

GBT Ipmitool Spec

GIGA COMPUTING Software

Document No.:

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0. General Information

0.1. Record of Changes

Table 0-1. Record of Changes

Issue	Date	Authors	Reason for Changes
1.0	2/15/2023	Knut Wang	1 st release.
1.0.1	3/6/2023	Alvin Chunag	2 nd release
1.0.2	3/23/2023	Alvin Chunag	3 nd release
1.0.3	4/24/2023	Debbie Liu	Fix bugs and add some features.
1.0.4	08/14/2023	Alvin Chuang	Fix bugs and add some features.
1.0.5	11/14/2023	Nicole Yan	Fix bugs and add some features.
1.0.8	04/16/2024	Alvin Chuang	Fix bugs and add some features.
1.1.1	08/29/2024	Eason Tsai	Modify SMTP command and support PEF simple setting.
1.1.2	11/07/2024	Eason Tsai	Rework PEF command and support upload CA with PEMChain
1.1.3	01/24/2025	Eason Tsai	Remove SKU, SOLSSH command and web/ssh options of service cmd.

0.2. References

NO	Document title
1	
2	

0.3. Acronyms

1. Introduction

The release of the gct ipmitool includes Linux and Windows versions, whose names are gbtipmitool-linux and gbtipmitool-win.

2. Operation

2.1. Multi node scanning

Scan an IP range and keep the BMC list for mass deployment.
Support pre-generated node list file with unique password mapping.

2.1.1 Scanning an IP range

Input:

gbtipmitool -T scan <IP range start> <IP range end>

Note:

Currently only supports a range of 225 nodes, with same IP domain. For example, IP range from 10.1.1.1 to 10.1.1.255

Output:

A list of IP scanned named gbtipmilist.txt generated in log directory, and the structure is [BMC IP],[BMC MAC],[BMC account],[BMC password]

Example:

\$ gbtipmitool-win.exe -T scan 10.1.116.10 10.1.116.50

```
Scan ip range : 10.1.116.10 - 10.1.116.50
Total BMC IP count: 5
```

MAC	IP	Username	Password
D8:5E:D3:04:4F:41	10.1.116.22	admin	password
E0:D5:5E:65:92:20	10.1.116.46	admin	password
D8:5E:D3:45:81:AC	10.1.116.33	admin	password
D8:5E:D3:E3:F4:49	10.1.116.38	admin	password
E0:D5:5E:17:19:7F	10.1.116.23	admin	password

\$ cat log/gbtipmilist.txt

```
10.1.116.22,D8:5E:D3:04:4F:41,admin,password
10.1.116.46,E0:D5:5E:65:92:20,admin,password
10.1.116.33,D8:5E:D3:45:81:AC,admin,password
10.1.116.38,D8:5E:D3:E3:F4:49,admin,password
10.1.116.23,E0:D5:5E:17:19:7F,admin,password
```

2.1.2 Scanning an IP range with unique password file

Input:

gbtipmitool -T scan <IP range start> <IP range end> <unique password file>

Note:

Currently only supports a range of 225 nodes, with same IP domain. For example IP range from 10.1.1.1 to 10.1.1.255

Output:

A list of IP scanned named gbtipmilist.txt generated in log directory, and the structure is [BMC IP]:[BMC MAC]:[BMC account]:[BMC password]

Example:

```
$ cat ./uniquePasswordFile.txt
74:56:3c:03:8c:52,UPD1
50:E5:49:46:1A:DE,UPD2
50:E5:49:46:1A:11,UPD3
```



```
$ gbtipmitool-win.exe -T scan 10.1.116.100 10.1.116.130 ./uniquePasswordFile.txt
```

```
Scan ip range : 10.1.116.100 - 10.1.116.130
./uniquePasswordFile.txt mac scan status
=====
| MAC                | IP                | Status          |
=====
| 74:56:3C:03:8C:52 | 10.1.116.104     | OK              |
| 50:E5:49:46:1A:DE |                   | Not Exist      |
| 50:E5:49:46:1A:11 |                   | Not Exist      |
=====

Total BMC IP count: 3
=====
| MAC                | IP                | Username        | Password        |
=====
| 74:56:3C:03:8C:52 | 10.1.116.104     | admin           | UPD1            |
| B4:2E:99:3E:EF:A6 | 10.1.116.122     | admin           | password        |
| 08:00:38:C2:22:F6 | 10.1.116.127     | admin           | password        |
=====
```

```
$ cat log/gbtipmilist.txt
10.1.116.104,74:56:3C:03:8C:52,admin,UPD1
10.1.116.122,B4:2E:99:3E:EF:A6,admin,password
10.1.116.127,08:00:38:C2:22:F6,admin,password
```

2.1.3 Show the list of scanned nodes

Input:

```
gbtipmitool -T scan list
```

Output:

```
[BMC MAC] | [BMC MAC] | [BMC account] | [BMC password]
```

Example:

```
$ gbtipmitool-win.exe -T scan list
```

```
Total BMC IP count: 3
=====
| MAC                | IP                | Username        | Password        |
=====
| 74:56:3C:03:8C:52 | 10.1.116.104     | admin           | UPD1            |
| B4:2E:99:3E:EF:A6 | 10.1.116.122     | admin           | password        |
| 08:00:38:C2:22:F6 | 10.1.116.127     | admin           | password        |
=====
```

2.2. Multi node operation

Send command to multiple bmc node

Input:

```
gbtipmitool -T multi {-N <Timeout Sec>} <commands>
```

Output:

Only run result will display on screen, the results of single nodes will be saved in log directory with IP as identifier.

Example:

```
$ gbtipmitool-win.exe -T multi chassis get status
10.1.116.62 : OK
10.1.116.68 : OK
10.1.116.72 : OK
```

```
$ cat log/2023-02-14.log
```

```
[9:50:22:856] 10.1.116.62:System Power:Off
[9:50:23:897] 10.1.116.68:System Power:On
[9:50:23:954] 10.1.116.72:System Power:Off
```

2.3. Single node operation

Sending command to single bmc node

Input:

```
gbtipmitool -H <BMC IP> -U <BMC account> -P <BMC password> {-N <Timeout Sec>} <commands>
```

Output:

Result same as following supported commands.

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password chassis get status
10.1.116.68
System Power : On
```

2.4. Read version of Gbtipmitool

Input:

```
gbtipmitool -v
```

Output:

Version: [version string]

Example:

```
$ gbtipmitool-win.exe -v
gbtipmitool version 1.0.8
```

3. Chassis

Set node chassis power state.

3.1. Get chassis status

Input:

```
gbtipmitool chassis get status
```

Output:

[BMC IP] | [System Power]: [On/Off]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password chassis get status
10.1.116.68
System Power      : On
```

3.2. Set chassis power control

Input:

```
gbtipmitool chassis set [on/off/cycle/reset/diag/soft]
```

Note:

"cycle": If host is in the power off state, running cycle command will transition to a power on state.

"reset": If host is in the power off state, running reset command will transition to a power on state.

Output:

```
[BMC IP] | [Result]: [OK/FAILED]
```

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password chassis set on
10.1.116.68
Result      : OK
```

3.3. Get chassis identify

Input:

```
gbtipmitool get chassis identify
```

Output:

```
[BMC IP] | [item]: [value]
```

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.82 -U admin -P password chassis get identify
10.1.116.82
IndicatorLED     : Off
```

3.4. Set chassis identify

Input:

```
gbtipmitool set chassis identify [on/off]
```

Output:

```
[BMC IP] | [Result]: [OK/FAILED]
```

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.82 -U admin -P password chassis set identify on
10.1.116.82
Result      : OK
```

3.5. chassis policy

Input:

```
gbtipmitool chassis set policy [always-on/previous/always-off]
```

Output:

```
[BMC IP] | [Result]: [OK/FAILED]
```

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.82 -U admin -P password chassis set policy always-on
```

10.1.116.82

Result : OK

3.6. chassis bootdev

Input:

gbtipmitool chassis set bootdev [None/Pxe/...] [Legacy/UEFI]

Note:

The option may vary depends on different models

Output:

[BMC IP] | [Result]: [OK/FAILED]

Example:

\$ gbtipmitool-win.exe -H 10.1.116.82 -U admin -P password chassis set bootdev None Legacy

10.1.116.82

Result : OK

3.7. chassis selftest

input:

gbtipmitool chassis selftest

Output:

[BMC IP] | [Result]: [OK/FAILED]

Example:

\$ gbtipmitool-win.exe -H 10.1.116.82 -U admin -P password chassis selftest

10.1.116.82

Result : OK

4. FRU

Get FRU data.

4.1. fru print

input:

gbtipmitool fru print [0/1/2/3/4/5/6/all]

Output:

[BMC IP] | [Fru item]: [Value]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.82 -U admin -P password fru print 0
10.1.116.82
```

```
Chassis Type   : Main Server Chassis
Chassis Part Number : 01234567
Chassis Serial  : 01234567890123456789AB
Board Mfg Date  : Tue Nov 29 23:21:00 2022
Board Mfg       : GIGABYTE
Board Product   : MZ92-FS2-00
Board Serial    : 01234567890123456789AB
Board Part Number : 123456789AB
Board Extra     : NULL
Product Manufacturer : GIGABYTE
Product Name     : MZ92-FS2-00
Product Part Number : 0000000000001
Product Version  : 1
Product Serial   : 01234567890123456789AB
Product Asset Tag : 01234567890123456789AB
```

5. SEL

Send SEL related command

5.1. sel info

Input:

gbtipmitool sel info

Output:

[BMC IP] | [Sel item]: [value]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.82 -U admin -P password sel info
10.1.116.82
Version      : 1.5 (v1.5, v2 compliant)
Entries      : 199
Free Space   : 14814
Percent Used : 18%
Last Add Time : Sun Jan 01 2012 08:00:01 GMT+0800 (GMT+08:00)
Last Del Time : Thu Jan 01 1970 16:00:00 GMT+0800 (GMT+08:00)
Overflow     : false
Supported Cmds : DeletePartial AddReserveGet Alloc Info
# of Alloc Units : 1022
Alloc Unit Size : 18
# Free Units   : 823
Largest Free Blk : 823
Max Record Size : 1
```

5.2. sel list

Input:

gbtipmitool sel list

Output:

[BMC IP] | [#] | [date] | [time] | [sensor number] | [sensor name] | [Log]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.82 -U admin -P password sel list
10.1.116.82
2      : Normal | Sat Jan 01 2000 08:02:04 GMT+0800 | 0xe7 | power_supply | PS2_Status | BMC Event :
Presence detected was asserted | asserted
1      : Normal | Sat Jan 01 2000 08:01:49 GMT+0800 | 0xe4 | processor | CPU0_Status | BMC Event :
Processor Presence detected was asserted | asserted
```

5.3. sel clear

Input:

gbtipmitool sel clear

Output:

[BMC IP] | [Result]: [OK/FAILED]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.82 -U admin -P password sel clear
10.1.116.82
Result   : OK
```

5.4. sel delete (delete certain SEL record)

Input:

gbtipmitool sel delete <sel id>

Output:

[BMC IP] | [Result]: [OK/FAILED]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.82 -U admin -P password sel delete 1
10.1.116.82
Result      : OK
```

5.5. sel list export

Input:

gbtipmitool sel list export

Output:

[BMC IP] | [Result]: [OK/FAILED]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.82 -U admin -P password sel list export
The dump file is stored in output directory as 10.1.116.82_2025-01-10_19-51-43_selhex.txt
10.1.116.82
Result      : OK
```

5.6. sel time

5.6.1 sel time get

Input:

gbtipmitool sel time get

Note:

This returns system time of BMC

Output:

[BMC IP] | ["Time"]: [date time in below format]
01/06/2023 03:00:44

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.82 -U admin -P password sel time get
10.1.116.82
Time       : 01/04/2012 16:55:50
```

5.6.2 sel time set

Input:

gbtipmitool sel time set <mm/dd/yyyy hh:mm:ss>

Note:

This set system time of BMC

Output:

[BMC IP] | [Result]: [OK/FAILED]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.82 -U admin -P password sel time set 01/04/2022 16:55:50
```

10.1.116.82

Result : OK

6. Sensor

6.1. sensor list

Input:

gbtipmitool sensor list

Output:

[BMC IP] | [Sensor name] | [Reading] | [Status ok/error]

Example:

\$ gbtipmitool-win.exe -H 10.1.116.82 -U admin -P password sensor list

10.1.116.82

P_12V	: na	Volts	na	na	10.205	10.790	13.195	13.845	na	
P_5V	: na	Volts	na	na	4.235	4.510	5.500	5.775	na	
P_3V3	: na	Volts	na	na	2.803	2.960	3.626	3.802	na	
P_5V_STBY	: na	Volts	na	na	4.235	4.510	5.500	5.775	na	
P0_VDDCR_SOC	: na	Volts	na	na	0.525	0.553	1.344	1.407	na	

6.2. sensor history

Input:

gbtipmitool sensor history

Output:

[BMC IP] | [Sensor name] | [Date] | [Reading]

Example:

\$ gbtipmitool-win.exe -H 10.1.116.82 -U admin -P password sensor history

10.1.116.82

```
CPU0_TEMP :
Mon Jan 1 21:56:52 2024 : 59
Mon Jan 1 22:56:52 2024 : 58
Mon Jan 1 23:56:52 2024 : 59
INLET_AIR_TEMP :
Mon Jan 1 21:56:52 2024 : 30
Mon Jan 1 22:56:52 2024 : 30
Mon Jan 1 23:56:52 2024 : 30
REAR_AIR_TEMP :
Mon Jan 1 21:56:52 2024 : 42
Mon Jan 1 22:56:52 2024 : 43
Mon Jan 1 23:56:52 2024 : 43
DIMMG0_TEMP :
```



```
Mon Jan 1 21:56:52 2024 : 46
Mon Jan 1 22:56:52 2024 : 47
Mon Jan 1 23:56:52 2024 : 47
  DIMMG1_TEMP    :
Mon Jan 1 21:56:52 2024 : 44
Mon Jan 1 22:56:52 2024 : 44
Mon Jan 1 23:56:52 2024 : 45
  DIMMG2_TEMP    :
Mon Jan 1 21:56:52 2024 : 45
Mon Jan 1 22:56:52 2024 : 45
Mon Jan 1 23:56:52 2024 : 45
  DIMMG3_TEMP    :
Mon Jan 1 21:56:52 2024 : 41
Mon Jan 1 22:56:52 2024 : 42
Mon Jan 1 23:56:52 2024 : 41
  E1S_0_TEMP     :
Mon Jan 1 21:56:52 2024 : 36
Mon Jan 1 22:56:52 2024 : 36
Mon Jan 1 23:56:52 2024 : 36
  E1S_1_TEMP     :
Mon Jan 1 21:56:52 2024 : 37
Mon Jan 1 22:56:52 2024 : 37
Mon Jan 1 23:56:52 2024 : 37
```

7. User

7.1. user summary

Input:

gbtipmitool user summary <channel number 0~7>

Output:

[BMC IP] | [User item]: [status]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.82 -U admin -P password user summary 1
10.1.116.82
  Maximum IDs    : 16
  Enable User Count : 1
  Fixed Name Count : 1
```

7.2. user list

Input:

gbtipmitool user list

Output:

[BMC IP] | [user id] | [name]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.82 -U admin -P password user list
10.1.116.82
  1          : admin Administrator
```

7.3. add user

input:

gbtipmitool user add <username> <password> <Administrator/Operator/ReadOnly>

Output:

[BMC IP] | [Result]: [OK/FAILED]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.82 -U admin -P password user add test testtest Administrator
10.1.116.82
Result      : OK
```

7.4. add user with snmp**input:**

```
gbtipmitool user add <username> <password> <Administrator/Operator/ReadOnly> --snmp
<SHA256/SHA384/SHA512> <DES/AES> <ReadOnly/ReadWrite>
```

Output:

[BMC IP] | [Result]: [OK/FAILED]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.82 -U admin -P password user add user6 passowrd Administrator --snmp SHA256
DES ReadOnly
10.1.116.82
Result      : OK
```

7.5. add snmp**input:**

```
gbtipmitool user add snmp <user id> <SHA256/SHA384/SHA512> <DES/AES> <ReadOnly/ReadWrite>
```

Output:

[BMC IP] | [Result]: [OK/FAILED]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.82 -U admin -P password user add snmp 5 SHA256 DES ReadOnly
10.1.116.82
Result      : OK
```

7.6. set name**Input:**

```
gbtipmitool user set name <user id> <user name>
```

Output:

[BMC IP] | [Result]: [OK/FAILED]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.82 -U admin -P password user set name 4 test1
10.1.116.82
Result      : OK
```

7.7. set password**input:**

```
gbtipmitool user set password <user id> <password>
```

Output:

[BMC IP] | [Result]: [OK/FAILED]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.82 -U admin -P password user set password 4 testtest1
10.1.116.82
Result      : OK
```

7.8. set snmp**input:**

```
gbtipmitool user set snmp <user id> <SHA256/SHA384/SHA512> <DES/AES> <ReadOnly/ReadWrite>
```

Output:

```
[BMC IP] | [Result]: [OK/FAILED]
```

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.82 -U admin -P password user set snmp 5 SHA256 DES ReadOnly
10.1.116.82
Result      : OK
```

7.9. disable**input:**

```
gbtipmitool user set disable <user id>
```

Output:

```
[BMC IP] | [Result]: [OK/FAILED]
```

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.82 -U admin -P password user set disable 4
10.1.116.82
Result      : OK
```

7.10. enable**input:**

```
gbtipmitool user set enable <user id>
```

Output:

```
[BMC IP] | [Result]: [OK/FAILED]
```

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.82 -U admin -P password user set enable 4
10.1.116.82
Result      : OK
```

7.11. delete**input:**

```
gbtipmitool user delete <user id>/snmp <user id>
```

Output:

```
[BMC IP] | [Result]: [OK/FAILED]
```

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.82 -U admin -P password user delete 4
10.1.116.82
Result      : OK
```

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.82 -U admin -P password user delete snmp 4  
10.1.116.82  
Result      : OK
```

8. DCMI

Send power limit management command.

8.1. reading

Input:

gbtipmitool dcmi power reading

Output:

[BMC IP] | [System Power]: [watt]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password dcmi power reading
```

10.1.116.68

Current power consumption : 105 W

Minimal power consumption : 0 W

Maxmal power consumption : 291 W

Average power consumption : 0 W

8.2. get_limit

Input:

gbtipmitool dcmi power get_limit

Output:

[BMC IP] | [item]: [value]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password dcmi power get_limit
```

10.1.116.68

Current Limit State : No Active Power Limit

LimitInWatts : 500

Correction time : 1000

Sampling period : 5

Exception actions : Hard Power Off & Log Event to SEL

8.3. set_limit

Input:

gbtipmitool dcmi power set_limit <watt>

Output:

[BMC IP] | [Result]: [OK/FAILED]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password dcmi power set_limit 800
```

10.1.116.68

Result : OK

8.4. deactivate

Input:

gbtipmitool dcmi power deactivate

Output:

[BMC IP] | [Result]: [OK/FAILED]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password dcmi power deactivate
```

10.1.116.68

Result : OK

8.5. history

Input:

gbtipmitool dcmi power history

Output:

[BMC IP] | [Result]: [OK/FAILED]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password dcmi power history
10.1.116.68
```

Sun Jan 21 21:47:31 2024 : 210 W

Sun Jan 21 22:47:31 2024 : 78 W

Sun Jan 21 23:47:31 2024 : 78 W

Mon Jan 22 00:00:09 2024 : 81 W

Mon Jan 22 01:00:09 2024 : 80 W

Mon Jan 22 02:00:09 2024 : 79 W

Mon Jan 22 03:00:09 2024 : 79 W

Mon Jan 22 03:49:07 2024 : 81 W

Mon Jan 22 03:55:25 2024 : 81 W

Mon Jan 22 04:55:25 2024 : 78 W

Mon Jan 22 05:55:25 2024 : 78 W

9. LAN

9.1. get list

Input

gbtipmitool lan get list

Output:

[BMC IP] | [item]: [value]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password lan get list
```

10.1.116.68

```
IP Address Source : DHCP
Address          : 10.1.116.68
Subnet Mask      : 255.255.255.0
MAC Address      : D8:5E:D3:6C:DC:3B
```

9.2. get hostmac

Input

gbtipmitool lan get hostmac

Output:

[BMC IP] | [item]: [value]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password lan get hostmac
```

10.1.116.68

```
LAN1      : e0:d5:5e:65:a7:15
LAN2      : e0:d5:5e:65:a7:16
LAN3      : 48:b0:2d:63:76:1c
LAN4      : 48:b0:2d:63:76:1d
```

9.3. set

Input:

gbtipmitool lan set <command> <parameter>

Output:

[BMC IP] | [Result]: [OK/FAILED]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password lan set ipsrc dhcp
```

10.1.116.68

```
Result      : OK
```

10. SNMP Trap

10.1. Get snmp setting list

Input:

```
gbtipmitool snmp list
```

Output:

```
[BMC IP] | [Result]: [OK/FAILED]
```

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.132 -U admin -P password snmp list
10.1.116.132
1          : RedfishEvent | Redfish | RedfishEvent|https://10.1.116.201/api/Redfish/Events
```

10.2. Set snmp trap

Input:

```
gbtipmitool snmp add <SNMPv1/SNMPv2c> <destination_addr>
gbtipmitool snmp add SNMPv3 <destination_addr> <snmp_bmc_username>
gbtipmitool snmp add RedfishEvent <destination_addr>
```

Output:

```
[BMC IP] | [Result]: [OK/FAILED]
```

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password snmp add SNMPv1 10.116.160
10.1.116.68
Result      : OK

$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password snmp add SNMPv3 10.116.160 user3
10.1.116.68
Result      : OK
```

10.3. Delete snmp trap

Input:

```
gbtipmitool snmp delete <SNMP ID>
```

Note:

The <SNMP ID> needs to be obtained from snmp list command

Output:

```
[BMC IP] | [Result]: [OK/FAILED]
```

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.132 -U admin -P password snmp delete 1
10.1.116.132
Result      : OK
```


11. SMBIOS

Get smbios information.

11.1. get raw smbios dump

Input:

gbtipmitool smbios dump

Output:

[BMC IP] | [Result]: [OK/FAILED]

The dump file is stored in output directory as [bmc ip]_smbios.bin

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password smbios dump
```

```
10.1.116.68
```

```
Result      : OK
```

```
$ ls -la output/10.1.116.68_smbios.bin
```

```
-rw-r--r-- 1 knut.wang 1049089 10187 Feb 14 10:45 log/10.1.116.68_smbios.bin
```

11.2. smbios list

Input:

gbtipmitool smbios list

Output:

[BMC IP] | [item]: [value]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password smbios list
```

```
10.1.116.68
```

```
CPU Iventory :
```

```
Location      : CPU0
```

```
Name          : Intel(R) Xeon(R) Platinum 8450H
```

```
Manufacturer   : Intel(R) Corporation
```

```
Family        : Xeon
```

```
External Clock : 100.000 MHz
```

```
Max Speed      : 3.500 GHz
```

```
Speed          : 2.000 GHz
```

```
DIMM Iventory :
```

```
Memory Attributes :
```

```
Maximum Capacity : 4096 GB
```

```
Installed Capacity : 512 GB
```

```
Slots Available : 16
```

```
Slots Used      : 16
```

```
Individual Memory Details :
```

```
Location        : DIMM_PO_A0
```

```
Manufacturer     : Micron
```

```
Manufacturer Part Number : MTC20F1045S1RC48BA2
```

```
SerialNumber     : 336CE74E
```

```
Type            : DDR5
```

```
Size             : 32 GB
```

```
Speed           : 4800
```

```
PCI Iventory :
```

```
Add In Card     :
```

```
Type            : System peripheral
```

Slot Number : SLOT1 0000:1A:00.0
Name : Virtual PCIe Placeholder Endpoint
Manufacturer : Broadcom / LSI
Vender ID : 0x1000
Device ID : 0x02B2
Link Width : x16
Link Speed : Gen5

On Board :
Type : Ethernet controller
Name : I350 Gigabit Network Connection
Manufacturer : Intel Corporation
Vender ID : 0x8086
Device ID : 0x1521
Link Width : x1
Link Speed : Gen2

HDD Iventory :
On Board :
Location : SATA Port0
Type : FCH
Name : TS256GSSD370
Manufacturer : Not Specified
Firmware Version : N1126KB
SerialNumber : B709601590
Size : 256.1 GB

NIC Iventory :
On Board :
Location : Port0
Name : I350 Gigabit Network Connection
MAC : 74:56:3c:59:1c:0f

On Board :
Location : Port1
Name : I350 Gigabit Network Connection
MAC : 74:56:3c:59:1c:10

Add In Card :
Location : SLOT_Inter
Name : BCM57416 NetXtreme-E Dual-Media 10G RDMA Ethernet Controller
MAC : 74:56:3c:49:70:93

Add In Card :
Location : SLOT_Inter
Name : BCM57416 NetXtreme-E Dual-Media 10G RDMA Ethernet Controller
MAC : 74:56:3c:49:70:94

12. BMC utils

12.1. Backup settings

Input:

gbtipmitool bmcutil backup <setting id>

0. ALL
1. SNMP
2. KVM
3. NETWORK
4. IPMI
5. NTP
6. AUTHENTICATION
7. SYSLOG

Output:

[BMC IP] | [Result]: [OK/FAILED]

The dump file is stored in log directory as [bmc ip]_bmc-config.bak

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password bmcutil backup 0
```

10.1.116.68

Result : OK

```
$ ls -la log/10.1.116.68_bmc-config.bak
```

```
-rw-r--r-- 1 knut.wang 1049089 118138 Feb 14 10:57 log/10.1.116.68_bmc-config.bak
```

12.2. Restore settings

Input:

gbtipmitool bmcutil restore <setting file Bmc-config.bak>

Output:

[BMC IP] | [Result]: [OK/FAILED]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password bmcutil restore log/10.1.116.68_bmc-config.bak
```

10.1.116.68

Result : OK

12.3. reset default

Input:

gbtipmitool bmcutil reset default

Output:

[BMC IP] | [Result]: [OK/FAILED]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password bmcutil reset default
```

10.1.116.68

Result : OK

12.4. reset bios

Input:

gbtipmitool bmcutil reset bios

Output:

[BMC IP] | [Result]: [OK/FAILED]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password bmcutil reset bios
10.1.116.68
Result      : OK
```

12.5. reboot bmc

Input:

gbtipmitool bmcutil reboot bmc

Output:

[BMC IP] | [Result]: [OK/FAILED]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password bmcutil reboot bmc
10.1.116.68
Result      : OK
```

12.6. Download last crash screen

Input:

gbtipmitool bmcutil export crash

Output:

[BMC IP] | [Result]: [OK/FAILED]

The dump file is stored in log directory as [bmc ip]_lastCrashScreen.jpg

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password bmcutil export crash
10.1.116.68
Result      : OK
```

12.7. Export BIOS setup menu settings

Input:

gbtipmitool bmcutil export setup <json>

Note:

If you add the json parameter, it will be printed directly without storing it.

Output:

[BMC IP] | [Result]: [OK/FAILED]

The dump file is stored in output directory as [bmc ip]_biosSettings.json

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password bmcutil export setup
The dump file is stored in output directory as 10.1.116.68_biosSettings.json.
10.1.116.68
Result      : OK
```

```
$ ls -la output/10.1.116.68_biosSettings.json
-rw-r--r-- 1 knut.wang 1049089 16539 Feb 14 11:04 log/10.1.116.68_biosSettings.json
```

12.8. Import BIOS setup menu settings

Step1. Modify the exported json file “currentValue” field .

```
{
  "AttributeName": "TCG001",
  "DefaultValue": "Enabled",
  "DisplayName": " TPM State",
  "HelpText": "Enable/Disable Security Device. NOTE: Your Computer will reboot during restart in order to change State of the Device.",
  "ReadOnly": false,
  "Type": "Enumeration",
  "Value": [
    {
      "ValueDisplayName": "Disabled",
      "ValueName": "Disabled"
    },
    {
      "ValueDisplayName": "Enabled",
      "ValueName": "Enabled"
    }
  ],
  "CurrentValue": "Enabled"
},
{
  "AttributeName": "TCG006",
  "DefaultValue": "None",
  "DisplayName": "Pending operation",
  "HelpText": "Schedule an Operation for the Security Device. NOTE: Your Computer will reboot during restart in order to change State of Security Device.",
  "ReadOnly": false,
  "Type": "Enumeration",
  "Value": [
    {
      "ValueDisplayName": "None",
      "ValueName": "None"
    },
    {
      "ValueDisplayName": "TPM Clear",
      "ValueName": "TPM Clear"
    }
  ],
  "CurrentValue": "None"
},
}
```

Step2. After modification, you can directly import it back.

Input:

gbtipmitool bmcutil import setup <setup menu.json>

Output:

[BMC IP] | [Result]: [OK/FAILED]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password bmcutil import setup biosSettings.json
```

10.1.116.68

Result : OK

12.9. Upload CA cert file

Input:

gbtipmitool bmcutil import ca PEM/PEMchain <cert.crt>

Output:

[BMC IP] | [Result]: [OK/FAILED]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password bmcutil import ca PEM cert.crt
10.1.116.68
Result      : OK
```

12.10. get audit log**Input:**

```
gbtipmitool bmcutil get audit log
```

Output:

[BMC IP] | [time]: [log]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password bmcutil get audit log
10.1.116.68
ID 1      : Sat Feb 04 2023 07:53:59 GMT+0800 (GMT+08:00) AMID85ED36CDC3C spx_restservice:
spx_restservice -- [2124 : 2124 WARNING]https Login Failed from IP:192.168.100.62 user:admin -
ID 2      : Sat Feb 04 2023 07:54:05 GMT+0800 (GMT+08:00) AMID85ED36CDC3C spx_restservice:
spx_restservice -- [2124 : 2124 INFO]https Login from IP:192.168.100.62 user:admin
```

12.11. get bmc fw info**Input:**

```
gbtipmitool bmcutil get bmc fw info
```

Output:

[BMC IP] | [item]: [value]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password bmcutil get bmc fw info
10.1.116.68
BMC Firmware Type : AMI
ASIC Type        : AST2600
Power-On Hours   : 5
```

12.12. get bmc health_check**Input:**

```
gbtipmitool bmcutil get bmc health_check
```

Output:

[BMC IP] | [item]: [value]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password bmcutil get bmc health_check
10.1.116.68
Result      :
[IP address :10.1.116.68]
```

--- 1. vpd sys ---

Model	SerialNumber	UUID
H253-ZA1-AAS1-TS0	GOG9D0912A000302	7DD64000-D6C1-11EF-8000-10FFE070B1DA

--- 2. firmware summary ---

ID	Version
----	---------

```
BIOS2      R06_F27
BIOS1      R06_F27
BMCIImage1 93.02.06
BMCIImage2 93.02.06
MB_CPLD1   11
```

--- 3. syshealth summary ---

```
PowerState: On
Processors: Normal
Memory: Normal
System: Normal
...
```

12.13. export health_check

Input:

```
gbtipmitool bmcutil export health_check
```

Output:

```
[BMC IP] | [item]: [value]
```

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password bmcutil export health_check
```

The dump file is stored in output directory as E263-Z30-AAV1-000_2025-01-10_19-48-28_10.1.116.68.txt

```
10.1.116.68
```

```
Result      : OK
```

13. Firmware update

13.1. Local/Remote update

Input:

gbtipmitool update <type> <file> <parameter>

gbtipmitool update MAIN_BMC <rom.ima_enc | file.hpm | remote URI>

Supported parameter:

--overwrite_cfg: All the configs will be preserved during updates except --overwrite_cfg is passed as parameter

--boot_check : Check if BMC boot up successfully after an update

gbtipmitool update BACKUP_BMC <rom.ima_enc | file.hpm | remote URI >

Supported parameter:

--overwrite_cfg: All the configs will be preserved during updates except --overwrite_cfg is passed as parameter

--boot_check : Check if BMC boot up successfully after an update

gbtipmitool update BOTH_BMC <rom.ima_enc | file.hpm | remote URI >

Supported parameter:

--overwrite_cfg: All the configs will be preserved during updates except --overwrite_cfg is passed as parameter

--boot_check : Check if BMC boot up successfully after an update

gbtipmitool update MAIN_BIOS <image.rbu | file.hpm | remote URI >

Supported parameter:

--reboot_cfg: Boot up host (when host is power off during update) or reboot host (when host is power on during update) after update finished

--postcomplete : Check if host boot up successfully after an update

--overwrite_setting: Discard all BIOS settings during update

gbtipmitool update BACKUP_BIOS <image.rbu | file.hpm | remote URI >

Supported parameter:

--reboot_cfg: Boot up host (when host is power off during update) or reboot host (when host is power on during update) after update finished

--postcomplete : Check if host boot up successfully after an update

--overwrite_setting: Discard all BIOS settings during update

gbtipmitool update BOTH_BIOS <image.rbu | file.hpm | remote URI >

Supported parameter:

--reboot_cfg: Boot up host (when host is power off during update) or reboot host (when host is power on during update) after update finished

--postcomplete : Check if host boot up successfully after an update

--overwrite_setting: Discard all BIOS settings during update

gbtipmitool update MB_CPLD <image.rcu | remote URI >

gbtipmitool update BPB_CPLD <image.rcu | remote URI >

gbtipmitool update SCM_CPLD <image.rcu | remote URI >

gbtipmitool update UPLOAD_PEM <pemfile.pem | remote URI >

gbtipmitool update MI300X_SMC <image.pldm | remote URI >

Type:

MAIN_BMC

BACKUP_BMC

BOTH_BMC

MAIN_BIOS
BACKUP_BIOS
BOTH_BIOS
MB_CPLD
BPB_CPLD
SCM_CPLD
UPLOAD_PEM
MI300X_SMC

Output:

[BMC IP] | [Update Status]: [0~100%]

Example:

MAIN_BMC / BACKUP_BMC:

\$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password update MAIN_BMC rom_v130418.ima_enc

\$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password update BACKUP_BMC rom_v130418_backup.hpm

MAIN_BIOS / BACKUP_BIOS:

\$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password update MAIN_BIOS image.rbu

\$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password update BACKUP_BIOS file.hpm

MB_CPLD / BPB_CPLD:

\$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password update MB_CPLD image.rcu

\$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password update BPB_CPLD image.rcu

14. BMC firmware version

14.1. mc info

Input:

gbtipmitool mc info

Output:

[BMC IP] | [item]: [value]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password mc info
10.1.116.68
```

```
Device ID      : 32
Device Revision : 1
Firmware Revision : 13.05.02
IPMI Version   : 2.0
Manufacturer ID : 15370
Manufacturer Name : Giga Computing
Product ID     : 4168 (0x1048)
Device Available : yes
Provides Device SDRs : yes
Additional Device Support :
    Sensor Device
    SDR Repository Device
    SEL Device
    FRU Inventory Device
    IPMB Event Receiver
    IPMB Event Generator
    Chassis Device
Aux Firmware Rev Info :
    0x2
    0x0
    0x0
    0x0
```

15. SMTP

15.1. get info

Input:

```
gbtipmitool smtp get info
```

Output:

```
[BMC IP] | [item]: [value]
```

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password smtp get info
```

```
10.1.116.68
```

```
Sender Email ID : support@ami.com
```

```
Primary SMTP Support : ON
```

```
Primary Username : admin
```

```
Primary Server IP : 10.1.116.78
```

```
Primary SMTP port : 25
```

```
Primary SMTP Authentication : ON
```

```
Primary SMTP Connection Protocol : None
```

```
Secondary SMTP Support : OFF
```

15.2. set

Input:

1. Only set primaryServer

```
gbtipmitool smtp set <email> <primaryEnable> <primaryServerIP> <primaryPort> <primaryAuthEnable>  
<primaryUsername> <primaryPassword> <sslTls/startTls/none> <CACertFile> <CertFile> <PrivateKeyFile>
```

2. Set primaryServer and secondaryServer both

```
smtp set <email> <primaryEnable> <primaryServerIP> <primaryPort> <primaryAuthEnable>  
<primaryUsername> <primaryPassword> <sslTls/startTls/none> <CACertFile> <CertFile> <PrivateKeyFile>
```

Output:

```
[BMC IP] | [Result]: [OK/FAILED]
```

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password smtp set test@email.com true 192.168.1.1 465 true
```

```
username password ./sslTls ca_1.pem ./cert_1.pem ./private_1.pem
```

```
10.1.116.68
```

```
Result : OK
```

16. PEF

16.1. SET

Input:

gbtipmitool pef <SNMP IP Address / Email address>

Output:

[BMC IP] | [item]: [value]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password pef test@email.com
```

```
10.1.116.68
```

```
Modify User Email : Success
```

```
Result           : Success
```

17. Virtual media

17.1. status

Input:

gbtipmitool vmedia status

Note:

Display the current mounting status of virtual media

Output:

[BMC IP] | [item]: [value]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.132 -U admin -P password vmedia status
10.1.116.132
  Inserted      : false
  TransferProtocolType : NFS
  Image        :
  ImageName     :
```

```
$ gbtipmitool-win.exe -H 10.1.116.132 -U admin -P password vmedia status
10.1.116.132
  Inserted      : true
  TransferProtocolType : CIFS
  Image        : //10.1.7.224/projects/iso/ubuntu-22.04-desktop-amd64.iso
  ImageName     : ubuntu-22.04-desktop-amd64.iso
```

17.2. mount

Input:

gbtipmitool vmedia mount <protocol_type> <iso_url> <user_name> <password>

Note:

Currently supports NFS 、 CIFS 、 HTTP protocol.

NFS and HTTP do not require username and password parameter.

Output:

[BMC IP] | [Result]: [OK/FAILED]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password vmedia mount nfs
//10.1.116.96/var/nfsshare/ubuntu2004liveserveramd64.iso
10.1.116.68
  Result      : OK
```

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password vmedia mount cifs //10.1.7.224/projects/iso/gct-
diag/gct_diagnostic_analyzer_v0.7.1.iso <user-name> <password>
10.1.116.68
  Result      : OK
```

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password vmedia mount http
//10.1.116.96/ubuntu2004AMD64.iso
10.1.116.68
  Result      : OK
```

17.3. unmount**Input:**

gbtipmitool vmedia unmount

Note:

Currently only supports NFS mount.

Output:

[BMC IP] | [Result]: [OK/FAILED]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password vmedia unmount
10.1.116.68
Result      : OK
```

18. NTP

18.1. get

Input:

gbtipmitool ntp get

Output:

[BMC IP] | ["NTP"]: [NTP url]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password ntp get
10.1.116.68
NTP Server      : time.asia.apple.com
```

18.2. set

Input:

gbtipmitool ntp set

Output:

[BMC IP] | [Result]: [OK/FAILED]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password ntp set time1.facebook.com time.stdtime.gov.tw
10.1.116.68
Result        : OK
```

19. IPMI RAW command

***Only supports BMC firmware v13.04.13 and subsequent versions.**

Input:

gbtipmitool raw [raw ipmi request data]

Output:

[BMC IP] | ["Response"] [Raw response data]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.82 -U admin -P password raw 0x06 0x01
```

```
10.1.116.82
```

```
Response      : 0x20 0x81 0xd 0x4 0x2 0xbf 0xa 0x3c 0x0 0x77 0x1 0xd 0x0 0x0 0x0
```


20. Firmware list of server components

20.1. fw get list

Input:

gbtipmitool fw get list

Output:

[BMC IP] | [BMC/BIOS/CPLD]: [version]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password fw get list
10.1.116.68
  BMC      : 12.60.19
  MB_CPLD1 : 83
  BIOS     : R24
```

20.2. fw get active

Input:

gbtipmitool fw get active

Output:

[BMC IP] | [BmcActiveStatus/BiosAcvtiveStatus]: [MAIN/BACKUP]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password fw get active
10.1.116.68
  BmcActiveStatus : MAIN
  BiosAcvtiveStatus : MAIN
```

20.3. fw get checksum

Input:

gbtipmitool fw get checksum

Output:

[BMC IP] | [BACKUP_BIOS]: [checksum]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password fw get checksum
10.1.116.68
  BACKUP_BIOS : c0f47bff
```

20.4. fw set active BIOS

Input:

gbtipmitool fw set active BIOS <MAIN / BACKUP>

Output:

[BMC IP] | [Result]: [OK/FAILED]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password fw set active BIOS
10.1.116.68
  Result : OK
```

20.5. fw obtain BACKUP_BIOS version**Input:**

gbtipmitool FW obtain BACKUP_BIOS version

Output:

[BMC IP] | [Result]: [OK/FAILED]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password FW obtain BACKUP_BIOS version
10.1.116.68
Result      : OK
```

20.6. fw calculate BACKUP_BIOS**Input:**

gbtipmitool fw calculate BACKUP_BIOS <image.bin>

Output:

[BMC IP] | [Checksum from BMC]: [checksum]
[Checksum from image]: [checksum]
[Check result]: [Success/Failed]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.68 -U admin -P password fw calculate BACKUP_BIOS /home/eason/MR92-
FS1_F16.bin
10.1.116.68
Checksum from BMC : c0f47bff
Checksum from image : c0f47bff
Check result      : Success
```

21. Lan6

Get or set IP source(DHCP/Static).

21.1. get

Input:

```
gbtipmitool lan6 get
```

Output:

```
[BMC IP]
[IP Address Source]: [DHCP/Static]
[Address]          : [IP address]
[Subnet Mask]      : [IP address]
[MAC Address]      : [MAC Address]
```

Example:

```
$ gbtipmitool-win.exe -H 192.168.100.43 -U admin -P password lan6 get
```

```
192.168.100.43
  ipv6              : ON
  IP Address Source : DHCP
  Address           : fd59:dd5e:6cfa:1:21d:aaff:0:42
  MAC Address       : D8:5E:D3:42:9F:11
```

21.2. set ipv6

Input:

```
gbtipmitool lan6 set ipv6 <on/off>
```

Output:

```
[BMC IP] | [Result]: [OK/FAILED]
```

Example:

```
$ gbtipmitool-win.exe -H 192.168.100.43 -U admin -P password lan6 set ipv6 on
192.168.100.43
  Result      : OK
```

21.3. set ipsrc (The IP router must support IPV6)

Input:

```
gbtipmitool lan6 set ipsrc <dhcp/static> <IPv6 index> <IPv6 address> <Subnet prefix length>
```

Output:

```
[BMC IP] | [Result]: [OK/FAILED]
```

Example:

```
$ gbtipmitool-win.exe -H 192.168.100.43 -U admin -P password lan6 set ipsrc static 0
fd59:dd5e:6cfa:1:48ba:3f18:7460:797e 64 fe80::21d:aaff:fe85:8ecc
192.168.100.43
  Result      : OK
```

22. DNS

Please mind that after setting host of DNS, network service of the BMC would be restart.

22.1. get

Input:

```
gbtipmitool dns get
```

Output:

```
[DNS Enabled]           : [True / False]
[mDNS Enabled]          : [True / False]
[Host Name Setting]     : [Automatic / Manual]
[Host Name]             : [Hostname]
[BMC Interface]         : [Ethernet Interface]
[Register BMC]          : [True / False]
[Register Method]       : [Nsupdate / DHCP / Hostname]
[TSIG Authentication Enabled] : [True / False]
[Current TSIG Private File Info] : [TSIG info]
[Domain Setting]        : [Automatic / Manual]
[Domain Interface]      : [bond0_v4 / bond0_v6]
[Domain Name Server Setting] : [Automatic / Manual]
[DNS Interface]         : [Ethernet Interface]
[IP Priority]           : [IPv4 / IPv6]
```

Example:

```
$ gbtipmitool-win.exe -H 192.168.100.43 -U admin -P password dns get
```

```
192.168.100.43
```

```
DNS Enabled      : True
mDNS Enabled     : False
Host Name Setting : Automatic
Host Name       : AMI202403290446
BMC Interface    : bond0
Register BMC     : True
Register Method  : Nsupdate
TSIG Authentication Enabled : False
Current TSIG Private File Info : Not Available
Domain Setting   : Automatic
Domain Interface : bond0_v4
Domain Name Server Setting : Automatic
DNS Interface    : bond0
IP Priority      : IPv4
```

22.2. set host

Input:

```
gbtipmitool dns set host <auto/manual> <hostName>
```

Output:

```
[BMC IP] | [Result]: [OK/FAILED]
          [Restart BMC]: [Success/FAILED]
```

Example:

```
$ gbtipmitool-win.exe -H 192.168.100.43 -U admin -P password dns set host auto
```

```
192.168.100.43
```

```
Result      : OK
Restart BMC  : Success
```

```
$ gbtipmitool-win.exe -H 192.168.100.43 -U admin -P password dns set host manual newHostName
192.168.100.43
Result      : OK
Restart BMC  : Success
```

22.3. set register

Input:

```
gbtipmitool dns set register enable <Nsupdate / DHCP / Hostname>
gbtipmitool dns set register disable
```

Output:

```
[BMC IP] | [Result]: [OK/FAILED]
          [Restart BMC]: [Success/FAILED]
```

Example:

```
$ gbtipmitool-win.exe -H 192.168.100.43 -U admin -P password dns set register enable Hostname
192.168.100.43
Result      : OK
It would take 1 minute at least to restart network service.
192.168.100.43
Restart BMC  : Success
```

22.4. set domain

Input:

```
gbtipmitool dns set domain auto <bond0_v4 / bond0_v6> server auto <IPv4 / IPv6>
gbtipmitool dns set domain auto <bond0_v4 / bond0_v6> server manual <dns_server1 dns_server2 dns_server3 >
gbtipmitool dns set domain manual <domain name> server auto <IPv4 / IPv6>
gbtipmitool dns set domain manual <domain name> server manual <dns_server1 dns_server2 dns_server3>
```

Output:

```
[BMC IP] | [Result]: [OK/FAILED]
          [Restart BMC]: [Success/FAILED]
```

Example:

```
$ gbtipmitool-win.exe -H 192.168.100.43 -U admin -P password dns set domain auto bond0_v4 server auto IPv4
192.168.100.43
Result      : OK
It would take 1 minute at least to restart network service.
192.168.100.43
Restart BMC  : Success
```

23. UpdateSensor

Send a serial commands for update sensor.

23.1. update

Input:

gbtipmitool UpdateSensor update <sku.zi_> <Options>

Supported parameter:

--preserve: The index 0 of FRU will be preserved during updates.

Output:

[BMC IP] | [Result]: [OK/FAILED]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.104 -U admin -P password UpdateSensor update R263-S33-AAF1-000.zi_  
10.1.116.104  
Result      : OK
```

23.2. version

Input:

gbtipmitool UpdateSensor version

Output:

[BMC IP] | [Version]: [SKU version number]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.104 -U admin -P password UpdateSensor version  
10.1.116.104  
Version     : 1695288974
```

24. GPU

Setting and getting pci information from BMC

24.1. pci_list

Input:

gbtipmitool get pci_list

Output:

[BMC IP] | [item]: [value]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.162 -U admin -P password gpu get pci_list
10.1.116.162
```

```
1      :
    ProductName: ASPEED Graphics Family
    Manufacturer: ASPEED Technology, Inc.
    Class: VGA compatible controller
    SlotDesignation: Onboard
    DeviceID: 0x2000
    VendorID: 0x1A03
    BusNumber: 0x0000
    DeviceNum: 0x0000
    SegmentGroupNumber: 0x0000
    LinkWidth: 0x0001
    LinkSpeed: 0x0002
2      :
    ProductName: I350 Gigabit Network Connection
    Manufacturer: Intel Corporation
    Class: Ethernet controller
    SlotDesignation: Onboard
    DeviceID: 0x1521
    VendorID: 0x8086
    BusNumber: 0x0000
    DeviceNum: 0x0000
    SegmentGroupNumber: 0x0000
    LinkWidth: 0x0004
    LinkSpeed: 0x0002
```

25. GraceUpdate

Send a serial commands for update Grace FW

25.1. FWPKG

Input:

```
gbtipmitool graceupdate FWPKG <image.fwpkg>
```

Output:

```
[BMC IP] | [Update Status]: [0~100%]
```

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.104 -U admin -P password graceupdate FWPKG MV13-HD0_F05d_qs_DOT.fwpkg
```

25.2. FPGA

Input:

```
gbtipmitool graceupdate FPGA <image.rpd>
```

Output:

```
[BMC IP] | [Update Status]: [0~100%]
```

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.104 -U admin -P password graceupdate FPGA FPGA_starship_0v8A.rpd
```

26. Service

*Only supports kvm, cd-media and hd-media.

26.1. get list

Input:

```
gbtipmitool service get list
```

Output:

```
[BMC IP] | [Service name]: [Status] | [Interfaces] | [Non Secure Port] | [Secure Port] | [Timeout] | [Maximum Session]
```

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.104 -U admin -P password service get list
10.1.116.104
  kvm      : Active | bond0 | N/A | 7582 | 1800 | 2
  cd-media  : Active | bond0 | N/A | 5124 | N/A | 4
  hd-media  : Active | bond0 | N/A | 5127 | N/A | 4
```

26.2. get session

Input:

```
gbtipmitool service get session <interface>
```

Output:

```
[BMC IP] | [Session ID]: [Session Type] | [User ID] | [User Name] | [Client IP] | [Privilege]
```

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.104 -U admin -P password service get session kvm
10.1.116.104
  19      : KVM | 2 | admin | 10.1.116.39 | Administrator
```


26.3. delete session

Input:

gbtipmitool service delete <session id>

Output:

[BMC IP] | [Result]: [OK/FAILED]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.104 -U admin -P password service delete 19
10.1.116.104
Result      : OK
```

26.4. active

Input:

gbtipmitool service set active <interface> <timeout>

Output:

[BMC IP] | [Result]: [OK/FAILED]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.104 -U admin -P password service set active kvm 1800
10.1.116.104
Result      : OK
```

26.5. deactivate

Input:

gbtipmitool service set deactivate <interface>

Output:

[BMC IP] | [Result]: [OK/FAILED]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.104 -U admin -P password service set deactivate kvm
10.1.116.104
Result      : OK
```

27. Log

27.1. get list

Input:

gbtipmitool log get list

Output:

[BMC IP] | [item]: [value]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.104 -U admin -P password log get list
10.1.116.104
Local Log    : Enable
Rotate       : 0
Remote Log   : Disable
Audit Log    : Enable
```

27.2. enable

Input:

gbtipmitool log enable <item>

Output:

[BMC IP] | [Result]: [OK/FAILED]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.104 -U admin -P password log enable audit
10.1.116.104
Result      : OK
```

27.3. disable

Input:

gbtipmitool log disable <item>

Output:

[BMC IP] | [Result]: [OK/FAILED]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.104 -U admin -P password log disable audit
10.1.116.104
Result      : OK
```

28. PEF

28.1. get email

Input:

gbtipmitool pef get email

Output:

[BMC IP] | [Account index (User name)]: [email address]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.104 -U admin -P password pef get email
10.1.116.104
1 (anonymous) :
2 (admin)      : testEmail@gigacomputing.com
```

28.2. get filter

Input:

gbtipmitool pef get filter

Output:

[BMC IP] | [Filter Index]: [Alert Enable] | [Alert Severity] | [Target Sensor] | [Sensor Severity] | [Destination]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.104 -U admin -P password pef get filter
10.1.116.104
```

Filter Index	: Alert Enable	Alert Severity	Sensor	Sensor Severity	Destination
1	: Disabled	Critical	All Sensors	Custom	Not defined
2	: Disabled	Non_Critical	All Sensors	Custom	Not defined
3	: Disabled	Critical	All Sensors	Custom	Not defined
4	: Disabled	Non_Critical	All Sensors	Custom	Not defined

5	: Disabled	Critical	All Sensors	Custom	Not defined
6	: Disabled	Non_Critical	All Sensors	Custom	Not defined
7	: Disabled	Critical	All Sensors	Custom	Not defined
8	: Disabled	Non_Critical	All Sensors	Custom	Not defined
9	: Disabled	Critical	All Sensors	Custom	Not defined
10	: Disabled	Non_Critical	All Sensors	Custom	Not defined
11	: Disabled	Critical	All Sensors	Custom	Not defined
12	: Disabled	Non_Critical	All Sensors	Custom	Not defined
13	: Disabled	Critical	All Sensors	Custom	Not defined
14	: Disabled	Critical	All Sensors	Custom	Not defined
15	: Disabled	Critical	All Sensors	Custom	Not defined

28.3. get dest

Input:

gbtipmitool pef get dest

Output:

[BMC IP] | [Dest Index]: [Dest Group ID] | [User Name/SNMP IP]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.104 -U admin -P password pef get dest
10.1.116.104
```

```
    Dest Index   : Group ID   Destination
    1            : 2          |(USER)admin
```

28.4. add filter

Input:

gbtipmitool pef add filter <alert severity> <user name/SNMP IP/dest group ID> <sensor severity> All

Output:

[BMC IP] | [Result]: [Success/FAILED]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.104 -U admin -P password pef add filter Monitor admin Critical All
10.1.116.104
```

```
    Result      : Success
```

28.5. add dest

Input:

gbtipmitool pef add dest <Dest Group ID> <user name/SNMP IP>

Output:

[BMC IP] | [Result]: [Success/FAILED]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.104 -U admin -P password pef add dest 8 admin
10.1.116.104
```

```
    Result      : Success
```

28.6. set filter

Input:

gbtipmitool pef set filter <index> <alert severity> <user name/SNMP IP/dest group ID> <sensor severity> All

Output:

[BMC IP] | [Result]: [Success/FAILED]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.104 -U admin -P password pef set filter 16 Monitor admin Non_Critical all
10.1.116.104
Result      : Success
```

28.7. set dest**Input:**

gbtipmitool pef set dest <index> <Dest Group ID> <user name/SNMP IP>

Output:

[BMC IP] | [Result]: [Success/FAILED]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.104 -U admin -P password pef set dest 1 9 admin
10.1.116.104
Result      : Success
```

28.8. set email**Input:**

gbtipmitool pef set email <email address>

Output:

[BMC IP] | [Modify User Email]: [Success/FAILED]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.104 -U admin -P password pef set email test2@gigacomputing.com
10.1.116.104
Modify User Email : Success
```

28.9. delete filter**Input:**

gbtipmitool pef delete filter <index>

Output:

[BMC IP] | [Result]: [OK/FAILED]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.104 -U admin -P password pef delete filter 16
10.1.116.104
Result      : OK
```

28.10. delete dest**Input:**

gbtipmitool pef delete dest <index>

Output:

[BMC IP] | [Result]: [Success/FAILED]

Example:

```
$ gbtipmitool-win.exe -H 10.1.116.104 -U admin -P password pef delete dest 1
10.1.116.104
Result      : Success
```


LOCAL

Send commands without IP for the local server.

*Notice 1: gbtipmitool cannot connect to corresponding BMC from same host OS, so you have to use the local command instead.

*Notice 2: You have to close the iKVM UI before executing local command.

Input:

gbtipmitool {-U admin password(option)} -T local <Main Service> <SubFunction> <SubFunctionBody>

Output:

[169.254.0.17]

Main Service Result

Example:

```
$ ./gbtipmitool-linux -T local sel list
```

169.254.0.17

```
4      : Mon May 08 2023 09:44:52 GMT+0000 (Coordinated Universal Time) | 0x0 | SYSTEM Event | bios :  
Timestamp Clock Synch was asserted  
3      : Mon May 08 2023 09:44:37 GMT+0000 (Coordinated Universal Time) | 0x0 | SYSTEM Event | bios :  
OEM System Boot Event was asserted  
2      : Mon May 08 2023 09:44:33 GMT+0000 (Coordinated Universal Time) | 0x0 | SYSTEM Event | bios :  
OEM System Boot Event was asserted  
1      : Mon May 08 2023 09:43:25 GMT+0000 (Coordinated Universal Time) | 0xe2 | CPU0_Status | BMC  
Event : Processor Presence detected was asserted
```

```
$ ./gbtipmitool-linux -T local -U admin2 password2 sel list
```

169.254.0.17

```
4      : Mon May 08 2023 09:44:52 GMT+0000 (Coordinated Universal Time) | 0x0 | SYSTEM Event | bios :  
Timestamp Clock Synch was asserted  
3      : Mon May 08 2023 09:44:37 GMT+0000 (Coordinated Universal Time) | 0x0 | SYSTEM Event | bios :  
OEM System Boot Event was asserted  
2      : Mon May 08 2023 09:44:33 GMT+0000 (Coordinated Universal Time) | 0x0 | SYSTEM Event | bios :  
OEM System Boot Event was asserted  
1      : Mon May 08 2023 09:43:25 GMT+0000 (Coordinated Universal Time) | 0xe2 | CPU0_Status | BMC  
Event : Processor Presence detected was asserted
```