfish/v1/Managers/bmc/NetworkProtocol",
  "@odata.type": "#ManagerNetworkProtocol.v1_5_0.ManagerNetworkProtocol",
  "Description": "Manager Network Service",
  "FQDN": "ast2600-ags8200",
  "HTTP": {
    "Port": null,
    "ProtocolEnabled": false
  },
  "HTTPS": {
    "Certificates": {
```

```
      "@odata.id": "/redfish/v1/Managers/bmc/NetworkProtocol/HTTPS/
  Certificates"
    },
    "Port": 443,
    "ProtocolEnabled": true
  },
  "HostName": "ast2600-ags8200",
  "IPMI": {
    "Port": 623,
    "ProtocolEnabled": true
  },
  "Id": "NetworkProtocol",
  "NTP": {
    "NTPServers": [],
    "ProtocolEnabled": true
  },
  "Name": "Manager Network Protocol",
  "SSH": {
    "Port": 22,
    "ProtocolEnabled": true
  },
  "Status": {
    "Health": "OK",
    "HealthRollup": "OK",
    "State": "Enabled"
  }
}
```


Method
PATCH

Parameters
“HostName” (option)
“NTP”:{“NTPServers”,” ProtocolEnabled”,” TimeZones”} (option)
“IPMI”:{“ProtocolEnabled”}(option)
“SSH”:{“ProtocolEnabled”}(option)

Request Example

```
curl -k -H "X-Auth-Token: $token" -X PATCH -d @protocol.json
https://${bmc_ip}/redfish/v1/Managers/bmc/NetworkProtocol
```

Platform Health and Peripheral Monitoring

The commands listed in this section include fan controller, sensors, PSU, and UCD related information.

redfish/v1/Chassis/

Gets the chassis information.

URL

/redfish/v1/Chassis/

Method

GET

Request Example

```
curl -k -H "X-Auth-Token: $token" -X GET https://${bmc_ip}/redfish/v1/
  Chassis/
```

Response Example


```
{
"@odata.id": "/redfish/v1/Chassis",
"@odata.type": "#ChassisCollection.ChassisCollection",
"Members": [
{
"@odata.id": "/redfish/v1/Chassis/Baseboard"

},
{
"@odata.id": "/redfish/v1/Chassis/FAN1"

},
{
"@odata.id": "/redfish/v1/Chassis/FAN2"

},
{
"@odata.id": "/redfish/v1/Chassis/FAN3"

},
{
"@odata.id": "/redfish/v1/Chassis/FAN4"

},
{
"@odata.id": "/redfish/v1/Chassis/FAN5"

},
{
"@odata.id": "/redfish/v1/Chassis/FAN6"

},
{
```

```
"@odata.id": "/redfish/v1/Chassis/FAN7"

},
{
"@odata.id": "/redfish/v1/Chassis/FAN8"

},
{
"@odata.id": "/redfish/v1/Chassis/FAN9"

},
{
"@odata.id": "/redfish/v1/Chassis/FAN10"

},
{
"@odata.id": "/redfish/v1/Chassis/FAN11"

},
{
"@odata.id": "/redfish/v1/Chassis/FAN12"

},
{
"@odata.id": "/redfish/v1/Chassis/FAN13"

},
{
"@odata.id": "/redfish/v1/Chassis/FAN14"

},
{
"@odata.id": "/redfish/v1/Chassis/FAN15"

},
{
"@odata.id": "/redfish/v1/Chassis/HSBP_Adapter"

},
{
"@odata.id": "/redfish/v1/Chassis/HSBP_F1_1"

},
{
"@odata.id": "/redfish/v1/Chassis/HSBP_F1_2"

},
{
"@odata.id": "/redfish/v1/Chassis/HSBP_F1_3"

},
{
"@odata.id": "/redfish/v1/Chassis/Middle_BP"

},
{
"@odata.id": "/redfish/v1/Chassis/OAM_fru"

},
{
"@odata.id": "/redfish/v1/Chassis/OCP_NIC"

},
{
"@odata.id": "/redfish/v1/Chassis/PCIE_Switch"
```

```
},
{
"@odata.id": "/redfish/v1/Chassis/PDB"

},
{
"@odata.id": "/redfish/v1/Chassis/RISER_2_F1"

},
{
"@odata.id": "/redfish/v1/Chassis/RISER_3_F1"

},
{
"@odata.id": "/redfish/v1/Chassis/UBB"

}
],
"Members@odata.count": 28,
"Name": "Chassis Collection"

}
```


redfish/v1/Chassis/Baseboard

Gets the properties of the chassis resource.

URL

/redfish/v1/Chassis/Baseboard

Method

GET

Request Example

```
curl -k -H "X-Auth-Token: $token" -X GET    https://${bmc_ip}/redfish/v1/
  Chassis/Baseboard
```

Response Example


```
{
"@odata.id": "/redfish/v1/Chassis/Baseboard",
"@odata.type": "#Chassis.v1_22_0.Chassis",
"Actions": {
"#Chassis.Reset": {
"@Redfish.ActionInfo": "/redfish/v1/Chassis/Baseboard/ResetActionInfo",
"target": "/redfish/v1/Chassis/Baseboard/Actions/Chassis.Reset"

}

},
"AssetTag": "N/A",
"ChassisType": "RackMount",
"Id": "Baseboard",
```

```
"IndicatorLED": "Off",
"Links": {
"ComputerSystems": [
{
"@odata.id": "/redfish/v1/Systems/system"

}
],
"ManagedBy": [
{
"@odata.id": "/redfish/v1/Managers/bmc"

}
]

},
"LocationIndicatorActive": false,
"Manufacturer": "Edgecore",
"Model": "Main Board",
"Name": "Baseboard",
"PCIeDevices": {
"@odata.id": "/redfish/v1/Systems/system/PCIeDevices"

},
"PartNumber": "142000003751H",
"Power": {
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power"

},
"PowerState": "On",
"Product_Manufacturer": "Edgecore",
"Product_Model": "AGS8200",
"Product_PartNumber": "F0ODC8280001H",
"Product_SerialNumber": "RD00000030",
"Sensors": {
"@odata.id": "/redfish/v1/Chassis/Baseboard/Sensors"

},
"SerialNumber": "RD00000001",
"Status": {
"Health": "OK",
"HealthRollup": "OK",
"State": "Enabled"

},
"Thermal": {
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal"

}

}
```


Method
PATCH

Parameters
"IndicatorLED"

Request Example

Change the local LED status.

```
curl -k -H "X-Auth-Token: $token" -X PATCH https://${bmc_ip}/redfish/v1/
  Chassis/Baseboard -d '{"IndicatorLED":"Blinking"}'
```

Response Example

```
{
 "@Message.ExtendedInfo": [
   {
   "@odata.type": "#Message.v1_1_1.Message",
   "Message": "Successfully Completed Request",
    "MessageArgs": [],
   "MessageId": "Base.1.8.1.Success",
    "MessageSeverity": "OK",
    "Resolution": "None"
   }
 ]
}
```

redfish/v1/Chassis/Baseboard/Power

Gets the properties of the chassis power.

URL

/redfish/v1/Chassis/Baseboard/Power

Method

GET

Request Example

```
curl -k -H "X-Auth-Token: $token" -X GET https://${bmc_ip}/redfish/v1/
  Chassis/Baseboard/Power
```

Response Example

```
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power",
"@odata.type": "#Power.v1_5_2.Power",
"Id": "Power",
"Name": "Power",
"PowerControl": [
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/PowerControl/0",
"@odata.type": "#Power.v1_0_0.PowerControl",
"MemberId": "0",
"Name": "Chassis Power Control",
```

```
"PowerLimit": {
"LimitException": "NoAction"

}

}
],
"PowerSupplies": [
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/PowerSupplies/0",
"EfficiencyPercent": 90,
"Manufacturer": "$BOARD_MANUFACTURER",
"MemberId": "0",
"Model": "$BOARD_PRODUCT_NAME",
"Name": "PSU1",
"PartNumber": "$BOARD_PART_NUMBER",
"PowerOutputWatts": 417.5,
"SerialNumber": "$BOARD_SERIAL_NUMBER",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/PowerSupplies/1",
"EfficiencyPercent": 90,
"Manufacturer": "$BOARD_MANUFACTURER",
"MemberId": "1",
"Model": "$BOARD_PRODUCT_NAME",
"Name": "PSU2",
"PartNumber": "$BOARD_PART_NUMBER",
"PowerOutputWatts": 398.5,
"SerialNumber": "$BOARD_SERIAL_NUMBER",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/PowerSupplies/2",
"EfficiencyPercent": 90,
"Manufacturer": "$PBOARD_MANUFACTURER",
"MemberId": "2",
"Model": "$BOARD_PRODUCT_NAME",
"Name": "PSU3",
"PartNumber": "$BOARD_PART_NUMBER",
"PowerOutputWatts": 432.5,
"SerialNumber": "$BOARD_SERIAL_NUMBER",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/PowerSupplies/3",
"EfficiencyPercent": 90,
"Manufacturer": "DELTA",
"MemberId": "3",
"Model": "DPS-2700AB-1 A",
```

```
"Name": "PSU7",
"PartNumber": "00000000000000",
"PowerOutputWatts": 547.0,
"SerialNumber": "KPID444025Z",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/PowerSupplies/4",
"EfficiencyPercent": 90,
"Manufacturer": "DELTA",
"MemberId": "4",
"Model": "DPS-2700AB-1 A",
"Name": "PSU8",
"PartNumber": "00000000000000",
"PowerOutputWatts": 0.0,
"SerialNumber": "KPID444025P",
"Status": {
"Health": "Critical",
"State": "Enabled"

}

}
],
"Redundancy": [],
"Voltages": [
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/Voltages/0",
"@odata.type": "#Power.v1_0_0.Voltage",
"LowerThresholdCritical": 1.26,
"LowerThresholdNonCritical": 1.44,
"MaxReadingRange": 300.0,
"MemberId": "0",
"MinReadingRange": 0.0,
"Name": "CPU0 FIVRA Vout",
"ReadingVolts": 1.765,
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 2.34,
"UpperThresholdNonCritical": 2.16

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/Voltages/1",
"@odata.type": "#Power.v1_0_0.Voltage",
"LowerThresholdCritical": 0.77,
"LowerThresholdNonCritical": 0.88,
"MaxReadingRange": 300.0,
"MemberId": "1",
"MinReadingRange": 0.0,
"Name": "CPU0 PVCCD Vout",
"ReadingVolts": 1.141,
"Status": {
"Health": "OK",
"State": "Enabled"

},
```

```
"UpperThresholdCritical": 1.43,
"UpperThresholdNonCritical": 1.32

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/Voltages/2",
"@odata.type": "#Power.v1_0_0.Voltage",
"LowerThresholdCritical": 1.26,
"LowerThresholdNonCritical": 1.44,
"MaxReadingRange": 300.0,
"MemberId": "2",
"MinReadingRange": 0.0,
"Name": "CPU0 PVCCIN Vout",
"ReadingVolts": 1.792,
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 2.34,
"UpperThresholdNonCritical": 2.16

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/Voltages/3",
"@odata.type": "#Power.v1_0_0.Voltage",
"LowerThresholdCritical": 1.26,
"LowerThresholdNonCritical": 1.44,
"MaxReadingRange": 300.0,
"MemberId": "3",
"MinReadingRange": 0.0,
"Name": "CPU1 FIVRA Vout",
"ReadingVolts": 1.79,
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 2.34,
"UpperThresholdNonCritical": 2.16

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/Voltages/4",
"@odata.type": "#Power.v1_0_0.Voltage",
"LowerThresholdCritical": 0.77,
"LowerThresholdNonCritical": 0.88,
"MaxReadingRange": 300.0,
"MemberId": "4",
"MinReadingRange": 0.0,
"Name": "CPU1 PVCCD Vout",
"ReadingVolts": 1.14,
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 1.43,
"UpperThresholdNonCritical": 1.32

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/Voltages/5",
"@odata.type": "#Power.v1_0_0.Voltage",
"LowerThresholdCritical": 1.26,
```

```
"LowerThresholdNonCritical": 1.44,
"MaxReadingRange": 300.0,
"MemberId": "5",
"MinReadingRange": 0.0,
"Name": "CPU1 PVCCIN Vout",
"ReadingVolts": 1.789,
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 2.34,
"UpperThresholdNonCritical": 2.16

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/Voltages/6",
"@odata.type": "#Power.v1_0_0.Voltage",
"LowerThresholdCritical": 1.26,
"LowerThresholdNonCritical": 1.44,
"MaxReadingRange": 20.0,
"MemberId": "6",
"MinReadingRange": 0.0,
"Name": "EHV CPU0 Vout",
"ReadingVolts": 1.796,
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 2.34,
"UpperThresholdNonCritical": 2.16

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/Voltages/7",
"@odata.type": "#Power.v1_0_0.Voltage",
"LowerThresholdCritical": 1.26,
"LowerThresholdNonCritical": 1.44,
"MaxReadingRange": 20.0,
"MemberId": "7",
"MinReadingRange": 0.0,
"Name": "EHV CPU1 Vout",
"ReadingVolts": 1.8,
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 2.34,
"UpperThresholdNonCritical": 2.16

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/Voltages/8",
"@odata.type": "#Power.v1_0_0.Voltage",
"LowerThresholdCritical": 0.7,
"LowerThresholdNonCritical": 0.8,
"MaxReadingRange": 300.0,
"MemberId": "8",
"MinReadingRange": 0.0,
"Name": "FAON CPU0 Vout",
"ReadingVolts": 1.054,
"Status": {
"Health": "OK",
```

```
"State": "Enabled"

},
"UpperThresholdCritical": 1.3,
"UpperThresholdNonCritical": 1.2

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/Voltages/9",
"@odata.type": "#Power.v1_0_0.Voltage",
"LowerThresholdCritical": 0.7,
"LowerThresholdNonCritical": 0.8,
"MaxReadingRange": 300.0,
"MemberId": "9",
"MinReadingRange": 0.0,
"Name": "FAON CPU1 Vout",
"ReadingVolts": 1.054,
"Status": {
"Health": "Critical",
"State": "Enabled"

},
"UpperThresholdCritical": 1.3,
"UpperThresholdNonCritical": 1.2

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/Voltages/10",
"@odata.type": "#Power.v1_0_0.Voltage",
"LowerThresholdCritical": 88.0,
"LowerThresholdNonCritical": 90.0,
"MaxReadingRange": 300.0,
"MemberId": "10",
"MinReadingRange": 0.0,
"Name": "PSU1 54VSB Vin",
"ReadingVolts": 224.0,
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 264.08,
"UpperThresholdNonCritical": 240.8

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/Voltages/11",
"@odata.type": "#Power.v1_0_0.Voltage",
"LowerThresholdCritical": 50.3,
"LowerThresholdNonCritical": 51.3,
"MaxReadingRange": 300.0,
"MemberId": "11",
"MinReadingRange": 0.0,
"Name": "PSU1 54VSB Vout",
"ReadingVolts": 53.701,
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 59.5,
"UpperThresholdNonCritical": 58.5

},
{
```

```
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/Voltages/12",
"@odata.type": "#Power.v1_0_0.Voltage",
"LowerThresholdCritical": 88.0,
"LowerThresholdNonCritical": 90.0,
"MaxReadingRange": 300.0,
"MemberId": "12",
"MinReadingRange": 0.0,
"Name": "PSU2 54VSB Vin",
"ReadingVolts": 224.25,
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 264.08,
"UpperThresholdNonCritical": 240.8

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/Voltages/13",
"@odata.type": "#Power.v1_0_0.Voltage",
"LowerThresholdCritical": 50.3,
"LowerThresholdNonCritical": 51.3,
"MaxReadingRange": 300.0,
"MemberId": "13",
"MinReadingRange": 0.0,
"Name": "PSU2 54VSB Vout",
"ReadingVolts": 53.957,
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 59.5,
"UpperThresholdNonCritical": 58.5

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/Voltages/14",
"@odata.type": "#Power.v1_0_0.Voltage",
"LowerThresholdCritical": 88.0,
"LowerThresholdNonCritical": 90.0,
"MaxReadingRange": 300.0,
"MemberId": "14",
"MinReadingRange": 0.0,
"Name": "PSU3 54VSB Vin",
"ReadingVolts": 224.5,
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 264.08,
"UpperThresholdNonCritical": 240.8

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/Voltages/15",
"@odata.type": "#Power.v1_0_0.Voltage",
"LowerThresholdCritical": 50.3,
"LowerThresholdNonCritical": 51.3,
"MaxReadingRange": 300.0,
"MemberId": "15",
"MinReadingRange": 0.0,
"Name": "PSU3 54VSB Vout",
```

```
"ReadingVolts": 54.021,
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 59.5,
"UpperThresholdNonCritical": 58.5

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/Voltages/16",
"@odata.type": "#Power.v1_0_0.Voltage",
"LowerThresholdCritical": 0.0,
"LowerThresholdNonCritical": 0.0,
"MaxReadingRange": 300.0,
"MemberId": "16",
"MinReadingRange": 0.0,
"Name": "PSU7 54VSB Vin",
"ReadingVolts": 225.0,
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 264.08,
"UpperThresholdNonCritical": 240.8

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/Voltages/17",
"@odata.type": "#Power.v1_0_0.Voltage",
"LowerThresholdCritical": 0.0,
"LowerThresholdNonCritical": 0.0,
"MaxReadingRange": 300.0,
"MemberId": "17",
"MinReadingRange": 0.0,
"Name": "PSU7 54VSB Vout",
"ReadingVolts": 12.164,
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 14.0,
"UpperThresholdNonCritical": 12.6

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/Voltages/18",
"@odata.type": "#Power.v1_0_0.Voltage",
"LowerThresholdCritical": 88.0,
"LowerThresholdNonCritical": 90.0,
"MaxReadingRange": 300.0,
"MemberId": "18",
"MinReadingRange": 0.0,
"Name": "PSU8 54VSB Vin",
"ReadingVolts": 0.0,
"Status": {
"Health": "Critical",
"State": "Enabled"

},
"UpperThresholdCritical": 264.08,
"UpperThresholdNonCritical": 240.8
```

```
},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/Voltages/19",
"@odata.type": "#Power.v1_0_0.Voltage",
"LowerThresholdCritical": 10.3,
"LowerThresholdNonCritical": 11.4,
"MaxReadingRange": 300.0,
"MemberId": "19",
"MinReadingRange": 0.0,
"Name": "PSU8 54VSB Vout",
"ReadingVolts": 0.0,
"Status": {
"Health": "Critical",
"State": "Enabled"

},
"UpperThresholdCritical": 14.0,
"UpperThresholdNonCritical": 12.6

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/Voltages/20",
"@odata.type": "#Power.v1_0_0.Voltage",
"LowerThresholdCritical": 0.7,
"LowerThresholdNonCritical": 0.97,
"MaxReadingRange": 2.5,
"MemberId": "20",
"MinReadingRange": 0.0,
"Name": "PVNN MAIN CPU0",
"ReadingVolts": 1.005,
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 1.3,
"UpperThresholdNonCritical": 1.03

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/Voltages/21",
"@odata.type": "#Power.v1_0_0.Voltage",
"LowerThresholdCritical": 0.7,
"LowerThresholdNonCritical": 0.97,
"MaxReadingRange": 2.5,
"MemberId": "21",
"MinReadingRange": 0.0,
"Name": "PVNN MAIN CPU1",
"ReadingVolts": 1.003,
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 1.3,
"UpperThresholdNonCritical": 1.03

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/Voltages/22",
"@odata.type": "#Power.v1_0_0.Voltage",
"LowerThresholdCritical": 0.63,
"LowerThresholdNonCritical": 0.855,
"MaxReadingRange": 2.5,
```

```
"MemberId": "22",
"MinReadingRange": 0.0,
"Name": "PVNN PCH",
"ReadingVolts": 0.898,
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 1.17,
"UpperThresholdNonCritical": 0.941

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/Voltages/23",
"@odata.type": "#Power.v1_0_0.Voltage",
"LowerThresholdCritical": 0.0,
"LowerThresholdNonCritical": 0.0,
"MaxReadingRange": 24.999999627470977,
"MemberId": "23",
"MinReadingRange": 0.0,
"Name": "PVPP HBM CPU0",
"ReadingVolts": 0.02,
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 15.6,
"UpperThresholdNonCritical": 2.708

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/Voltages/24",
"@odata.type": "#Power.v1_0_0.Voltage",
"LowerThresholdCritical": 0.0,
"LowerThresholdNonCritical": 0.0,
"MaxReadingRange": 24.999999627470977,
"MemberId": "24",
"MinReadingRange": 0.0,
"Name": "PVPP HBM CPU1",
"ReadingVolts": 0.02,
"Status": {
"Health": "Critical",
"State": "Enabled"

},
"UpperThresholdCritical": 15.6,
"UpperThresholdNonCritical": 2.708

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/Voltages/25",
"@odata.type": "#Power.v1_0_0.Voltage",
"LowerThresholdCritical": 2.1,
"LowerThresholdNonCritical": 2.4,
"MaxReadingRange": 5.0,
"MemberId": "25",
"MinReadingRange": 0.0,
"Name": "VBATT",
"ReadingVolts": 2.836,
"Status": {
"Health": "OK",
"State": "Enabled"
```

```
},
"UpperThresholdCritical": 3.9,
"UpperThresholdNonCritical": 3.6

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/Voltages/26",
"@odata.type": "#Power.v1_0_0.Voltage",
"LowerThresholdCritical": 8.4,
"LowerThresholdNonCritical": 4.25,
"MaxReadingRange": 24.999999627470977,
"MemberId": "26",
"MinReadingRange": 0.0,
"Name": "VCC12V CPU0 DIMM",
"ReadingVolts": 12.76,
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 15.6,
"UpperThresholdNonCritical": 15.0

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/Voltages/27",
"@odata.type": "#Power.v1_0_0.Voltage",
"LowerThresholdCritical": 8.4,
"LowerThresholdNonCritical": 4.25,
"MaxReadingRange": 24.999999627470977,
"MemberId": "27",
"MinReadingRange": 0.0,
"Name": "VCC12V CPU1 DIMM",
"ReadingVolts": 12.86,
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 15.6,
"UpperThresholdNonCritical": 15.0

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/Voltages/28",
"@odata.type": "#Power.v1_0_0.Voltage",
"LowerThresholdCritical": 8.4,
"LowerThresholdNonCritical": 11.04,
"MaxReadingRange": 24.999999627470977,
"MemberId": "28",
"MinReadingRange": 0.0,
"Name": "VCC12V HSBP",
"ReadingVolts": 12.71,
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 15.6,
"UpperThresholdNonCritical": 13.6

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/Voltages/29",
"@odata.type": "#Power.v1_0_0.Voltage",
```

```
"LowerThresholdCritical": 8.4,
"LowerThresholdNonCritical": 11.04,
"MaxReadingRange": 24.999999627470977,
"MemberId": "29",
"MinReadingRange": 0.0,
"Name": "VCC12V RISER",
"ReadingVolts": 12.86,
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 15.6,
"UpperThresholdNonCritical": 13.6

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/Voltages/30",
"@odata.type": "#Power.v1_0_0.Voltage",
"LowerThresholdCritical": 0.735,
"LowerThresholdNonCritical": 0.997,
"MaxReadingRange": 2.5,
"MemberId": "30",
"MinReadingRange": 0.0,
"Name": "VCC1V05 PCH",
"ReadingVolts": 1.052,
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 1.365,
"UpperThresholdNonCritical": 1.082

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/Voltages/31",
"@odata.type": "#Power.v1_0_0.Voltage",
"LowerThresholdCritical": 1.26,
"LowerThresholdNonCritical": 1.728,
"MaxReadingRange": 5.0,
"MemberId": "31",
"MinReadingRange": 0.0,
"Name": "VCC1V8 PCH",
"ReadingVolts": 1.826,
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 2.34,
"UpperThresholdNonCritical": 1.863

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/Voltages/32",
"@odata.type": "#Power.v1_0_0.Voltage",
"LowerThresholdCritical": 2.31,
"LowerThresholdNonCritical": 3.135,
"MaxReadingRange": 5.0,
"MemberId": "32",
"MinReadingRange": 0.0,
"Name": "VCC3V3",
"ReadingVolts": 3.3,
"Status": {
```

```
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 4.29,
"UpperThresholdNonCritical": 3.465

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/Voltages/33",
"@odata.type": "#Power.v1_0_0.Voltage",
"LowerThresholdCritical": 2.31,
"LowerThresholdNonCritical": 3.003,
"MaxReadingRange": 5.0,
"MemberId": "33",
"MinReadingRange": 0.0,
"Name": "VCC3V3 RISER",
"ReadingVolts": 3.31,
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 4.29,
"UpperThresholdNonCritical": 3.597

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/Voltages/34",
"@odata.type": "#Power.v1_0_0.Voltage",
"LowerThresholdCritical": 2.31,
"LowerThresholdNonCritical": 3.217,
"MaxReadingRange": 5.0,
"MemberId": "34",
"MinReadingRange": 0.0,
"Name": "VCC3V3 SB",
"ReadingVolts": 3.31,
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 4.29,
"UpperThresholdNonCritical": 3.383

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Power#/Voltages/35",
"@odata.type": "#Power.v1_0_0.Voltage",
"LowerThresholdCritical": 3.5,
"LowerThresholdNonCritical": 4.75,
"MaxReadingRange": 13.888888336994052,
"MemberId": "35",
"MinReadingRange": 0.0,
"Name": "VCC5V",
"ReadingVolts": 5.1222,
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 6.5,
"UpperThresholdNonCritical": 6.25

}
```

```
]

}
```

redfish/v1/Chassis/Baseboard/Thermal

Gets the properties of the thermal sensor resource.

URL

/redfish/v1/Chassis/Baseboard/Thermal

Method

GET

Request Example

```
curl -k -H "X-Auth-Token: $token" -X GET https://${bmc_ip}/redfish/v1/
  Chassis/Baseboard/Thermal
```

Response Example

```
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal",
"@odata.type": "#Thermal.v1_4_0.Thermal",
"Fans": [
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/0",
"@odata.type": "#Thermal.v1_3_0.Fan",
"LowerThresholdCritical": 1750,
"LowerThresholdNonCritical": 2000,
"MaxReadingRange": 25000,
"MemberId": "0",
"MinReadingRange": 0,
"Name": "Fan front 1",
"Reading": 7160,
"ReadingUnits": "RPM",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/1",
"@odata.type": "#Thermal.v1_3_0.Fan",
"LowerThresholdCritical": 1750,
"LowerThresholdNonCritical": 2000,
"MaxReadingRange": 25000,
"MemberId": "1",
"MinReadingRange": 0,
"Name": "Fan front 10",
"Reading": 7160,
"ReadingUnits": "RPM",
```

```
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/2",
"@odata.type": "#Thermal.v1_3_0.Fan",
"LowerThresholdCritical": 1750,
"LowerThresholdNonCritical": 2000,
"MaxReadingRange": 25000,
"MemberId": "2",
"MinReadingRange": 0,
"Name": "Fan front 11",
"Reading": 7339,
"ReadingUnits": "RPM",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/3",
"@odata.type": "#Thermal.v1_3_0.Fan",
"LowerThresholdCritical": 1750,
"LowerThresholdNonCritical": 2000,
"MaxReadingRange": 25000,
"MemberId": "3",
"MinReadingRange": 0,
"Name": "Fan front 12",
"Reading": 7160,
"ReadingUnits": "RPM",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/4",
"@odata.type": "#Thermal.v1_3_0.Fan",
"LowerThresholdCritical": 1750,
"LowerThresholdNonCritical": 2000,
"MaxReadingRange": 25000,
"MemberId": "4",
"MinReadingRange": 0,
"Name": "Fan front 13",
"Reading": 7160,
"ReadingUnits": "RPM",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/5",
"@odata.type": "#Thermal.v1_3_0.Fan",
"LowerThresholdCritical": 1750,
```

```
"LowerThresholdNonCritical": 2000,
"MaxReadingRange": 25000,
"MemberId": "5",
"MinReadingRange": 0,
"Name": "Fan front 14",
"Reading": 7160,
"ReadingUnits": "RPM",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/6",
"@odata.type": "#Thermal.v1_3_0.Fan",
"LowerThresholdCritical": 1750,
"LowerThresholdNonCritical": 2000,
"MaxReadingRange": 25000,
"MemberId": "6",
"MinReadingRange": 0,
"Name": "Fan front 15",
"Reading": 7160,
"ReadingUnits": "RPM",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/7",
"@odata.type": "#Thermal.v1_3_0.Fan",
"LowerThresholdCritical": 1750,
"LowerThresholdNonCritical": 2000,
"MaxReadingRange": 25000,
"MemberId": "7",
"MinReadingRange": 0,
"Name": "Fan front 2",
"Reading": 7160,
"ReadingUnits": "RPM",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/8",
"@odata.type": "#Thermal.v1_3_0.Fan",
"LowerThresholdCritical": 1750,
"LowerThresholdNonCritical": 2000,
"MaxReadingRange": 25000,
"MemberId": "8",
"MinReadingRange": 0,
"Name": "Fan front 3",
"Reading": 7160,
"ReadingUnits": "RPM",
"Status": {
"Health": "OK",
"State": "Enabled"
```

```
}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/9",
"@odata.type": "#Thermal.v1_3_0.Fan",
"LowerThresholdCritical": 1750,
"LowerThresholdNonCritical": 2000,
"MaxReadingRange": 25000,
"MemberId": "9",
"MinReadingRange": 0,
"Name": "Fan front 4",
"Reading": 7160,
"ReadingUnits": "RPM",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/10",
"@odata.type": "#Thermal.v1_3_0.Fan",
"LowerThresholdCritical": 1750,
"LowerThresholdNonCritical": 2000,
"MaxReadingRange": 25000,
"MemberId": "10",
"MinReadingRange": 0,
"Name": "Fan front 5",
"Reading": 6981,
"ReadingUnits": "RPM",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/11",
"@odata.type": "#Thermal.v1_3_0.Fan",
"LowerThresholdCritical": 1750,
"LowerThresholdNonCritical": 2000,
"MaxReadingRange": 25000,
"MemberId": "11",
"MinReadingRange": 0,
"Name": "Fan front 6",
"Reading": 6981,
"ReadingUnits": "RPM",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/12",
"@odata.type": "#Thermal.v1_3_0.Fan",
"LowerThresholdCritical": 1750,
"LowerThresholdNonCritical": 2000,
"MaxReadingRange": 25000,
"MemberId": "12",
"MinReadingRange": 0,
```

```
"Name": "Fan front 7",
"Reading": 7339,
"ReadingUnits": "RPM",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/13",
"@odata.type": "#Thermal.v1_3_0.Fan",
"LowerThresholdCritical": 1750,
"LowerThresholdNonCritical": 2000,
"MaxReadingRange": 25000,
"MemberId": "13",
"MinReadingRange": 0,
"Name": "Fan front 8",
"Reading": 7160,
"ReadingUnits": "RPM",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/14",
"@odata.type": "#Thermal.v1_3_0.Fan",
"LowerThresholdCritical": 1750,
"LowerThresholdNonCritical": 2000,
"MaxReadingRange": 25000,
"MemberId": "14",
"MinReadingRange": 0,
"Name": "Fan front 9",
"Reading": 7160,
"ReadingUnits": "RPM",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/15",
"@odata.type": "#Thermal.v1_3_0.Fan",
"LowerThresholdCritical": 1750,
"LowerThresholdNonCritical": 2000,
"MaxReadingRange": 25000,
"MemberId": "15",
"MinReadingRange": 0,
"Name": "Fan rear 1",
"Reading": 8413,
"ReadingUnits": "RPM",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
```

```
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/16",
"@odata.type": "#Thermal.v1_3_0.Fan",
"LowerThresholdCritical": 1750,
"LowerThresholdNonCritical": 2000,
"MaxReadingRange": 25000,
"MemberId": "16",
"MinReadingRange": 0,
"Name": "Fan rear 10",
"Reading": 8413,
"ReadingUnits": "RPM",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/17",
"@odata.type": "#Thermal.v1_3_0.Fan",
"LowerThresholdCritical": 1750,
"LowerThresholdNonCritical": 2000,
"MaxReadingRange": 25000,
"MemberId": "17",
"MinReadingRange": 0,
"Name": "Fan rear 11",
"Reading": 8592,
"ReadingUnits": "RPM",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/18",
"@odata.type": "#Thermal.v1_3_0.Fan",
"LowerThresholdCritical": 1750,
"LowerThresholdNonCritical": 2000,
"MaxReadingRange": 25000,
"MemberId": "18",
"MinReadingRange": 0,
"Name": "Fan rear 12",
"Reading": 8592,
"ReadingUnits": "RPM",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/19",
"@odata.type": "#Thermal.v1_3_0.Fan",
"LowerThresholdCritical": 1750,
"LowerThresholdNonCritical": 2000,
"MaxReadingRange": 25000,
"MemberId": "19",
"MinReadingRange": 0,
"Name": "Fan rear 13",
"Reading": 8592,
"ReadingUnits": "RPM",
"Status": {
```

```
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/20",
"@odata.type": "#Thermal.v1_3_0.Fan",
"LowerThresholdCritical": 1750,
"LowerThresholdNonCritical": 2000,
"MaxReadingRange": 25000,
"MemberId": "20",
"MinReadingRange": 0,
"Name": "Fan rear 14",
"Reading": 8592,
"ReadingUnits": "RPM",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/21",
"@odata.type": "#Thermal.v1_3_0.Fan",
"LowerThresholdCritical": 1750,
"LowerThresholdNonCritical": 2000,
"MaxReadingRange": 25000,
"MemberId": "21",
"MinReadingRange": 0,
"Name": "Fan rear 15",
"Reading": 8413,
"ReadingUnits": "RPM",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/22",
"@odata.type": "#Thermal.v1_3_0.Fan",
"LowerThresholdCritical": 1750,
"LowerThresholdNonCritical": 2000,
"MaxReadingRange": 25000,
"MemberId": "22",
"MinReadingRange": 0,
"Name": "Fan rear 2",
"Reading": 8413,
"ReadingUnits": "RPM",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/23",
"@odata.type": "#Thermal.v1_3_0.Fan",
"LowerThresholdCritical": 1750,
"LowerThresholdNonCritical": 2000,
```

```
"MaxReadingRange": 25000,
"MemberId": "23",
"MinReadingRange": 0,
"Name": "Fan rear 3",
"Reading": 8413,
"ReadingUnits": "RPM",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/24",
"@odata.type": "#Thermal.v1_3_0.Fan",
"LowerThresholdCritical": 1750,
"LowerThresholdNonCritical": 2000,
"MaxReadingRange": 25000,
"MemberId": "24",
"MinReadingRange": 0,
"Name": "Fan rear 4",
"Reading": 8413,
"ReadingUnits": "RPM",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/25",
"@odata.type": "#Thermal.v1_3_0.Fan",
"LowerThresholdCritical": 1750,
"LowerThresholdNonCritical": 2000,
"MaxReadingRange": 25000,
"MemberId": "25",
"MinReadingRange": 0,
"Name": "Fan rear 5",
"Reading": 8234,
"ReadingUnits": "RPM",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/26",
"@odata.type": "#Thermal.v1_3_0.Fan",
"LowerThresholdCritical": 1750,
"LowerThresholdNonCritical": 2000,
"MaxReadingRange": 25000,
"MemberId": "26",
"MinReadingRange": 0,
"Name": "Fan rear 6",
"Reading": 8413,
"ReadingUnits": "RPM",
"Status": {
"Health": "OK",
"State": "Enabled"

}
```

```
},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/27",
"@odata.type": "#Thermal.v1_3_0.Fan",
"LowerThresholdCritical": 1750,
"LowerThresholdNonCritical": 2000,
"MaxReadingRange": 25000,
"MemberId": "27",
"MinReadingRange": 0,
"Name": "Fan rear 7",
"Reading": 8592,
"ReadingUnits": "RPM",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/28",
"@odata.type": "#Thermal.v1_3_0.Fan",
"LowerThresholdCritical": 1750,
"LowerThresholdNonCritical": 2000,
"MaxReadingRange": 25000,
"MemberId": "28",
"MinReadingRange": 0,
"Name": "Fan rear 8",
"Reading": 8413,
"ReadingUnits": "RPM",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/29",
"@odata.type": "#Thermal.v1_3_0.Fan",
"LowerThresholdCritical": 1750,
"LowerThresholdNonCritical": 2000,
"MaxReadingRange": 25000,
"MemberId": "29",
"MinReadingRange": 0,
"Name": "Fan rear 9",
"Reading": 8234,
"ReadingUnits": "RPM",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/30",
"@odata.type": "#Thermal.v1_3_0.Fan",
"MaxReadingRange": 30000,
"MemberId": "30",
"MinReadingRange": 0,
"Name": "PSU1 54VSB Fan Speed 1",
"Reading": 8992,
"ReadingUnits": "RPM",
```

```
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/31",
"@odata.type": "#Thermal.v1_3_0.Fan",
"MaxReadingRange": 30000,
"MemberId": "31",
"MinReadingRange": 0,
"Name": "PSU2 54VSB Fan Speed 1",
"Reading": 8992,
"ReadingUnits": "RPM",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/32",
"@odata.type": "#Thermal.v1_3_0.Fan",
"MaxReadingRange": 30000,
"MemberId": "32",
"MinReadingRange": 0,
"Name": "PSU3 54VSB Fan Speed 1",
"Reading": 9008,
"ReadingUnits": "RPM",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/33",
"@odata.type": "#Thermal.v1_3_0.Fan",
"MaxReadingRange": 30000,
"MemberId": "33",
"MinReadingRange": 0,
"Name": "PSU7 54VSB Fan Speed 1",
"Reading": 10048,
"ReadingUnits": "RPM",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/34",
"@odata.type": "#Thermal.v1_3_0.Fan",
"MaxReadingRange": 30000,
"MemberId": "34",
"MinReadingRange": 0,
"Name": "PSU8 54VSB Fan Speed 1",
"Reading": 0,
"ReadingUnits": "RPM",
"Status": {
```

```
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/35",
"@odata.type": "#Thermal.v1_3_0.Fan",
"MaxReadingRange": 100,
"MemberId": "35",
"MinReadingRange": 0,
"Name": "Pwm 1",
"Reading": 19,
"ReadingUnits": "Percent",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/36",
"@odata.type": "#Thermal.v1_3_0.Fan",
"MaxReadingRange": 100,
"MemberId": "36",
"MinReadingRange": 0,
"Name": "Pwm 10",
"Reading": 19,
"ReadingUnits": "Percent",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/37",
"@odata.type": "#Thermal.v1_3_0.Fan",
"MaxReadingRange": 100,
"MemberId": "37",
"MinReadingRange": 0,
"Name": "Pwm 11",
"Reading": 19,
"ReadingUnits": "Percent",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/38",
"@odata.type": "#Thermal.v1_3_0.Fan",
"MaxReadingRange": 100,
"MemberId": "38",
"MinReadingRange": 0,
"Name": "Pwm 12",
"Reading": 19,
"ReadingUnits": "Percent",
"Status": {
"Health": "OK",
```

```
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/39",
"@odata.type": "#Thermal.v1_3_0.Fan",
"MaxReadingRange": 100,
"MemberId": "39",
"MinReadingRange": 0,
"Name": "Pwm 13",
"Reading": 19,
"ReadingUnits": "Percent",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/40",
"@odata.type": "#Thermal.v1_3_0.Fan",
"MaxReadingRange": 100,
"MemberId": "40",
"MinReadingRange": 0,
"Name": "Pwm 14",
"Reading": 19,
"ReadingUnits": "Percent",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/41",
"@odata.type": "#Thermal.v1_3_0.Fan",
"MaxReadingRange": 100,
"MemberId": "41",
"MinReadingRange": 0,
"Name": "Pwm 15",
"Reading": 19,
"ReadingUnits": "Percent",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/42",
"@odata.type": "#Thermal.v1_3_0.Fan",
"MaxReadingRange": 100,
"MemberId": "42",
"MinReadingRange": 0,
"Name": "Pwm 2",
"Reading": 19,
"ReadingUnits": "Percent",
"Status": {
"Health": "OK",
"State": "Enabled"
```

```
}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/43",
"@odata.type": "#Thermal.v1_3_0.Fan",
"MaxReadingRange": 100,
"MemberId": "43",
"MinReadingRange": 0,
"Name": "Pwm 3",
"Reading": 19,
"ReadingUnits": "Percent",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/44",
"@odata.type": "#Thermal.v1_3_0.Fan",
"MaxReadingRange": 100,
"MemberId": "44",
"MinReadingRange": 0,
"Name": "Pwm 4",
"Reading": 19,
"ReadingUnits": "Percent",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/45",
"@odata.type": "#Thermal.v1_3_0.Fan",
"MaxReadingRange": 100,
"MemberId": "45",
"MinReadingRange": 0,
"Name": "Pwm 5",
"Reading": 19,
"ReadingUnits": "Percent",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/46",
"@odata.type": "#Thermal.v1_3_0.Fan",
"MaxReadingRange": 100,
"MemberId": "46",
"MinReadingRange": 0,
"Name": "Pwm 6",
"Reading": 19,
"ReadingUnits": "Percent",
"Status": {
"Health": "OK",
"State": "Enabled"
```

```
}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/47",
"@odata.type": "#Thermal.v1_3_0.Fan",
"MaxReadingRange": 100,
"MemberId": "47",
"MinReadingRange": 0,
"Name": "Pwm 7",
"Reading": 19,
"ReadingUnits": "Percent",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/48",
"@odata.type": "#Thermal.v1_3_0.Fan",
"MaxReadingRange": 100,
"MemberId": "48",
"MinReadingRange": 0,
"Name": "Pwm 8",
"Reading": 19,
"ReadingUnits": "Percent",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/49",
"@odata.type": "#Thermal.v1_3_0.Fan",
"MaxReadingRange": 100,
"MemberId": "49",
"MinReadingRange": 0,
"Name": "Pwm 9",
"Reading": 19,
"ReadingUnits": "Percent",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/50",
"@odata.type": "#Thermal.v1_3_0.Fan",
"MaxReadingRange": 100,
"MemberId": "50",
"MinReadingRange": 0,
"Name": "Pwm PSU1 54VSB Fan 1",
"Reading": 30,
"ReadingUnits": "Percent",
"Status": {
"Health": "OK",
"State": "Enabled"

}
```

```
},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/51",
"@odata.type": "#Thermal.v1_3_0.Fan",
"MaxReadingRange": 100,
"MemberId": "51",
"MinReadingRange": 0,
"Name": "Pwm PSU2 54VSB Fan 1",
"Reading": 30,
"ReadingUnits": "Percent",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/52",
"@odata.type": "#Thermal.v1_3_0.Fan",
"MaxReadingRange": 100,
"MemberId": "52",
"MinReadingRange": 0,
"Name": "Pwm PSU3 54VSB Fan 1",
"Reading": 30,
"ReadingUnits": "Percent",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/53",
"@odata.type": "#Thermal.v1_3_0.Fan",
"MaxReadingRange": 100,
"MemberId": "53",
"MinReadingRange": 0,
"Name": "Pwm PSU7 54VSB Fan 1",
"Reading": 16,
"ReadingUnits": "Percent",
"Status": {
"Health": "OK",
"State": "Enabled"

}

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Fans/54",
"@odata.type": "#Thermal.v1_3_0.Fan",
"MaxReadingRange": 100,
"MemberId": "54",
"MinReadingRange": 0,
"Name": "Pwm PSU8 54VSB Fan 1",
"Reading": 16,
"ReadingUnits": "Percent",
"Status": {
"Health": "OK",
"State": "Enabled"

}
```

```
}
],
"Id": "Thermal",
"Name": "Thermal",
"Redundancy": [],
"Temperatures": [
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Temperatures/0",
"@odata.type": "#Thermal.v1_3_0.Temperature",
"LowerThresholdCritical": 5.0,
"LowerThresholdNonCritical": 10.0,
"MaxReadingRangeTemp": 127.0,
"MemberId": "0",
"MinReadingRangeTemp": -128.0,
"Name": "CPU0 FIVRA Temp",
"ReadingCelsius": 37.0,
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 70.0,
"UpperThresholdNonCritical": 60.0

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Temperatures/1",
"@odata.type": "#Thermal.v1_3_0.Temperature",
"LowerThresholdCritical": 5.0,
"LowerThresholdNonCritical": 10.0,
"MaxReadingRangeTemp": 127.0,
"MemberId": "1",
"MinReadingRangeTemp": -128.0,
"Name": "CPU0 PVCCD Temp",
"ReadingCelsius": 40.0,
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 70.0,
"UpperThresholdNonCritical": 60.0

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Temperatures/2",
"@odata.type": "#Thermal.v1_3_0.Temperature",
"LowerThresholdCritical": 5.0,
"LowerThresholdNonCritical": 10.0,
"MaxReadingRangeTemp": 127.0,
"MemberId": "2",
"MinReadingRangeTemp": -128.0,
"Name": "CPU0 PVCCIN Temp",
"ReadingCelsius": 42.0,
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 70.0,
"UpperThresholdNonCritical": 60.0

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Temperatures/3",
```

```
"@odata.type": "#Thermal.v1_3_0.Temperature",
"LowerThresholdCritical": 5.0,
"LowerThresholdNonCritical": 10.0,
"MaxReadingRangeTemp": 127.0,
"MemberId": "3",
"MinReadingRangeTemp": -128.0,
"Name": "CPU1 FIVRA Temp",
"ReadingCelsius": 33.0,
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 70.0,
"UpperThresholdNonCritical": 60.0

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Temperatures/4",
"@odata.type": "#Thermal.v1_3_0.Temperature",
"LowerThresholdCritical": 5.0,
"LowerThresholdNonCritical": 10.0,
"MaxReadingRangeTemp": 127.0,
"MemberId": "4",
"MinReadingRangeTemp": -128.0,
"Name": "CPU1 PVCCD Temp",
"ReadingCelsius": 36.0,
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 70.0,
"UpperThresholdNonCritical": 60.0

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Temperatures/5",
"@odata.type": "#Thermal.v1_3_0.Temperature",
"LowerThresholdCritical": 5.0,
"LowerThresholdNonCritical": 10.0,
"MaxReadingRangeTemp": 127.0,
"MemberId": "5",
"MinReadingRangeTemp": -128.0,
"Name": "CPU1 PVCCIN Temp",
"ReadingCelsius": 31.0,
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 70.0,
"UpperThresholdNonCritical": 60.0

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Temperatures/6",
"@odata.type": "#Thermal.v1_3_0.Temperature",
"LowerThresholdCritical": 5.0,
"LowerThresholdNonCritical": 10.0,
"MaxReadingRangeTemp": 127.0,
"MemberId": "6",
"MinReadingRangeTemp": -128.0,
"Name": "FAON CPU0 Temp",
"ReadingCelsius": 41.0,
```

```
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 70.0,
"UpperThresholdNonCritical": 60.0

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Temperatures/7",
"@odata.type": "#Thermal.v1_3_0.Temperature",
"LowerThresholdCritical": 5.0,
"LowerThresholdNonCritical": 10.0,
"MaxReadingRangeTemp": 127.0,
"MemberId": "7",
"MinReadingRangeTemp": -128.0,
"Name": "FAON CPU1 Temp",
"ReadingCelsius": 41.0,
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 70.0,
"UpperThresholdNonCritical": 60.0

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Temperatures/8",
"@odata.type": "#Thermal.v1_3_0.Temperature",
"LowerThresholdCritical": 0.0,
"LowerThresholdNonCritical": 5.0,
"MaxReadingRangeTemp": 127.0,
"MemberId": "8",
"MinReadingRangeTemp": -128.0,
"Name": "LM75BD MB",
"ReadingCelsius": 31.25,
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 115.0,
"UpperThresholdNonCritical": 110.0

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Temperatures/9",
"@odata.type": "#Thermal.v1_3_0.Temperature",
"LowerThresholdCritical": 5.0,
"LowerThresholdNonCritical": 10.0,
"MaxReadingRangeTemp": 127.0,
"MemberId": "9",
"MinReadingRangeTemp": -128.0,
"Name": "PSU1 54VSB Temp",
"ReadingCelsius": 30.812,
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 70.0,
"UpperThresholdNonCritical": 60.0
```

```
},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Temperatures/10",
"@odata.type": "#Thermal.v1_3_0.Temperature",
"LowerThresholdCritical": 5.0,
"LowerThresholdNonCritical": 10.0,
"MaxReadingRangeTemp": 127.0,
"MemberId": "10",
"MinReadingRangeTemp": -128.0,
"Name": "PSU2 54VSB Temp",
"ReadingCelsius": 30.812,
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 70.0,
"UpperThresholdNonCritical": 60.0

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Temperatures/11",
"@odata.type": "#Thermal.v1_3_0.Temperature",
"LowerThresholdCritical": 5.0,
"LowerThresholdNonCritical": 10.0,
"MaxReadingRangeTemp": 127.0,
"MemberId": "11",
"MinReadingRangeTemp": -128.0,
"Name": "PSU3 54VSB Temp",
"ReadingCelsius": 30.812,
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 70.0,
"UpperThresholdNonCritical": 60.0

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Temperatures/12",
"@odata.type": "#Thermal.v1_3_0.Temperature",
"LowerThresholdCritical": 5.0,
"LowerThresholdNonCritical": 10.0,
"MaxReadingRangeTemp": 127.0,
"MemberId": "12",
"MinReadingRangeTemp": -128.0,
"Name": "PSU7 54VSB Temp",
"ReadingCelsius": 26.0,
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 70.0,
"UpperThresholdNonCritical": 60.0

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Thermal#/Temperatures/13",
"@odata.type": "#Thermal.v1_3_0.Temperature",
"LowerThresholdCritical": 5.0,
"LowerThresholdNonCritical": 10.0,
"MaxReadingRangeTemp": 127.0,
"MemberId": "13",
```

```
"MinReadingRangeTemp": -128.0,
"Name": "PSU8 54VSB Temp",
"ReadingCelsius": 27.5,
"Status": {
"Health": "OK",
"State": "Enabled"

},
"UpperThresholdCritical": 70.0,
"UpperThresholdNonCritical": 60.0

}
]

}
```

redfish/v1/Chassis/Baseboard/Sensors

Gets the properties of the sensors resource.

URL

/redfish/v1/Chassis/Baseboard/Sensors

Method

GET

Request Example

```
curl -k -H "X-Auth-Token: $token" -X GET
https://${bmc_ip}/redfish/v1/Chassis/Baseboard/Sensors
```

Response Example

```
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Sensors",
"@odata.type": "#SensorCollection.SensorCollection",
"Description": "Collection of Sensors for this Chassis",
"Members": [
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Sensors/current_CPU0_FIVRA_Iout"

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Sensors/current_CPU0_PVCCD_Iin"

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Sensors/current_CPU0_PVCCIN_Iout"

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Sensors/current_CPU1_FIVRA_Iout"

},
{
```

```
"@odata.id": "/redfish/v1/Chassis/Baseboard/Sensors/current_CPU1_PVCCD_Iin"

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Sensors/current_CPU1_PVCCIN_Iout"

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Sensors/current_FAON_CPU0_Iout"

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Sensors/current_FAON_CPU1_Iout"

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Sensors/current_PSU1_54VSB_Iin"

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Sensors/current_PSU1_54VSB_Iout"

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Sensors/current_PSU2_54VSB_Iin"

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Sensors/current_PSU2_54VSB_Iout"

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Sensors/current_PSU3_54VSB_Iin"

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Sensors/current_PSU3_54VSB_Iout"

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Sensors/current_PSU7_54VSB_Iin"

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Sensors/current_PSU7_54VSB_Iout"

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Sensors/current_PSU8_54VSB_Iin"

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Sensors/current_PSU8_54VSB_Iout"

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Sensors/power_CPU0_FIVRA_Pout"

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Sensors/power_CPU0_PVCCD_Pin"

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Sensors/power_CPU0_PVCCIN_Pout"
```

```
},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Sensors/power_CPU1_FIVRA_Pout"

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Sensors/power_CPU1_PVCCD_Pin"

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Sensors/power_CPU1_PVCCIN_Pout"

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Sensors/power_FAON_CPU0_Pout"

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Sensors/power_FAON_CPU1_Pout"

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Sensors/power_PSU1_54VSB_Pin"

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Sensors/power_PSU1_54VSB_Pout"

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Sensors/power_PSU2_54VSB_Pin"

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Sensors/power_PSU2_54VSB_Pout"

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Sensors/power_PSU3_54VSB_Pin"

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Sensors/power_PSU3_54VSB_Pout"

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Sensors/power_PSU7_54VSB_Pin"

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Sensors/power_PSU7_54VSB_Pout"

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Sensors/power_PSU8_54VSB_Pin"

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Sensors/power_PSU8_54VSB_Pout"

},
{
"@odata.id": "/redfish/v1/Chassis/Baseboard/Sensors/power_PSU_Power_Total"
```

```
}
],
"Members@odata.count": 37,
"Name": "Sensors"

}
```

Platform Management

The commands listed in this section include power control, session service, x86 system information, and boot setting related functions.

redfish/v1/Managers/bmc/ResetActionInfo

Gets the information of the reset action resource for the BMC.

URL

/redfish/v1/Managers/bmc/ResetActionInfo

Method

GET

Request Example

```
curl -k -H "X-Auth-Token: $token" -X GET https://${bmc_ip}/redfish/v1/
  Managers/bmc/ResetActionInfo
```

Response Example

```
{
  "@odata.id": "/redfish/v1/Managers/bmc/ResetActionInfo",
  "@odata.type": "#ActionInfo.v1_1_2.ActionInfo",
  "Id": "ResetActionInfo",
  "Name": "Reset Action Info",
  "Parameters": [
    {
      "AllowableValues": [
        "GracefulRestart",
        "ForceRestart"
      ],
      "DataType": "String",
      "Name": "ResetType",
      "Required": true
    }
  ]
}
```

redfish/v1/Managers/bmc/Actions/Manager.Reset

Resets the BMC based on the reset type.

URL

/redfish/v1/Managers/bmc/Actions/Manager.Reset

Method

GET

Parameters

"ResetType"

- GracefulRestart
- ForceRestart

Request Example

```
curl -k -H "X-Auth-Token: $token" -X POST https://${bmc_ip}/redfish/v1/
  Managers/bmc/Actions/Manager.Reset -d '{"ResetType": "GracefulRestart"}'
```

Response Example

```
{
  "@Message.ExtendedInfo": [
    {
      "@odata.type": "#Message.v1_1_1.Message",
      "Message": "The request completed successfully.",
      "MessageArgs": [],
      "MessageId": "Base.1.16.0.Success",
      "MessageSeverity": "OK",
      "Resolution": "None"
    }
  ]
}
```

redfish/v1/SessionService/

Gets the properties of the sessions resource.

URL

/redfish/v1/SessionService/

Method

GET

Request Example

```
curl -k -H "X-Auth-Token: $token" -X GET https://${bmc_ip}/redfish/v1/
  SessionService/
```

Response Example

```
{
  "@odata.id": "/redfish/v1/SessionService/",
  "@odata.type": "#SessionService.v1_0_2.SessionService",
  "Description::": "Session Service",
  "Id": "SessionService",
  "Name": "Session Service",
  "ServiceEnabled": true,
  "SessionTimeout": 1800,
  "Sessions": {
    "@odata.id": "/redfish/v1/SessionService/Sessions"
  }
}
```

Method
PATCH

Parameters
SessionTimeout

Request Example
Set the session timeout time.

```
curl -k -H "Content-Type: application/json" -H "X-Auth-Token: $token" -X
  PATCH https://${bmc_ip}/redfish/v1/SessionService/ -d '{"SessionTimeout":
  2000}'
```

Response Example

```
{
  "SessionTimeOut@Message.ExtendedInfo": [
    {
      "@odata.type": "#Message.v1_1_1.Message",
     "Message": "The property SessionTimeOut was assigned the value 2000 due
  to modification by the service.",
      "MessageArgs": [
        "SessionTimeOut",
        "2000"
      ],
      "MessageId": "Base.1.8.1.PropertyValueModified",
      "MessageSeverity": "Warning",
      "Resolution": "No resolution is required."
    }
  ]
}
ubuntu@ags8200:~$ curl -k -H X-Auth-Token: $token" -k -H "Content-Type:
  application/json" -X GET https://${bmc_ip}/redfish/v1/SessionService
{
  "@odata.id": "/redfish/v1/SessionService/",
  "@odata.type": "#SessionService.v1_0_2.SessionService",
  "Description": "Session Service",
```

```
  "Id": "SessionService",
  "Name": "Session Service",
  "ServiceEnabled": true,
  "SessionTimeout": 2000,
  "Sessions": {
    "@odata.id": "/redfish/v1/SessionService/Sessions"
  }
}
```

redfish/v1/SessionService/Sessions/

Reads the sessions information.

URL

/redfish/v1/SessionService/Sessions/

Method

GET

Request Example

```
curl -k -H "X-Auth-Token: $token" -X GET https://${bmc_ip}/redfish/v1/
  SessionService/Sessions
```

Response Example

```
{
  "@odata.id": "/redfish/v1/SessionService/Sessions/",
  "@odata.type": "#SessionCollection.SessionCollection",
  "Description": "Session Collection",
  "Members": [
   {
     "@odata.id": "/redfish/v1/SessionService/Sessions/xiCleu31Bo"
   },
  ],
  "Members@odata.count": 1,
  "Name": "Session Collection"
}
URL:                  /redfish/v1/SessionService/Sessions/
Description:       Create a new session for specific user.
Method:                                                  POST
Parameter:                                                N/A
Request Example:curl -k -H "Content-Type: application/json" -H "X-Auth-Token:
  $token" -X POST https://${bmc}/redfish/v1/SessionService/Sessions/ -d
  '{"UserName":"root", "Password":"0penBmc"}'
Response
Example:                                                  {
"@odata.id": "/redfish/v1/SessionService/Sessions/XexjqaD3lu",
   "@odata.type": "#Session.v1_5_0.Session",
   "ClientOriginIPAddress": "10.102.8.101",
   "Description": "Manager User Session",
   "Id": "XexjqaD3lu",
   "Name": "User Session",
   "UserName": "root"
```

```
}
```

redfish/v1/SessionService/Sessions/<str>

Deletes a session by session ID.

URL

/redfish/v1/SessionService/Sessions/<str>

Method

DELETE

Parameters

Session ID

Request Example

```
curl -k -H "X-Auth-Token: $token" -X DELETE https://${bmc_ip} /redfish/v1/
  SessionService/Sessions/MYXxduyvGe
```

Response Example

```
{
  "@Message.ExtendedInfo": [
    {
      "@odata.type": "#Message.v1_1_1.Message",
      "Message": "Successfully Completed Request",
      "MessageArgs": [],
      "MessageId": "Base.1.8.1.Success",
      "MessageSeverity": "OK",
      "Resolution": "None"
    }
  ]
}
```

redfish/v1/Systems

Gets system information.

URL

/redfish/v1/Systems

Method

GET

Request Example

```
curl -k -H "X-Auth-Token: $token" -X GET https://${bmc_ip}/redfish/v1/Systems
```

Response Example

```
{
  "@odata.id": "/redfish/v1/Systems",
  "@odata.type": "#ComputerSystemCollection.ComputerSystemCollection",
  "Members": [
    {
      "@odata.id": "/redfish/v1/Systems/system"
    }
  ],
  "Members@odata.count": 1,
  "Name": "Computer System Collection"
}
```

redfish/v1/Systems/system

Gets the properties of systems resource.

URL

/redfish/v1/Systems/system

Method

GET

Request Example

```
curl -k -H "X-Auth-Token: $token" -X GET https://${bmc_ip}/redfish/v1/
  Systems/system/
```

Response Example

```
{
  "@odata.id": "/redfish/v1/Systems",
  "@odata.type": "#ComputerSystemCollection.ComputerSystemCollection",
  "Members": [
    {
      "@odata.id": "/redfish/v1/Systems/system"
    }
  ],
  "Members@odata.count": 1,
  "Name": "Computer System Collection"
}
:~/openbmc$ curl -k -H "X-Auth-Token: $token" -X GET https://${bmc}/redfish/
  v1/Systems/system/
{
  "@odata.id": "/redfish/v1/Systems/system",
```

```
"@odata.type": "#ComputerSystem.v1_16_0.ComputerSystem",
"Actions": {
  "#ComputerSystem.Reset": {
    "@Redfish.ActionInfo": "/redfish/v1/Systems/system/ResetActionInfo",
    "target": "/redfish/v1/Systems/system/Actions/ComputerSystem.Reset"
  }
},
"AssetTag": "N/A",
"Bios": {
  "@odata.id": "/redfish/v1/Systems/system/Bios"
},
"Boot": {
  "AutomaticRetryConfig": "RetryAttempts",
  "AutomaticRetryConfig@Redfish.AllowableValues": [
    "Disabled",
    "RetryAttempts"
  ],
  "BootSourceOverrideEnabled": "Disabled",
  "BootSourceOverrideMode": "UEFI",
  "BootSourceOverrideMode@Redfish.AllowableValues": [
    "Legacy",
    "UEFI"
  ],
  "BootSourceOverrideTarget": "None",
  "BootSourceOverrideTarget@Redfish.AllowableValues": [
    "None",
    "Pxe",
    "Hdd",
    "Cd",
    "Diags",
    "BiosSetup",
    "Usb"
  ],
  "StopBootOnFault": "Never",
  "TrustedModuleRequiredToBoot": "Disabled"
},
"Description": "Computer System",
"FabricAdapters": {
  "@odata.id": "/redfish/v1/Systems/system/FabricAdapters"
},
"GraphicalConsole": {
  "ConnectTypesSupported": [
    "KVMIP"
  ],
  "MaxConcurrentSessions": 4,
  "ServiceEnabled": true
},
"HostWatchdogTimer": {
  "FunctionEnabled": false,
  "Status": {
    "State": "Enabled"
  },
  "TimeoutAction": "ResetSystem"
},
"Id": "system",
"IndicatorLED": "Off",
"LastResetTime": "2024-06-27T07:19:55+00:00",
"Links": {
  "Chassis": [
    {
      "@odata.id": "/redfish/v1/Chassis/HSBP_1_F1"
    }
  ],
  "ManagedBy": [
    {
```

```
        "@odata.id": "/redfish/v1/Managers/bmc"
      }
    ]
  },
  "LocationIndicatorActive": false,
  "LogServices": {
    "@odata.id": "/redfish/v1/Systems/system/LogServices"
  },
  "Manufacturer": "Accton",
  "Memory": {
    "@odata.id": "/redfish/v1/Systems/system/Memory"
  },
  "MemorySummary": {
    "TotalSystemMemoryGiB": 0.0
  },
  "Model": "Main Board",
  "Name": "system",
  "PCIeDevices": [],
  "PCIeDevices@odata.count": 0,
  "PartNumber": "N0OMX2280001H",
  "PowerRestorePolicy": "AlwaysOn",
  "PowerState": "On",
  "ProcessorSummary": {
    "Count": 0
  },
  "Processors": {
    "@odata.id": "/redfish/v1/Systems/system/Processors"
  },
  "Product_Manufacturer": "Accton",
  "Product_Model": "RS2280",
  "Product_PartNumber": "F0OMX2280012H",
  "Product_SerialNumber": "RS2280S31233100003",
  "SerialConsole": {
    "IPMI": {
      "ServiceEnabled": true
    },
    "MaxConcurrentSessions": 15,
    "SSH": {
      "HotKeySequenceDisplay": "Press ~. to exit console",
      "Port": 2200,
      "ServiceEnabled": true
    }
  },
  "SerialNumber": "AN330000798",
  "Status": {
    "Health": "OK",
    "HealthRollup": "OK",
    "State": "Enabled"
  },
  "Storage": {
    "@odata.id": "/redfish/v1/Systems/system/Storage"
  },
  "SystemType": "Physical"
}
```


Method
PATCH

Parameters
{

```
    "IndicatorLED": "Blinking",
    "LocationIndicatorActive":true,
    "Boot": {
    "BootSourceOverrideEnabled":"Disabled",
    "BootSourceOverrideTarget": "None",
    "AutomaticRetryConfig": "Disabled",
    "TrustedModuleRequiredToBoot":false
}
```

Request Example

Change BIOS parameters.

```
curl -k -H "Content-Type: application/json" -H "X-Auth-Token: $token" -X
  PATCH https://${bmc}/redfish/v1/Systems/system/ -d @system
```

redfish/v1/Systems/system/ResetActionInfo

Gets the information of the reset action resource for the system.

URL

/redfish/v1/Systems/system/ResetActionInfo

Method

GET

Request Example

```
curl -k -H "X-Auth-Token: $token" -X GET
https://${bmc_ip}/redfish/v1/Systems/system/ResetActionInfo/
```

Response Example

```
{
  "@odata.id": "/redfish/v1/Systems/system/ResetActionInfo",
  "@odata.type": "#ActionInfo.v1_1_2.ActionInfo",
  "Id": "ResetActionInfo",
  "Name": "Reset Action Info",
  "Parameters": [
    {
      "AllowableValues": [
        "On",
        "ForceOff",
        "ForceOn",
        "ForceRestart",
        "GracefulRestart",
        "GracefulShutdown",
        "PowerCycle",
        "Nmi"
```

```
      ],
      "DataType": "String",
      "Name": "ResetType",
      "Required": true
    }
  ]
}
```

redfish/v1/Systems/system/Actions/ComputerSystem.Reset

Resets the system based on the reset type.

URL

/redfish/v1/Systems/system/Actions/ComputerSystem.Reset

Method

GET

Parameters

"ResetType"

- On
- ForceOff
- ForceOn
- ForceRestart
- GracefulRestart
- GracefulShutdown
- PowerCycle

Request Example

```
curl -k -H "X-Auth-Token: $token" -X POST https://${bmc}/redfish/v1/Systems/
  system/Actions/ComputerSystem.Reset -d '{"ResetType": "ForceRestart"}'
```

Response Example

```
{
  "@Message.ExtendedInfo": [
    {
      "@odata.type": "#Message.v1_1_1.Message",
      "Message": "The request completed successfully.",
      "MessageArgs": [],
      "MessageId": "Base.1.16.0.Success",
      "MessageSeverity": "OK",
      "Resolution": "None"
    }
  ]
}
```

Platform Troubleshooting

The commands listed in this section include SEL logs and post-code related functions.

redfish/v1/Systems/system/LogServices

Displays the log type.

URL

/redfish/v1/Systems/system/LogServices

Method

GET

Request Example

```
curl -k -H "X-Auth-Token: $token" -X GET https://${bmc_ip}/redfish/v1/
  Systems/system/LogServices
```

Response Example

```
{
  "@odata.id": "/redfish/v1/Systems/system/LogServices",
  "@odata.type": "#LogServiceCollection.LogServiceCollection",
  "Description": "Collection of LogServices for this Computer System",
  "Members": [
    {
      "@odata.id": "/redfish/v1/Systems/system/LogServices/EventLog"
    },
    {
      "@odata.id": "/redfish/v1/Systems/system/LogServices/HostLogger"
    },
    {
      "@odata.id": "/redfish/v1/Systems/system/LogServices/PostCodes"
    }
  ],
  "Members@odata.count": 3,
  "Name": "System Log Services Collection"
}
```

redfish/v1/Systems/system/LogServices/EventLog

Displays the event log type.

URL

/redfish/v1/Systems/system/LogServices/EventLog

Method

GET

Request Example

```
curl -k -H "X-Auth-Token: $token" -X GET https://${bmc_ip}/redfish/v1/
  Systems/system/LogServices
```

Response Example

```
{
  "@odata.id": "/redfish/v1/Systems/system/LogServices/EventLog",
  "@odata.type": "#LogService.v1_1_0.LogService",
  "Actions": {
    "#LogService.ClearLog": {
      "target": "/redfish/v1/Systems/system/LogServices/EventLog/Actions/
  LogService.ClearLog"
    }
  },
  "DateTime": "2023-12-28T00:18:36+08:00",
  "DateTimeLocalOffset": "+08:00",
  "Description::": "System Event Log Service",
  "Entries": {
    "@odata.id": "/redfish/v1/Systems/system/LogServices/EventLog/Entries"
  },
  "Id": "EventLog",
  "Name": "Event Log Service",
  "OverWritePolicy": "WrapsWhenFull"
}
```

redfish/v1/Systems/system/LogServices/EventLog/Entries

Gets the properties of the SEL entries resource.

URL

/redfish/v1/Systems/system/LogServices/EventLog/Entries

Method

GET

Request Example

```
curl -k -H "X-Auth-Token: $token" -X GET https://${bmc_ip}/redfish/v1/
  Systems/system/LogServices/ EventLog/Entries/
```

Response Example


```
{
  "@odata.id": "/redfish/v1/Systems/system/LogServices/EventLog/Entries",
  "@odata.type": "#LogEntryCollection.LogEntryCollection",
  "Description::": "Collection of System Event Log Entries",
  "Members": [
    {
  "@odata.id": "/redfish/v1/Systems/system/LogServices/EventLog/Entries/
  1704791824",
      "@odata.type": "#LogEntry.v1_8_0.LogEntry",
      "Created": "2024-01-09T17:17:04",
      "EntryType": "Event",
      "Id": "1704791824",
      "Message": "   1 | 01/09/24 | 17:17:04 CST | Voltage PSU1_VIN | Lower
  Non-critical going low  | Asserted | Reading 0 < Threshold 90 Volts\n",
      "MessageArgs": [
        "0x2",
        "50002d",
        "0x20",
        "1",
        "1",
        "2",
        "0x1e"
      ],
      "MessageId": "1",
      "Name": "System Event Log Entry",
      "Severity": ""
      },
      {
      "@odata.id": "/redfish/v1/Systems/system/LogServices/EventLog/Entries/
  1704791824_1",
      "@odata.type": "#LogEntry.v1_8_0.LogEntry",
      "Created": "2024-01-09T17:17:04",
      "EntryType": "Event",
      "Id": "1704791824_1",
      "Message": "   2 | 01/09/24 | 17:17:04 CST | Voltage PSU1_VIN | Lower
  Non-critical going low  | Asserted | Reading 0 < Threshold 90 Volts\n",
      "MessageArgs": [
        "0x2",
        "50002d",
        "0x20",
        "1",
        "1",
        "2",
        "0x1e\r"
      ],
      "MessageId": "2",
      "Name": "System Event Log Entry",
      "Severity": ""
    }
    ],
  "Members@odata.count": 2,
  "Name": "System Event Log Entries"
```

```
}
```

redfish/v1/Systems/system/LogServices/EventLog/Entries/<str>

Gets the properties of one SEL entry resource.

URL

/redfish/v1/Systems/system/LogServices/EventLog/Entries/<str>

Method

GET

Parameters

log_id

Request Example

```
curl -k -H "X-Auth-Token: $token" -X GET https://${bmc_ip}/redfish/v1/
  Systems/system/LogServices/ EventLog/Entries/1704804020_1
```

Response Example

```
{
  "@odata.id": "/redfish/v1/Systems/system/LogServices/EventLog/Entries/
  1704804020_1",
  "@odata.type": "#LogEntry.v1_8_0.LogEntry",
  "Created": "2024-01-09T20:40:20",
  "EntryType": "Event",
  "Id": "1704804020_1",
  "Message": "   c | 01/09/24 | 20:40:20 CST | Voltage PSU1_VOUT | Lower Non-
  critical going low  | Asserted | Reading 0 < Threshold 108 Volts",
  "MessageArgs": [
    "0x2",
    "50006c",
    "0x20",
    "1",
    "1",
    "2",
    "0x1f\r"
  ],
  "MessageId": "12",
  "Name": "System Event Log Entry",
  "Severity": ""
}
```

redfish/v1/Systems/system/LogServices/EventLog/Actions/LogService.ClearLog

Executes a SEL clear action.

URL

/redfish/v1/Systems/system/LogServices/EventLog/Actions/LogService.ClearLog

Method

POST

Request Example

```
curl -k -H "X-Auth-Token: $token" -X POST https://${bmc_ip}/redfish/v1/
  Systems/system/LogServices/ /EventLog/Actions/LogService.ClearLog/
```

Response Example

```
{
  "@Message.ExtendedInfo": [
    {
      "@odata.type": "#Message.v1_1_1.Message",
      "Message": "Successfully Completed Request",
      "MessageArgs": [],
      "MessageId": "Base.1.8.1.Success",
      "MessageSeverity": "OK",
      "Resolution": "None"
    }
  ]
}
```

redfish/v1/Systems/system/LogServices/PostCodes/Actions/LogService.ClearLog

Executes a PostCode log clear action.

URL

/redfish/v1/Systems/system/LogServices/PostCodes/Actions/LogService.ClearLog

Method

POST

Request Example

```
curl -k -H "X-Auth-Token: $token" -X POST https://${bmc_ip}/redfish/v1/
  Systems/system/LogServices/PostCodes/Actions/LogService.ClearLog
```

Response Example

```
{
  "@Message.ExtendedInfo": [
    {
      "@odata.type": "#Message.v1_1_1.Message",
      "Message": "The request completed successfully.",
      "MessageArgs": [],
      "MessageId": "Base.1.16.0.Success",
      "MessageSeverity": "OK",
      "Resolution": "None"
    }
  ]
}
```

redfish/v1/Systems/system/LogServices/PostCodes/Entries

Gets a collection of POST Code log entries.

URL

/redfish/v1/Systems/system/LogServices/PostCodes/Entries

Method

GET

Request Example

```
curl -k -H "X-Auth-Token: $token" -X POST https://${bmc_ip}/redfish/v1/
  Systems/system/LogServices/PostCodes/Entries
```

Response Example

```
francis@ai-build: ~ francis@ai-build:~$ curl -k -H "Content-Type:
  application/json" -H "X-Auth-Token: $token" -X GET https://${bmc}/redfish/
  v1/Systems/system/LogServices/PostCodes/Entries
{
  "@odata.id": "/redfish/v1/Systems/system/LogServices/PostCodes/Entries",
  "@odata.type": "#LogEntryCollection.LogEntryCollection",
  "Description": "Collection of POST Code Log Entries",
  "Members": [
    {
      "@odata.id": "/redfish/v1/Systems/system/LogServices/PostCodes/Entries/
  B1-1",
      "@odata.type": "#LogEntry.v1_9_0.LogEntry",
      "Created": "2024-07-01T06:51:18.118489+00:00",
      "EntryType": "Event",
      "Id": "B1-1",
     "Message": "Boot Count: 1; Time Stamp Offset: 0.0000 seconds; POST Code:
  0x7f",
      "MessageArgs": [
        "1",
        "0.0000",
        "0x7f"
      ],
```

```
      "MessageId": "OpenBMC.0.2.BIOSPOSTCode",
      "Name": "POST Code Log Entry",
      "Severity": "OK"
    },
    {
      "@odata.id": "/redfish/v1/Systems/system/LogServices/PostCodes/Entries/
  B1-2",
      "@odata.type": "#LogEntry.v1_9_0.LogEntry",
      "Created": "2024-07-01T06:51:18.170153+00:00",
      "EntryType": "Event",
      "Id": "B1-2",
     "Message": "Boot Count: 1; Time Stamp Offset: 0.0517 seconds; POST Code:
  0x48",
      "MessageArgs": [
        "1",
        "0.0517",
        "0x48"
      ],
      "MessageId": "OpenBMC.0.2.BIOSPOSTCode",
      "Name": "POST Code Log Entry",
      "Severity": "OK"
    },
... (ignore)
... (ignore)
... (ignore)
    {
      "@odata.id": "/redfish/v1/Systems/system/LogServices/PostCodes/Entries/
  B2-488",
      "@odata.type": "#LogEntry.v1_9_0.LogEntry",
      "Created": "2024-07-01T03:41:08.830870+00:00",
      "EntryType": "Event",
      "Id": "B2-488",
      "Message": "Boot Count: 2; Time Stamp Offset: 46.8544 seconds; POST
  Code: 0x92",
      "MessageArgs": [
        "2",
        "46.8544",
        "0x92"
      ],
      "MessageId": "OpenBMC.0.2.BIOSPOSTCode",
      "Name": "POST Code Log Entry",
      "Severity": "OK"
    }
  ],
  "Members@odata.count": 3592,
  "Members@odata.nextLink": "/redfish/v1/Systems/system/LogServices/
  PostCodes/Entries?$skip=1000",
  "Name": "BIOS POST Code Log Entries"
}
francis@ai-build:~$
```

Security Service

The commands listed in this section include user management, permission, and certification functions.

redfish/v1/AccountService

Gets the properties of the account resource.

URL

/redfish/v1/AccountService

Method

GET

Request Example

```
curl -k -H "X-Auth-Token: $token" -X GET https://${bmc_ip}/redfish/v1/
  AccountService
```

Response Example

```
{
  "@odata.id": "/redfish/v1/AccountService",
  "@odata.type": "#AccountService.v1_10_0.AccountService",
  "AccountLockoutDuration": 0,
  "AccountLockoutThreshold": 0,
  "Accounts": {
    "@odata.id": "/redfish/v1/AccountService/Accounts"
  },
  "ActiveDirectory": {
    "Authentication": {
      "AuthenticationType": "UsernameAndPassword",
      "Password": null,
      "Username": ""
    },
    "LDAPService": {
      "SearchSettings": {
        "BaseDistinguishedNames": [
          ""
        ],
        "GroupsAttribute": "",
        "UsernameAttribute": ""
      }
    },
    "RemoteRoleMapping": [],
    "ServiceAddresses": [
      ""
    ],
    "ServiceEnabled": false
  },
  "Description": "Account Service",
  "Id": "AccountService",
  "LDAP": {
    "Authentication": {
```

```
      "AuthenticationType": "UsernameAndPassword",
      "Password": null,
      "Username": ""
    },
    "Certificates": {
      "@odata.id": "/redfish/v1/AccountService/LDAP/Certificates"
    },
    "LDAPService": {
      "SearchSettings": {
        "BaseDistinguishedNames": [
          ""
        ],
        "GroupsAttribute": "",
        "UsernameAttribute": ""
      }
    },
    "RemoteRoleMapping": [],
    "ServiceAddresses": [
      ""
    ],
    "ServiceEnabled": false
  },
  "MaxPasswordLength": 20,
  "MinPasswordLength": 8,
  "Name": "Account Service",
  "Oem": {
    "OpenBMC": {
      "@odata.id": "/redfish/v1/AccountService#/Oem/OpenBMC",
      "@odata.type": "#OpenBMCAccountService.v1_0_0.AccountService",
      "AuthMethods": {
        "BasicAuth": true,
        "Cookie": true,
        "SessionToken": true,
        "TLS": true,
        "XToken": true
      }
    }
  },
  "Roles": {
    "@odata.id": "/redfish/v1/AccountService/Roles"
  },
  "ServiceEnabled": true
}
```


Method
PATCH

Parameters
"AccountLockoutDuration"(option)
"AccountLockoutThreshold"(option)
"MaxPasswordLength"(option)
"MinPasswordLength"(option)
"LDAP"(option)
"ActiveDirectory"(option)
"Oem"(option)

Request Example

Change the properties of the account resource.

```
curl -k -H "X-Auth-Token: $token" -H "Content-Type: application/json" -X
  PATCH https://${bmc}/redfish/v1/AccountService -d
  '{"AccountLockoutThreshold":4, "AccountLockoutDuration":0 }'
```

Response Example

```
{
  "@Message.ExtendedInfo": [
    {
      "@odata.type": "#Message.v1_1_1.Message",
      "Message": " The request completed successfully. ",
      "MessageArgs": [],
      "MessageId": " Base.1.16.0.Success",
      "MessageSeverity": "OK",
      "Resolution": "None"
    },
    {
      "@odata.type": "#Message.v1_1_1.Message",
      "Message": " The request completed successfully.",
      "MessageArgs": [],
      "MessageId": " Base.1.16.0.Success",
      "MessageSeverity": "OK",
      "Resolution": "None"
    }
  ]
}
```

redfish/v1/AccountService/Roles

Gets the information of account roles.

URL

/redfish/v1/AccountService/Roles

Method

GET

Request Example

```
curl -k -H "X-Auth-Token: $token" -X GET https://${bmc_ip}/redfish/v1/
  AccountService/Roles/
```

Response Example

```
{
  "@odata.id": "/redfish/v1/AccountService/Roles",
```

```
  "@odata.type": "#RoleCollection.RoleCollection",
  "Description": "BMC User Roles",
  "Members": [
    {
      "@odata.id": "/redfish/v1/AccountService/Roles/Administrator"
    },
    {
      "@odata.id": "/redfish/v1/AccountService/Roles/Operator"
    },
    {
      "@odata.id": "/redfish/v1/AccountService/Roles/ReadOnly"
    }
  ],
  "Members@odata.count": 3,
  "Name": "Roles Collection"
}
```

redfish/v1/AccountService/Accounts

Gets the information of accounts.

URL

/redfish/v1/AccountService/Accounts

Method

GET

Request Example

```
curl -k -H "X-Auth-Token: $token" -X GET https://${bmc_ip}/redfish/v1/
  AccountService/Accounts/
```

Response Example

```
{
  "@odata.id": "/redfish/v1/AccountService/Accounts",
  "@odata.type": "#ManagerAccountCollection.ManagerAccountCollection",
  "Description::": "BMC User Accounts",
  "Members": [
    {
      "@odata.id": "/redfish/v1/AccountService/Accounts/root"
    },
    {
      "@odata.id": "/redfish/v1/AccountService/Accounts/debuguser"
    }
  ],
  "Members@odata.count": 2,
  "Name": "Accounts Collection"
}
```

Method
POST

Parameters
"UserName"
"Password"
"RoleId"(option)
"Enabled"(option)

Request Example
Create a new account.

```
curl -k -H "X-Auth-Token: $token" -H "Content-Type: application/json" -X POST
  https://${bmc_ip}/redfish/v1/AccountService/Accounts -d '{"UserName":
  "debuguser", "Password": "0penBmc1", "RoleId": "Administrator"}'
```

Response Example

```
{
  "@Message.ExtendedInfo": [
    {
      "@odata.type": "#Message.v1_1_1.Message",
      "Message": "The resource has been created successfully.",
      "MessageArgs": [],
      "MessageId": "Base.1.16.0.Created",
      "MessageSeverity": "OK",
      "Resolution": "None."
    }
  ]
}
```

redfish/v1/AccountService/Accounts/<str>

Gets the information of accounts.

URL
/redfish/v1/AccountService/Accounts/<str>

Method
GET

Parameters
str: account name

Request Example

```
curl -k -H "X-Auth-Token: $token" -X GET https://${bmc_ip}/redfish/v1/
  AccountService/Accounts/debuguser
```

Response Example


```
{
  "@odata.id": "/redfish/v1/AccountService/Accounts/debuguser",
  "@odata.type": "#ManagerAccount.v1_4_0.ManagerAccount",
  "AccountTypes": [
    "Redfish"
  ],
  "Description::": "User Account",
  "Enabled": true,
  "Id": "debuguser",
  "Links": {
    "Role": {
      "@odata.id": "/redfish/v1/AccountService/Roles/Administrator"
    }
  },
  "Locked": false,
  "Locked@Redfish.AllowableValues": [
    "false"
  ],
  "Name": "User Account",
  "Password": null,
  "PasswordChangeRequired": false,
  "RoleId": "Administrator",
  "UserName": "debuguser"
}
```


Method
DELETE

Request Example
Delete an account.

```
curl -k -H "X-Auth-Token: $token" -X DELETE https://${bmc_ip}/redfish/v1/
  AccountService/Accounts/debuguser
```

Response Example


```
{
  "@Message.ExtendedInfo": [
    {
      "@odata.type": "#Message.v1_0_0.Message",
      "Message": "The account was successfully removed.",
      "MessageArgs": [],
      "MessageId": "Base.1.8.1.AccountRemoved",
```

```
      "MessageSeverity": "OK",
      "Resolution": "No resolution is required."
    }
  ]
}
```

redfish/v1/AccountService/LDAP/Certificates

Gets the information of LDAP certificates.

URL

/redfish/v1/AccountService/LDAP/Certificates

Method

GET

Request Example

```
curl -k -H "X-Auth-Token: $token" -X GET https://${bmc_ip}/ redfish/v1/
  AccountService/LDAP/Certificates
```

Response Example

```
{
  "@odata.id": "/redfish/v1/AccountService/LDAP/Certificates",
  "@odata.type": "#CertificateCollection.CertificateCollection",
  "Description": "A Collection of LDAP certificate instances",
  "Members": [],
  "Members@odata.count": 0,
  "Name": "LDAP Certificates Collection"
}
```

redfish/v1/CertificateService/CertificateLocations

Defines a resource that an administrator can use in order to locate all certificates installed on a given service.

URL

/redfish/v1/CertificateService/CertificateLocations

Method

GET

Request Example

```
curl -k -H "X-Auth-Token: $token" -X GET https://${bmc_ip}/redfish/v1/
  CertificateService/CertificateLocations/
```

Response Example

```
{
  "@odata.id": "/redfish/v1/CertificateService/CertificateLocations",
  "@odata.type": "#CertificateLocations.v1_0_0.CertificateLocations",
  "Description:": "Defines a resource that an administrator can use in order
  to locate all certificates installed on a given service",
  "Id": "CertificateLocations",
  "Links": {
    "Certificates": [
      {
        "@odata.id": "/redfish/v1/Managers/bmc/NetworkProtocol/HTTPS/
  Certificates/1"
      }
    ],
    "Certificates@odata.count": 1
  },
  "Name": "Certificate Locations"
}
```

redfish/v1/Managers/bmc/NetworkProtocol/HTTPS/Certificates

Gets a collection of HTTPS certificate instances.

URL

/redfish/v1/Managers/bmc/NetworkProtocol/HTTPS/Certificates

Method

GET

Request Example

```
curl -k -H "X-Auth-Token: $token" -X GET https://${bmc_ip} redfish/v1/
  Managers/bmc/NetworkProtocol/HTTPS/Certificates/
```

Response Example

```
{
 "@odata.id": "/redfish/v1/Managers/bmc/NetworkProtocol/HTTPS/Certificates",
  "@odata.type": "#CertificateCollection.CertificateCollection",
  "Description:": "A Collection of HTTPS certificate instances",
  "Members": [
    {
```

```
      "@odata.id": "/redfish/v1/Managers/bmc/NetworkProtocol/HTTPS/
  Certificates/1"
    }
  ],
  "Members@odata.count": 1,
  "Name": "HTTPS Certificates Collection"
}
```

redfish/v1/Managers/bmc/NetworkProtocol/HTTPS/Certificates/<str>

Gets an HTTPS certificate.

URL

/redfish/v1/Managers/bmc/NetworkProtocol/HTTPS/Certificates/<str>

Method

GET

Request Example

```
curl -k -H "X-Auth-Token: $token" -X GET https://${bmc_ip} redfish/v1/
  Managers/bmc/NetworkProtocol/HTTPS/Certificates/1
```

Response Example

```
{
  "@odata.id": "/redfish/v1/Managers/bmc/NetworkProtocol/HTTPS/Certificates/
  1",
  "@odata.type": "#Certificate.v1_0_0.Certificate",
  "CertificateString": "-----BEGIN CERTIFICATE-----
  \nMIIDlzCCAn8CFFCCLVEwyaNn0bpR8R1kpHvvn6L+MA0GCSqGSIb3DQEBCwUAMIGD\nMQswCQY
  DVQQGEwJBVTEMMAoGA1UECAwDMTExMQ8wDQYDVQQHDAZ0YWl3YW4xDzAN\nBgNVBAoMBmFjY3Rv
  bjEPMA0GA1UECwwGYWNjdG9uMQ0wCwYDVQQDDAR0ZXN0MSQw\nIgYJKoZIhvcNAQkBFhVhbHZpb
  l9mZW5nQGFjY3Rvbi5jb20wHhcNMjQwMTEwMDk0\nNTM0WhcNMjUwMTA5MDk0NTM0WjCBizEQMA
  4GA1UEBwwHSHNpbmNodTEQMA4GA1UE\nAwwHMS4xLjEuMTELMAkGA1UEBhMCVVMxDTALBgQrDgM
  CDANSU0ExHTAbBgNVHSUM\nFFNlcnZlckF1dGhlbnRpY2F0aW9uMQ8wDQYDVQQKDAZBY2N0b24x
  DDAKBgNVBAsM\nA1NXMTELMAkGA1UECAwCQVUwggEiMA0GCSqGSIb3DQEBAQUAA4IBDwAwggEKA
  oIB\nAQDKqbH0loFqILjgbPVxc/
  pLdyTLY11+csll0nVTADHbYmaatSgvnceYltSigJqg\nL834RdWbHAlm2ANzW8xzOH7UQm14JGi
  obuxr5m//
  IjAtEzjW1E+E8fvx+tO1Qnmr\nZEZQiQI9t6LNLWiQJwNMUkSokT2CK5I8bSRYfy6OYzU7yGCJ4
  ZaJoBbnqyk2o+Gn\n672pCo96/
  KP9kFLuQOt4CgUSi221a+nZbEI0sLk2qlsi9KZnJyNT0zi1IjXW+UK9\nPWUSJs6zCUzoJj4HNR
  LOcXTrOIUEXONDUfRdBNSyOep7wVKLDalh4+NK41hOteKs\nbgJIQLOidd8CPADgvU1Hmt8VAgM
  BAAEwDQYJKoZIhvcNAQELBQADggEBAEBm5s4e\nFT2VOYfGZODI/8uHj/
  V9eLcq5mbxJVXl73NOK7wErOUfpdaGF0ZLJqLo6eRhx2E4\nsRMoz6KQG+RAd9ouIxtslyJb3nO
  ohDD6ma2h3DuTbTqqQ9CXHiNJ6CTN85b1i825\nERpodj3G5w6IILaO0VP+HuyGCMBd0N22HPOI
  2KtLlVVkIBdAOCAKDJpiMJAZyhPC\n/
  O7taKYoOHrdclASOCSWx2M30YNnDqc+6Grwi2uawcCEca5yvnwdsoOoHe5dZlSu\nlCD8f9UVrE
  ab7y7Eay84sGwzLSKta1r6cQpp90VWzx8tZISS9dtCB+HSPlA1WCFg\n2FGu7akvbMOVtww=\n-
  ----END CERTIFICATE-----\n",
  "Description:": "HTTPS Certificate",
  "Id": "1",
  "Issuer": {
    "City": "taiwan",
```

```
    "CommonName": "test",
    "Country": "AU",
    "Organization": "accton",
    "OrganizationalUnit": "accton",
    "State": "111"
  },
  "KeyUsage:": [],
  "Name": "HTTPS Certificate",
  "Subject": {
    "City": "Hsinchu",
    "CommonName": "1.1.1.1",
    "Country": "US",
    "Organization": "Accton",
    "OrganizationalUnit": "SW1",
    "State": "AU"
  },
  "ValidNotAfter": "2025-01-09T05:45:34+08:00",
  "ValidNotBefore": "2024-01-10T05:45:34+08:00"
}
```


redfish/v1/Managers/bmc/Truststore/Certificates

Gets a collection of HTTPS certificate instances.

URL

/redfish/v1/Managers/bmc/Truststore/Certificates

Method

GET

Request Example

```
curl -k -H "X-Auth-Token: $token" -X GET https://${bmc_ip} redfish/v1/
  Managers/bmc/Truststore/Certificates/
```

Response Example


```
{
"@odata.id": "/redfish/v1/Managers/bmc/Truststore/Certificates/",
"@odata.type": "#CertificateCollection.CertificateCollection",
  "Description": "A Collection of TrustStore certificate instances",
  "Members": [],
  "Members@odata.count": 0,
  "Name": "TrustStore Certificates Collection"
}
```

redfish/v1/CertificateService/Actions/CertificateService.ReplaceCertificate

Replaces HTTPS certificate instances.

URL

/redfish/v1/CertificateService/Actions/CertificateService.ReplaceCertificate

Method

POST

Request Example

```
curl -k -H "X-Auth-Token: $token" -X POST https://${bmc_ip} /redfish/v1/
  CertificateService/Actions/CertificateService.ReplaceCertificate/ -d
  @certificate.json
```

Response Example

```
{
  "@odata.id": "/redfish/v1/Managers/bmc/NetworkProtocol/HTTPS/Certificates/
  1",
  "@odata.type": "#Certificate.v1_0_0.Certificate",
  "CertificateString": "-----BEGIN CERTIFICATE-----
  \nMIIDlzCCAn8CFFCCLVEwyaNn0bpR8R1kpHvvn6L+MA0GCSqGSIb3DQEBCwUAMIGD\nMQswCQY
  DVQQGEwJBVTEMMAoGA1UECAwDMTExMQ8wDQYDVQQHDAZ0YWl3YW4xDzAN\nBgNVBAoMBmFjY3Rv
  bjEPMA0GA1UECwwGYWNjdG9uMQ0wCwYDVQQDDAR0ZXN0MSQw\nIgYJKoZIhvcNAQkBFhVhbHZpb
  l9mZW5nQGFjY3Rvbi5jb20wHhcNMjQwMTEwMDk0\nNTM0WhcNMjUwMTA5MDk0NTM0WjCBizEQMA
  4GA1UEBwwHSHNpbmNodTEQMA4GA1UE\nAwwHMS4xLjEuMTELMAkGA1UEBhMCVVMxDTALBgQrDgM
  CDANSU0ExHTAbBgNVHSUM\nFFNlcnZlckF1dGhlbnRpY2F0aW9uMQ8wDQYDVQQKDAZBY2N0b24x
  DDAKBgNVBAsM\nA1NXMTELMAkGA1UECAwCQVUwggEiMA0GCSqGSIb3DQEBAQUAA4IBDwAwggEKA
  oIB\nAQDKqbH0loFqILjgbPVxc/
  pLdyTLY11+csll0nVTADHbYmaatSgvnceYltSigJqg\nL834RdWbHAlm2ANzW8xzOH7UQm14JGi
  obuxr5m//
  IjAtEzjW1E+E8fvx+tO1Qnmr\nZEZQiQI9t6LNLWiQJwNMUkSokT2CK5I8bSRYfy6OYzU7yGCJ4
  ZaJoBbnqyk2o+Gn\n672pCo96/
  KP9kFLuQOt4CgUSi221a+nZbEI0sLk2qlsi9KZnJyNT0zi1IjXW+UK9\nPWUSJs6zCUzoJj4HNR
  LOcXTrOIUEXONDUfRdBNSyOep7wVKLDalh4+NK41hOteKs\nbgJIQLOidd8CPADgvU1Hmt8VAgM
  BAAEwDQYJKoZIhvcNAQELBQADggEBAEBm5s4e\nFT2VOYfGZODI/8uHj/
  V9eLcq5mbxJVXl73NOK7wErOUfpdaGF0ZLJqLo6eRhx2E4\nsRMoz6KQG+RAd9ouIxtslyJb3nO
  ohDD6ma2h3DuTbTqqQ9CXHiNJ6CTN85b1i825\nERpodj3G5w6IILaO0VP+HuyGCMBd0N22HPOI
  2KtLlVVkIBdAOCAKDJpiMJAZyhPC\n/
  O7taKYoOHrdclASOCSWx2M30YNnDqc+6Grwi2uawcCEca5yvnwdsoOoHe5dZlSu\nlCD8f9UVrE
  ab7y7Eay84sGwzLSKta1r6cQpp90VWzx8tZISS9dtCB+HSPlA1WCFg\n2FGu7akvbMOVtww=\n-
  ----END CERTIFICATE-----\n",
  "Description:": "HTTPS certificate",
  "Id": "1",
  "Issuer": {
    "City": "taiwan",
    "CommonName": "test",
    "Country": "AU",
    "Organization": "accton",
    "OrganizationalUnit": "accton",
    "State": "111"
  },
  "KeyUsage:": [],
  "Name": "HTTPS certificate",
  "Subject": {
    "City": "Hsinchu",
    "CommonName": "1.1.1.1",
```

```
    "Country": "US",
    "Organization": "Accton",
    "OrganizationalUnit": "SW1",
    "State": "AU"
  },
  "ValidNotAfter": "2025-01-09T05:45:34+08:00",
  "ValidNotBefore": "2024-01-10T05:45:34+08:00"
}
```

redfish/v1/CertificateService/Actions/CertificateService.GenerateCSR

Generates a CSR file.

URL

/redfish/v1/CertificateService/Actions/CertificateService.GenerateCSR

Method

POST

Request Example

```
curl -k -H "X-Auth-Token: $token" -X POST https://${bmc_ip} /redfish/v1/
  CertificateService/Actions/CertificateService.GenerateCSR/ -d
  @csr_file.json
```

Response Example

```
{
  "CSRString":"-----BEGIN CERTIFICATE REQUEST-----
  MIIC0TCCAbkCAQEwgYsxEDAOBgNVBAcMB0hzaW5jaHUxEDAOBgNVBAMMBzEuMS4x
  LjExCzAJBgNVBAYTAlVTMQ0wCwYEKw4DAgwDUlNBMR0wGwYDVR0lDBRTZXJ2ZXJB
  dXRoZW50aWNhdGlvbjEPMA0GA1UECgwGQWNjdG9uMQwwCgYDVQQLDANTVzExCzAJ
  BgNVBAgMAkFVMIIBIjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCAQEAyqmx9JaB
  aiC44Gz1cXP6S3cky2NdfnLJZdJ1UwAx22JmmrUoL53HmJbUooCaoC/N+EXVmxwJ
  ZtgDc1vMczh+1EJteCRoqG7sa+Zv/yIwLRM41tRPhPH78frTtUJ5q2RGUIkCPbei
  zS1okCcDTFJEqJE9giuSPG0kWH8ujmM1O8hgieGWiaAW56spNqPhp+u9qQqPevyj/
  ZBS7kDreAoFEotttWvp2WxCNLC5NqpbIvSmZycjU9M4tSI11vlCvT1lEibOswlM
  6CY+BzUSznF06ziFBFzjQ1H0XQTUsjnqe8FSiw2pYePjSuNYTrXirG4CSECzonXf
  AjwA4L1NR5rfFQIDAQABoAAwDQYJKoZIhvcNAQELBQADggEBAAujABzYXc5b81Z4
  JORLSUFAptM+oa46xR5zttsFHW1be8c2MAyVS5wWjAC6hlpgd2/h5/TPEGT26T7/
  hqeOZYxlcaEegNt8ZcdYio4WvOAbeo0lYU/9SJILkz12CWj916EPQhXpWYihzHiw
  5cu72BPeUq7VnleBdMnFkEjuH2zMyp4vz18xSyb8G8Ig73pQSz5gFD0vT+cBBg8+
  X2ci4XjDXEdNeonT/EECzOrSxiLFSiEwxeASxxSmgMGzeehhxyXb5xrel1obL3Cf
  iBAazB99aC+qam7n51iWB7VpA2KwPN8ScJCijkeskNUGkPpmMcphDNdfqNoDSOrLH0UA/lg=---
  --END CERTIFICATE REQUEST-----",
  "CertificateCollection": {
  "@odata.id": "/redfish/v1/Managers/bmc/NetworkProtocol/HTTPS/Certificates/"
  }
}
```

5 Web Interface

This chapter includes the following sections:

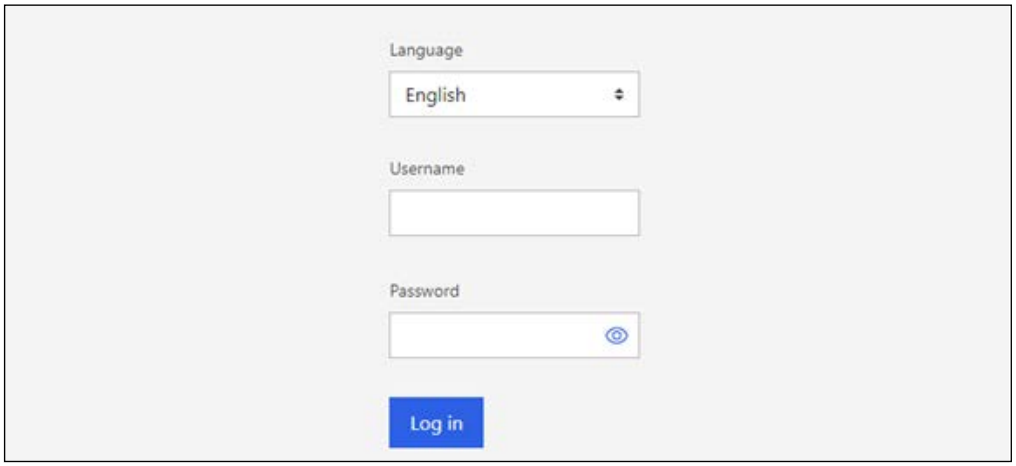
Web Interface Overview

OpenBMC supports web services through the HTTPS protocol, and the BMC web interface can be accessed based on the IP address setting of the BMC's management (MGMT) port. For example, https://192.168.1.100, the IP address "192.168.1.100" must be the same as the IP address of the BMC's MGMT port. The BMC web interface on the AGS8200 uses "webui-vue," which is a web-based user interface for the OpenBMC firmware stack built on Vue.js. Each of the following sections describe the functional support based on each web page.

Web Interface Login

This is the login page of the OpenBMC web interface. After you enter a user name and password into the corresponding fields, click the "Log in" button to log in to the web service.

Figure 1: Web Interface Login



The following fields on this page are available for configuration.

- **Language** — Select the language that you want to display in the web interface.
- **Username** — Enter a registered username.
- **Password** — Enter a registered password.

Bulletin Board

The bulletin board contains the board serial number, product health, x86 power status, and logged-in user related information.

Figure 2: Bulletin Board

The following icons on the Bulletin Board are displayed or can be clicked.

- **Accton** — Click to return to the overview page.
- **Product Serial Number** — Displays the product serial number.
- **Health** — Displays the event log status that has been received. Clicking this button links to the "Event logs" page.
- **Power** — Displays the x86 power state, which is based on the ACPI state. Green indicates power-on status and gray indicates power-off status. Click this button to go to the "Server power operations" page.
- **Logged-in User** — The drop-down list provides "Profile settings" and "log out" options.

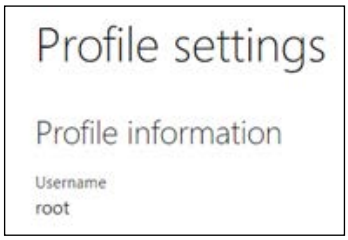
Profile Settings

The Profile Settings page displays the currently logged-in user account and provides the options to change the password and configure the timezone.

Profile Information

This section displays the logged-in user accounts.

Figure 3: Profile Settings



The following field is displayed.

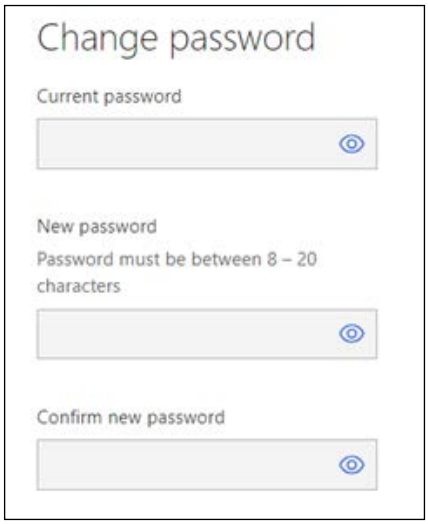
- **Username** - The logged-in user account.

Change Password

This page section allows the account password to be changed. First enter the current password, and then enter a new password. Passwords should be between 8-20 characters.

Enter the new password again in "Confirm new password" and then click "Save settings" to save the new password. The web interface logs out automatically and then asks you to log in using the new password.

Figure 4: Change Password



The following fields on this page are available for configuration.

- **Current password** — Enter the old password.
- **New password** — Enter the new password. Passwords must be between 8-20 characters.
- **Confirm new password** — Enter the new password again. Must be the same as the password above.

Timezone Display Preference

In this section, you can select how time is displayed throughout the application.

Figure 5: Timezone Display

The following field on this page is available for configuration.

- **Timezone** — Select how time is displayed throughout the application.

System Overview

This page displays the current system time and system-related information, including server information, firmware information, network information, power information, and status information.

Figure 6: Overview

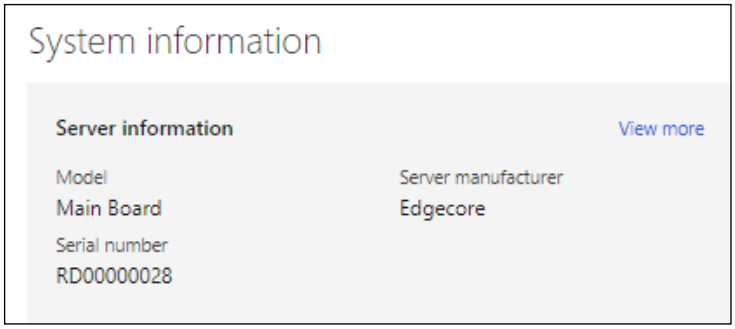
The following fields on this page are available for configuration or information.

- **BMC date and time** — Shows the BMC date and time.
- **SOL console** — Click this button to link to the "SOL console" page.

Server Information

The Server Information window is used to display the basic information of the machine, including the model, manufacturer, and serial number.

Figure 7: Server Information



The following fields are displayed in this window.

- **Model** — The board type of the product.
- **Server manufacturer** — The name of the manufacturer.
- **Serial number** — The serial number of the product.
- **View more** — Click this link to go to the "Inventory and LEDs" page.

Firmware Information

The Firmware Information window displays the version of the running BMC firmware. Click "View more" to link to the "Firmware" page.

Figure 8: Firmware Information

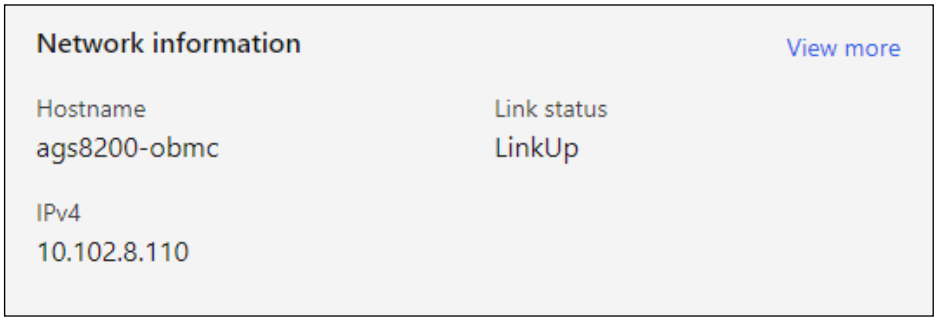
The following fields are displayed in this window.

- **Running** — Displays the version of the running BMC firmware.
- **View more** — Click this link to go to the "Firmware" page.

Network Information

The Network Information window displays network information, including the hostname, link status, and IPv4 address. More detailed network information and settings are available through the "View more" link.

Figure 9: Network Information



The following fields are displayed in this window.

- **Hostname** — The name of the machine host.
- **Link status** — The network interface link status.
- **IPv4** — Displays the IPv4 address.
- **View more** — Click this link to go to the "Network" page and view detailed network information and settings.

Power Information

The Power Information window displays the total power consumption of the machine.

Figure 10: Power Information

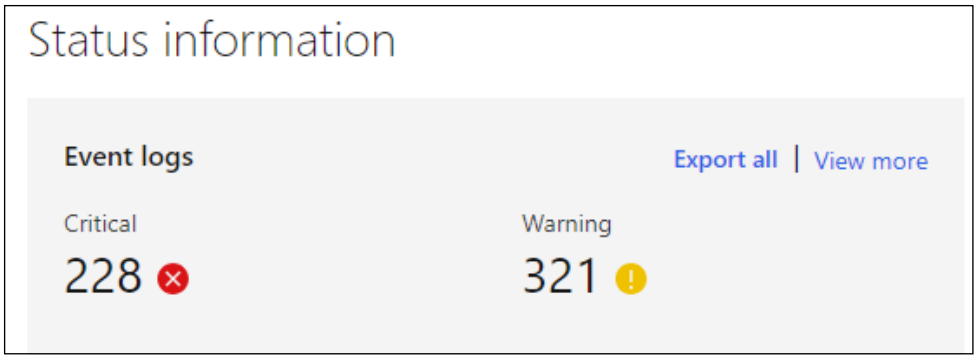
The following fields are displayed in this window.

- **Power consumption** — Displays the total power consumption of the machine.
- **View more** — Click this link to go to the "Power" page and view information about the total power consumption of the machine.

Status Information

The Status Information window displays whether the machine currently has any abnormal events with a log level classified as Critical or Warning. You can use the "Export all" option to download related logs, or use the "View more" option to view detailed event logs.

Figure 11: Status Information



The following fields are displayed in this window.

- **Critical** — Number of critical level logs.
- **Warning** — Number of warning level logs.
- **Export all** — Downloads all logs to a computer.
- **View more** — Click this link to go to the "Event logs" page and view detailed event log information.

Inventory and LEDs

The Inventory and LEDs window allows you to turn on or off the machine's UID (Unit Identification) LED. This feature can help you to quickly locate specific machines in the server room.

Figure 12: Inventory and LEDs

The following fields are displayed in this window.

- **System identify LED** — Turns the UID LED on or off.
- **View more** — Click this link to go to the "Inventory and LEDs" page.

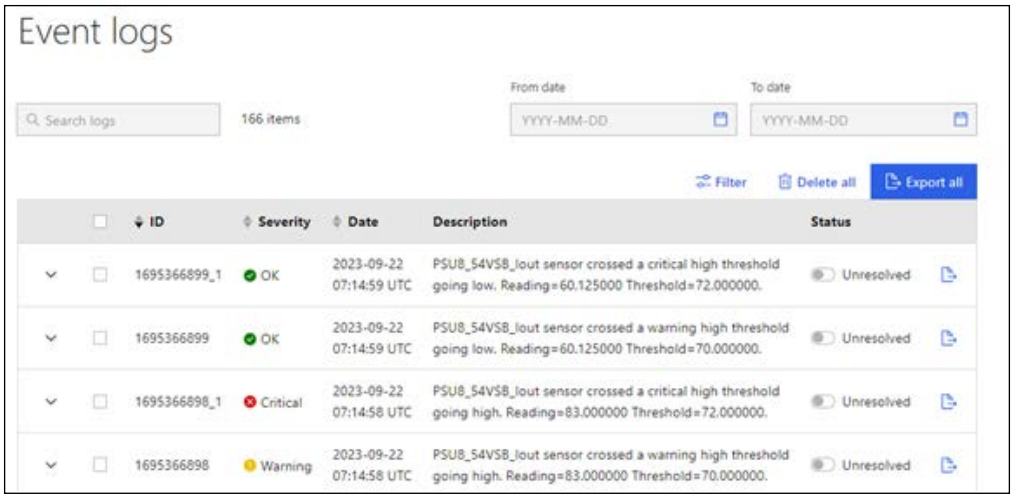
Logs

The Logs drop-down menu contains two options, "Event logs" and "POST code logs." You can view the currently recorded event log status through the "Event logs" page, and check the x86 boot status through "POST code logs" page.

Event Logs

The Events Logs page displays system event logs. You can query the logs on this page for troubleshooting and analysis purposes.

Figure 13: Event Logs



The following fields are displayed on this page.

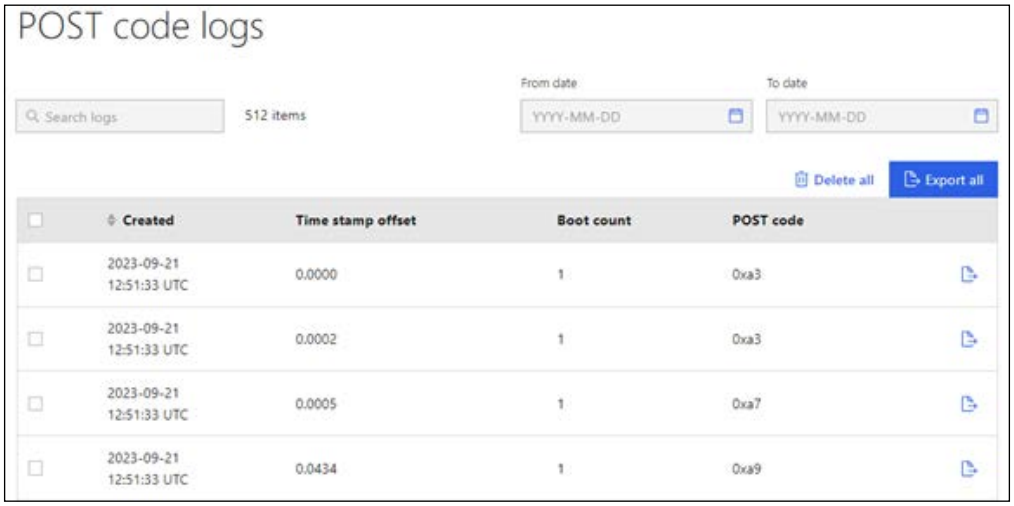
- **Search logs** — Use keywords to search for specific logs.

- **From date** — Sets the starting time to view logs within an interval.
- **To date** — Sets the end time to view logs within an interval.
- **Filter** — This option can filter logs that users would like to display based on severity and status.
- **Delete all** — Deletes all logs.
- **Export all** — Outputs all logs into files.
- **ID** — Log entry ID.
- **Severity** — Classification log level.
- **Date** — The time when a log event occurred.
- **Description** — The content of a log entry.
- **Status** — The log can indicate resolved or unresolved.

POST Code Logs

The POST Code Logs page displays the x86 startup status records.

Figure 14: POST Code Logs



The following fields are displayed on this page.

- **Search logs** — Use keywords to search for specific post logs.
- **From date** — Sets the starting time to view POST logs within an interval.
- **To date** — Sets the end time to view POST logs within an interval.
- **Delete all** — Deletes all post logs.

- **Export all** — Outputs all post logs into files.
- **Items per page** — Selects how many POST logs to display on each page.

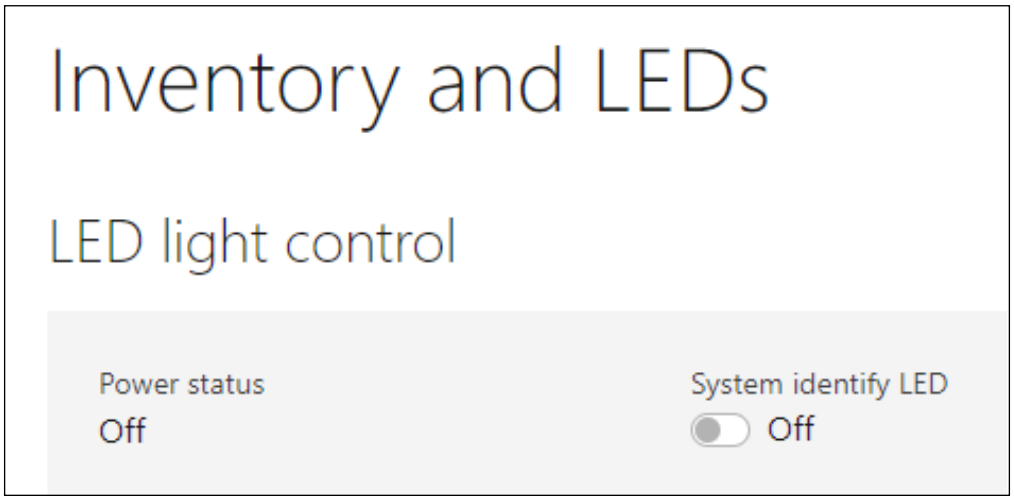
Hardware Status

The Hardware Status drop-down menu contains two options, "Inventory and LEDs" and "Sensors." You can view the board and product EEPROM information from the "Inventory and LEDs" page and can enable or disable the UID LED on the AGS8200 AI Server. In addition, you can check the real-time health status of components from the "Sensors" page.

Inventory and LEDs – LED Light Control

The Inventory and LEDs window contains two elements, "Power status" and "System identify LED." The "Power status" indicates whether the power state of the x86 host is on or off, and the "System identify LED" turns the UID LED on or off.

Figure 15: LED Light Control



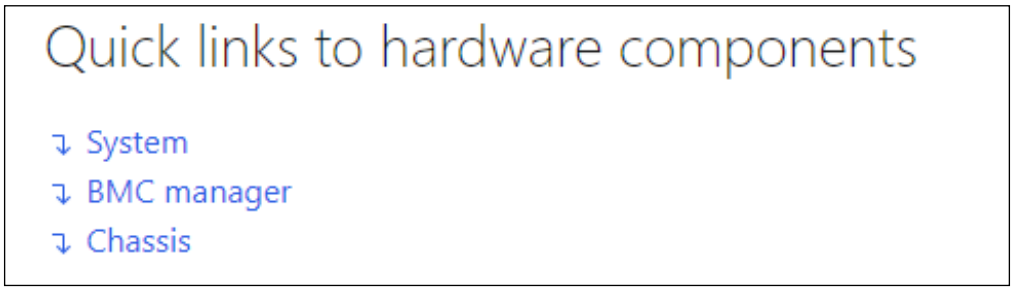
The following fields are displayed in this window.

- **Power status** — The power status of the x86 host.
- **System identify LED** — Turns UID LED light on or off.

Inventory and LEDs – Quick Links

The "Quick links to hardware components" window provides three links to the "System," "BMC manager," and "Chassis" windows on the same page.

Figure 16: Quick Links to Hardware Components



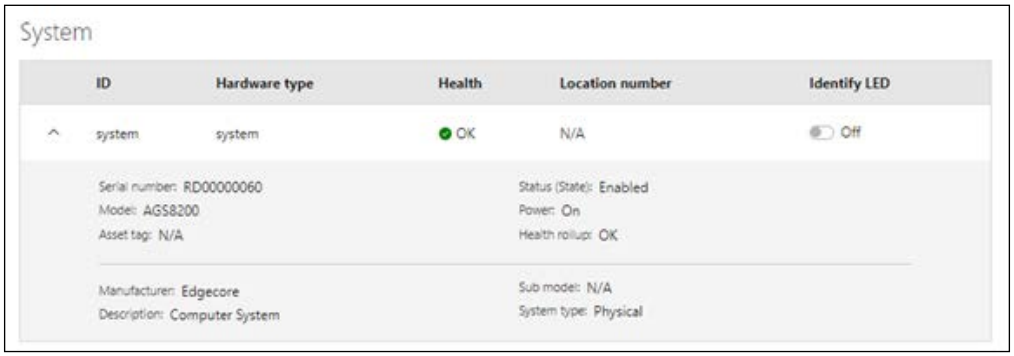
The following fields are displayed in this window.

- **System** — Click this link to the "System" window.
- **BMC manager** — Click this link to the "BMC manager" window.
- **Chassis** — Click this link to the "Chassis" window.

Inventory and LEDs – System

The System window displays various information of the main board FRU EEPROM, the power status, and the state of the host system. Click "Identify LED" to turn the UID LED on or off.

Figure 17: Inventory and LEDs - System



The following fields are displayed in this window.

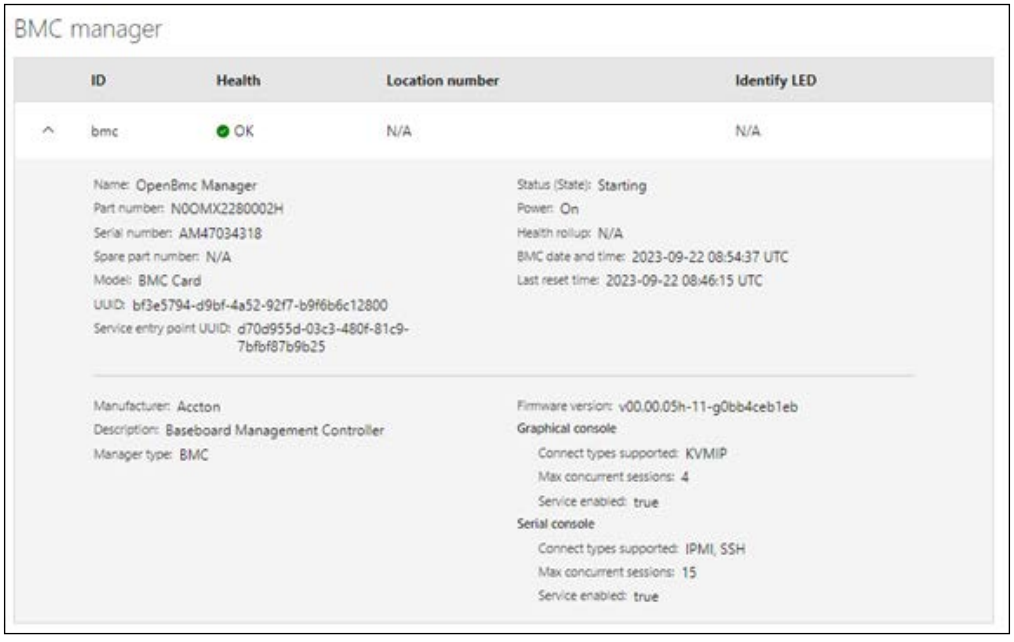
- **ID** — Displays the ID of this window.
- **Hardware type** — Displays the hardware type of this window.
- **Health** — Displays the health status of the host system.
- **Location number** — Displays the location number. This is not defined for AGS8200.

- **Identify LED** — Click this button to turn the UID LED on or off.
- **Serial number** — Displays the product serial number of the main board FRU EEPROM.
- **Model** — Displays the product model name of the main board FRU EEPROM.
- **Assert tag** — Displays the product assert tag of the main board FRU EEPROM.
- **Status (State)** — Displays the state of the host system.
- **Power** — Displays the power status of the host system.
- **Health rollup** — Displays the health rollup status of the host system.
- **Manufacturer** — Displays the product manufacturer of the main board FRU EEPROM.
- **Description** — Displays the description of this window.
- **Sub model** — Displays the product sub model name of the main board FRU EEPROM.
- **System type** — Displays the system type.

Inventory and LEDs – BMC Manager

The BMC Manager window displays information of the BMC board FRU EEPROM, the power status, and the state of the BMC system. Click the "Identify LED" to turn on or off the identify LED if it exists.

Figure 18: Inventory and LEDs - BMC Manager



The following fields are displayed in this window.

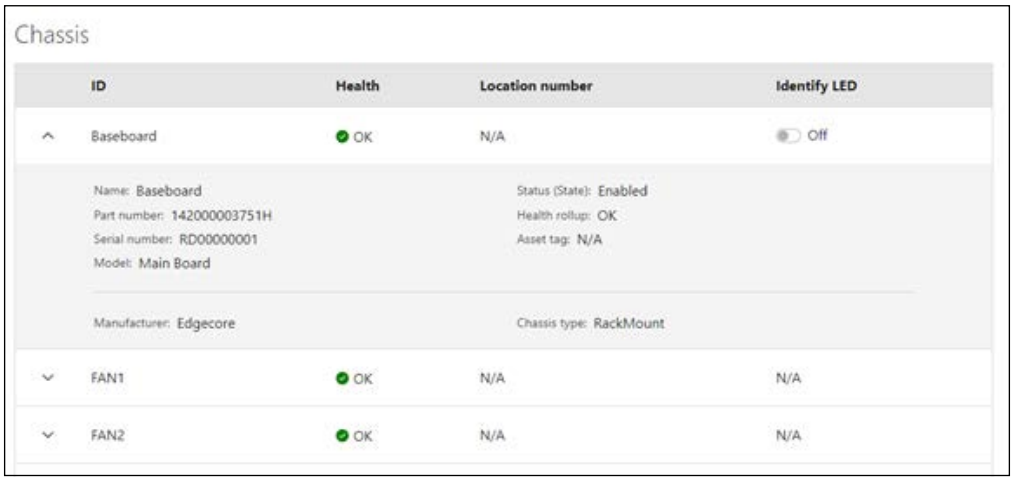
- **ID** — Displays the ID of this window.
- **Health** — Displays the health status of the BMC system.
- **Location number** — Displays the location number. This is not defined for AGS8200.
- **Identify LED** — Click this button to turn on or off the identify LED for the BMC system. Not supported for AGS8200.
- **Name** — Displays the name of the BMC system.
- **Part number** — Displays the board part number of the BMC board FRU EEPROM.
- **Serial number** — Displays the board serial number of the BMC board FRU EEPROM.
- **Spare part number** — Displays the board spare part number of the BMC board FRU EEPROM.
- **Model** — Displays the product model name of the BMC board FRU EEPROM.
- **UUID** — Displays the UUID of the BMC system.
- **Service entry point UUID** — Displays the service entry point UUID of the BMC system.
- **Status (State)** — Displays the state of the BMC system.
- **Power** — Displays the power status of the BMC system.
- **Health rollup** — Displays the health rollup status of the BMC system. This is not defined for AGS8200.
- **BMC date and time** — Displays the date and time of the BMC system.
- **Last reset time** — Displays the date and time of the BMC system.
- **Manufacturer** — Displays the board manufacturer of the BMC board FRU EEPROM.
- **Description** — Displays the description of this window.
- **Manager type** — Displays the manager type.
- **Firmware version** — Display sthe running firmware version of the BMC system.

- **Graphical console - Connect types supported** — Displays the supported type of the graphical console.
- **Graphical console - Max concurrent sessions** — Displays the max concurrent sessions number of the graphical console.
- **Graphical console - Service enabled** — Displays the enabled status of the graphical console.
- **Serial console - Connect types supported** — Displays the supported type of the serial console.
- **Serial console - Max concurrent sessions** — Displays the max concurrent sessions number of the serial console.
- **Serial console - Service enabled** — Displays the enabled status of the serial console.

Inventory and LEDs – Chassis

The Chassis window displays information from the FRU EEPROM of boards and components. Click "Identify LED" to turn on or off the board identify LED.

Figure 19: Inventory and LEDs - Chassis



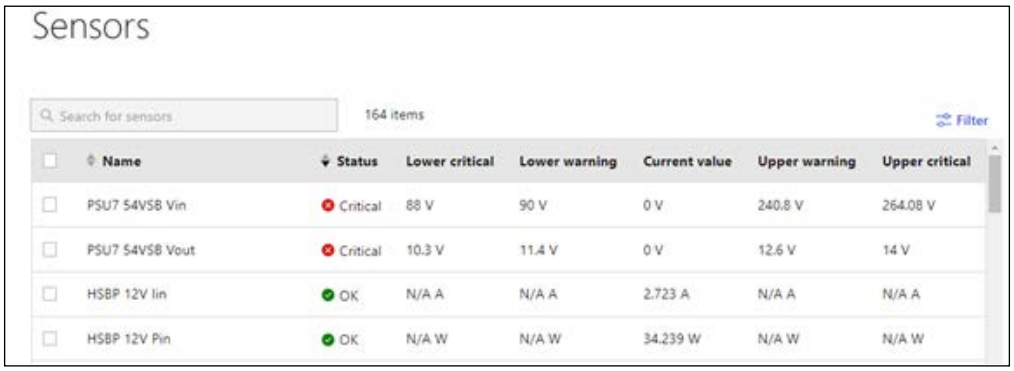
The following fields are displayed in this window.

- **ID** — The name of the board.
- **Health** — The status of the board.
- **Location number** — If the board has a location number, it will be displayed in this field. Otherwise, it will show as "NA".
- **Identify LED** — If the board has an LED indicator, you can click to turn it on.

Sensors

The Sensors window displays the values and status of all sensors. It provides real-time information about sensor readings and the operational status of components.

Figure 20: Sensors



The following fields are displayed in this window.

- **Search for sensors** — Uses keywords to search for a specific sensor.
- **Filter** — This option can filter the sensors and components that you want to display based on the OK/Warning/Critical status.
- **Name** — Sensor name.
- **Status** — Sensor status.
- **Lower critical** — Lower critical sensor value.
- **Lower warning** — Lower warning sensor value.
- **Current value** — Current sensor value.
- **Upper warning** — Upper warning sensor value.
- **Upper critical** — Upper critical sensor value.

Operations

The Operations drop-down menu contains six options, “KVM”, “Firmware”, “Reboot BMC”, “SOL console”, “Server power operations”, and “Virtual media”. The “KVM”, “SOL console” and “Virtual media” pages are remote-control host related functions. In addition, you can update the BMC firmware and obtain BMC firmware information through the “Firmware” page, and set x86 power related operations through the “Server power operations” page.

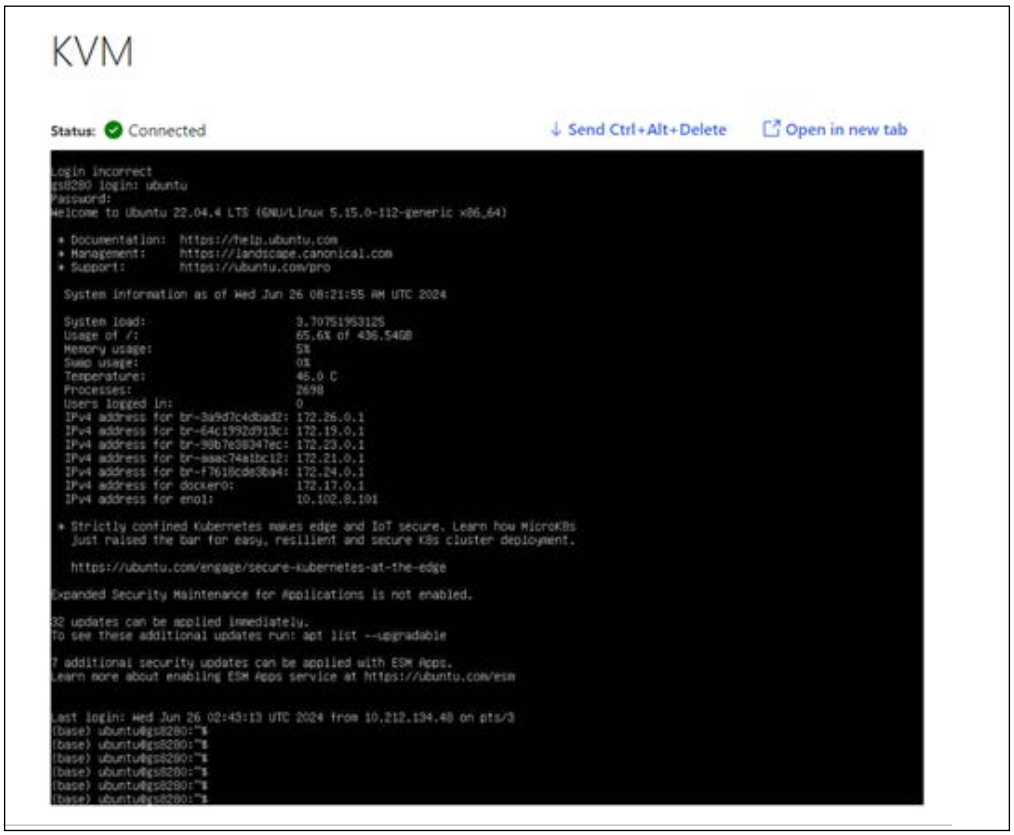
KVM

This page provides the KVM (Keyboard, Video and Mouse) feature for the host system and displays the status. KVM is a feature within the BMC firmware that allows for remote management of a computer system. Through KVM, you can interact with the host system as if you were physically present, providing the capability to manage and troubleshoot systems remotely.

Click the “Send Ctrl+Alt+Delete” button to simulate sending a Ctrl+Alt+Delete command to the host operating system. Click the “Open in new tab” button to open this web page in another browser tab.

Note that the host BIOS and operating system should install the Aspeed VGA controller driver to fully support the VGA controller’s features for AGS8200. For more detailed instructions, refer to the “Aspeed Graphics User Guide”.

Figure 21: KVM



The following fields are displayed on this page.

- **Status** — Displays the status of the KVM.
- **Send Ctrl+Alt+Delete** — Click this button to simulate sending a Ctrl+Alt+Delete command to the host operating system.
- **Open in new tab** — Click this button to open this web page in another browser tab.

Firmware – BMC and Server

The BMC and Server window displays the version of the running BMC firmware.

Figure 22: Firmware – BMC and Server

The following field is displayed in this window.

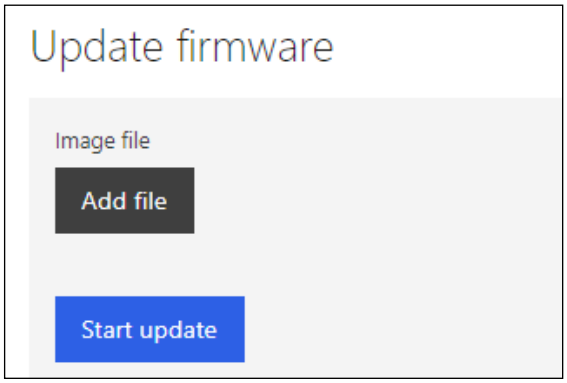
- **Running image** — Displays the version of the running BMC firmware.

Firmware – Update Firmware

The Update Firmware window provides the BMC firmware updating feature.

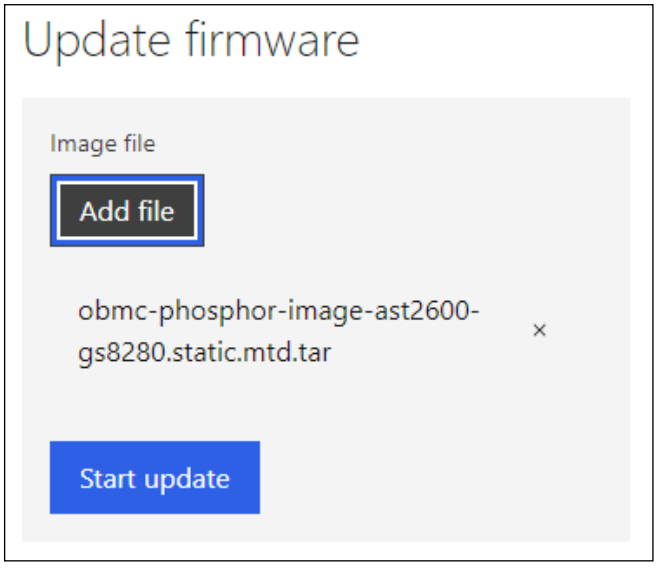
Click the "Add file" button to select the BMC firmware image.

Figure 23: Update Firmware – Add File



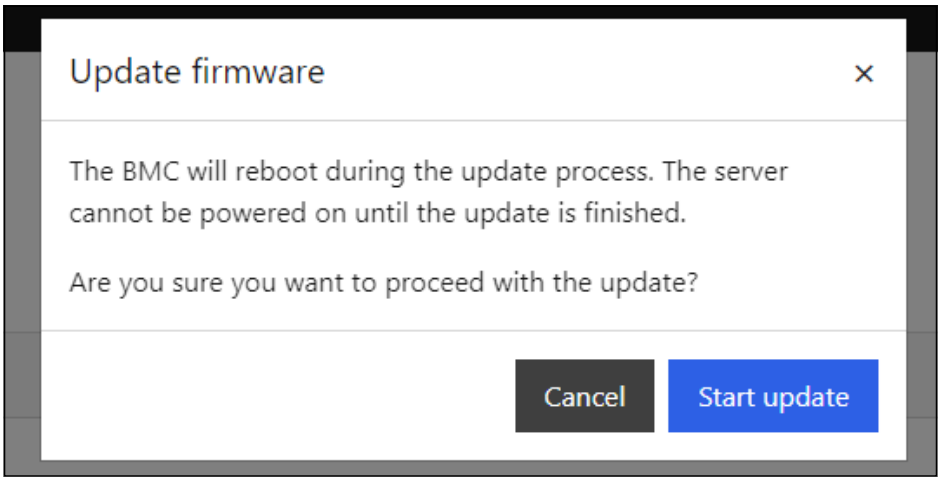
Then click the "Start update" button to start the update.

Figure 24: Update Firmware – Start Update



Click the "Cancel" or "Start update" button of the popup window to cancel or confirm the update procedure.

Figure 25: Update Firmware – Confirm Update



The following fields are displayed in these windows.

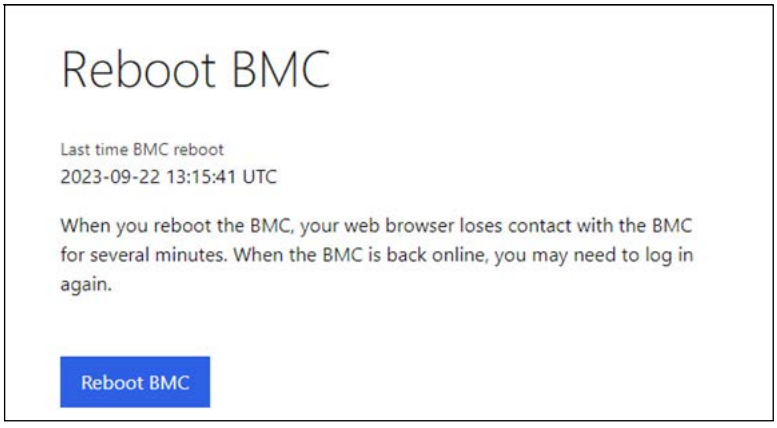
- **Add file** — Click this button to select the BMC firmware image for the update.
- **x** — Click this button to cancel the selected file.
- **Start update** — Click this button to start updating the selected BMC firmware image.
- **Cancel** — Click this button to cancel the update request.
- **Start Update** — Click this button to start executing the update procedure.

Reboot BMC

The Reboot BMC page displays the time of the last BMC reboot and provides the reboot feature for the BMC.

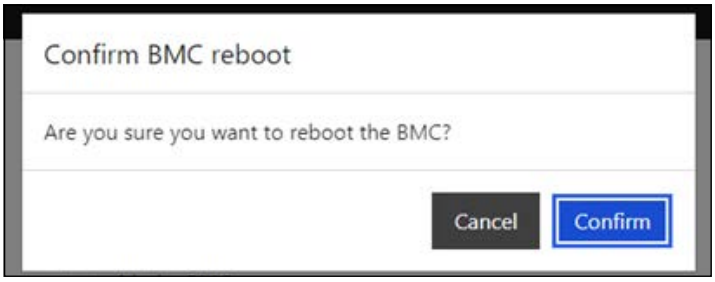
Click the "Reboot BMC" button to start the process.

Figure 26: Reboot BMC - Start



Then click the "Confirm" button to reboot BMC.

Figure 27: Reboot BMC - Confirm



The following fields are displayed in these windows.

- **Last time BMC reboot** — Display the time of the last BMC reboot.
- **Reboot BMC** — Click this button to send the reboot request.
- **Confirm** — Click this button to confirm the reboot request.

SOL Console

The SOL Console page provides the Serial-over-LAN (SOL) feature for the host system and displays the status of the SOL console. SOL is a feature within the BMC firmware that allows administrators to remotely access and manage a system's serial console over a network. This capability is essential for troubleshooting and managing systems without needing physical access to them. Click the “Open in new tab” button to open the web page in another browser tab.

Figure 28: SOL Console

The following fields are displayed on this page.

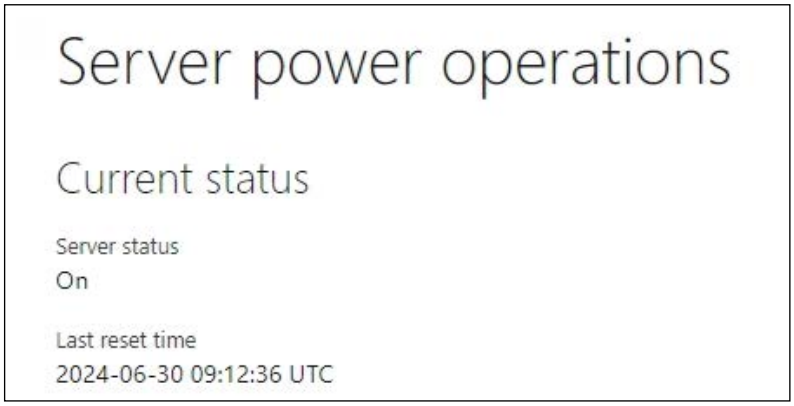
- **Status** — Displays the status of the SOL connection.

- **Open in new tab** — Click the button to open this web page in another browser tab.

Server Power Operations – Current Status

The Server Power Operations – Current Status window displays the status and the last reboot time of the host system.

Figure 29: Server Power Operations – Current Status



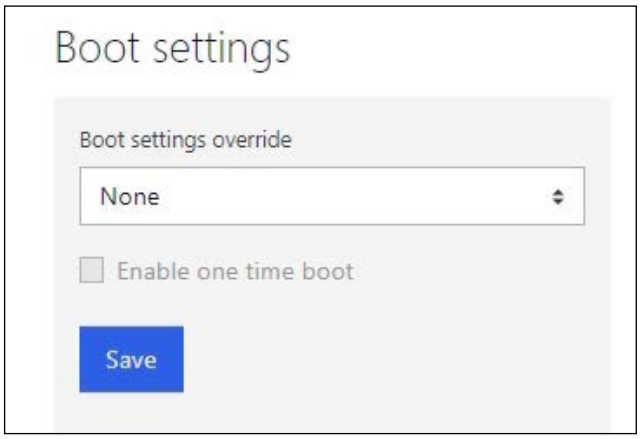
The following fields are displayed in this window.

- **Server status** — Display the status of the host system.
- **Last reset time** — Display the time of the last host system reboot.

Server Power Operations – Boot Settings

The Server Power Operations – Boot Settings page can select the x86 system boot options and set whether to take effect permanently or enable a one-time boot.

Figure 30: Server Power Operations – Boot Settings



The following fields are displayed on this page.

- **Boot settings override** — Select the x86 system boot item from the drop-down list, including the following options: “none”, “Pxe”, “Hdd”, “Cd”, “Diags”, “BiosSetup”, and “Usb”.
- **Enable one time boot** — Choose whether to boot once or make permanent changes.
- **Save** — Saves the boot settings.

Server Power Operations – Operations

The Server Power Operations – Operations window provides two different methods to reboot or shutdown the x86 host, namely forcefully or gracefully. The graceful method involves safely shutting down all running processes and services, ensuring that all data is saved and no corruption occurs. This method is preferred for regular maintenance and updates. The forceful method involves abruptly restarting the system without giving processes time to close properly. This method is used in emergency situations when the system is unresponsive or frozen.

Click the “Orderly” or “Immediate” button to select the desired method first. Then click the “Reboot” or “Shut down” button to execute the procedure based on the selected method. Click the “Cancel” or “Confirm” button of the popup window to cancel or execute the selected procedure.

Figure 31: Server Power Operations – Operations

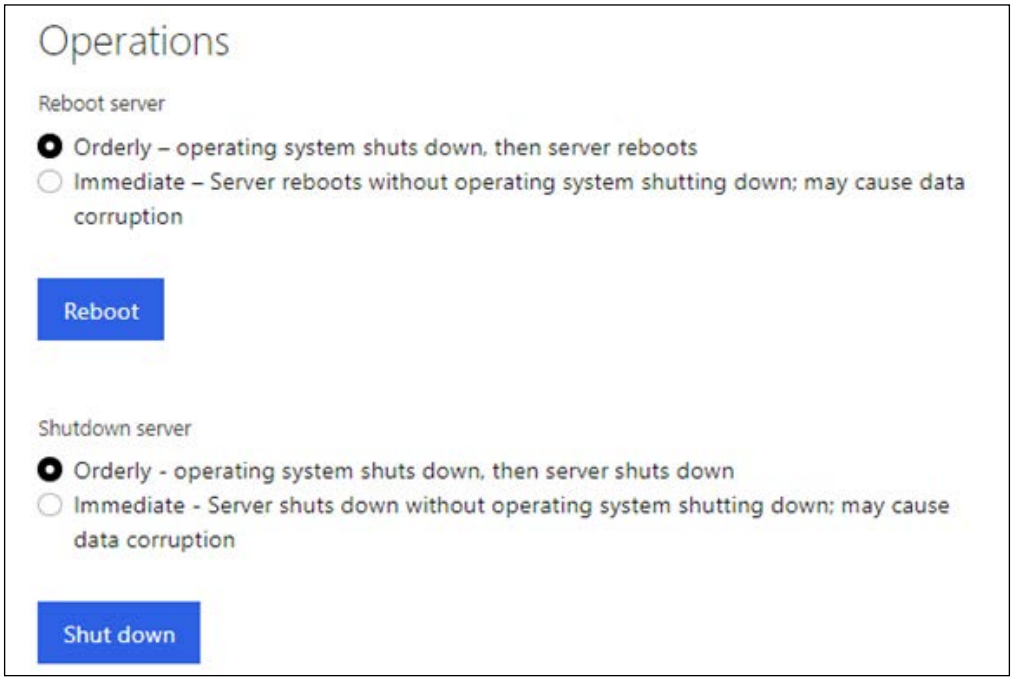


Figure 32: Server Power Operations – Confirm Reboot

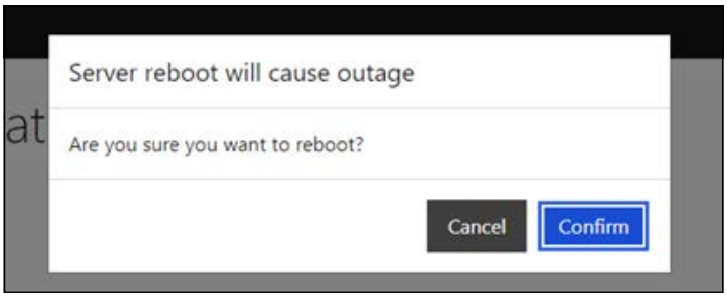
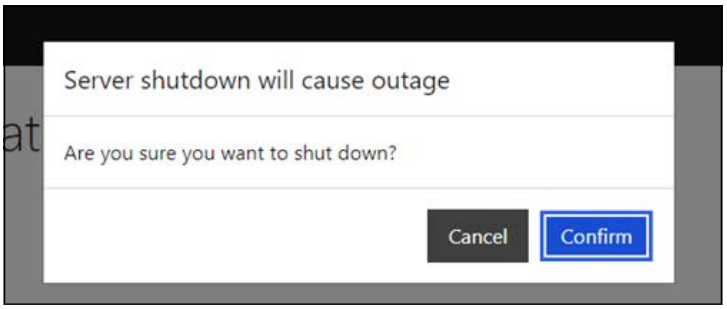


Figure 33: Server Power Operations – Confirm Shutdown



The following fields are displayed in these windows.

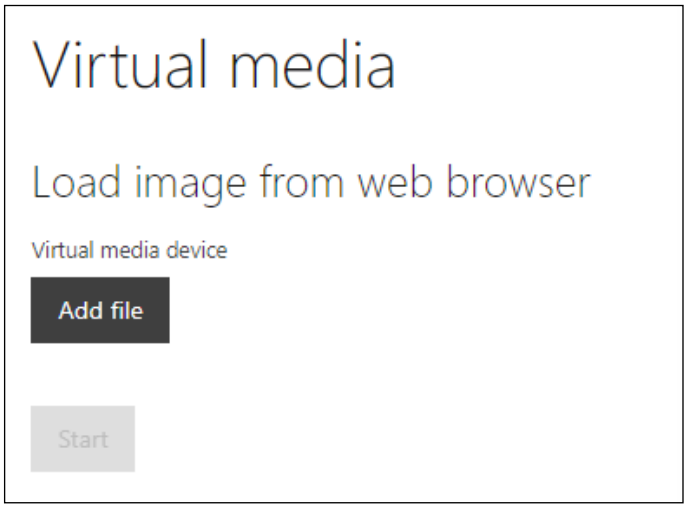
- **Orderly** — Gracefully reboot or shutdown the x86 host.
- **Immediate** — Forcefully reboot or shutdown the x86 host.
- **Reboot** — Click this button to reboot the x86 host based on the selected method.
- **Shut down** — Click this button to shutdown the x86 host based on the selected method.
- **Cancel** — Click this button to cancel the reboot or shutdown procedure.
- **Confirm** — Click this button to confirm to execute the reboot or shutdown procedure.

Virtual Media

The Virtual Media page provides the virtual media feature for the host system. Virtual media refers to a feature within the firmware that enables administrators to remotely mount and access virtual media, such as ISO images, from a remote server or workstation. This feature facilitates various management tasks, including OS installations, firmware updates, and diagnostics, without the need for physical media or direct access to the system.

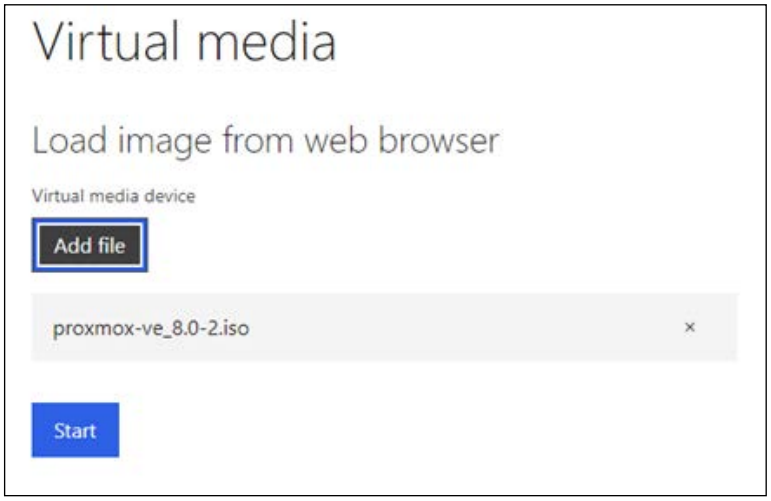
Click “Add file” to select the ISO image you want to mount.

Figure 34: Virtual Media - Add File



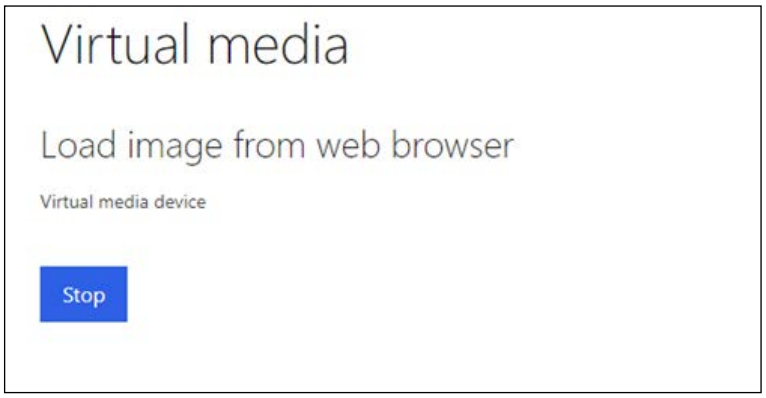
Click the "Start" button to start mounting the selected ISO image.

Figure 35: Virtual Media - Start



Click the "Stop" button to stop mounting the selected ISO image.

Figure 36: Virtual Media - Stop



The following fields are displayed in these windows.

- **Add file** — Click this button to select the ISO images users want to mount.
- **x** — Click this button to cancel the selected file.
- **Start** — Click this button to start mounting the selected ISO image.
- **Stop** — Click this button to stop mounting the selected ISO image.

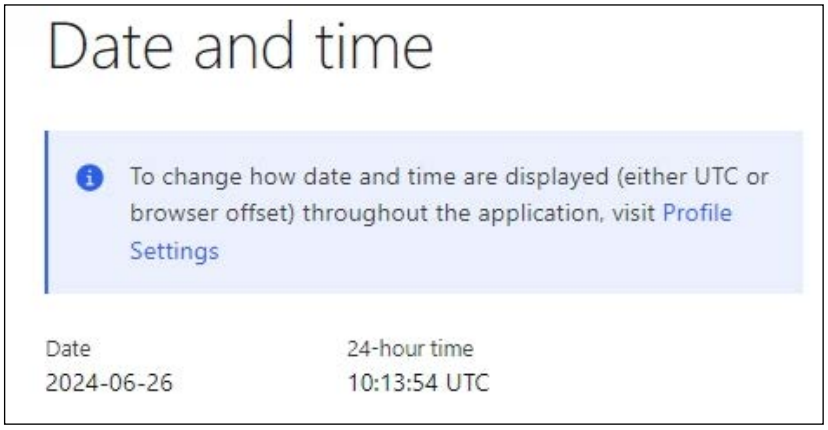
Settings

The "Settings" drop-down menu contains three options, "Date and Time", "Network", and "Power restore policy". You can configure the system time and RTC time from the "Date and Time" page, and set the BMC's Ethernet interface from the "Network" page. In addition, the "Power restore policy" page is used to configure the power restore policy of the x86 host.

Date and Time

The Date and Time window displays the current system date and time.

Figure 37: Date and Time Settings



The following fields are displayed on this page.

- **Profile Settings** — Click the link to go to the "Profile settings" page.
- **Date** — Displays the current system date.
- **24-hour time** — Displays the current system time (24-hour).

Network

The Network page can configure the network settings for the machine and display network information. The configurable options include “DHCP”, “Add static IPv4 address”, “Static DNS”, “Use domain name”, “Use DNS servers”, and “Use NTP servers”.

Figure 38: Network Settings

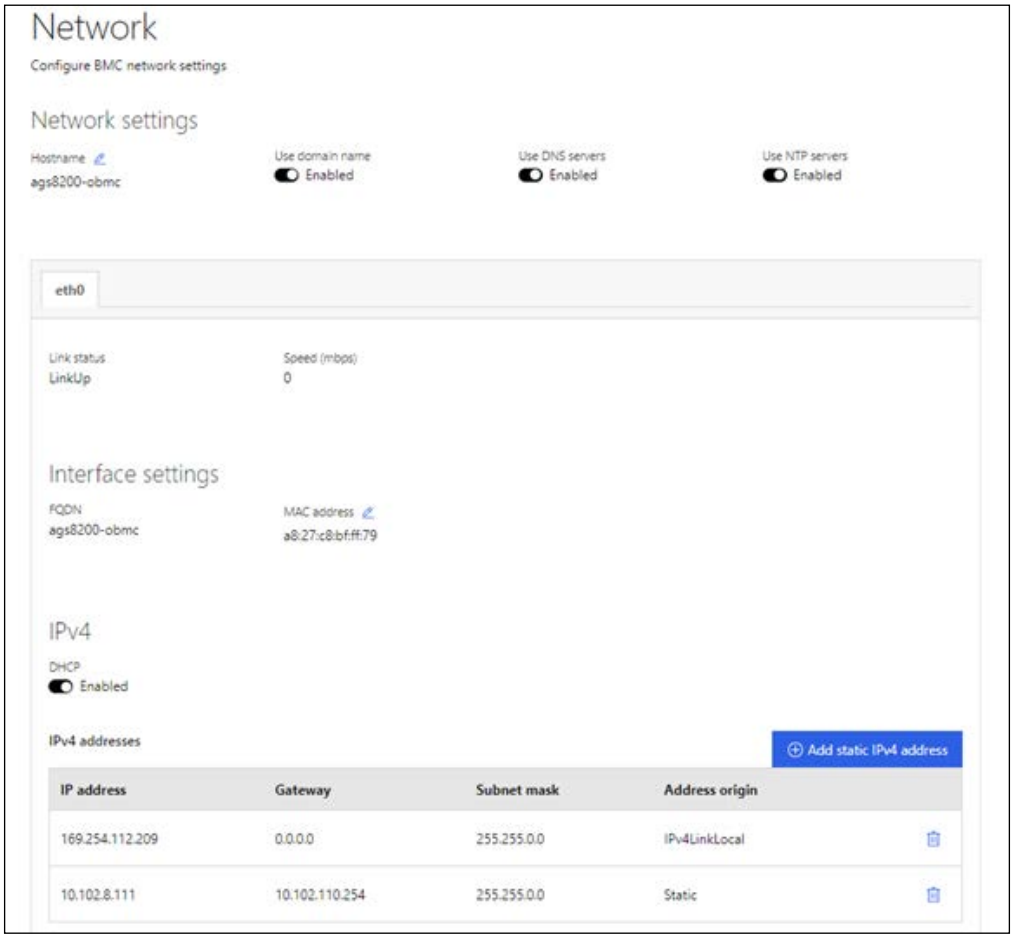


Figure 39: Network Settings - Add Static IP Address

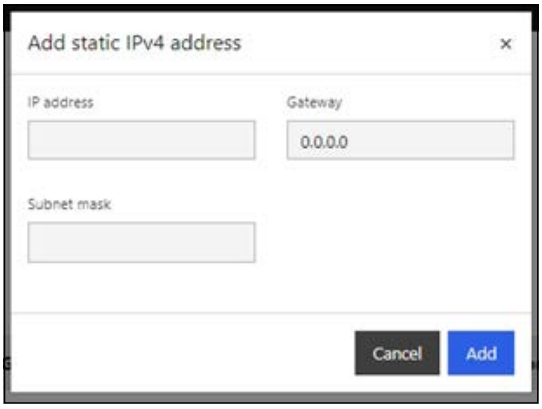


Figure 40: Network Settings - Static DNS

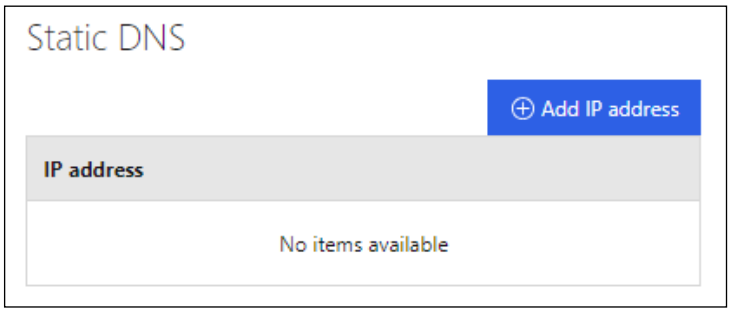
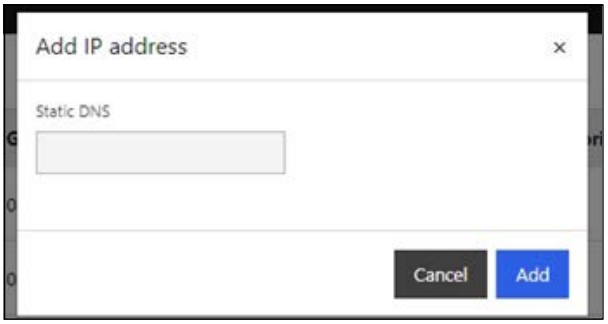


Figure 41: Network Settings - Add Static DNS IP Address



The following fields are displayed in these windows.

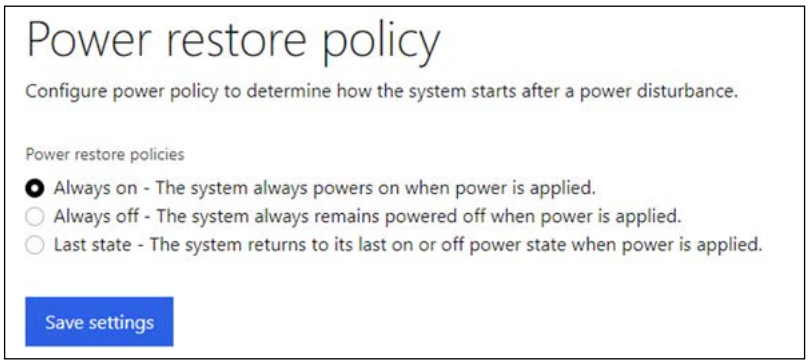
- **Hostname** — A hostname is a name used to identify a device or machine.
- **Use domain name** — A domain name is a human-readable address used to identify and access resources on the Internet, such as websites and email servers.
- **Use DNS servers** — DNS servers are specialized computers that translate human-readable domain names (such as www.example.com) into numerical IP addresses (such as 192.0.2.1) that devices use to identify each other on the network.
- **Use NTP servers** — NTP servers are specialized servers that use the Network Time Protocol (NTP) to synchronize the clocks of devices in a network.
- **Link status** — The interface link status.
- **FQDN** — FQDN stands for Fully Qualified Domain Name.
- **Mac address** — A MAC address, or Media Access Control address, is a unique identifier assigned to network interfaces for communications on the physical network.
- **DHCP** — Enables IP address assignment using DHCP.
- **IP address** — The IPv4 address.

- **Gateway** — The IPv4 Gateway.
- **Subnet mask** — The IPv4 subnet mask.
- **Address origin** — Indicates Static or DHCP.
- **Add static IPv4 address** — Click this button to set the IPv4 address.
- **Add ip address** — Click this button to set the IPv4 DNS address.

Power Restore Policy

The Power Restore Policy page provides three different power restore policies to use when the power is applied. The default policy is "Always on". Select one policy and then click the "Save settings" button to permanently save the selected policy.

Figure 42: Power Restore Policy



The following fields are displayed on this page.

- **Power restore policies** — Click a button to select the power restore policy.
- **Save settings** — Click this button to save the selected power restore policy permanently.

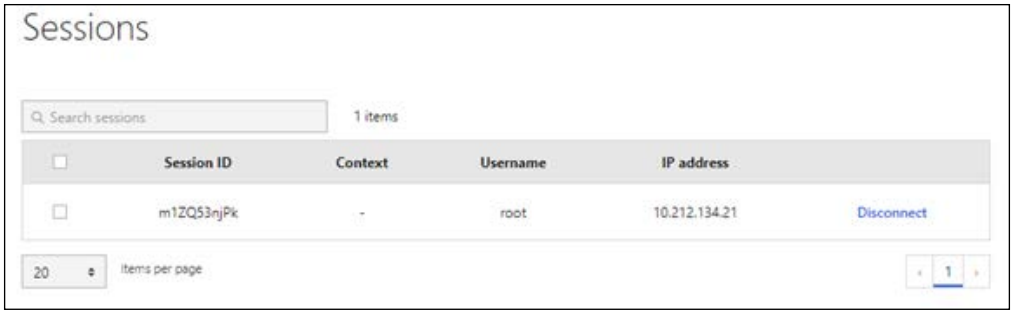
Security and Access

The “Security and access” drop-down menu contains five options, “Sessions”, “LDAP”, “User management”, “Policies”, and “Certificates”. “LDAP” and “User management” are for user account management related functions. “Sessions” and “Policies” are session management related functions. In addition, you can generate a CSR certificate through the “Certificates” page.

Sessions

This page displays connected sessions with user names and IP addresses.

Figure 43: Power Restore Policy



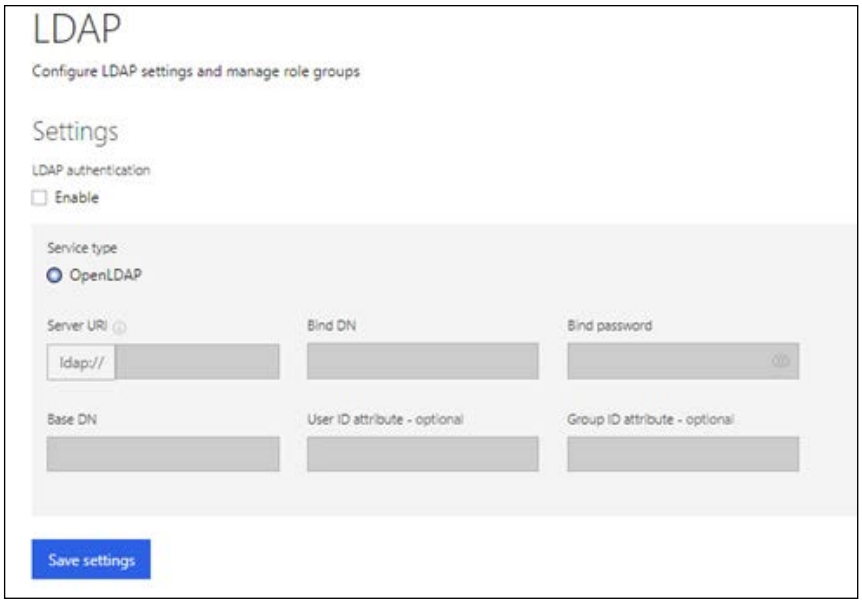
The following fields are displayed on this page.

- **Search sessions** — Use keywords to search for a specific session.
- **Session ID** — The session ID for respective users.
- **Context** — The context of the user session.
- **Username** — The user name of the login account.
- **IP address** — The IP address of the user.
- **Disconnect** — Click to pause the session of a specific user.
- **Items per page** — Selects how many sessions to display on each page.

LDAP

The Lightweight Directory Access Protocol (LDAP) is a common technique to store passwords. You must first set up an LDAP server and then enter the LDAP settings on this page, including the LDAP server's URI, DN, password, and role groups.

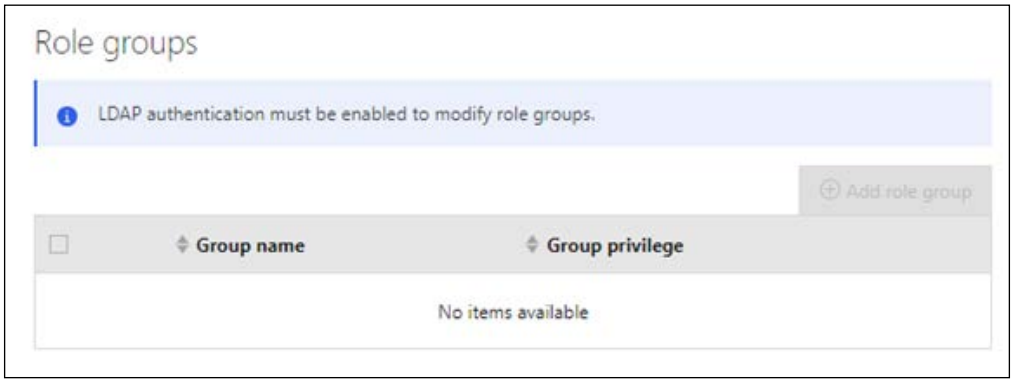
Figure 44: LDAP



The following fields are displayed on this page.

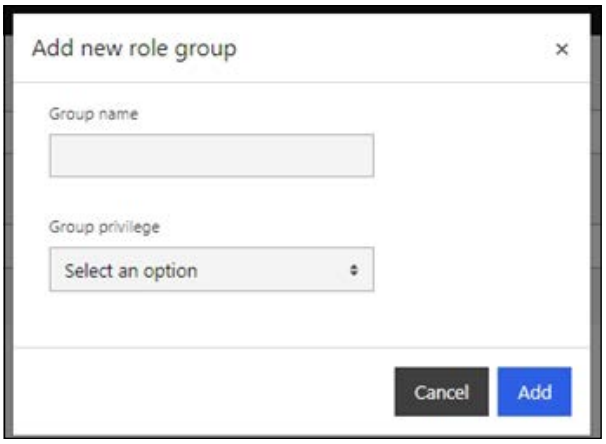
- **LDAP authentication** — Click to enable LDAP.
- **OpenLDAP** — The service type supports OpenLDAP. Click to select it.
- **Server URI** — Enter the IP address or hostname of the LDAP server.
- **Bind DN** — Enter the distinguished name of the LDAP server.
- **Bind password** — Enter the LDAP server's password.
- **Base DN** — Enter the base distinguished name of the LDAP server.
- **User ID attribute** — Enter the user ID attributes that have been registered in the LDAP server. (Optional)
- **Group ID attribute** — Enter the group ID that has been registered in the LDAP server. (Optional)
- **Save settings** — Click this button to save the settings.

Figure 45: LDAP - Role Groups



After setting the name and privilege, click “Add” to save the group information.

Figure 46: LDAP - Add Role Group



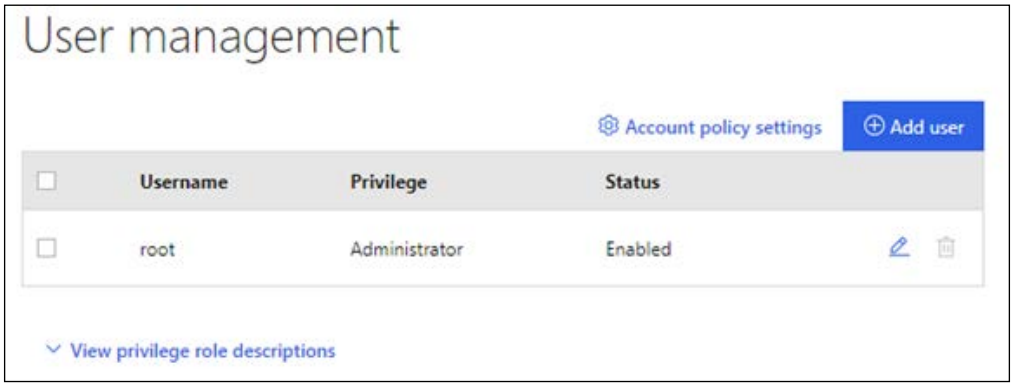
The following fields are displayed in these windows.

- **Add role group** — After setting the LDAP server information, this button is enabled. Click to add a role group.
- **Group name** — Fill in the group’ s name that has been registered in the LDAP server.
- **Group privilege** — Select the group privilege.

User Management

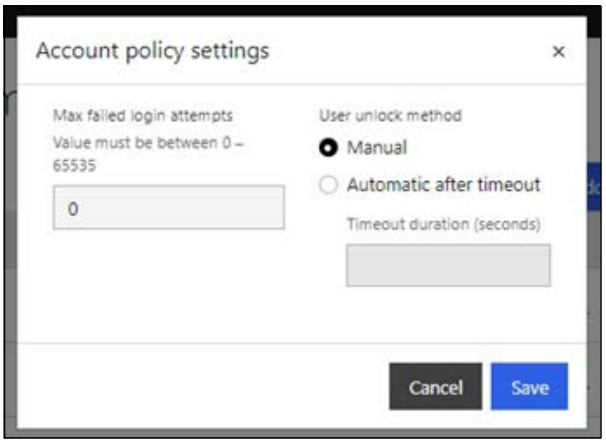
The User Management page displays a list of user account information, including each user's privilege and status. New user accounts cab be added from this page. Also, you can edit account information, modify the status to enabled or disabled, and delete specific accounts.

Figure 47: User Management



Click "Account policy settings" on the upper right corner to set an account's policy. After setting up the account policy, click "Save" to save the settings.

Figure 48: User Management - Account Policy

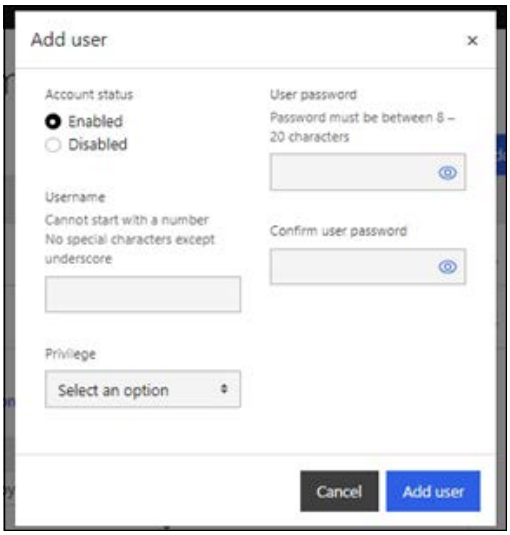


The following fields are displayed in this window.

- **Max failed login attempts** — Set the maximum failed login attempts value for security. The default value is zero.
- **User unlock method** — The default unlock method is manual. An automatic method is also available with a defined timeout duration.

On the User Management page, click "Add user" in the upper right corner to add a user manually. After filling in the account information, click "Add user" to save the settings.

Figure 49: User Management - Add User



The following fields are displayed in this window.

- **Account status** — Click "enabled" or "disabled" to set the account status.
- **Username** — Enter the user name in a valid format. (Cannot start with a number. No special characters except underscore.)
- **Privilege** — Set the privilege for the account; Administrator, Operator, or ReadOnly.
- **User password** — Enter the user password (8-20 characters).
- **Confirm user password** — Enter the user password again for confirmation.

Policies

On the Policies page you can set the web session timeout policy.

Figure 50: Policies - Web Session Timeout

The following field is displayed on this page.

- **WEB Session Timeout** — The drop-down list provides timeout options for web sessions.

Certificates

The Certificates page displays all certificates for the BMC. Also, you can generate a Certificate Signing Request (CSR) with the provided information. If you have your own certificate file, the certificate file can be uploaded from this page.

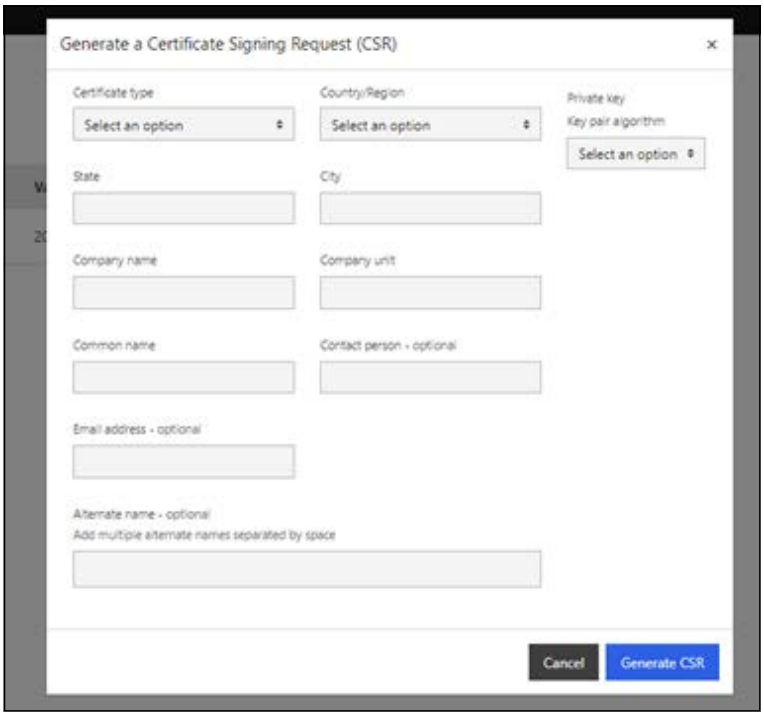
Figure 51: Security Certificates

The following fields are displayed on this page.

- **Certificate** — The certificates type.
- **Issued by** — The organization that issued the certificate.
- **Issued to** — Who the certificate is issued to.
- **Valid from** — The certificate valid start date.
- **Valid until** — The certificate valid end date.
- **Update icon** — Click this icon to update a certificate.
- **Delete icon** — Click the trashcan icon to delete a certificate.

Click the upper right button “Generate CSR” to generate a CSR according to the provided information. After entering all the information, click “Generate CSR” to save the content.

Figure 52: Security Certificates - Generate CSR

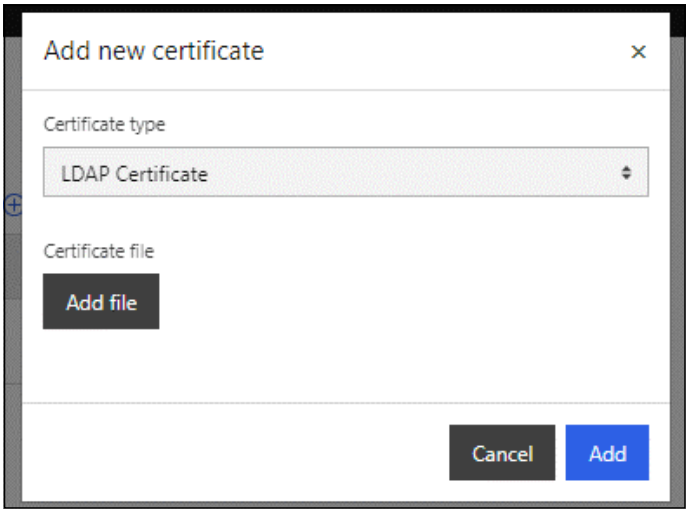


The following fields are displayed in this window.

- **Generate type** — A drop-down list provides two options, HTTPS and LDAP certificate. Select one option.
- **Country /Region** — A drop-down list provides the country/region of the user. Specify the certificate's country or region.
- **State** — Enter the name of the state.
- **City** — Enter the name of the city.
- **Company name** — Enter the company name.
- **Company unit** — Enter the company unit.
- **Common name** — Enter the hostname or server IP address.
- **Contact person** — Enter a contact person's name. (optional)
- **Email address** — Enter an email address for the contact person. (optional)
- **Alternate name** — Enter an alternate name for the certificate. Use spaces to separate multiple names.

From the Certificates table, click the upper-right button "Add new certificate" to upload your own certificate. After uploading the certificate file, click "Add" to save the new certificate.

Figure 53: Security Certificates - Add New Certificate



The following fields are displayed in this window.

- **Certificate type** — Select the certificate type from the drop-down list; LDAP certificate or CA certificate.
- **Certificate file** — Uploads a new certificate file.

Resource Management

The "Resource management" drop-down menu only has the "Power" option, which enables you to view the current total power consumption.

Power

The Power window displays the total power consumption of the machine.

Figure 54: Resource Management - Power

The following field is displayed in this window.

- **Current power consumption** — Displays the total power consumption of the machine.

6 System Event Log (SEL)

This chapter includes the following sections:

SEL Overview

The AGS8200 currently supports generating System Event Log (SEL) entries. SEL generation follows the IPMI SEL specification format (refer to the "Intelligent Platform Management Interface Specification v2.0 rev 1.1, section 41").

The following table shows the SEL entries currently supported by the AGS8200 BMC.

Table 5: BMC SEL Entries

Event Type Code	Sensor Type	Event Class	Offset	Description	Event Detail Description
01h	N/A	Threshold	00h	Lower non-critical going low.	When a sensor exceeds the threshold value, the SEL log will be sent.
			02h	Lower critical going low.	
			07h	Upper non-critical going high.	
			09h	Upper critical going high.	
6Fh	Event Logging Disabled	N/A	02h	Log Area Reset/Cleared	Sent when executing the "ipmitool sel clear" command.
6Fh	Power Supply	N/A	00h	Presence detected	Sent when PSU plugging/unplugging action occurs.
08h	Fan	Availability State	00h	Absent	Sent when a fan plugging/unplugging action occurs.
08h	Fan	Availability State	01h	Present	
6Fh	Button	N/A	00h	Power button pressed	Sent when the power button is pressed.
6Fh	FRU State	N/A	02h	Activation requested	Sent when the X86 host is powered on.
6Fh	FRU State	N/A	05h	Deactivation requested	Sent when the X86 host is powered off.