Bull System Manager

NOVASCALE & ESCALA

BSM 1.3

Remote Hardware Management CLI Reference Manual

REFERENCE
86 A2 58FA 04

NOVASCALE & ESCALA

BSM 1.3

Remote Hardware Management CLI Reference Manual

Software

August 2010

BULL CEDOC
357 AVENUE PATTON
B.P.20845
49008 ANGERS CEDEX 01
FRANCE

REFERENCE
86 A2 58FA 04

Printed in France

Trademarks and Acknowledgements

Table of Contents

Introduction

Scope and Audience of this Manual

The purpose of this manual is to describe the Hardware Management CLI (Command Line Interface) for Bull NovaScale 3005, 4000, 5005 & 9006 series, NS R400 series, NS T800, Express5800 servers, Blade servers, and Escala Privilege Line servers.

This manual is intended for users in charge of:

- managing these servers locally and/or remotely,
- writing server management batch scripts.

Using this Manual

This manual contains the following chapters:

Chapter 1	**Hardware Management Commands** Describes the syntax of each command.
Appendix A	**Server ON / OFF status codes** Gives details about the states returned by the bsmpower command.
Appendix B	**User/Password internal authentication file** Gives detail about the commands used to manipulate the user/password internal authentication file.

Related Information

- For more information about Bull System Manager, please refer to:
  Bull System Manager Installation Guide (Ref. 86 A2 54FA)
  Bull System Manager Administrator's Guide (Ref. 86 A2 56FA)
  Bull System Manager User's Guide (Ref. 86 A2 55FA)
- For more information about the Intel Server Manager (ISM) management tool, please refer to the documentation provided by Intel.

Chapter 1. Hardware Management Commands

1.1 Description

The Hardware Management CLI provides an easy Command Line Interface (CLI) for local or remote hardware management and automation scripts. It is designed for:

- NovaScale 4000, 5005 & 9006 series, Express 5800 servers, NovaScale and Evolutive Line Blade servers, Escala Privilege Line servers, NovaScale servers using the ipmilan, lanplus or ipmidrv model, Bullx series.
- IA32 or IA64 architectures,
- Linux systems ONLY.

The CLI uses an OutOfBand connection to the target hosts:

- IPMIoverLAN for NovaScale 3005 series, NovaScale 4000 series, Express 5800 servers, NovaScale servers using the ipmilan or lanplus model, and Bullx series.
- PAM Web services for NovaScale 5005 & 6000 series.
- SNMP requests to the Chassis Management Module for NS servers, EL Blade servers, Bullx series.
- SNMP requests to the SNMP agent of Power Distribution Units (PDU).
- SSH connection to Hardware Management Console (HMC) for Escala PL servers. Escala PL servers remote management with HMC requires:
  - identity key files to be installed on the HMC
  - the presence of a SSH client configuration file to perform non-prompt ssh connection to the HMC
  - locally, key files and configuration file (if any) must be in the same directory.

Most of the commands may also use an InBand connection for local Hardware Management of NovaScale servers running Linux and managed via IPMI using the ipmidrv model.

It is installed in the **bin** subdirectory of the **BSMHW** package install directory. Default is: **/opt/BSMHW/bin.**

The Hardware Management CLI comprises the following shell scripts:

- bsmpower.sh
- bsmreset.sh
- bsminfo.sh
- bsmlog.sh
- bsmfru.sh
- bsmsensor.sh
- bsmsnmp.sh
- bsmpowergroup.sh
- bsmsol.sh

- bsmidentify.sh
- bsmHWinfocmd.sh
- bsmFWcmd.sh
- bsmFWupg.sh
- bsmHWpm.sh
- bsmOSpm.sh
- bsmHMCpm.sh
- bsmGetConfParam.sh
- bsmSetConfParam.sh
- bsmPDUpower.sh

Note The following Hardware Management commands (NovaScale 5005 & 6000 series only) require PAM version 8.13 (or higher) / PAM version 22.13 (or higher) to be installed:
  - bsmsnmp.sh
  - bsmpowergroup.sh
  - bsminfo -i identitycard

1.2 Password Specification

All password arguments may be either specified by "-p password" or extracted from the internal authentication file. This file is created with the **bsmcfg_auth_cmd.sh** command, detailed in Appendix B.

1.3 Models Requirement

Although very similar, the tiger, nec, ipmilan, lanplus and ipmidrv models have different mandatory argument.

tiger model:

- The "user" argument is mandatory via "-u user".
- The "password" argument is mandatory via "-p password" or extracted from the internal authentication file.

nec model:

- The "user" argument is mandatory via "-u user" or via the default (MWA) user.
- The "password" argument is mandatory via "-p password" or extracted from the internal authentication file.

ipmilan model:

- The "user" and "password" arguments are not mandatory.
- If "-p password" is not specified and "-u user" is specified, the "password" (that may be found or not) is searched in the internal authentication file.

ipmidrv model:

- IPMI management of a local system requires the Linux OpenIPMI driver to be installed and configured, and the OpenIPMI library to be installed.
- The "user" , "password" and "host" arguments must not be specified for local hardware management via IPMI.

lanplus model:

- The "user" argument is mandatory.
- If "-p password" is not specified, the "password" (that may be found or not) is searched in the internal authentication file.
- IPMI connection is done with lanplus interface using cipher suite IDs for authentication, integrity, and encryption algorightms. Default cipher suite ID is 3 which specifies RAKP-HMAC-SHA1 authentication, HMAC-SHA1-96 integrity, and AES-CBC-128 encryption algorithms.

1.4 Modification of the IPMITOOL configuration

The possibility of modifying some configuration parameters for IPMITOOL is offered. The way of changing those parameters is explained bellow.

1.4.1 How to change the IPMITOOL configuration parameters?

Parameters to change are in the file bsmcli.cfg.custom.sh.tmpl.

- Rename the file in order to run it by calling the BSMCLI scripts.

```
$ cd /opt/BSMHW/bin
$ mv bsmcli.cfg.custom.sh.tmpl bsmcli.cfg.custom.sh
```

- Edit the bsmcli.cfg.custom.sh file, modify the value you want to change and save the file content.

1.4.2 IPMITOOL configuration parameters

For the moment, it is possible to change only one parameter:

CYPHER_SUITE_ID : this parameter specify the authentication, integrity and confidentiality algorithms that are used when connecting via **lanplus** interface. The default value is 3.

bsmpower

bsmpower.sh is used to power ON/OFF a server, a Blade server, an Escala PL server, Bullx chassis or blades, or to activate/shutdown an Escala logical partition.

This command is asynchronous and returns the prompt before the end of command completion.

The user can check the server power state and the PL server system or partition state using the following status command:

```
bsmpower.sh -a status
```

Usage

NovaScale 5005 and 6000 series servers

```
bsmpower.sh [-h] [-q] -a action -m fame -H host -D domain -M hwmanager -u
user -p password [-o outfile] [-l level]
```

Express 5800 servers

```
bsmpower.sh [-h] [-q] -a action -m nec -H host [-u user] -p password
[-o outfile] [-l level]
```

NovaScale servers using the ipmilan or lanplus model

```
bsmpower.sh [-h] [-q] -a action -m ipmilan -H host [-u user]
[-p password] [-o outfile] [-l level]
```

```
bsmpower.sh [-h] [-q] -a action -m lanplus -H host -u user
[-p password] [-o outfile] [-l level] [-Y cipher]
```

NovaScale servers using the ipmidrv model

```
bsmpower.sh [-h] [-q] -a action -m ipmidrv [-o outfile] [-l level]
```

NovaScale 4000 series servers

```
bsmpower.sh [-h] [-q] -a action -m tiger -H host -u user -p password
[-o outfile] [-l level]
```

NovaScale and Evolutive Line Blade servers

```
bsmpower.sh [-h] [-q] -a action -m blade -M hwmanager –B bladename
[-S SNMPv] [-C community] [-P port] [-T timeout] [-o outfile] [-l level]
```

Escala Privilege Line servers

```
bsmpower.sh [-h] [-q] -a action -m HMC -M hwmanager –B CECname –I idfile
-C configfile [-d cfgdir] [-T timeout] [-L lpar] [-f profilename]
[-o outfile] [-l level]
```

Bullx chassis

```
bsmpower.sh [-h] [-q] -a action -m CMC -M hwmanager [-S SNMPv] [-C
community] [-P port] [-T timeout] [-o outfile] [-l level]
```

Bullx blades

```
bsmpower.sh [-h] [-q] -a action -m blade_CMC -H host [-u user] [-p
password] [-o outfile] [-l level]
```

`-h`	Displays command usage.
`-l` *`level`*	Specifies the severity of the messages to be logged in syslog. 0 : no message is logged (default). 1 : only the FAILED completion of the command is logged. 3 : FAILED and successful completion of the command are logged.
`-q`	Quiet option: stops all outputs (**stdout, sdterr,** or *`outfile`* if **-o** option is specified).
`-a` *`action`*	Action: `on`, `off`, `off_force`, `status`, `restart` (Escala PL servers).
`-H` *`host`*	DNS name or target server IP address, Bullx blade IP address.
`-D` *`domain`*	Target server domain name (NovaScale 5005 and 6000 series only).
`-m` *`model`*	Target server model: fame, nec, ipmilan, lanplus, tiger, ipmidrv, blade, HMC
`-M` *`hwmanager`*	DNS name or PAP Manager IP address (NovaScale 5005 & 6000 series) or NS and EL Blade servers manager IP address, or HMC IP address for PL servers, or CMC IP address for Bullx chassis.
`-u` *`user`*	PAP administrator for NovaScale 5005 & 6000 series. SMU user on the target server for NovaScale 4000 series. BMC user for NovaScale target servers using the ipmilan model, and for Bullx blades. User for ssh connection to the HMC for PL servers.
`-Y cipher`	Cipher suite ID to be used by lanplus interface (default is 3).
`-I idfile`	Identity key file used to perform connection to the HMC with ssh.
`-C configfile`	ssh client configuration file used to perform non-prompt connection to the HMC.
`-d cfgdir`	Directory where identity key file and ssh client configuration file are installed (default value is **../etc/ssh**).
`-L lpar`	Logical partition name for partitioned Escala PL server.

`-f profilename`	Name of the partition profile to use when activating a partition. This argument is required unless the managed system is in the manufacturing default configuration.
`-p password`	User password. (Authentication key for Express5800 servers).
`-B targetname`	Blade name for Blade servers, or managed system name (CECname) for PL servers.
`-S SNMPv`	SNMP version: 1 (default value), 2, 3.
`-C community`	SNMP community (default value is “public” for “status” action and “private” for “on” and “off” action).
`-P port`	SNMP port (default value is 161).
`-T timeout`	SNMP timeout (default value is 20s). SSH connection timeout (default value is 30s).
`-o outfile`	Output file name to which **stdout** and **stderr** outputs are redirected.

Notes

- Servers are identified by their DNS name or IP address (`-H` parameter).
- NovaScale 5005 & 6000 series servers can also be identified by their domain name (for a PAP manager, domain names are unique).
- -H *host* and -D *domain* parameters are exclusive.
- The *tiger* model, defined for NovaScale 4000 series servers, is similar to the *ipmilan* model and used to ensure compatibility with version 2.0.
- The “off_force” action is not available for NS and EL Blade servers.
- In order to power on/off a blade of NS or EL Blade servers, or a Bullx chassis, the system running **bsmpower** must be declared on the target server as a member of a SNMPv1 read-write community. The default read-write community name used by **bsmpower** is “private”.

bsmpower.sh -a on/off/off_force/restart

This command powers ON/OFF the system or activate/shutdown an Escala logical partition.

The **restart** command, performing an immediate restart, is available only for Escala PL servers and logical partitions.

Note For the Power Off command to be taken into account on a remote host running Windows 2000 / 2003 Server, the `Shutdown: Allow system to be shut down without having to log on` security option must be enabled on the remote host.
To configure this security option:

- Click Start -> Run.
- In the Open box, type `gpedit.msc` and click OK.
- In the Group Policy window, expand Computer Configuration\Windows\ Settings\Security Settings\Local\Policies\Security Options\
- Set the Shutdown Security option to enabled.

Return Codes:

0 command accepted.

-1 command failed.

Note A power ON command on an already powered ON server and/or a power OFF command on an already powered OFF server may return 0 (command accepted).

Output:

An acknowledgement message is displayed in **stdout** (except if the `-q` option is specified).

Examples:

```
$ bsmpower.sh -a on -m fame -D FAME000 -M paptest2 -u pap -p pap
```

```
$ bsmpower.sh -a on -m blade -M 192.168.200.10 -B SN#AA123456K11K
Blade powered ON
```

```
$ bsmpower.sh -a on -m HMC -M 172.31.50.12 –I id_dsa –C config_bsm –d
/etc/ssh -u hscroot –B “Server-8203-E4A-YC7939”
```

```
$ bsmpower.sh -a on -m HMC -M 172.31.50.12 –I id_dsa –C config_bsm –d
/etc/ssh -u hscroot –B “Server-8203-E4A-YC7939” –L LPAR1 –f FULL
```

```
$ bsmpower.sh -a off -m HMC -M 172.31.50.12 –I id_dsa –C config_bsm –d
/etc/ssh -u hscroot –B “Server-8203-E4A-YC7939”
```

```
$ bsmpower.sh -a off -m HMC -M 172.31.50.12 –I id_dsa –C config_bsm –d
/etc/ssh -u hscroot –B “Server-8203-E4A-YC7939” –L LPAR1
```

```
$ bsmpower.sh -a on -m CMC -M 129.184.238.254 -C write_com
```

```
$ bsmpower.sh -a on -m blade_CMC -H 129.184.238.110 -u root –p pass
Blade Power Control: on
```

bsmpower.sh -a status

This command displays power ON/OFF status of servers, or the system or partition status of Escala PL servers.

Note Excepted for Escala PL servers and logical partitions, power ON/OFF status represents the electrical status and not the functional status of the system. For example, a system may be powered ON but not RUNNING, due to a BIOS initialization error.

For Escala PL servers, power ON/OFF status represents the server or partition functional state.

Return Codes for NovaScale 5005 and 6000 Servers

0 Server ON or RUNNING.

1 Server OFF.

2 Server in a TRANSIENT normal state (POWERING ON or POWERING DOWN).

3 Server in a TRANSIENT abnormal state (all TRANSIENT states apart from POWERING ON and POWERING DOWN).

-1 Command failed.

Note The interconnexion between ON / RUNNING / OFF / TRANSIENT states and server status is detailed in Appendix A.

Return Codes for NovaScale 40x0 Servers or NovaScale Servers using the ipmilan, lanplus or ipmidrv model

0 Server powered ON.

1 Server powered OFF.

-1 Command failed.

Return Codes for NovaScale and Evolutive Line Blade servers, Bullx blades

0 Blade power is ON.

1 Blade power is OFF.

-1 Command failed.

Return Codes for Escala PL servers and logical partitions

0 Server or partition in Operating or Running state.

1 Server or partition in OFF state.

2 Server or partition in a TRANSIENT normal state (Starting, Shutting Down, Power Off In Progress, Initializing, or Standby).

4 Server or partition in Unknown state (Not Activated, Error, Open Firmware, or Not Available).

-1 Command failed.

Return Codes for Bullx chassis

0 Chassis power is ON.

1 Chassis power is OFF (Deep Standby, Light Standby).

-1 Command failed.

Examples:

```
$ bsmpower.sh -a status -m fame -D FAME000 -M paptest2 -u pap -p pap
```

```
INACTIVE
```

```
$ bsmpower.sh -a status -m fame -D FAME000 -M paptest2 -u pap -p pap
```

```
POWERING ON
```

```
$ bsmpower.sh -a status -m fame -D FAME000 -M paptest2 -u pap -p pap
```

```
POWERING ON FAILED
```

```
$ bsmpower.sh -a status -m nec -p guest -H 129.182.6.114
```

```
Chassis Power is on
```

```
$ bsmpower.sh -a status -m ipmilan -H 129.182.6.114 –u MWA –p guest
```

```
Chassis Power is on
```

```
$ bsmpower.sh -a status -m blade -M 192.168.200.10 -B SN#AA123456K11K
```

```
blade power is ON
```

```
$ bsmpower.sh -a status -m HMC -M 192.31.50.12 –I id_dsa –d /etc/ssh
-C config_bsm -u hscroot –B “Server-8203-E4A-YC7939”
```

```
Operating
```

```
$ bsmpower.sh -a status -m HMC -M 192.31.50.12 –I id_dsa –d /etc/ssh
-C config_bsm -u hscroot –B “Server-8203-E4A-YC7939” –L LPAR1
```

```
Not Activated
```

```
$ bsmpower.sh -a status -m CMC -M 129.184.238.254
```

```
Chassis Power is ON
```

```
$ bsmpower.sh -a status -m blade_CMC -H 129.184.238.110 -u root –p
pass
```

```
Blade power is on
```

```
$ bsmpower.sh -a status -m lanplus -H 129.182.6.114 –u MWA –p guest
```

```
Chassis Power is on
```

bsmreset

bsmreset.sh is used to forcibly Power Reset a server.

Usage

NovaScale 5005 and 6000 series servers

```
bsmreset.sh [-h] [-q] -m fame -H host -D domain -M hwmanager -u user
-p password [-o outfile] [-l level]
```

Express 5800 servers

```
bsmreset.sh [-h] [-q] -m nec -H host [-u user] -p password [-o outfile]
[-l level]
```

NovaScale servers using the ipmilan or lanplus model

```
bsmreset.sh [-h] [-q] -m ipmilan -H host [-u user -p password]
[-o outfile] [-l level]
```

```
bsmreset.sh [-h] [-q] -m lanplus -H host -u user [-p password]
[-o outfile] [-l level] [-Y cipher]
```

NovaScale 4000 series servers

```
bsmreset.sh [-h] [-q] -m tiger -H host -u user -p password [-o outfile]
[-l level]
```

Bullx blades

```
bsmreset.sh [-h] [-q] -m blade_CMC -H host [-u user] [-p password] [-o
outfile] [-l level]
```

`-h`	Displays command usage.
`-l level`	Specifies the severity of the messages to be logged in syslog. 0 : no message is logged (default). 1 : only the FAILED completion of the command is logged. 3 : FAILED and successful completion of the command are logged.
`-q`	Quiet option: stops all outputs (**stdout, sdterr,** or *"outfile"* if **-o** option is specified).
`-H host`	DNS name or target server IP address, Bullx blade IP address.
`-D domain`	Target server domain name (NovaScale 5005 and 6000 series only).
`-m model`	Target server model: fame, nec, ipmilan, lanplus, tiger, blade_CMC.

`-M hwmanager`	DNS name or PAP Manager IP address (NovaScale 5005 & 6000 series only).
`-u user`	PAP administrator for NovaScale 5005 & 6000 series. SMU user on the target server for NovaScale 4000 series. BMC user for NovaScale target servers using the ipmilan model, and for Bullx blades.
`-p password`	User password.(Authentication key for Express5800 servers).
`-Y cipher`	Cipher suite ID to be used by lanplus interface (default is 3).
`-o outfile`	Output file name to which **stdout** and **stderr** outputs are redirected.

Notes

- Servers are identified by their DNS name or IP address (`-H` parameter).
- NovaScale 5005 & 6000 series servers can also be identified by their domain name (for a PAP manager, domain names are unique).
- -H *host* and -D *domain* parameters are exclusive.
- The `tiger` model, defined for NovaScale 4000 series servers, is similar to the `ipmilan` model and used to ensure compatibility with version 2.0.

Return Codes

0	command accepted.
-1	command failed.

Note If the server is not in the right state to perform the reset command, an error is displayed.

bsminfo

bsminfo.sh is used to direct, to the standard output, the configuration information specified in the `-i information` parameter.

Note This command concerns NovaScale 5005 & 6000 series servers, and NovaScale servers using the ipmilan, lanplus or ipmidrv model for *hardware status and BMCinfo* information.

Usage

NovaScale 5005 and 6000 series servers

```
bsminfo.sh [-h] -i information -m fame [-e element] [-H host] [-D domain]
-M hwmanager -u user -p password [-o outfile] [-l level] [-x] [-X]
```

`-h`	Displays command usage.
`-l level`	Specifies the severity of the messages to be logged in syslog. 0 : no message is logged (default). 1 : only the FAILED completion of the command is logged. 3 : FAILED and successful completion of the command are logged.
`-i information`	Information type. See list and usage below for NovaScale 5005 and 6000 series servers. Currently, only *hardwarestatus and BMCinfo* information is available for NovaScale servers using ipmilan or ipmidrv model.
`-e element`	Hardware element concerned (in PAM PUID format).
`-H host`	DNS name or target server IP address.
`-D domain`	Target server domain name.
`-m model`	Target server model: fame.
`-M hwmanager`	DNS name or PAP Manager IP address.
`-u user`	PAP administrator for NovaScale 5005 & 6000 series.
`-p password`	User password.
`-o outfile`	Output file name to which **stdout** and **stderr** outputs are redirected.
`-x`	Displays Identity Card in XML format.
`-X`	Outputs Identity Card in raw XML format (without whitespaces and newlines).

NovaScale servers using the ipmilan or lanplus model

```
bsminfo.sh [-h] -i information -m ipmilan -H host [-u user] [-p password]
[-o outfile] [-l level]

bsminfo.sh [-h] -i information -m lanplus -H host -u user [-p password]
[-o outfile] [-l level] [-Y cipher]
```

NovaScale servers using the ipmidrv model

```
bsminfo.sh [-h] -i information -m ipmidrv [-o outfile] [-l level]
```

`-h`	Displays command usage.
`-l`	Logs in syslog the successful completion of the command (OK). By default, only FAILED completion is logged.
`-i information`	Information type. Currently, only *hardwarestatus and BMCinfo* information is available.
`-H host`	DNS name or target server IP address.
`-m model`	Target server model: ipmilan, lanplus, ipmidrv
`-u user`	BMC user.
`-p password`	User password.
`-Y cipher`	Cipher suite ID to be used by lanplus interface (default is 3).
`-o outfile`	Output file name to which **stdout** and **stderr** outputs are redirected.

Notes

- Servers are identified by their DNS name or IP address (`-H` parameter).
- NovaScale 5005 & 6000 series servers can also be identified by their domain name (for a PAP manager, domain names are unique).
- `-H host` and `-D domain` parameters are exclusive.

Return Codes

0	command accepted.
-1	command failed.

bsminfo Options and Parameters

-i Option	PAM Level (no -D or -e option)	Domain Level (-D option specified)	Hardware Component Level (-e option specified)
domainlist	Lists all the domains managed by PAM.		
cellblockident	Displays the cellblock code wheel number(s) of all the domains managed by PAM.	Displays the cellblock code wheel number of the cellblock on which the domain is defined.	
domainstatus	Lists the Functional Status of all the domains managed by PAM.	Displays domain FunctionalStatus.	
domainhardware		Lists the Functional Status of all domain hardware components (QBB, CPU, MEM, IOB).	
domainlogistics		Lists the Functional Status of all logistic hardware components (FAN, MDP, PMB, …) in the domain cellblock.	
hardwarestatus			Lists all hardware component statuses.
FRUtemperatures			Lists all hardware component temperatures
hardwareinfo			Lists FRUs and displays hardware information (firmware version, …).
domaininfo		Displays domain memory size and BIOS version.	
domainexclusion		Lists the excluded components of a domain.	
pmbpresence	Displays the PMB PresenceStatus of all the CSS modules managed by PAM.		
identitycard	Displays a full PAM Identity Card		Displays the Identity Card of a specified Cellblock component

Table 1. bsminfo options and parameters for NovaScale 5005 and 6000 series

-i Option	Hardware Component Level (-e option specified)
hardwarestatus	Returns the power status ON/OFF of the chassis
BMCinfo	Returns the BMC IPMI version, FW revision, ...

Table 2. bsminfo options and parameters for NovaScale servers using ipmilan/ipmidrv

bsminfo -i domainlist

domainlist is used to list the domains managed by the specified PAM.

Note -H and -D parameters are not used (ignored if present).

Output:

PAM:/DOMAINGROUP_<cellsblock name>/DOMAIN_<domain name>/
DomainName=<domain name>
…

Example:

```
$ bsminfo.sh -i domainlist -m fame -M papcharly3 -u pap -p pap
```

```
PAM:/DOMAINGROUP_CHARLY3/DOMAIN_ID1/DomainName=ID1
PAM:/DOMAINGROUP_CHARLY3/DOMAIN_ID2/DomainName=ID2
$
```

bsminfo - i cellblockident

cellblockident is used to display the code wheel number of the cellblock on which the specified domain is defined.

If the domain is not specified, it displays the **cellblock code wheel number(s)** of all the domains managed by PAM.
The **cellblock code wheel number** identifies (localizes) a cellblock.
For example, this number localizes a NovaScale 5005 or 6000 series server in a computer room if the servers are physically positioned according to this number.

Notes

- Although the **cellblock code wheel number** is a cellblock attribute, it is domain dependent.
- HPC is the only user of this information.
- It is not possible to get the code wheel number of a cellblock forwhich no domain has been defined.
- Each PMB (CSS module) also has a code wheel number.

Output:

PAM:/DOMAINGROUP_<cellsblock name>/DOMAIN_<domain name>/
CellBlockIdent=[0-15]
…

Examples:

```
$ bsminfo.sh -i cellblockident -m fame -D FAME000 -M paptest2 -u pap
-p pap
```

```
PAM:/DOMAINGROUP_PROTO9/DOMAIN_FAME000/CellBlockIdent=0
$
```

```
$ bsminfo.sh -i cellblockident -m fame -M papcharly3 -u pap -p pap
```

```
PAM:/DOMAINGROUP_CHARLY3/DOMAIN_ID1/CellBlockIdent=0
PAM:/DOMAINGROUP_CHARLY3/DOMAIN_ID2/CellBlockIdent=0
$
```

bsminfo -i domainstatus

domainstatus is used to display the functional status of a specified domain.
If the domain is not specified, it displays the functional status of all the domains managed by PAM.

Possible states: NORMAL, WARNING, CRITICAL, FATAL and UNKNOWN.

Output:

PAM:/DOMAINGROUP_<cellsblock name>/DOMAIN_<domain name>/ FunctionalStatus =NORMAL | WARNING | CRITICAL | FATAL | UNKNOWN

Examples:

```
$ bsminfo.sh -i domainstatus -m fame -D FAME000 -M paptest2 -u pap -p
pap
```

```
PAM:/DOMAINGROUP_PROTO9/DOMAIN_FAME000/FunctionalStatus=WARNING
$
```

```
$ bsminfo.sh -i domainstatus -m fame -M papcharly3 -u pap -p pap
```

```
PAM:/DOMAINGROUP_CHARLY3/DOMAIN_ID1/FunctionalStatus=NORMAL
PAM:/DOMAINGROUP_CHARLY3/DOMAIN_ID2/FunctionalStatus=NORMAL
$
```

bsminfo -i domainhardware

domainhardware is used to display the list and the functional status of the hardware components in the specified domain.

Possible states: NORMAL, WARNING, CRITICAL, FATAL and UNKNOWN.

Hardware element types: QBB, CPU, MEM, IOB, IOR (or IOC and IOL for NovaScale 5xx5 and 6xx5 servers).

Objects are displayed in PAM (PUID) format for use as the **hardwarestatus** and **hardwareinfo** `-e` parameter.

Output:

According to object type:

<object PUID >/ FunctionalStatus =NORMAL | WARNING | CRITICAL | FATAL | UNKNOWN

Example:

```
$ bsminfo.sh -i domainhardware -m fame -D ID1 -M papcharly3 -u pap -p
pap
```

```
PAM:/CELLSBLOCK_CHARLY3/Module_0/QBB_0/FunctionalStatus=NORMAL
PAM:/CELLSBLOCK_CHARLY3/Module_0/QBB_0/CPU_0/FunctionalStatus=NORMAL
PAM:/CELLSBLOCK_CHARLY3/Module_0/QBB_0/CPU_1/FunctionalStatus=NORMAL
PAM:/CELLSBLOCK_CHARLY3/Module_0/QBB_0/CPU_2/FunctionalStatus=NORMAL
PAM:/CELLSBLOCK_CHARLY3/Module_0/QBB_0/CPU_3/FunctionalStatus=NORMAL
PAM:/CELLSBLOCK_CHARLY3/Module_0/QBB_0/MEMORY_S/FunctionalStatus=NORMAL
PAM:/CELLSBLOCK_CHARLY3/Module_0/QBB_0/MEMORY_P/FunctionalStatus=NORMAL
PAM:/CELLSBLOCK_CHARLY3/Module_0/IOC_0/FunctionalStatus=NORMAL
PAM:/CELLSBLOCK_CHARLY3/Module_0/IOC_0/IOL/FunctionalStatus=NORMAL
PAM:/CELLSBLOCK_CHARLY3/Module_0/QBB_1/FunctionalStatus=NORMAL
PAM:/CELLSBLOCK_CHARLY3/Module_0/QBB_1/CPU_0/FunctionalStatus=NORMAL
PAM:/CELLSBLOCK_CHARLY3/Module_0/QBB_1/CPU_1/FunctionalStatus=NORMAL
PAM:/CELLSBLOCK_CHARLY3/Module_0/QBB_1/CPU_2/FunctionalStatus=NORMAL
PAM:/CELLSBLOCK_CHARLY3/Module_0/QBB_1/CPU_3/FunctionalStatus=NORMAL
PAM:/CELLSBLOCK_CHARLY3/Module_0/QBB_1/MEMORY_S/FunctionalStatus=NORMAL
PAM:/CELLSBLOCK_CHARLY3/Module_0/QBB_1/MEMORY_P/FunctionalStatus=NORMAL
PAM:/CELLSBLOCK_CHARLY3/Module_0/IOC_1/FunctionalStatus=NORMAL
PAM:/CELLSBLOCK_CHARLY3/Module_0/IOC_1/IOL/FunctionalStatus=NORMAL
```

bsminfo -i domainlogistics

domainlogisitics is used to list the functional status of all common logistic hardware module components in the domain cellblock.

Possible states: NORMAL, WARNING, CRITICAL, FATAL and UNKNOWN.

Hardware element types:

- NovaScale 5xx0, 6xx0 server example:
  MIDPLANE, FPB, DPS, QBBFanBox, SPSFanBox, PMB.
- NovaScale 5xx5, 6xx5 server example:
  CORE Unit, DPS, FanBox, PMB.

Objects are displayed in PAM (PUID) format for use as the **hardwarestatus** and **hardwareinfo** `-e` parameter.

Output:

<object PUID >/ FunctionalStatus =NORMAL | WARNING | CRITICAL | FATAL | UNKNOWN

Example:

```
$ bsminfo.sh -i domainlogistics -m fame -D C3-bimodule -M papcharly3
-u pap -p pap
```

bsminfo -i hardwarestatus

hardwarestatus is used to display all the statuses of the specified hardware object.

For NovaScale servers using the ipmilan or ipmidrv model, returned hardwarestatus information is: `chassis power status` info.

Notes

- `-e` option is mandatory for the fame model and ignored for the ipmilan model.
- `-H` and `-D` parameters are not used (ignored if present).

Possible statuses according to the object (NovaScale 5xx0 or 6xx0 example):

	Presence Status	Functional Status	Failure Status	Fault Status	Exclusion Status	Power Status	Temperature Status	Fan Status
QBB	x	x	x	x	x	x	x	
CPU	x	x	x	x	x			
MEMORY	x	x	x		x			
FANBOX	x	x	x	x	x	x		x
PMB	x	x	x	x		x	x	

	Presence Status	Functional Status	Failure Status	Fault Status	Exclusion Status	Power Status	Temperature Status	Fan Status
DPS	x	x	x	x	x	x		
MIDPLANE	x	x	x	x		x	x	
IOB	x	x	x	x	x	x	x	
FPB	x	x	x	x		x	x	

Table 3. Hardware statuses

Object naming:
Objects are displayed in PAM (PUID) format and correspond to the names returned by the **domainhardware** and **domainlogistics** options.

Output:

<object PUID >/<status name>=<status value>

Possible status values:

Status Name	Status Value
PresenceStatus	NORMAL, MISSING, UNKNOWN, ABSENT, PRESENT
FunctionalStatus	NORMAL, WARNING, CRITICAL, FATAL, UNKNOWN
FailureStatus	NORMAL, FAULTY, UNKNOWN
FaultStatus	NORMAL, FAULTY, UNKNOWN
ExclusionStatus	yes, no
PowerStatus	MAINON, MAINOFF, MAINFAILED, STDBYON, STDBYOFF, STDBYFAILED
TemperatureStatus	NORMAL, WARNING, CRITICAL, FATAL, UNKNOWN
FanStatus	tbd

Table 4. Status Values

Example:

```
$ bsminfo.sh -i hardwarestatus –e
PAM:/CELLSBLOCK_CHARLY3/Module_0/QBB_0
-m fame -M papcharly3 -u pap -p pap
```

```
PAM:/CELLSBLOCK_CHARLY3/Module_0/QBB_0/PresenceStatus=PRESENT
PAM:/CELLSBLOCK_CHARLY3/Module_0/QBB_0/FunctionalStatus=NORMAL
PAM:/CELLSBLOCK_CHARLY3/Module_0/QBB_0/FailureStatus=NORMAL
PAM:/CELLSBLOCK_CHARLY3/Module_0/QBB_0/FaultStatus=NORMAL
PAM:/CELLSBLOCK_CHARLY3/Module_0/QBB_0/ExclusionStatus=no
PAM:/CELLSBLOCK_CHARLY3/Module_0/QBB_0/PowerStatus=POWEROFF
PAM:/CELLSBLOCK_CHARLY3/Module_0/QBB_0/TemperatureStatus=NORMAL
```

```
$ bsminfo.sh -i hardwarestatus -m ipmilan -H nsmaster -u MWA -p guest
```

```
Chassis Power is on
```

```
$ bsminfo.sh -i hardwarestatus -m lanplus -H nsmaster -u MWA -p guest
```

```
Chassis Power is on
```

bsminfo -i FRUtemperatures

FRUtemperatures is used to display all the specified hardware object temperatures in °C.

Notes

- -e option is mandatory.
- -H and -D parameters are not used (ignored if present).

Object naming:
Objects are displayed in PAM (PUID) format and correspond to the names returned by the **domainhardware** and **domainlogistics** options.

Output:

<Temperature object PUID > Temperature=<value>

Example:

```
$ bsminfo.sh -i FRUtemperatures -e PAM:/CELLSBLOCK_FAME0/MODULE_0/QBB_0
-m fame -M papcharly3 -u pap -p pap
```

```
PAM:/CELLSBLOCK_FAME0/MODULE_0/QBB_0/TEMPSENSOR_CPU_CORE_0 Temperature=52
PAM:/CELLSBLOCK_FAME0/Module_0/QBB_0/TEMPSENSOR_CPU_CORE_1 Temperature=53
PAM:/CELLSBLOCK_FAME0/Module_0/QBB_0/TEMPSENSOR_CPU_POD_0 Temperature=34
PAM:/CELLSBLOCK_FAME0/Module_0/QBB_0/TEMPSENSOR_CPU_POD_1 Temperature=34
PAM:/CELLSBLOCK_FAME0/Module_0/QBB_0/TEMPSENSOR_MEM_P Temperature=25.6
PAM:/CELLSBLOCK_FAME0/Module_0/QBB_0/TEMPSENSOR_MEM_S Temperature=25.5
PAM:/CELLSBLOCK_FAME0/Module_0/QBB_0/TEMPSENSOR_SNC Temperature=37
PAM:/CELLSBLOCK_FAME0/Module_0/QBB_0/TEMPSENSOR_TEMP_0 Temperature=30
PAM:/CELLSBLOCK_FAME0/Module_0/QBB_0/TEMPSENSOR_TEMP_1 Temperature=27
```

bsminfo -i hardwareinfo

hardwareinfo is used to display the Identity Card (including fru, version, memory size...) of the specified hardware object.

Notes

- -e option is mandatory.
- -H and -D parameters are not used (ignored if present).

Possible hardware information (NovaScale 5xx0 or 6xx0 example):

	FRU Info	Memory Size	Firmware Version
QBB	x	x	
CPU	x		
MEMORY	x		
FANBOX			
PMB	x		x
DPS	x		
MIDPLANE	x		
IOB	x		
FPB	x		

Table 5. Hardware Information

Object naming:
Objects are displayed in PAM (PUID) format and correspond to the names returned by the **domainhardware** and **domainlogistics** options.

Output:

QBB objects:
<object PUID>/MemorySize=<value in GB>GB

PMB objects:
<object PUID>/RunningMaestroVersion=<running maestro version>
<object PUID >/MaestroOrigin=<maestro origin>
<object PUID>/BootRomOrigin=<bootrom origin>
<object PUID>/FactoryBootRomVersion=<factory bootrom version>
<object PUID>/UpdatedBootRomVersion=<updated bootrom version>
<object PUID>/RomMaestroVersion=<rom maestro version>
<object PUID>/MaestroImageChoice=<maestro image choice>
<object PUID>/KCSCPLDVersion=<kcs cpld version>

All objects:
<object PUID>/FRU=<fru tag> : <fru value>

Examples:

```
$ bsminfo.sh -i hardwareinfo -e PAM:/CELLSBLOCK_CHARLY3/Module_0/QBB_0
-m fame -M papcharly3 -u pap -p pap
```

```
PAM:/CELLSBLOCK_CHARLY3/Module_0/QBB_0/MemorySize=4GB
PAM:/CELLSBLOCK_CHARLY3/Module_0/QBB_0/FRU=Board Language : en - English
PAM:/CELLSBLOCK_CHARLY3/Module_0/QBB_0/FRU=Board MfgDateTime : 2004/07/19 11:55
PAM:/CELLSBLOCK_CHARLY3/Module_0/QBB_0/FRU=Board Manufacturer : Intel
PAM:/CELLSBLOCK_CHARLY3/Module_0/QBB_0/FRU=Board ProductName : Processor Board
PAM:/CELLSBLOCK_CHARLY3/Module_0/QBB_0/FRU=Board SerialNumber : ABBD24527020
PAM:/CELLSBLOCK_CHARLY3/Module_0/QBB_0/FRU=Board PartNumber : A55955-305
PAM:/CELLSBLOCK_CHARLY3/Module_0/QBB_0/FRU=Board FRUFileID :
PAM:/CELLSBLOCK_CHARLY3/Module_0/QBB_0/FRU=Board CustomField :
PAM:/CELLSBLOCK_CHARLY3/Module_0/QBB_0/FRU=Board CustomField : unknow
PAM:/CELLSBLOCK_CHARLY3/Module_0/QBB_0/FRU=Board CustomField : 305-rcomp
PAM:/CELLSBLOCK_CHARLY3/Module_0/QBB_0/FRU=Board CustomField : BULL
```

```
$ bsminfo.sh -i hardwareinfo -e PAM:/CELLSBLOCK_CHARLY3/MODULE_0/PMB
-m fame -D MyOperations-00 -M 129.182.193.52 -u pap -p pap
```

```
PAM:/CELLSBLOCK_CHARLY3/MODULE_0/PMB/RunningMaestroVersion=21.11.2.1_DEBUG_MEM /
3.8.0.2
PAM:/CELLSBLOCK_CHARLY3/MODULE_0/PMB/MaestroOrigin=PAP disk
PAM:/CELLSBLOCK_CHARLY3/MODULE_0/PMB/BootRomOrigin=Updated BootRom
PAM:/CELLSBLOCK_CHARLY3/MODULE_0/PMB/FactoryBootRomVersion=3.6.0.2
PAM:/CELLSBLOCK_CHARLY3/MODULE_0/PMB/UpdatedBootRomVersion=3.8.0.2
PAM:/CELLSBLOCK_CHARLY3/MODULE_0/PMB/RomMaestroVersion=bad ROM
PAM:/CELLSBLOCK_CHARLY3/MODULE_0/PMB/MaestroImageChoice=PAP disk
PAM:/CELLSBLOCK_CHARLY3/MODULE_0/PMB/KCSCPLDVersion=1.1
PAM:/CELLSBLOCK_CHARLY3/MODULE_0/PMB/FRU=Board Language : en - English
PAM:/CELLSBLOCK_CHARLY3/MODULE_0/PMB/FRU=Board MfgDateTime : 2004/03/24 14:42
PAM:/CELLSBLOCK_CHARLY3/MODULE_0/PMB/FRU=Board Manufacturer : SANMINA
PAM:/CELLSBLOCK_CHARLY3/MODULE_0/PMB/FRU=Board ProductName : PMB
PAM:/CELLSBLOCK_CHARLY3/MODULE_0/PMB/FRU=Board SerialNumber : SOP0309325
PAM:/CELLSBLOCK_CHARLY3/MODULE_0/PMB/FRU=Board PartNumber : 76678672-002
PAM:/CELLSBLOCK_CHARLY3/MODULE_0/PMB/FRU=Board FRUFileID :
PAM:/CELLSBLOCK_CHARLY3/MODULE_0/PMB/FRU=Board CustomField : 76678672-002
PAM:/CELLSBLOCK_CHARLY3/MODULE_0/PMB/FRU=Board CustomField : 0001
PAM:/CELLSBLOCK_CHARLY3/MODULE_0/PMB/FRU=Board CustomField : SFOK
PAM:/CELLSBLOCK_CHARLY3/MODULE_0/PMB/FRU=Board CustomField : -209
PAM:/CELLSBLOCK_CHARLY3/MODULE_0/PMB/FRU=Board CustomField : BULL
```

bsminfo -i pmbpresence

pmbpresence is used to display PMB presence status for the specified servers.

Possible states:

ABSENT, PRESENT

PRESENT	PMB accessible.
ABSENT	PMB not accessible. (PMB absent, hardware problem, connection, ...). It is possible to have more than one PMB per NovaScale (one PMB per CSS module).

Note - `H` and `-D` parameters are not used (ignored if present).

Output:

PAM :/CELLSBLOCK_<cellsblock name>/MODULE_< module number>/PMB/PresenceStatus=PRESENT | ABSENT

Example:

```
$ bsminfo.sh -i pmbpresence -m fame -M papcharly3 -u pap -p pap
```

```
PAM:/CELLSBLOCK_CHARLY3/MODULE_0/PMB/PresenceStatus=PRESENT
PAM:/CELLSBLOCK_CHARLY3/MODULE_1/PMB/PresenceStatus=PRESENT
```

bsminfo -i domaininfo

domaininfo is used to display domain memory size and BIOS version.

TotalMemorySize: maximum memory size for a domain, obtained by adding the memory size of all the QBBs included in the domain.

AvailableMemorySize Available memory size.

Notes

- If the domain is inactive, excluded QBBs are not taken into account.
- If the domain is active and if an excluded QBB is powered ON, its memory is calculated since the exclusion is effective only after a power OFF / power ON sequence.

Output:

PAM:/DOMAINGROUP_<cellsblock name>/DOMAIN_<domain name>/ TotalMemorySize=<memory size in GB>GB

PAM:/DOMAINGROUP_<cellsblock name>/DOMAIN_<domain name>/ AvailableMemorySize=< memory size in GB>GB

PAM:/DOMAINGROUP_<cellsblock name>/DOMAIN_<domain name>/ BiosVersionM<BIOS version>

Example:

```
$ bsminfo.sh -i domaininfo -m fame -D FAME000 -M paptest2 -u pap -p pap
```

```
PAM:/DOMAINGROUP_CHARLY3/DOMAIN_C3-bimodule/TotalMemorySize=10GB
PAM:/DOMAINGROUP_CHARLY3/DOMAIN_C3-bimodule/AvailableMemorySize=10GB
PAM:/DOMAINGROUP_CHARLY3/DOMAIN_C3-
bimodule/BiosVersion=B740.004.08/24/2004.11:43:47.
```

bsminfo -i domainexclusion

domainexclusion is used to list excluded components.

Output:

PAM:/DOMAINGROUP_<cellsblock name>/DOMAIN_<domain name>/
ExcludedComponents=YES|NO

<hardware component PUID>/ExclusionStatus=YES

Example:

```
$ bsminfo.sh -i domainexclusion -m fame -D FAME000 -M paptest2 -u pap
-p pap
```

```
PAM:/DOMAINGROUP_PROTO9/DOMAIN_FAME000/ExcludedComponents=YES
PAM:/CELLSBLOCK_PROTO9/MODULE_0/QBB_0/ExclusionStatus=YES
PAM:/CELLSBLOCK_PROTO9/MODULE_0/QBB_1/CPU_0/ExclusionStatus=YES
PAM:/CELLSBLOCK_PROTO9/MODULE_0/QBB_1/CPU_1/ExclusionStatus=YES
```

bsminfo -i identitycard

identitycard is used to display a full PAM Identity Card (or the Identity Card of a hardware object specified by its PUID).

Notes

- `-e` option is only needed to specify a cellblock component which identity card is to be read.
- The identity card of a cellblock component is very similar to the information extracted with the *-i hardwareinfo* parameter.
- `-H` and `-D` parameters are not used (ignored if present).
- If they are present, -x and -X option (for XML format) are exclusive.

Examples:

```
$ bsminfo.sh -i identitycard -m fame -M paptest2 -u pap -p pap
```

```
PAM:/SiteName=Paptest2
PAM:/Target=PAM:/ALL
PAM:/Version=22.11.

PAM:/module/oncrpc.dll FileVersion : 8, 9, 0, 0
PAM:/module/oncrpc.dll FileDescription : ONC/RPC Library
PAM:/module/oncrpc.dll LegalCopyright : Copyright &#194;&#169; 2001-2004
PAM:/module/oncrpc.dll Comments : ONC/RPC library
PAM:/module/oncrpc.dll CompanyName : BULL S.A.
PAM:/module/oncrpc.dll InternalName : oncrpc
PAM:/module/oncrpc.dll ProductName : PAP Software
PAM:/module/oncrpc.dll ProductVersion : 8, 9, 0, 0
```

```
PAM:/module/PAP.DLL FileVersion : 8, 10, 0, 0
PAM:/module/PAP.DLL FileDescription : PAP Module
PAM:/module/PAP.DLL LegalCopyright : Copyright &#194;&#169; 2001-2005
PAM:/module/PAP.DLL Comments : This library contains the COM+ object which is the
entry point to the PAP software.
PAM:/module/PAP.DLL CompanyName : BULL S.A.
PAM:/module/PAP.DLL InternalName : PAP
PAM:/module/PAP.DLL ProductName : PAP Software
PAM:/module/PAP.DLL ProductVersion : 8, 10, 0, 0
.
.
.

PAM:/module/?? FileVersion : 6, 3, 1, 0


PAM:/module/?? LegalCopyright : Copyright &#194;&#169; 2003 Rainbow Technologies


PAM:/module/?? CompanyName : Rainbow Technologies
PAM:/module/?? ProductName : Sentinel SuperPro
PAM:/module/?? ProductVersion : 6, 3, 1, 0


PAM:/module/pmservice.exe FileVersion : 7, 5, 0, 0
PAM:/module/pmservice.exe FileDescription : ONC/RPC Portmap service
PAM:/module/pmservice.exe LegalCopyright : Copyright &#194;&#169; 2001-2004
PAM:/module/pmservice.exe Comments : Install/Start/Stop/Remove ONC/RPC
Portmap Service
PAM:/module/pmservice.exe CompanyName : BULL S.A.
PAM:/module/pmservice.exe InternalName : pmservice
PAM:/module/pmservice.exe ProductName : PAP Software
PAM:/module/pmservice.exe ProductVersion : 7, 5, 0, 0


PAM:/CELLSBLOCK_FAME000/MODULE_0/MFL/FRUEEPROMSYSTEM/FRU AreaVersion : 1
PAM:/CELLSBLOCK_FAME000/MODULE_0/MFL/FRUEEPROMSYSTEM/FRU=Chassis
ChassisType : Main Server Chassis
PAM:/CELLSBLOCK_FAME000/MODULE_0/MFL/FRUEEPROMSYSTEM/FRU=Chassis PartNumber
:
PAM:/CELLSBLOCK_FAME000/MODULE_0/MFL/FRUEEPROMSYSTEM/FRU=Chassis
SerialNumber : XAN-S11-00023
PAM:/CELLSBLOCK_FAME000/MODULE_0/MFL/FRUEEPROMSYSTEM/FRU=Chassis
CustomField : Main Server Chassis
PAM:/CELLSBLOCK_FAME000/MODULE_0/MFL/FRUEEPROMSYSTEM/FRU=Product Language :
en - English
PAM:/CELLSBLOCK_FAME000/MODULE_0/MFL/FRUEEPROMSYSTEM/FRU=Product
Manufacturer : BULL
PAM:/CELLSBLOCK_FAME000/MODULE_0/MFL/FRUEEPROMSYSTEM/FRU=Product
ProductName : Nova
PAM:/CELLSBLOCK_FAME000/MODULE_0/MFL/FRUEEPROMSYSTEM/FRU=Product
PartOrModelNumber : unknow
PAM:/CELLSBLOCK_FAME000/MODULE_0/MFL/FRUEEPROMSYSTEM/FRU=Product
ProductVersion : 1068739936000
PAM:/CELLSBLOCK_FAME000/MODULE_0/MFL/FRUEEPROMSYSTEM/FRU=Product
SerialNumber : XAN-S11-00023
PAM:/CELLSBLOCK_FAME000/MODULE_0/MFL/FRUEEPROMSYSTEM/FRU=Product AssetTag :
PAM:/CELLSBLOCK_FAME000/MODULE_0/MFL/FRUEEPROMSYSTEM/FRU=Product FRUFileID
:

PAM:/CELLSBLOCK_FAME000/MODULE_0/PMB/FRU PresenceStatus : PRESENT
PAM:/CELLSBLOCK_FAME000/MODULE_0/PMB/FRU AreaVersion : 1
PAM:/CELLSBLOCK_FAME000/MODULE_0/PMB/FRU=Board Language : en - English
PAM:/CELLSBLOCK_FAME000/MODULE_0/PMB/FRU=Board MfgDateTime : 2003/05/12
15:36
PAM:/CELLSBLOCK_FAME000/MODULE_0/PMB/FRU=Board Manufacturer : SANMINA
PAM:/CELLSBLOCK_FAME000/MODULE_0/PMB/FRU=Board ProductName : PMB
PAM:/CELLSBLOCK_FAME000/MODULE_0/PMB/FRU=Board SerialNumber : SOP0310195
PAM:/CELLSBLOCK_FAME000/MODULE_0/PMB/FRU=Board PartNumber : 76678672-002
PAM:/CELLSBLOCK_FAME000/MODULE_0/PMB/FRU=Board FRUFileID :
PAM:/CELLSBLOCK_FAME000/MODULE_0/PMB/FRU=Board CustomField : 76678672-002
PAM:/CELLSBLOCK_FAME000/MODULE_0/PMB/FRU=Board CustomField : 0001
PAM:/CELLSBLOCK_FAME000/MODULE_0/PMB/FRU=Board CustomField : SFOK
PAM:/CELLSBLOCK_FAME000/MODULE_0/PMB/FRU=Board CustomField : -00
PAM:/CELLSBLOCK_FAME000/MODULE_0/PMB/FRU=Board CustomField : BULL
PAM:/CELLSBLOCK_FAME000/MODULE_0/PMB/FRU=Board CustomField :
SPS(6.0/01;5.4/01)
.
.
```

```
.
PAM:/CELLSBLOCK_FAME000/MODULE_0/QBB_0/FRU PresenceStatus : PRESENT
PAM:/CELLSBLOCK_FAME000/MODULE_0/QBB_0/FRU AreaVersion : 1
PAM:/CELLSBLOCK_FAME000/MODULE_0/QBB_0/FRU=Board Language : en - English
PAM:/CELLSBLOCK_FAME000/MODULE_0/QBB_0/FRU=Board MfgDateTime : 2003/05/12
15:36
PAM:/CELLSBLOCK_FAME000/MODULE_0/QBB_0/FRU=Board Manufacturer : SANMINA
PAM:/CELLSBLOCK_FAME000/MODULE_0/QBB_0/FRU=Board ProductName : PMB
PAM:/CELLSBLOCK_FAME000/MODULE_0/QBB_0/FRU=Board SerialNumber : SOP0310195
PAM:/CELLSBLOCK_FAME000/MODULE_0/QBB_0/FRU=Board PartNumber : 76678672-002
PAM:/CELLSBLOCK_FAME000/MODULE_0/QBB_0/FRU=Board FRUFileID :
PAM:/CELLSBLOCK_FAME000/MODULE_0/QBB_0/FRU=Board CustomField : 76678672-002
PAM:/CELLSBLOCK_FAME000/MODULE_0/QBB_0/FRU=Board CustomField : 0001
PAM:/CELLSBLOCK_FAME000/MODULE_0/QBB_0/FRU=Board CustomField : SFOK
PAM:/CELLSBLOCK_FAME000/MODULE_0/QBB_0/FRU=Board CustomField : -00
PAM:/CELLSBLOCK_FAME000/MODULE_0/QBB_0/FRU=Board CustomField : BULL
PAM:/CELLSBLOCK_FAME000/MODULE_0/QBB_0/FRU=Board CustomField :
SPS(6.0/01;5.4/01)

PAM:/CELLSBLOCK_FAME000/MODULE_0/QBB_0/CPU_0/FRU PresenceStatus : PRESENT
PAM:/CELLSBLOCK_FAME000/MODULE_0/QBB_0/CPU_0/FRU AreaVersion : 1
PAM:/CELLSBLOCK_FAME000/MODULE_0/QBB_0/CPU_0/FRU=Board Language : en -
English
PAM:/CELLSBLOCK_FAME000/MODULE_0/QBB_0/CPU_0/FRU=Board MfgDateTime :
2005/05/09 11:18
PAM:/CELLSBLOCK_FAME000/MODULE_0/QBB_0/CPU_0/FRU=Board Manufacturer : Intel
PAM:/CELLSBLOCK_FAME000/MODULE_0/QBB_0/CPU_0/FRU=Board ProductName : L6P6
PAM:/CELLSBLOCK_FAME000/MODULE_0/QBB_0/CPU_0/FRU=Board SerialNumber :
0xFECE9051E4EE0000
PAM:/CELLSBLOCK_FAME000/MODULE_0/QBB_0/CPU_0/FRU=Board PartNumber : 80542KC
PAM:/CELLSBLOCK_FAME000/MODULE_0/QBB_0/CPU_0/FRU=Board FRUFileID :
.
.
.
PAM:/CELLSBLOCK_FAME000/MODULE_0/DIB_0/FRU PresenceStatus : PRESENT
PAM:/CELLSBLOCK_FAME000/MODULE_0/DIB_0/FRU AreaVersion : 1
PAM:/CELLSBLOCK_FAME000/MODULE_0/DIB_0/FRU=Board Language : en - English
PAM:/CELLSBLOCK_FAME000/MODULE_0/DIB_0/FRU=Board MfgDateTime : 2003/05/12
15:36
PAM:/CELLSBLOCK_FAME000/MODULE_0/DIB_0/FRU=Board Manufacturer : SANMINA
PAM:/CELLSBLOCK_FAME000/MODULE_0/DIB_0/FRU=Board ProductName : PMB
PAM:/CELLSBLOCK_FAME000/MODULE_0/DIB_0/FRU=Board SerialNumber : SOP0310195
PAM:/CELLSBLOCK_FAME000/MODULE_0/DIB_0/FRU=Board PartNumber : 76678672-002
PAM:/CELLSBLOCK_FAME000/MODULE_0/DIB_0/FRU=Board FRUFileID :
PAM:/CELLSBLOCK_FAME000/MODULE_0/DIB_0/FRU=Board CustomField : 76678672-002
PAM:/CELLSBLOCK_FAME000/MODULE_0/DIB_0/FRU=Board CustomField : 0001
PAM:/CELLSBLOCK_FAME000/MODULE_0/DIB_0/FRU=Board CustomField : SFOK
PAM:/CELLSBLOCK_FAME000/MODULE_0/DIB_0/FRU=Board CustomField : -00
PAM:/CELLSBLOCK_FAME000/MODULE_0/DIB_0/FRU=Board CustomField : BULL
PAM:/CELLSBLOCK_FAME000/MODULE_0/DIB_0/FRU=Board CustomField :
SPS(6.0/01;5.4/01)
```

```
$ bsminfo.sh -i identitycard -e PAM:/CELLSBLOCK_FAME000/MODULE_0/QBB_0
–m fame -M paptest2 -u pap -p pap
```

```
PAM:/SiteName=Paptest2
PAM:/Target=PAM:/CELLSBLOCK_FAME000/MODULE_0/QBB_0
PAM:/Version=22.11.
```

```
PAM:/CELLSBLOCK_FAME000/MODULE_0/QBB_0/FRU PresenceStatus : PRESENT
PAM:/CELLSBLOCK_FAME000/MODULE_0/QBB_0/FRU AreaVersion : 1
PAM:/CELLSBLOCK_FAME000/MODULE_0/QBB_0/FRU=Board Language : en - English
PAM:/CELLSBLOCK_FAME000/MODULE_0/QBB_0/FRU=Board MfgDateTime : 2003/05/12
15:36
PAM:/CELLSBLOCK_FAME000/MODULE_0/QBB_0/FRU=Board Manufacturer : SANMINA
PAM:/CELLSBLOCK_FAME000/MODULE_0/QBB_0/FRU=Board ProductName : PMB
PAM:/CELLSBLOCK_FAME000/MODULE_0/QBB_0/FRU=Board SerialNumber : SOP0310195
PAM:/CELLSBLOCK_FAME000/MODULE_0/QBB_0/FRU=Board PartNumber : 76678672-002
PAM:/CELLSBLOCK_FAME000/MODULE_0/QBB_0/FRU=Board FRUFileID :
PAM:/CELLSBLOCK_FAME000/MODULE_0/QBB_0/FRU=Board CustomField : 76678672-002
PAM:/CELLSBLOCK_FAME000/MODULE_0/QBB_0/FRU=Board CustomField : 0001
PAM:/CELLSBLOCK_FAME000/MODULE_0/QBB_0/FRU=Board CustomField : SFOK
PAM:/CELLSBLOCK_FAME000/MODULE_0/QBB_0/FRU=Board CustomField : -00
PAM:/CELLSBLOCK_FAME000/MODULE_0/QBB_0/FRU=Board CustomField : BULL
PAM:/CELLSBLOCK_FAME000/MODULE_0/QBB_0/FRU=Board CustomField :
SPS(6.0/01;5.4/01)
```

bsminfo -i BMCinfo

BMCinfo is used to display BMC information such as IPMI version, firmware revision, etc.

Note BMCinfo is available only for NovaScale servers using ipmilan or ipmidrv model.

Example:

```
$ bsminfo.sh -i BMCinfo -m ipmilan -H 129.182.6.50 -u MWA -p guest
```

```
Device ID             : 32
Device Revision       : 1
Firmware Revision     : 3.26
IPMI Version          : 2.0
Manufacturer ID       : 116
```

```
$ bsminfo.sh -i BMCinfo -m lanplus -H 129.182.6.50 -u MWA -p guest
```

```
Device ID             : 32
Device Revision       : 1
Firmware Revision     : 3.26
IPMI Version          : 2.0
Manufacturer ID       : 116
```

bsmlog

bsmlog is used to direct system log contents (SEL) to the standard output.

bsmlog is also used to clear the system log contents (SEL) on NovaScale and Evolutive Line Blade servers, NovaScale servers using the ipmilan or ipmidrv model, Bullx chassis and Bullx blades.

Note For NovaScale 5005 & 6000 series, the PAMHistory log is displayed and it is not possible to select a domain or a host.

Usage

NovaScale 5005 and 6000 series servers

```
bsmlog.sh [-h] [-v] -m fame [-n range]-M hwmanager -u user -p password
[-o outfile] [-l level]
```

Express5800 servers

```
bsmlog.sh [-h] [-v] -m nec [-n range] -H host [-u user] -p password
[-o outfile] [-l level]
```

NovaScale servers using the ipmilan or lanplus model

```
bsmlog.sh [-h] [-v] -m ipmilan [-n range] -H host [-u user] [-p password]
[-o outfile] [-l level] [-c]

bsmlog.sh [-h] [-v] -m lanplus [-n range] -H host -u user [-p password]
[-o outfile] [-l level] [-c] [-Y cipher]
```

NovaScale servers using the ipmidrv model

```
bsmlog.sh [-h] [-v] -m ipmidrv [-n range] [-o outfile] [-l level] [-c]
```

NovaScale 4000 series servers

```
bsmlog.sh [-h] [-v] -m tiger [-n range] -H host -u user -p password
[-o outfile] [-l level]
```

NovaScale and Evolutive Line Blade servers

```
bsmlog.sh [-h] -m blade -M hwmanager [–B bladename] [-n range] [-S SNMPv]
[-C community] [-P port] [-T timeout] [-o outfile] [-l level] [-c]
```

Escala Privilege Line servers

```
bsmlog.sh [-h] [-v] -m HMC -M hwmanager –B CECname –I idfile –u user
-C configfile [-d cfgdir] [-T timeout] [-o outfile] [-t event_type] [-l
level]
```

Bullx chassis

```
bsmlog.sh [-h] [-v] -m CMC -H host [–u user] [–p password] [-n range]
[-c] [-o outfile] [-l level]
```

Bullx blades

```
bsmlog.sh [-h] [-v] -m blade_CMC -H host [–u user] [–p password] [-c]
[-n range] [-o outfile]  [-l level]
```

`-h`	Displays command usage.
`-l level`	Specifies the severity of the messages to be logged in syslog. 0 : no message is logged (default). 1 : only the FAILED completion of the command is logged. 3 : FAILED and successful completion of the command are logged.
`-v`	Displays record details. See below.
`-n range`	Range of records to be displayed. May be specified as a number or as an interval: -n n: displays the n most recent records. -n r1-r2: displays records from r1 to r2. Events are displayed in chronological order beginning with the most recent ones.
`-e element`	Hardware element concerned (in PAM PUID format).
`-H host`	DNS name or target server IP address, CMC IP address for Bullx chassis, or Bullx blade IP address.
`-m model`	Target server model: fame, nec, ipmilan, lanplus, tiger, ipmidrv, blade, HMC, CMC, blade_CMC.
`-M hwmanager`	DNS name or PAP Manager IP address (NovaScale 5005 & 6000 series) or NS and EL Blade servers manager IP address, or HMC IP address for PL servers.
`-u user`	PAP administrator for NovaScale 5005 & 6000 series. SMU user on the target server for NovaScale 4000 series. BMC user for NovaScale target servers using the ipmilan model, Bullx chassis, Bullx blades. User for ssh connection to the HMC for PL servers.
`-I idfile`	Identity key file used to perform connection to the HMC with ssh.
`-C configfile`	ssh client configuration file used to perform non-prompt connection to the HMC.
`-d cfgdir`	Directory where identity key file and ssh client configuration file are installed (default value is **../etc/ssh**).

`-t event_type`	Type of events to list. Valid values are “console” or “hardware” (default value).
`-p password`	User password. (Authentication key for Express5800 servers).
`-Y cipher`	Cipher suite ID to be used by lanplus interface (default is 3).
`-B targetname`	Blade name (for Blade servers), or managed system name (CECname) for PL servers.
`-S SNMPv`	SNMP version: 1(default value), 2, 3.
`-C community`	SNMP community: (default value is “public” for reading the log, and “private” for clearing the log).
-P port	SNMP port: default value is 161.
-T timeout	SNMP timeout: default value is 20. SSH connection timeout (default value is 120s).
-o outfile	Output file to which stdout and **stderr** outputs are redirected.
`-c`	Clears the SEL (for NovaScale servers using the *ipmilan or ipmidrv* model).

Notes

- Servers are identified by their DNS name or IP address (`-H` parameter).
- The *`tiger`* model, defined for NovaScale 4000 series servers, is similar to the *`ipmilan`* model and used to ensure compatibility with version 2.0.
- `-n` ”range” is ignored if the `-c` option is specified.
- By default, the “-n range” parameter is set to “-n 10”.
- In order to clear the system log of NS or EL Blade servers, the system running **bsmlog** must be declared on the target server as a member of a SNMPv1 read-write community. The default read-write community name used by **bsmlog** is “private”.

Return Codes

0 command accepted.
-1 command failed

Output

If –v option is not specified, the output format is:

- for Escala PL servers (and “hardware” event_type),
  <rank> | <record_id> | <local date> | <local time> | <event state> | <refcode> | <event description>

- for Escala PL servers (and “console” event_type)
  <rank> | <local date> | <local time> | <event description>
- for all others servers
  <rank> | <record id> | <local date> | <local time> | <event target> | <severity> - <event description>

The <severity> field exists for NovaScale 5005 & 6000 series and NovaScale or Evolutive Line Blade servers.
To homogenize the output format for all types of servers, the <severity> field must be concatenated with <event description> field.

<severity> = SUCCESS | INFORMATION | WARNING | ERROR

If `-v` option is specified, one record is displayed by field (on several rows according to the format):

<label>: <value>

<label> varies according to the server model.

Notes

- For Blade servers, the <event target> field is replaced by two fields, the <source> field and the <bladename> field separated by the character “|”.
- For Blade servers, if no “–B bladename” option is specified, events logged for all blades are displayed depending on the “-n range” option.
- For Blade servers, if the “-c” option is specified, the “-B bladename” option is ignored and the full event log of the chassis is cleared.

Examples

```
$ bsmlog.sh -n 145-140 -m tiger -H tiger_s2 -u admin -p admin
```

```
144 | 0x0b30 | 09/22/2004 | 15:26:51 | System Event #0x08 | OEM System boot event
143 | 0x0b1c | 09/22/2004 | 12:46:05 | System Event #0x08 | OEM System boot event
142 | 0x0b08 | 09/21/2004 | 19:50:31 | Drive Slot #0x09 | Device Inserted/Present
141 | 0x0af4 | 09/21/2004 | 19:50:26 | Drive Slot #0x09 | Device Removed/Absent
140 | 0x0ae0 | 09/21/2004 | 19:50:21 | Drive Slot #0x09 | Device Inserted/Present
$
```

```
$ bsmlog.sh -n 144-142 -m tiger -H tiger_s2 –v -u admin -p admin
```

```
SEL rank          : 00144
SEL Record ID     : 0b30
 Record Type      : 02
 Timestamp        : 09/22/2004 15:26:51
 Generator ID     : 0001
 EvM Revision     : 04
 Sensor Type      : System Event
 Sensor Num       : 08
 Event Type       : Sensor-specific Discrete
 Event Direction  : Assertion Event
 Event Data       : 01ffff
 Description      : OEM System boot event
```

```
SEL rank          : 00142
SEL Record ID     : 0b08
 Record Type      : 02
 Timestamp        : 09/21/2004 19:50:31
 Generator ID     : 00c0
 EvM Revision     : 04
 Sensor Type      : Drive Slot
 Sensor Num       : 09
 Event Type       : Generic Discrete
 Event Direction  : Assertion Event
 Event Data       : 010fff
 Description      : Device Inserted/Present
```

```
$ bsmlog.sh -m ipmilan -H 129.182.6.1 -c -u admin -p admin
```

```
$
```

```
$ bsmlog.sh -n 5 -m fame -M papcharly3 -u pap -p pap
```

```
638 | 2b2b2215 | 09/27/04 | 16:44:31 | /DOMAINGROUP_CHARLY3/DOMAIN_CHARLY3_0ID0 |
SUCCESS - Domain CHARLY3_0ID0 powered on
637 | 2b2b221f | 09/27/04 | 16:44:31 | /DOMAINGROUP_CHARLY3/DOMAIN_CHARLY3_0ID0 |
SUCCESS - Domain initialization step : Step 99 substep 0 Final Step Of PowerOn OK
636 | 2b2b221f | 09/27/04 | 16:44:31 | /DOMAINGROUP_CHARLY3/DOMAIN_CHARLY3_0ID0 |
SUCCESS - Domain initialization step : Step 37 substep 2 Setting SPADS
MODULE_0/QBB_0 OK
635 | 2b2b221f | 09/27/04 | 16:44:30 | /DOMAINGROUP_CHARLY3/DOMAIN_CHARLY3_0ID0 |
SUCCESS - Domain initialization step : Step 37 substep 1 Setting SPADS
MODULE_1/QBB_0 OK
634 | 2b2b221f | 09/27/04 | 16:44:30 | /DOMAINGROUP_CHARLY3/DOMAIN_CHARLY3_0ID0 |
SUCCESS - Domain initialization step : Step 37 substep 0 Setting SPADS
MODULE_0/QBB_1 OK
633 | 2b2b221f | 09/27/04 | 16:44:30 | /DOMAINGROUP_CHARLY3/DOMAIN_CHARLY3_0ID0 |
SUCCESS - Domain initialization step : Step 36 substep 2 Setting SPADS
MODULE_1/IOC_0 OK
```

```
$ bsmlog.sh -n 5 -m blade -M 192.168.207.50 –B SN#YK148077L1NG
```

```
12 | 4 | 09/27/07 | 16:44:30 | SERVPROC | SN#YK148077L1NG | INFO –
Blade 6 removed
11 | 6 | 09/22/07 | 11:30:30 | SERVPROC | SN#YK148077L1NG | WARN –
DHCP[0] failure, no IP address assigned
10 | 10 | 09/22/07 | 11:20:25 | SWITCH | SN#YK148077L1NG | INFO – I/O
module 3 has restarted
9 | 11 | 09/22/07 | 11:19:30 | SERVPROC | SN#YK148077L1NG | ERR –
Blower 2 fault
8 | 13 | 09/22/07 | 11:18:30 | SERVPROC | SN#YK148077L1NG | INFO –
Event log cleared
```

```
$ bsmlog.sh -n 5 -m blade -M 192.168.207.50 –B SN#YK148077L1NG -v
```

```
  Rank          : 12
  Index         : 4
  Local Time    : 09/27/07 16:44:30
  Severity      : INFO
  Source        : SERVPROC
  Name          : SN#YK148077L1NG
  Description   : Blade 6 removed
```

```
Rank          : 11
Index         : 6
Local Time    : 09/22/07 11:30:30
Severity      : WARN
Source        : SERVPROC
Name          : SN#YK148077L1NG
Description   : DHCP[0] failure, no IP address assigned
Rank          : 10
Index         : 10
Local Time    : 09/22/07 11:20:25
Severity      : INFO
Source        : SWITCH
Name          : SN#YK148077L1NG
Description   : I/O module 3 has restarted
Rank          : 9
Index         : 11
Local Time    : 09/22/07 11:19:30
Severity      : ERR
Source        : SERVPROC
Name          : SN#YK148077L1NG
Description   : Blower 2 fault
Rank          : 8
Index         : 13
Local Time    : 09/27/07 11:18:30
Severity      : INFO
Source        : SERVPROC
Name          : SN#YK148077L1NG
Description   : Event log cleared
```

```
$ bsmlog.sh -m blade -M 192.168.207.50 –c
```

```
Clear event log done.
```

```
$ bsmlog.sh -m HMC -M 129.183.12.80 –I id_dsa –C config_bsm -u hscroot
–d /etc/ssh –B “PL250R+ -FLEURS- Violette” –n 3
```

```
5 | 38 | 09/17/2007 | 20:09:45 | Open | B3030001 | Other subsystem  (0x7c):
Predictive error (0x20)
4 | 19 | 12/07/2006 | 13:34:50 | Open | 110000AC | Power/Cooling subsystem & control
(0x60): Unrecoverable Error (0x40)
3 | 13 | 11/15/2006 | 16:58:22 | Open | #651301  | “Platform Firmware Miscellaneous,
Information Only.”
```

```
$ bsmlog.sh -m HMC -M 129.183.12.80 –I id_dsa –C config_bsm -u hscroot
–d /etc/ssh –B “PL250R+ -FLEURS- Violette” –n 5 -v
```

```
Rank          : 5
Problem num   : 38
Status        : Open
Local Time    : 09/17/2007 20:09:45
RefCode       : B3030001
Description   : Other subsystem  (0x7c): Predictive error (0x20)
```

```
  Rank          : 4
  Problem num   : 19
  Status        : Open
  Local Time    : 12/07/2006 13:34:50
  RefCode       : 110000AC
  Description   : Power/Cooling subsystem & control (0x60): Unrecoverable Error
(0x40)

  Rank          : 3
  Problem num   : 13
  Status        : Open
  Local Time    : 11/15/2006 16:58:22
  RefCode       : #651301
  Description   : “Platform Firmware Miscellaneous, Information Only.”
```

```
$ bsmlog.sh -m HMC -M 129.183.12.80 –I id_dsa –C config_bsm -u hscroot
–d /etc/ssh –t console –n 3
```

```
17 | 10/17/2008 | 10:41:21 | HSCE2016 User name hscroot Logical Partition blue with
ID 3 of managed system 9111-525*10A0525 has been activated with profile blue_aix
16 | 10/17/2008 | 10:41:21 | HSCE2245 User name : Activating the partition 2
succeeded on managed system -525*10A0525
15 | 10/17/2008 | 10:39:57 | HSCE2254 User name : Dump to load source “Platform
Firmware Miscellaneous, Information Only.
```

```
$ bsmlog.sh -m HMC -M 129.183.12.80 –I id_dsa –C config_bsm -u hscroot
–d /etc/ssh –t console –n 3 -v
```

```
  Rank          : 17
  Local Time    : 10/17/2008 10:41:21
  Description   : HSCE2016 User name hscroot Logical Partition blue with ID 3 of
managed  system 9111-525*10A0525 has been activated with profile blue_aix

  Rank          : 16
  Local Time    : 10/17/2008 10:41:21
  Description   : HSCE2245 User name : Activating the partition 2 succeeded on
managed system -525*10A0525

  Rank          : 15
  Local Time    : 10/17/2008 10:39:57
  Description   : HSCE2254 User name : Dump to load source “Platform Firmware
Miscellaneous, Information Only.
```

```
$ bsmlog.sh -n 2 -m CMC -H 129.184.238.254 -u root -p pass
```

```
2 | 0x011d | 05/13/2009 | 17:35:55 | Temperature (IBSW_TEMP1) #2000#06 | Lower Non-
critical going low #501414 | Deasserted
1 | 0x011c | 05/13/2009 | 17:35:22 | Temperature (IBSW_TEMP1) #2000#06 | Lower Non-
critical going low #501314 | Reading 19 < Threshold 20 degrees C
$
```

```
$ bsmlog.sh -n 145-140 -m lanplus -H tiger_s2 -u admin -p admin –Y 0
```

```
144 | 0x0b30 | 09/22/2004 | 15:26:51 | System Event #0x08 | OEM System boot event
143 | 0x0b1c | 09/22/2004 | 12:46:05 | System Event #0x08 | OEM System boot event
142 | 0x0b08 | 09/21/2004 | 19:50:31 | Drive Slot #0x09 | Device Inserted/Present
141 | 0x0af4 | 09/21/2004 | 19:50:26 | Drive Slot #0x09 | Device Removed/Absent
140 | 0x0ae0 | 09/21/2004 | 19:50:21 | Drive Slot #0x09 | Device Inserted/Present
$
```

bsmfru

bsmfru displays the FRU contents on the standard output.

For NovaScale 5005 & 6000 series, the displayed FRUs are only those linked to the cabinet (system eeprom) and linked to the modules on which the domain is defined; except if the "-e ALL" option is specified, in which case ALL the FRUS linked to the modules on which the domain is defined are displayed. The FRUS of all domain hardware elements are accessible using the `bsminfo.sh -i hardwareinfo` command.

Usage

NovaScale 5005 and 6000 series servers

```
bsmfru.sh [-h] -m fame -H host -D domain -M hwmanager -u user
-p password [-o outfile] [-l level] [-e ALL]]
```

Express 5800 servers

```
bsmfru.sh [-h] -m nec -H host [-u user] -p password [-o outfile] [-l
level]
```

NovaScale servers using the ipmilan or lanplus model

```
bsmfru.sh [-h] -m ipmilan -H host [-u user -p password]
[-o outfile] [-l level]

bsmfru.sh [-h] -m lanplus -H host -u user [-p password]
[-o outfile] [-l level] [-Y cipher]
```

NovaScale servers using the ipmidrv model

```
bsmfru.sh [-h] -m ipmidrv [-o outfile] [-l level]
```

NovaScale 4000 series servers

```
bsmfru.sh [-h] -m tiger -H host -u user -p password [-o outfile] [-l
level]
```

NovaScale and Evolutive Line Blade servers

```
bsmfru.sh [-h] -m blade –M hwmanager [-B bladename] [-S SNMPv] [-C
community] [-P port] [-T timeout] [-o outfile] [-l level]
```

Escala Privilege Line servers

```
bsmfru.sh [-h] -m HMC -M hwmanager –B CECname –I idfile –u user
-C configfile [-d cfgdir] [-T timeout] [-o outfile] [-l level]
```

Bullx chassis

```
bsmfru.sh [-h] -m CMC -H host [–u user] [–p password] [-o outfile]
[-l level]
```

Bullx blades

```
bsmfru.sh [-h] -m blade_CMC -H host [–u user] [–p password] [-o outfile]
[-l level]
```

`-h`	Displays command usage.
`-l` *`level`*	Specifies the severity of the messages to be logged in syslog. 0 : no message is logged (default). 1 : only the FAILED completion of the command is logged. 3 : FAILED and successful completion of the command are logged.
`-H` *`host`*	DNS name or target server IP address, CMC IP address for Bullx chassis, or Bullx blade IP address
`-D` *`domain`*	Target server domain name (NovaScale 5005 & 6000 series only).
`-m` *`model`*	Target server model: fame, nec, ipmilan, lanplus, tiger, ipmidrv, blade, HMC, CMC, blade_CMC.
`-M` *`hwmanager`*	DNS name or PAP Manager IP address (NovaScale 5005 or 6000 series) or NS and EL Blade server manager IP address, or HMC IP address for PL servers.
`-u` *`user`*	PAP administrator for NovaScale 5005 or 6000 series. SMU user on the target server for NovaScale 4000 series. BMC user for NovaScale target servers using the ipmilan model, Bullx chassis, Bullx blades. User for ssh connection to the HMC for PL servers.
`-I idfile`	Identity key file used to perform connection to the HMC with ssh.
`-C configfile`	ssh client configuration file used to perform non-prompt connection to the HMC.
`-d cfgdir`	Directory where identity key file and ssh client configuration file are installed (default value is ../etc/ssh).
`-p` *`password`*	User password. (Authentication key for Express5800 servers).
`-Y cipher`	Cipher suite ID to be used by lanplus interface (default is 3).
`-B targetname`	Blade name (for Blade servers), or managed system name (CECname) for PL servers.
`-S SNMPv`	SNMP version : 1 (default value), 2, 3.
`-C community`	SNMP community (default value is “public”).

`-P port`	SNMP port (default value is 161).
`-T timeout`	SNMP timeout (default value is 20). SSH connection timeout (default value is 30s).
`-o outfile`	Output file name where stdout and stderr outputs are redirected.
`-e ALL`	Displays ALL the FRUs linked to the modules on which the domain is defined.

Notes

- Servers are identified by their DNS name or IP address (`-H` parameter).
- NovaScale 5005 & 6000 series servers can also be identified by their domain name (for a PAP manager, domain names are unique).
- `-H host` and `-D domain` parameters are exclusive.
- The `tiger` model, defined for NovaScale 4000 series servers, is similar to the `ipmilan` model and used to ensure compatibility with version 2.0.
- For Blade servers, if no "–B bladename" option is specified, all the FRUs of all the components of the blade chassis are displayed.

Return Codes

0 command accepted.

-1 command failed.

Output

<fru tag>: <fru content>

Examples

```
$ bsmfru.sh -m tiger -H tiger_s2 -u admin -p admin
```

```
Builtin FRU device
Chassis Type     : Rack Mount Chassis
Chassis Part     : SBHG2
Chassis Serial   : ZT233430002
Board Mfg        : Intel
Board Product    : Main Board
Board Serial     : 0007E9234320283IMBH
Board Part       : C40483-401
Product Mfg      : Intel
Product Name     : MP Server
Product Part     : SBHG2
Product Version  :
Product Serial   : ZT233430002
Product Asset    :
```

```
$ bsmfru.sh -m fame -D CHARLY3_0ID0 -M papcharly3 -u pap -p pap
```

```
Builtin FRU device: cellsblock CHARLY3
Chassis ChassisType       : Main Server Chassis
Chassis PartNumber        :
Chassis SerialNumber      : XAN_L04_99999
Chassis CustomField       : Unknown
Product Language          : en - English
Product Manufacturer      : Bull
Product ProductName       : NovaScale
Product PartOrModelNumber : 5165
Product ProductVersion    : 1076671129000
Product SerialNumber      : XAN-S11-99999
Product AssetTag          :
Product FRUFileID         :
FRU Device Description: module 1 MFL
Chassis ChassisType  : Other
Chassis PartNumber   :
Chassis SerialNumber : Unknown
Chassis CustomField  : Unknown
Board Language       : en - English
Board MfgDateTime    :
Board Manufacturer   : Solectron
Board ProductName    : MFL V2
Board SerialNumber   : E0042209
Board PartNumber     : 76679005-104
Board FRUFileID      :
Board CustomField    : Unknown
Board CustomField    : MAP OK
Board CustomField    : MAP OK
Board CustomField    : 104
Board CustomField    : BULL
```

```
$ bsmfru.sh -m blade –M 192.168.207.50 –B BLADE-03
```

```
FRU Device Description: Blade BLADE-03 Hardware VPD
Bay Number                : 3
Manufacturing Id          : Intel (ASUS)
Serial Number             : 99G0103
Product Type              : B260
Uuid                      : E035 1CC6 EF1D B211 90DE F2C7 3523 160D
Part Number               : D43707-201
Component Serial          : Not available
Product Model             : Not available
Manufacturing ID Number   : 20301
Product Id                : 13
Clei                      : Not available
Daughter Card Type        : storageExpansion (2)
FRU Device Description: Blade BLADE-03 MAC Address VPD
MAC Address 1             : 00:14:5E:1D:C9:42
MAC Address 2             : 00:14:5E:1D:C9:42
FRU Device Description: Blade BLADE-03 Firmware VPD
Bios Build Id             : BCE021AUS
Bios Revision             : 1.06
Bios Date                 : 08/02/2007
Diags Build Id            : BCYT18AUS
Diags Revision            : 1.02
Diags Date                : 02/23/2007
SysMgmtProc Build Id      : BYBT23A
SysMgmtProc Revision      : 1.23
cKVM Revision             : 1.11.3.37
……
```

```
$ bsmfru.sh -m HMC -M 172.31.50.12 –I id_dsa –C config_bsm -u hscroot
–d /etc/ssh –B “Server-8203-E4A-YC7939”
```

```
FRU System Description : CEC Server-8203-E4A-YC7939
System Type             : 8203
System Model            : E4A
Serial Number           : 1000B1A
```

```
$ bsmfru.sh -m CMC –H 129.184.238.254 -u root –p pass
```

```
FRU System Description : ……
……
FRU System Description : CMB_Chassis (ID 2 on MC 0x20)
Board Mfg Date   : Sat Mar 14 11:57:00 2009
Board Mfg        : Sanmina-SCI
Board Product    : LCP chassis
Board Serial     : E86C0910014
Board Part Number: WP11011500-C
Board Extra      : 0
Board Extra      : 0
Board Extra      : DVT
Board Extra      : 0
Board Extra      : WP11011500-C
Board Extra      : BULL
……
```

```
$ bsmfru.sh -m lanplus -H tiger_s2 -u admin -p admin –Y 0
```

```
Builtin FRU device
Chassis Type     : Rack Mount Chassis
Chassis Part     : SBHG2
Chassis Serial   : ZT233430002
Board Mfg        : Intel
Board Product    : Main Board
Board Serial     : 0007E9234320283IMBH
Board Part       : C40483-401
Product Mfg      : Intel
Product Name     : MP Server
Product Part     : SBHG2
Product Version  :
Product Serial   : ZT233430002
Product Asset    :
```

bsmsensor

bsmsensor is used to direct sensor values to the standard output.

This command is not available for NovaScale 5005 & 6000 series servers.

Usage

Express5800 servers

```
bsmsensor.sh [-h] [-v] -m nec -H host [-u user] -p password
[-o outfile] [-l level] [-c]
```

NovaScale servers using the ipmilan or lanplus model

```
bsmsensor.sh [-h] [-v] -m ipmilan -H host [-u user -p password]
[-o outfile] [-l level] [-s sensorid_list] [-t type [-a]] [-c]

bsmsensor.sh [-h] [-v] -m lanplus -H host -u user [-p password] [-c]
[-o outfile] [-l level] [-s sensorid_list] [-t type [-a]] [-Y cipher]
```

NovaScale servers using the ipmidrv model

```
bsmsensor.sh [-h] [-v] -m ipmidrv [-o outfile] [-l level]
[-s sensorid_list] [-t type [-a]] [-c]
```

NovaScale 4000 series servers

```
bsmsensor.sh [-h] [-v] -m tiger -H host -u user -p password
[-o outfile] [-l level]
```

NovaScale and Evolutive Line Blade servers

```
bsmsensor.sh [-h] -m blade –M hwmanager [-B bladename] [-S SNMPv] [-C
community] [-P port] [-T timeout] [-c] [-o outfile] [-l level]
```

Bullx chassis

```
bsmsensor.sh [-h] [-v] -m CMC -H host [–u user] [–p password] [-o
outfile] [-l level] [-s sensorid_list] [-t type [-a]] [-c]
```

Bullx blades

bsmsensor.sh [-h] [-v] -m blade_CMC -H host [–u user] [–p password] [-o outfile] [-l level] [-s sensorid_list] [-t *type* [-a]] [-c]

`-h`	Displays command usage.
`-l level`	Specifies the severity of the messages to be logged in syslog. 0 : no message is logged (default). 1 : only the FAILED completion of the command is logged. 3 : FAILED and successful completion of the command are logged.
`-v`	Displays details of each sensor. See output section below.
`-H host`	DNS name or target server IP address, CMC IP address for Bullx chassis, or Bullx blade IP address..
`-m model`	Target server model: nec, ipmilan, lanplus, tiger, ipmidrv, blade, CMC, blade_CMC.
`-M hwmanager`	NS and EL Blade server manager IP address.
`-u user`	SMU user on the target server for NovaScale 4000 series. BMC user for NovaScale target servers using the ipmilan model, Bullx chassis, Bullx blades.
`-p password`	User password. (Authentication key for Express5800 servers).
`-Y cipher`	Cipher suite ID to be used by lanplus interface (default is 3).
`-c`	On blade servers, used In order to get sensors of the blade chassis only. On IPMI servers, used in conjunction to "-v"in order to get sensors information in a more compact form.
`-B bladename`	Blade name. For Blade servers only.
`-S SNMPv`	SNMP version : 1 (default value), 2, 3. For Blade servers only.
`-C community`	SNMP community (default value is "public"). For Blade servers only.
`-P port`	SNMP port (default value is 161). For Blade servers only.
`-T timeout`	SNMP timeout (default value is 20). For Blade servers only.
`-o outfile`	Output file name to which **stdout** and **stderr** outputs are redirected.

`-s sensorid` Specify a list of sensor(s), specified between quotes "" and separated by comma(s), to be read.

`-t type` Process only sensors of the specified type (as defined in IPMI specification).

`-a` Process only analog sensors of the type specified with "-t type".

Notes

- Servers are identified by their DNS name or IP address (`-H` parameter).
- The *`tiger`* model, defined for NovaScale 4000 series servers, is similar to the *`ipmilan`* model and used to ensure compatibility with version 2.0.
- Sensor type (see definition in IPMI specification) may be specified either with the sensor type code in hexadecimal (ie: -t 0x01 for temperature) or with the sensor type string (ie: -t "Power Unit").
- *-s sensorid* and *–t type* parameters (for –m ipmilan model) are exclusive.
- *-B bladename* and *–c* parameters (for –m blade model) are exclusive.

Return Codes

0 command accepted.

-1 command failed.

Output

<sensor addr> | <sensor id> | <sensor value> | <sensor unit> | <status> | <lower non recoverable> | <lower critical> | <lower non critical> | <upper non critical> | <upper critical> | <supper non recoverable>

If `-v` option is specified, one sensor is displayed per field, on several rows depending on the format.

<label>: <value>

Note The fields and labels display may change according to servers and to sensors.

Examples

```
$ bsmsensor.sh -m nec -H nsmaster -p guest
```

```
0x00200010 | Baseboard 1.2V   | 1.205      | Volts      | ok    | na
| 1.019     | 1.078     | 1.313     | 1.372     | na
0x00200011 | Baseboard 1.25V  | 1.245      | Volts      | ok    | na
| na        | na        | na        | na        | na
0x00200013 | Baseboard 1.8V   | 1.790      | Volts      | ok    | na
| 1.521     | 1.615     | 1.977     | 2.059     | na
```

```
0x00200014 | Baseboard 1.8VSB | 1.790      | Volts      | ok    | na
| 1.521     | 1.615     | 1.977     | 2.059     | na
...
0x00200030 | Baseboard Temp   | 30.000     | degrees C  | ok    | na
| 0.000     | 3.000     | 60.000    | 65.000    | na
```

```
$ bsmsensor.sh -v -m ipmilan -H nsmaster
```

```
Sensor Addr             : 0x00200010
Sensor ID               : Baseboard 1.2V (0x10)
Sensor Type (Analog)    : Voltage
Sensor Reading          : 1.205 (+/- 0.039) Volts
Status                  : ok
Lower Non-Recoverable   : na
Lower Critical          : 1.019
Lower Non-Critical      : 1.078
Upper Non-Critical      : 1.313
Upper Critical          : 1.372
Upper Non-Recoverable   : na
Sensor Addr             : 0x00200011
Sensor ID               : Baseboard 1.25V (0x11)
Sensor Type (Analog)    : Voltage
Sensor Reading          : 1.245 (+/- 0.039) Volts
Status                  : ok
Lower Non-Recoverable   : na
Lower Critical          : 1.058
Lower Non-Critical      : 1.117
Upper Non-Critical      : 1.372
Upper Critical          : 1.431
Upper Non-Recoverable   : na
...
```

```
$ bsmsensor.sh -m ipmilan -H nsmaster -u MWA -p guest -t ”Power
Supply”
```

```
0x00200010 | Power Supply 1   | 0x1        | Discrete   |0x0100 | na
| na        | na        | na        | na        | na
0x00200011 | Power Supply 2   | 0x0        | Discrete   |0x0000 | na
| na        | na        | na        | na        | na
```

```
$ bsmsensor.sh -m ipmilan -H nsmaster -u MWA -p guest -t 0x01
```

```
0x00200021 | CPU 1 Temp       | 39.000     | Degrees C | ok    | na
| na        | na        | 85.000    | na        | 95.000
```

```
$ bsmsensor.sh -m ipmilan -H nsmaster -u MWA -p guest -t 0x01 -a
```

```
0x00200021 | CPU 1 Temp       | 39.000     | Degrees C | ok    | na
| na        | na        | 85.000    | na        | 95.000
```

```
$ bsmsensor.sh -m ipmilan -H 123.34.56.78 -u user -p pass –s “TH_0
temp.”
```

```
Locating sensor record …
Sensor Addr            : 0x00200029
Sensor ID              : TH_0 temp. (0x29)
 Entity ID             : 39.0 (External Environment)
 Entity Type (Analog)  : Temperature
 Sensor Reading        : 18.408 (+/- 0) degrees C
 Status                : ok
 Lower Non-Recoverable : na
 Lower Critical        : 9.768
 Lower Non-Critical    : na
 Upper Non-Critical    : na
 Upper Critical        : 34.824
 Upper Non-Recoverable : na
 Assertion Events      : lcr+ ucr-
 Assertions Enabled    : lcr+ ucr+
 Deassertions Enabled  : lcr+ ucr+
```

```
$ bsmsensor.sh -m CMC -H 129.184.238.254 –u root -p pass
```

```
0x00200001 | CMB_Temp          | 31.000     | degrees C  | ok    |
0.000     | 10.000    | 20.000    | 40.000    | 50.000    | 60.000
...
0x00200006 | IBSW_Temp1        | 22.000     | degrees C  | ok    |
0.000     | 10.000    | 20.000    | 40.000    | 50.000    | 60.000
...
0x00200009 | FAN2A             | 12500.000  | RPM        | ok    |
3200.000  | 6900.000  | 8000.000  | 17800.000 | 18400.000 | 19000.000
...
```

```
$ bsmsensor.sh -m lanplus -H nsmaster -u MWA -p guest –Y 0 -t 0x01
```

```
0x00200021 | CPU 1 Temp        | 39.000     | Degrees C | ok    | na
| na        | na        | 85.000    | na        | 95.000
```

```
$ bsmsensor.sh -m ipmilan -H 129.184.238.253 -u super -p bull –s
“PSU_4_Vin”,”Drawer Power” -c
```

```
Locating sensor record …
Sensor Addr            : 0x0020004a
Sensor ID              : PSU_4_Vin (0x4a)
 Entity ID             : 19.99 (Power Unit)
 Entity Type (Analog)  : Voltage
 Sensor Reading        : 220 (+/- 0) Volts
 Status                : ok

Sensor Addr            : 0x0020004b
Sensor ID              : Drawer Power (0x4b)
 Entity ID             : 19.96 (Power Unit)
 Entity Type (Analog)  : Power Supply
 Sensor Reading        : 962 (+/- 18.500) Watts
 Status                : ok
```

bsmsnmp

bsmsnmp is used to add or remove a server from the list of SNMP trap receivers.

It is also used to Enable or Disable SNMP trap transmission.

Notes

- This command only applies to NovaScale 5005 & 6000 series servers. (PAM software).
- An SNMP subscription defining the destination, the notification type and filter of the events to be sent as alerts is required.
- An SNMP subscription can be enabled or disabled by its creator, but only the PAM administrator can activate / deactivate it.

Usage

NovaScale 5005 and 6000 series servers

```
bsmsnmp.sh [-h] -a action -m pam -M hwmanager -d destination -u user -p
password [-P prefix] [-o outfile] [-l level]
```

`-h`	Displays command usage.
`-l level`	Specifies the severity of the messages to be logged in syslog. 0 : no message is logged (default). 1 : only the FAILED completion of the command is logged. 3 : FAILED and successful completion of the command are logged.
`-a action`	Action on PAP manager SNMP configuration: create_dest, delete_dest, display_dest, trap_enable, trap_disable, trap_status
`-m model`	Target server model of the SNMP alerts sender: pam
`-M hwmanager`	DNS name or PAP Manager IP address.
`-d destination`	Alert receiver DNS name or IP address.
`-u user`	PAP administrator.
`-p password`	User password.
`-P prefix`	Filter name used for the naming of the subscription.
`-o outfile`	Output file name where **stdout** and **stderr** outputs are redirected.

Return Codes

0 command accepted.

-1 command failed.

-2 command for creation of a subscription already existing.

creat_dest

creat_dest is used to create the **<prefix>_SNMP_<destination>** subscription, where **<prefix>** is the name of the filter attached to this subscription and **<destination>** identifies the alert receiver.

If the <prefix> argument is not specified, the filter named `HPC` is used by default.

If the subscription already exists, the message `subscription ..... already created` is displayed.

Notes

- The default filter used for HPC (`HPC` filter) must be pre-loaded on each PAP manager.
- The subscription is created with the current state set to "enabled".

Examples

```
$ bsmsnmp.sh -a create_dest -m pam -M paptest2 -u pap -p pap -d
frcls1234 -P BEMA
```

```
creation successful
```

```
$ bsmsnmp.sh -a create_dest -m pam -M paptest2 -u pap -p pap -d
123.456.7.89
```

```
creation successful
```

```
$ bsmsnmp.sh -a create_dest -m pam -M paptest2 -u pap -p pap -d
frcls1234 -P BEMA
```

```
ERROR: subscription <subscription_name> already created
```

delete_dest

delete_dest is used to delete the **<prefix>_SNMP_<destination>** subscription.

If the <prefix> argument is not specified, the filter named `HPC` is used by default.

If the subscription does not exist, the message `no such subscription ...` is displayed.

Examples:

```
$ bsmsnmp.sh -a delete_dest -m pam -M paptest2 -u pap -p pap -d
frcls1234 -P BEMA
```

```
Deletion successful
```

```
$ bsmsnmp.sh -a delete_dest -m pam -M paptest2 -u pap -p pap -d
frcls1234 -P BEMAA
```

```
ERROR: no such subscription <subscription_name>
```

display_dest

display_dest is used to display the list of SNMP subscriptions.

Each SNMP subscription is listed with its current state (Enabled= yes/no) and its current active state (Active=yes/no).

Examples:

```
$ bsmsnmp.sh -a display_dest -m pam -M paptest2 -u pap -p pap
```

```
subscription BEMA_SNMP_FRCLS1234 : Enable=no  Active=yes
subscription HPC_SNMP_123.456.7.89 : Enable=yes  Active=yes
```

trap_enable

trap_enable is used to enable the **<prefix>_SNMP_<destination>** subscription, and to enable SNMP trap transmission.

If the <prefix> argument is not specified, the filter named `HPC` is used by default.

If the subscription does not exist, the message "`no such subscription...`" is displayed.

Examples:

```
$ bsmsnmp.sh -a trap_enable -m pam -M paptest2 -u pap -p pap
-d frcls1234 -P BEMA
```

```
Enable value successfully set
```

```
$ bsmsnmp.sh -a trap_enable -m pam -M paptest2 -u pap -p pap
-d frcls1234 -P BEMAA
```

```
ERROR: no such subscription <subscription_name>
```

trap_disable

trap_disable is used to disable the **<prefix>_SNMP_<destination>** subscription, and to disable SNMP trap transmission.
If the <prefix> argument is not specified, the filter named `HPC` is used by default.
If the subscription does not exist, the message `no such subscription ...` is displayed.

Examples:

```
$ bsmsnmp.sh -a trap_disable -m pam -M paptest2 -u pap -p pap
-d frcls1234 -P BEMA
```

```
Enable value successfully set
```

```
$ bsmsnmp.sh -a trap_disable -m pam -M paptest2 -u pap -p pap
-d frcls1234 -P BEMAA
```

```
ERROR: no such subscription <subscription_name>
```

trap_status

trap_status is used to display the current state (Enable= yes/no) and the current active state (Active=yes/no) of the **<prefix>_SNMP_<destination>** subscription.
If the subscription does not exist, the message `no such subscription ...` is displayed.

Examples:

```
$ bsmsnmp.sh -a trap_status -m pam -M paptest2 -u pap -p pap -d
123.456.7.89 -P HPC
```

```
HPC_SNMP_123.456.7.89 : Enable=yes  Active=yes
```

```
$ bsmsnmp.sh -a trap_status -m pam -M paptest2 -u pap -p pap -d
frcls1234 -P BEMAA
```

```
ERROR: no such subscription <subscription_name>
```

bsmpowergroup

The **bsmpowergroup** command is used to execute a power action (on/off/off_force/status) on a list of domains that are managed by a single PAP manager. This list of domains may be all the domains managed by a manager or a list specified by the user.

This command executes the specified power action sequentially on each valid domain from the list whatever the result of the execution on the previous domain.

Usage

NovaScale 5005 and 6000 series servers

```
bsmpowergroup.sh [-h] [-q] -a action -m pam -M hwmanager -g group -u user
-p password [-t timedelay] [-w offdelay] [-l level] [-o outfile]
```

`-h`	Displays command usage.
`-l level`	Specifies the severity of the messages to be logged in syslog. 0 : no message is logged (default). 1 : only the FAILED completion of the command is logged. 3 : FAILED and successful completion of the command are logged.
`-q`	Quiet option: stops all outputs (**stdout, sdterr**, or *"outfile"* if **-o** option is specified).
`-a action`	Action: on, off, off_force, status.
`-m model`	Target server model: pam.
`-M hwmanager`	DNS name or PAP Manager IP address.
`-g group`	Defines the domains to be powered on /off: -g all : specifies all the domains managed by the PAP manager. -g « domain1 domain2 … » : specifies a list of domains.
`-u user`	PAP administrator.
`-p password`	User password.
`-t timedelay`	Specifies the time interval (in seconds) between the sending of the power command to two successives domains. By default, this interval is set to 30 seconds for power <on>, and 0 second for <off>, <off_force> and <status>.

`-w offdelay` Specifies the time (in seconds) for a domain to reach the INACTIVE status after powering it <off>. If a domain is not in the INACTIVE status on expiry of the specified time, a power <off_force> command is sent to this domain.
By default, this time is set to 0 second, which means that domain status is not tested.

`-o outfile` Output file name to which **stdout** and **stderr** outputs are redirected.

Note If the user specifies a list of domains, a check is carried out to verify that each domain in the list is managed by the specified PAP manager.
Domains that are not managed by the PAP manager are declared as invalid and marked with the « WARNING » keyword on the output.
The power command is then applied to the valid domains from the list and the return code is increased by 128 to indicate that at least one specified domain is invalid.

Return Codes

The return code represents the least successful power action.

The return code represents the worst return code for all the power commands:

- <status> action:

  0 , 1 , 2 , 3 all <status> commands succeeded

  128, 129, 130, 131
  all <status> commands succeeded but at least one domain name in the list is invalid

  -1 at least one <status> command failed

- <on, off_force, off> actions:

  0 all commands succeeded

  128 all commands succeeded but at least one domain name in the list is invalid

  -1 at least one command failed

Output

domain xxx : SUCCESS | ERROR : <bsmpower output message>

domain xxx : WARNING : invalid domain

Examples

```
$ bsmpowergroup.sh -a status -m pam -M paptest2 -g all -u pap -p pap
```

```
domain FAME000 : SUCCESS : INACTIVE
domain FAME001 : SUCCESS : POWERING ON
```

```
$ bsmpowergroup.sh -a off -m pam -M papcharly -g ”Domain-0 Domian-1
Domain-2 Domain-3” -w 10 -u pap -p pap
```

```
domain Domain-1 : WARNING : invalid domain
domain Domain-2 : SUCCESS : Already OFF
domain Domain-0 : SUCCESS : INACTIVE    (if this domain status
                            changed to INACTIVE within 10 seconds)
domain Domain-3 : SUCCESS : command successfully launched (if it
                            was necessary to send the power
                            <off_force> command to this domain.)
```

bsmsol

The **bsmsol** command is used to establish a Serial-Over-Lan session.

This command is available only for NovaScale servers using the ipmilan or lanplus model.

Usage

```
bsmsol.sh [-h] -m ipmilan -H host [-u user] [-p password] [-l level] [-C
crypt] [-L priv]

bsmsol.sh [-h] -m lanplus -H host -u user [-p password] [-l level] [-L
priv] [-Y cipher]
```

`-h`	Displays command usage.
`-l level`	Specifies the severity of the messages to be logged in syslog. 0 : no message is logged (default). 1 : only the FAILED completion of the command is logged. 3 : FAILED and successful completion of the command are logged.
`-m model`	Target server model: ipmilan, lanplus.
`-H host`	DNS name or target server IP address.
`-C crypt`	Cipher suite to be used by ipmilan model for lanplus encryption (default value "0" means no encryption).
`-L priv`	Remote session privilege level (ADMINISTRATOR (default), OPERATOR, USER).
`-u user`	BMC user.
`-p password`	User password.
`-Y cipher`	Cipher suite ID to be used by lanplus interface (default is 3).

Notes

- Enter "~." to close the session.
- Only one Serial-Over-Lan session can be opened on a given target server.
- When the target server is a NovaScale 3005 with a BMC firmware including encryption, the cipher suite parameter must be set to "3" .

Examples

```
$ bsmsol.sh -m ipmilan -H 129.182.6.50 -u root -p root
```

```
[SOL Session operational. Use ~? For help]
Shell>
……..
Shell>~. [terminated ipmitool]
```

```
$ bsmsol.sh -m lanplus -H 129.182.6.50 -u root -p root
```

```
[SOL Session operational. Use ~? For help]
Shell>
……..
Shell>~. [terminated ipmitool]
```

bsmidentify

The **bsmidentify** command is used to identify physically a remote host via user-visible lights or beeps during some time.

This command is available for NovaScale servers using the ipmilan, lanplus or ipmidrv model, and for Bullx chassis and blades.

Usage

NovaScale servers using the ipmilan or lanplus model

```
bsmidentify.sh [-h] -m ipmilan -H host [-u user] [-p password] [-l level]
-C value [-o outfile]
```

```
bsmidentify.sh [-h] -m lanplus -H host -u user [-p password] [-l level] -
C value [-o outfile] [-Y cipher]
```

NovaScale servers using the ipmidrv model

```
bsmidentify.sh [-h] -m ipmidrv [-l level] -C value [-o outfile]
```

Bullx chassis and blades

```
bsmidentify.sh [-h] -m CMC –M hwmanager [-B targetname | -I index] -C
value -U community [-S SNMPv] [-P port] [-T timeout] [-o outfile]
```

`-h` Displays command usage.

`-l level` Specifies the severity of the messages to be logged in syslog.
0 : no message is logged (default).
1 : only the FAILED completion of the command is logged.
3 : FAILED and successful completion of the command are logged.

`-m model` Target server model: ipmilan, lanplus, ipmidrv, CMC.

`-H host` DNS name or target server IP address.

`-C value` Specifies the duration of identification (in seconds).
This value may be set from 0 to 250.
This value set to 0 stops the identification.
For Bullx chassis and blades, this parameter specifies the switching on(1)/off(0) of the LED indicator of the component.

`-B targetname` Bullx blade name or Bullx chassis component name.
Possible Bullx chassis components are:
LCPCMM : for CMM and Local Control Panel
IBS : for IB Switch blade panel
ESM : for Ethernet Switch Module panel
UCM : for Ultracapacitor Module

`-I index`	Bullx blade index (Bullx blade slot)
`-M hwmanager`	Bullx chassis CMC IP address.
`-u user`	BMC user.
`-p password`	User password.
`-Y cipher`	Cipher suite ID to be used by lanplus interface (default is 3).
`-o outfile`	Output file name where **stdout** and **stderr** outputs are redirected.
`-S SNMPv`	SNMP version : 1 (default value), 2, 3.
`-U community`	SNMP community for SNMP writing.
`-P port`	SNMP port (default value is 161).
`-T timeout`	SNMP timeout (default value is 20).

Note For Bullx chassis and blades, no "–B targetname" option is equivalent to "-B LCPCMM".

Examples

```
$ bsmidentify.sh -m ipmilan -H 129.182.6.50 -u root -p root -C 10
```

```
Chassis identify interval : 10 seconds
```

```
$ bsmidentify.sh -m lanplus -H 129.182.6.50 -u root -p root -C 10
```

```
Chassis identify interval : 10 seconds
```

bsmHWinfocmd

bsmHWinfocmd is used to get various IPMI information such as BMC parameters, LAN configuration parameters, users list, and Alerting parameters.

Usage

Express5800 servers

```
bsmHWinfocmd.sh [-h] -m nec -H host –a param [-u user] -p password
[-o outfile] [-l level]
```

NovaScale servers using the ipmilan or lanplus model

```
bsmHWinfocmd.sh [-h] -m ipmilan -H host –a param [-u user] [-p password]
[-o outfile] [-l level]

bsmHWinfocmd.sh [-h] -m lanplus -H host –a param -u user [-p password]
[-o outfile] [-l level] [-Y cipher]
```

NovaScale 4000 series servers

```
bsmHWinfocmd.sh [-h] -m tiger -H host –a param -u user -p password
[-o outfile] [-l level]
```

`-h`	Displays command usage.
`-l level`	Specifies the severity of the messages to be logged in syslog. 0 : no message is logged (default). 1 : only the FAILED completion of the command is logged. 3 : FAILED and successful completion of the command are logged.
`-a param`	Type of information to be read: bmc_info, lan_print, user_list, get_lan_alert_dest, get_pef_list, get_pef_policy.
`-H host`	DNS name or IP address of the target BMC.
`-m model`	Target server model: nec, ipmilan, lanplus, tiger.
`-u user`	BMC user name.
`-p password`	BMC user password. (Authentication key for Express5800 servers).
`-Y cipher`	Cipher suite ID to be used by lanplus interface (default is 3).
`-o outfile`	Output file name to which **stdout** and **stderr** outputs are redirected.

Note The *tiger* model, defined for NovaScale 4000 series servers, is similar to the *ipmilan* model and used to ensure compatibility with version 2.0.

Return Codes

0 command accepted.

-1 command failed.

bmc_info

bmc_info is used to get IPMI information such as BMC Firmware revision, Manufacturer, BMC Device support…

Example:

```
$ bsmHWinfocmd.sh -a bmc_info -m ipmilan –H 129.182.6.151 –u MWA
-p guest
```

```
Device ID                 : 34
Device revision           : 1
Firmware revision         : 0.18
IPMI version              : 2.0
Manufacturer name         : NEC
……
Additionnal Device Support:
    Sensor Device
    SDR Repository Device
    SEL Device
    FRU Inventory Device
    ……
```

```
$ bsmHWinfocmd.sh -a bmc_info -m lanplus –H 129.182.6.151 –u MWA
-p guest
```

```
Device ID                 : 34
Device revision           : 1
……
```

lan_print

lan_print is used to get the configuration parameters of the LAN channel used to access the BMC with an OutOfBand connection

Example:

```
$ bsmHWinfocmd.sh -a lan_print -m ipmilan –H 129.182.6.151 –u MWA
-p guest
```

```
Set in Progress           : Set Complete
Auth Type Support         : NONE MD2 MD5 PASSWORD
```

```
Auth Type Enable          : ……
IP Address Source         : Static Address
IP Address                : 129.182.6.151
Subnet Mask               : 255.255.255.0
MAC Address               : 00:12:34:56:78:90
SNMP Community String     : public
IP Header                 : ……
BMC ARP Control           : ……
……
```

user_list

user_list is used to get information about the users configured for the LAN channel used to access the BMC with an OutOfBand connection

Example:

```
$ bsmHWinfocmd.sh -a user_list -m ipmilan –H 129.182.6.151 –u MWA
-p guest
```

```
Channel Number            : 0x7
Maximum User Ids          : 4
Enabled User IDs          : 3

User ID                   : 1
User name                 :
Fixed Name                : Yes
Access Available          : call-in / callback
Link Authentication       : enabled
IPMI Messaging            : enabled
Privilege Level           : ADMINISTRATOR

User ID                   : 2
User name                 : MWA
Fixed Name                : No
Access Available          : call-in / callback
Link Authentication       : enabled
IPMI Messaging            : enabled
Privilege Level           : ADMINISTRATOR

……
```

get_lan_alert_dest

get_lan_alert_dest is used to get information about the LAN alert destinations configured for the LAN channel used to access the BMC with an OutOfBand connection

Example:

```
$ bsmHWinfocmd.sh -a get_lan_alert_dest -m ipmilan –H 129.182.6.151 –u
MWA -p guest
```

```
Alert Destination         : 0
```

```
Alert Acknowledge          : Unacknowledged
Destination type           : PET Trap
Retry Interval             : 0
Number of Retries          : 0
Alert Gateway              : Default
Alert IP Address           : 0.0.0.0
Alert MAC Address          : 00:00:00:00:00:00

Alert Destination          : 1
Alert Acknowledge          : Unacknowledged
Destination type           : PET Trap
Retry Interval             : 5
Number of Retries          : 3
Alert Gateway              : Default
Alert IP Address           : 129.182.6.22
Alert MAC Address          : 00:11:22:33:44:55

.........
```

get_pef_policy

get_pef_policy is used to get information about the Alert Policy Table used by the BMC for Alert processing.

Example:

```
$ bsmHWinfocmd.sh -a get_pef_policy -m ipmilan –H 129.182.6.151 –u MWA
-p guest
```

```
Alert policy table entry   : 1
Policy set                 : 1
Policy entry rule          : Try-next-entry
Channel number             : 7
Channel medium             : 802.3 LAN
Destination number         : 2
Alert destination type     : PET
ACK timeout / retry        : 5
Retries                    : 3
IP address                 : 129.182.6.22
MAC address                : 00:11:2:33:44:55
Status                     : Enabled

Alert policy table entry   : 2
.........
```

get_pef_list

get_pef_list is used to get information about the Platform Event Filter Table used by the BMC for Alert processing.

Example:

```
$ bsmHWinfocmd.sh -a get_pef_list -m ipmilan –H 129.182.6.151 –u MWA -
p guest
```

```
PEF table entry           : 1
Status                    : active
Version                   : 0x11
Sensor type               : Any
Sensor number             : Any
Event severity            : Warning
Event class               : Threshold
Event trigger(s)          : (0x01/0x0081)<LNC,<UNC
Action                    : Alert
Policy set                : 1

PEF table entry           : 2
Status                    : inactive

PEF table entry           : 3
Status                    : active
Version                   : 0x11
Sensor type               : Power Supply
Sensor number             : Any
Event severity            : Critical
Event class               : Discrete
Event trigger(s)          : Sensor-specific
Action                    : Alert
Policy set                : 1

.........
```

bsmFWupg

bsmFWupg is used to upgrade, using an external tool, the firmware of Remote Management Modules.

This command is available only for ipmilan model NovaScale servers with Raritan Remote Management Modules that can be manipulated with the command line based tool named **KiraTool, and for Bull servers with bulloem command extension to ipmitool utility**.

Requirement

The **KiraTool** software, that allows you to manipulate the module's firmware, must be installed on the system running **bsmFWupg.sh**.

Refer to the *KiraTool User Manual* for the installation procedure.

Usage

NovaScale servers updated via kiratool

```
bsmFWupg.sh [-h] -t kiratool -H host –F fw_binfile [-u user] [-p
password]
[-D tooldir] [-d fw_bindir] [-o outfile]
```

Bull servers updated via ipmitool bulloem extension

```
bsmFWupg.sh [-h] -t ipmitool -H host –F fw_binfile [-u user]
[-p password] [-a action] [-E component] [-M module] [-m model]
[-d fw_bindir] [-o outfile]
```

`-h`	Displays command usage.
`-D tooldir`	Installation directory of the KiraTool command line tool (full path). Default value is "C:\Program files\KiraTool" for Windows, and "/usr/local/bin" for Linux.
`-F fw_binfile`	Name of the firmware binary file.
`-d fw_bindir`	Directory where the firmware binary file is (full path). Default value is "/tmp".
`-H host`	DNS name or IP address to talk to the module over LAN.
`-t tool`	Command line tool: kiratool, ipmitool.

`-a action` Operation to be done on a component (idendified by component_id) on the module (specified by module_id) :
bulloemver: display the firmware version of the component
bulloemupg: upgrade the firmware of the component
bulloemlisthw: display the list of components which can be upgraded (presently limited to module 0).

`-E component_id` Component name

`-M module_id` Module ID ,from 0 (default value) to 3.

`-m model` Target server model: ipmilan, lanplus, ipmidrv. If not present, kcs driver will be used.

`-u user` Administrative login to the Remote Management Module.

`-p password` Administrative password to the Remote Management Module.

`-o outfile` Output file name to which **stdout** and **stderr** outputs are redirected.

Return Codes

0 command accepted.

-1 command failed.

Example

```
$ bsmFWupg.sh -t kiratool –H 129.182.6.110 –u super -p pass
–F “fw-wub-MESCB_010100_0026.bin”
```

```
Starting Firmware Upgrade
Uploading Firmware File
0% ------------------- 50% ------------------- 100%
************************************************
Upload complete.
Flashing Firmware (takes about 1min)
Successfully upgraded firmware.
```

```
$ bsmFWupg.sh -t ipmitool –a bulloemver –H 129.182.6.110 –u super
-p pass –m ipmilan –E BMC –M 1
```

```
$ bsmFWupg.sh -t ipmitool –a bulloemupg –H 129.182.6.110 –u super
-p pass –m ipmilan –F “fw_xxx.bin” –E BMC
```

```
$ bsmFWupg.sh -t ipmitool –a bulloemlisthw –H 129.182.6.110 –u super
-p pass –m ipmilan
```

```
BMC
LCP
ILBC
MXBC
ADM1069_4_A_98
ADM1069_4_A_9C
ADM1069_3_B_98
ADM1069_3_B_9A
```

```
$ bsmFWupg.sh -t ipmitool –a bulloemlisthw –H 129.182.6.110
```

```
BMC
LCP
ILBC
MXBC
ADM1069_4_A_98
ADM1069_4_A_9C
ADM1069_3_B_98
ADM1069_3_B_9A
```

bsmFWcmd

The **bsmFWcmd** command is used to execute firmware reset on components.

Usage

Bullx chassis

```
bsmFWcmd.sh [-h] -m model –a action –M hwmanager [-E component]|[-B
targetname]|[-I index] -C community [-S SNMPv] [-P port] [-T timeout] [-o
outfile]
```

`-a action`	Action: reset.
`-h`	Displays command usage.
`-m model`	Target server model: CMC.
`-E component`	Bullx chassis component name. Possible Bullx components are: LCP : for Local Control Panel ESCMM or CMM : for CMM Ethernet Switch IBS : for IB Switch blade ESESM or ESM : for ESM Ethernet Switch ESW : for ESW
`-B targetname`	Bullx blade name
`-I index`	Bullx blade index (Bullx blade slot)
`-M hwmanager`	Bullx chassis CMC IP address.
`-o outfile`	Output file name where **stdout** and **stderr** outputs are redirected.
`-S SNMPv`	SNMP version : 1 (default value), 2, 3.
`-C community`	SNMP community for SNMP writing.
`-P port`	SNMP port (default value is 161).
`-T timeout`	SNMP timeout (default value is 20).

Note For Bullx chassis and blades, "-E component" "-B targetname" and "-I index" are exclusive options.

NovaScale servers using the ipmilan or lanplus model

```
bsmFWcmd.sh [-h] -m model –a action –M hwmanager [-u user -p password] [-
Y cipher] [-o outfile]
```

`-a action`	Action: reset.
`-h`	Displays command usage.
`-m` *`model`*	Target server model: ipmilan, lanplus.
`-M` *`hwmanager`*	BMC target IP address.
`-o` *`outfile`*	Output file name where **stdout** and **stderr** outputs are redirected.
`-u` *`user`*	BMC user.
`-p` *`password`*	User password.
`-Y` *`cipher`*	Cipher suite ID to be used by lanplus interface (default is 3).

bsmFWcmd.sh -a reset

The **reset** action is used to execute firmware reset.

Return Codes:

0 command accepted.

-1 command failed.

Examples:

```
$ bsmFWcmd.sh -a reset -m CMC - M 129.184.238.254 –E LCP –C community
```

```
$ bsmFWcmd.sh -a reset -m ipmilan - M 129.184.238.199 –u super –p pass
```

```
$ bsmFWcmd.sh -a reset -m lanplus - M 129.184.238.199 –u super –p pass
-Y 0
```

bsmHWpm

The **bsmHWpm** command, available for servers with Manageability Engine, is used to control power consumption of platform via power and thermal policies. For NovaScale servers which name ends with an 'Fx', the model generation argument is mandatory.

Usage

```
bsmHWpm.sh [-h] [-l level] -m model –H host [–u user –p password] [-o
outfile] [_M generation] –a action arglist
```

`-a action`	Action.
`-h`	Displays command usage.
`-m model`	Target server model: lanplus, ipmilan.
`-H host`	BMC target IP address.
`-l level`	Specifies the severity of the messages to be logged in syslog. 0 : no message is logged (default). 1 : only the FAILED completion of the command is logged. 3 : FAILED and successful completion of the command are logged.
`-u user`	BMC user.
`-p password`	User password.
`-Y cipher`	Cipher suite ID to be used by lanplus interface (default is 3).
`-o outfile`	Output file name where **stdout** and **stderr** outputs are redirected.
`-M generation`	Model generation : for NovaScale servers which name ends with an 'Fx', model generation must be 'F'.
`-z value`	Hexadecimal code of the manageability engine channel to reach (default is 0x06)
`-e value`	Hexadecimal code of the manageability engine address to reach (default is 0x2c)
`arglist`	list of arguments specific to the action.

Return Codes

0	command accepted.
-1	command failed.

bsmHWpm.sh -a getPowerBudget

The **getPowerBudget** action is used to get the Total Power Budget (in Watts) that is maintained by the Power Budget Control Service.

```
bsmHWpm.sh [-h] [-l level] -m model –H host [–u user –p password] [-o
outfile] [-z ME channel] [-e ME address] –a getPowerBudget
```

Example:

```
$ bsmHWpm.sh -m lanplus –H 199.182.100.160 –u root -p bull –a
getPowerBudget
```

```
Power Budget = 377 Watts
```

bsmHWpm.sh -a setPowerBudget

The **setPowerBudget** action is used to set the Total Power Budget (in Watts) that should be maintained by the Power Budget Control Service.

```
bsmHWpm.sh [-h] [-l level] -m model –H host [–u user –p password] [-o
outfile] [-z ME channel] [-e ME address] –a setPowerBudget –x value

-x value        Total Power Budget to be set. This value must be greater
                than the min Power Limit value and less than the max
                Power Limit value returned with the getNMCapibilities
                action.
```

Example:

```
$ bsmHWpm.sh -m lanplus –H 199.182.100.160 –u root -p bull –a
setPowerBudget –x 350
```

```
Total Power Budget has been set
```

bsmHWpm.sh -a getPowerConsumption

The **getPowerConsumption** action is used to get global or per policy Power Consumption Statistics.

```
bsmHWpm.sh [-h] [-l level] -m model –H host [–u user –p password] [-o
outfile] [-z ME channel] [-e ME address] –a getPowerConsumption
[-i policyID]

-i policyID       This argument is mandatory only in order to get per
                  policy power consumption statistics. Without this
                  argument, global power consumption statistics are
                  returned
```

Example:

```
$ bsmHWpm.sh -m lanplus –H 199.182.100.160 –u root -p bull –a
getPowerConsumption
```

```
Current consumption: 167 Watts
Minimum consumption: 135 Watts
Maximum consumption: 511 Watts
Average consumption: 203 Watts
```

bsmHWpm.sh -a getNMVersion

The **getNMVersion** action is used to get Node Manager and firmware version numbers.

```
bsmHWpm.sh [-h] [-l level] -m model –H host [–u user –p password] [-o
outfile] [-z ME channel] [-e ME address] –a getNMVersion
```

Example:

```
$ bsmHWpm.sh -m lanplus –H 172.31.50.98 –u ADMIN -p ADMIN –a
getNMVersion
```

```
Node Manager Version:
  Manufacturers ID: 0x000157 (Intel)
  Node Manager Version: supported Node Manager 1.5
  IPMI interface version: Patch version (binary encoded) 0x00
  IPMI interface version: Major Firmware revision (binary encoded)0x01
  IPMI interface version: Minir Firmware revision (BCD encoded) 0x04
```

bsmHWpm.sh -a getNMCapabilities

The **getNMCapabilities** action is used to get Node Manager Capabilities.

```
bsmHWpm.sh [-h] [-l level] -m model –H host [–u user –p password] [-o
outfile] [-z ME channel] [-e ME address] –a getNMCapabilities
–g policyTriggerType

-g policyTriggerType    Policy Trigger Type:
                         0 : No Policy Trigger
                         1 : Inlet Temperature Policy Trigger Type
```

Example:

```
$ bsmHWpm.sh -m lanplus –H 172.31.50.98 –u ADMIN -p ADMIN –a
getNMCapabilities –g 0
```

```
Node Manager Capabilities:
  Manufacturers ID: 0x000157 (Intel)
  Max Concurrent Settings: 10
  Max Power/Thermal value to be settable as trigger or max Power Limit
to be maintained  if Policy trigger type is equal to 0: 32767
  Min Power/Thermal value to be settable as trigger or min Power Limit
to be maintained  if Policy trigger type is equal to 0: 1
  Min Correction time: 6000 ms
  Max Correction time: 600000 ms
  Min Statistics Reporting Period: 1 s
  Max statistics reporting Period: 3600 s
  Domain limiting scope: CPU power limiting
  IPMI interface version: Minir Firmware revision (BCD encoded) 0x04
```

bsmHWpm.sh -a endisNMPolicyControl

The **endisNMPolicyControl** action is used to Enable/Disable Node Manager Policy Control.

```
bsmHWpm.sh [-h] [-l level] -m model –H host [–u user –p password] [-o
outfile] [-z ME channel] [-e ME address] –a endisNMPolicyControl
–f policyControl [-i policyID]

-f policyControl Policy Control value:
                 0 : Global Disable Node Manager policy control
                 1 : Global Enable Node Manager policy control
                 2 : Per Domain Disable Node Manager policies for the
                 specified domain (domain 0)
                 3 : Per Domain Enable Node Manager policies for the
                 specified domain (domain 0)
                 4 : Per Policy Disable Node Manager policy for the
                 specified policy within domain (domain 0)
                 5 : Per Policy Enable Node Manager policy for the
                 specified policy within domain (domain 0)

-i policyID      This argument is mandatory only if policyControl
                 argument is set to 4 or 5
```

Example:

```
$ bsmHWpm.sh -m lanplus –H 172.31.50.98 –u ADMIN -p ADMIN –a
endisNMPolicyControl –f 5 –i 0
```

```
Node Manager Policy Control is done.
```

bsmHWpm.sh -a getNMPolicy

The **getNMPolicy** action is used to get the Node Manager policy parameters.

```
bsmHWpm.sh [-h] [-l level] -m model –H host [–u user –p password] [-o
outfile] [-z ME channel] [-e ME address] –a getNMPolicy -i policyID

-i policyID     Policy ID
```

Example:

```
$ bsmHWpm.sh -m lanplus –H 172.31.50.98 –u ADMIN -p ADMIN –a
getNMPolicy –i 0
```

```
Node Manager Policy:
  Manufacturers ID: 0x000157 (Intel)
   Domain Id: 0
   Policy enabled
   per Domain Node Manager policy control enabled:
   Global Node Manager policy control enabled:
   Policy Trigger Type: No Policy Trigger. Policy will maintain Power
Limit
   Policy Type: Power Control Policy
   Policy Exception Actions:
      send alert disabled
      shutdown system disabled
   Power Limit: 32767 [Watts]
   Print Correction Time Limit: 600000 [ms]
   Policy Trigger Limit: 32767
   Statistics Reporting Period: 30 [s]
```

bsmHWpm.sh -a setNMPolicy

The **setNMPolicy** action is used to create or modify a Node Manager Policy.

```
bsmHWpm.sh [-h] [-l level] -m model –H host [–u user –p password]
[-o outfile] [-z ME channel] [-e ME address] –a setNMPolicy –i policyID
 –g policyTriggerType –x powerLimit [-G policyTriggerLimit]
–c exceptionAction –T correctionTimeLimit –r statisticsReportingPeriod

-i policyID             Policy ID

-g policyTriggerType    Policy Trigger Type:
                         0 : No Policy Trigger
                         1 : Inlet Temperature Policy Trigger type

-x powerLimit           Power Limit to be maintained.

-G policyTriggerLimit   Defines the Inlet temperature (in Celsius) to be
                         used as Policy Trigger value.
                        This argument is mandatory only if the policy
                         trigger type is set to 1
```

```
-c exceptionAction      Defines the action to be taken if the maintained
                        given policy power limit is exceeded over the
                        Correction Time Limit.Possible values are:
                        0 : no action
                        1 : send alert
                        2 : hard system shutdown via BMC

-T correctionTimeLimit  Defines the max time (in seconds), in which the
                        Node Manager must take corrective actions in
                        order to bring the platform back within the
                        specified power limit before taking the
                        Exception Action.

-r statisticsReportingPeriod   Defines the Statistics Reporting Period in
                        seconds.
```

Example:

```
$ bsmHWpm.sh -m lanplus –H 172.31.50.98 –u ADMIN -p ADMIN –a
setNMPolicy –i 0 –g 0 –x 380 –c 0 –T 500 –r 20
```

```
Node Manager Policy 0 has been set
```

bsmHWpm.sh -a removeNMPolicy

The **removeNMPolicy** action is used to remove a Node Manager Policy.

```
bsmHWpm.sh [-h] [-l level] -m model –H host [–u user –p password]
[-o outfile] [-z ME channel] [-e ME address] –a removeNMPolicy
–i policyID –g policyTriggerType

-i policyID     Policy ID

-g policyTriggerType    Policy Trigger Type:
                        0 : No Policy Trigger
                        1 : Inlet Temperature Policy Trigger type
```

Example:

```
$ bsmHWpm.sh -m lanplus –H 172.31.50.98 –u ADMIN -p ADMIN –a
removeNMPolicy –i 1 –g 0
```

```
Node Manager Policy 1 has been removed
```

bsmHWpm.sh -a getPowerLimit

The **getPowerLimit** action is used to get the Power Limit to be maintained on a policy ID.

```
bsmHWpm.sh [-h] [-l level] -m model –H host [–u user –p password]
[-o outfile] [-z ME channel] [-e ME address] –a getPowerLimit –i policyID

-i policyID     Policy ID
```

Example:

```
$ bsmHWpm.sh -m lanplus –H 172.31.50.98 –u ADMIN -p ADMIN –a
getPowerLimit –i 0
```

```
Node Manager Policy 0 Power Limit = 365 Watts
```

bsmHWpm.sh -a setPowerLimit

The **setPowerLimit** action is used to set the Power Limit to be maintained on a policy ID.

```
bsmHWpm.sh [-h] [-l level] -m model –H host [–u user –p password]
[-o outfile] [-z ME channel] [-e ME address] –a setPowerLimit –i policyID
–x powerLimit

-i policyID     Policy ID

-x powerLimit   Power Limit to be maintained.
```

Example:

```
$ bsmHWpm.sh -m lanplus –H 172.31.50.98 –u ADMIN -p ADMIN –a
setPowerLimit –i 1 –x 365
```

```
Node Manager Policy 1 Power Limit has been set
```

bsmHWpm.sh -a getTempTrigger

The **getTempTrigger** action is used to get the Inlet temperature (in Celsius) that defines the Policy Trigger Limit on a policy ID.

```
bsmHWpm.sh [-h] [-l level] -m model –H host [–u user –p password]
[-o outfile] [-z ME channel] [-e ME address] –a getTempTrigger
–i policyID

-i policyID     Policy ID
```

Example:

```
$ bsmHWpm.sh -m lanplus –H 172.31.50.98 –u ADMIN -p ADMIN –a
getTempTrigger –i 0
```

```
Policy 0 Inlet Temperature Trigger Limit = 0x0032 Celsius
```

bsmHWpm.sh -a setTempTrigger

The **setTempTrigger** action is used to set Inlet temperature (in Celsius) that defines the Policy Trigger Limit on a policy ID.

```
bsmHWpm.sh [-h] [-l level] -m model –H host [–u user –p password]
[-o outfile] [-z ME channel] [-e ME address] –a setTempTrigger
–i policyID –x tempLimit

-i policyID     Policy ID

-x tempLimit    Temperature Limit used as Policy Trigger value
```

Example:

```
$ bsmHWpm.sh -m lanplus –H 172.31.50.98 –u ADMIN -p ADMIN –a
setTempTrigger –i 1 –x 85
```

```
Policy 1 Inlet Temperature Trigger Limit has been set
```

bsmHWpm.sh -a setNMPowerDrawRange

The **setNMPowerDrawrange** action is used to set the Min and Max power consumption range.

```
bsmHWpm.sh [-h] [-l level] -m model –H host [–u user –p password]
[-o outfile] [-z ME channel] [-e ME address] –a setNMPowerDrawRange
 –n minPower –N mawPower

-n minPower     Minimum Power Draw in Watts

-N maxPower     Maximum Power Draw in Watts
```

Example:

```
$ bsmHWpm.sh -m lanplus –H 172.31.50.98 –u ADMIN -p ADMIN –a
setNMPowerDrawRange –n 200 –N 400
```

```
Power Draw range has been set
```

bsmHWpm.sh -a getNMStatistics

The **getNMStatistics** action is used to get the Node Manager Power Statistics.

```
bsmHWpm.sh [-h] [-l level] -m model –H host [–u user –p password]
[-o outfile] [-z ME channel] [-e ME address] –a getNMStatistics –O mode
[–i policyID]

-O mode         Specifies the type of statistics to be collected:
                1 : global power statistics (in Watts)
                2 : global inlet temperature statistics (in Celsius)
                17 : per policy power statistics (in Watts)
                18 : per policy trigger statistics (in Celsius)

-i policyID     This argument is mandatory only if “mode” argument is set
                to 17 or 18
```

Example:

```
$ bsmHWpm.sh -m lanplus –H 172.31.50.98 –u ADMIN -p ADMIN –a
getNMStatistics –O 1
```

```
Node Manager Statistics:
   ???????????????
```

bsmHWpm.sh -a resetNMStatistics

The **resetNMStatistics** action is used to reset the Node Manager Power Statistics.

```
bsmHWpm.sh [-h] [-l level] -m model –H host [–u user –p password]
[-o outfile] [-z ME channel] [-e ME address] –a resetNMStatistics –O mode
[–i policyID]

-O mode         Specifies the type of statistics to be reset:
                0 : global statistics including power statistics and
                inlet temperature statistics
                1 : per policy statistics including power and trigger
                statistics

-i policyID     This argument is mandatory only if “mode” argument is set
                to 1
```

Example:

```
$ bsmHWpm.sh -m lanplus –H 172.31.50.98 –u ADMIN -p ADMIN –a
resetNMStatistics –O 0
```

```
Node Manager Statistics have been reset
```

bsmHWpm.sh -a getNumberOfCPUStates

The **getNumberOfCPUStates** action is used to get the number of P-States and T-States available on the target platform.

```
bsmHWpm.sh [-h] [-l level] -m model –H host [–u user –p password]
[-o outfile] [-z ME channel] [-e ME address] –a getNumberOfCPUStates
```

Example:

```
$ bsmHWpm.sh -m lanplus –H 172.31.50.98 –u ADMIN -p ADMIN –a
getNumberOfCPUStates
```

```
Number of P-States available on the platform: 9
Number of T-States available on the platform: 8
```

bsmHWpm.sh -a getMaxAllowedCPUStates

The **getMaxAllowedCPUStates** action is used to get the current maximum P-State and T-State.

```
bsmHWpm.sh [-h] [-l level] -m model –H host [–u user –p password]
[-o outfile] [-z ME channel] [-e ME address] –a getMaxAllowedCPUStates
```

Example:

```
$ bsmHWpm.sh -m lanplus –H 172.31.50.98 –u ADMIN -p ADMIN –a
getMaxAllowedCPUStates
```

```
Current maximum P-State: 5
Current maximum T-State: 4
```

bsmHWpm.sh -a setMaxAllowedCPUPState

The **setMaxAllowedCPUPState** action is used to set the current maximum P-State .

```
bsmHWpm.sh [-h] [-l level] -m model –H host [–u user –p password]
[-o outfile] [-z ME channel] [-e ME address] –a setMaxAllowedCPUPState
–s stateNumber

-s stateNumber  P-State number to be set; from 0 to n-1, where “n” is
                the Number of P-States (returned with the
                getNumberOfCPUStates action) available on the platform.
```

Example:

```
$ bsmHWpm.sh -m lanplus –H 172.31.50.98 –u ADMIN -p ADMIN –a
setMaxAllowedCPUPState –s 3
```

```
CPU P-State/T-State has been set
```

bsmHWpm.sh -a setMaxAllowedCPUTState

The **setMaxAllowedCPUTState** action is used to set the current maximum T-State .

```
bsmHWpm.sh [-h] [-l level] -m model –H host [–u user –p password]
[-o outfile] [-z ME channel] [-e ME address] –a setMaxAllowedCPUTState
–s stateNumber

-s stateNumber  T-State number to be set; from 0 to n-1, where “n” is
                the Number of T-States (returned with the
                getNumberOfCPUStates action) available on the platform.
```

Example:

```
$ bsmHWpm.sh -m lanplus –H 172.31.50.98 –u ADMIN -p ADMIN –a
setMaxAllowedCPUTState –s 3
```

```
CPU P-State/T-State has been set
```

bsmHWpm.sh -a getPowerBudget –M F

The **getPowerBudget** action is used to get the maximum power, the minimum power and the power budget cap (in Watts or BTU/h).

```
bsmHWpm.sh [-h] [-l level] -m model –H host [–u user –p password] [-o
outfile] –M generation -w unit –a getPowerBudget

-M generation   Model generation : For novascale NS4xxF2 model, model
                generation must be F.
-w unit         Unit in which is expressed the returned result. Possible
                values are watt or btuphr.
```

Example:

```
$ bsmHWpm.sh -m lanplus –H 199.182.100.160 –u root -p bull –a
getPowerBudget –M F –w watt
```

```
Maximum power: 506 Watt
Minimum power: 139 Watt
Power cap    : 506 Watt
```

```
$ bsmHWpm.sh -m lanplus –H 199.182.100.160 –u root -p bull –a
getPowerBudget –M F –w btuphr
```

```
Maximum power: 2027224563  BTU/hr
Minimum power: 309237645  BTU/hr
Power cap    : 2027224563  BTU/hr
```

bsmHWpm.sh -a setPowerBudget –M F

The **setPowerBudget** action is used to set the power budget cap (in Watts, BTU/h or in percentage).

```
bsmHWpm.sh [-h] [-l level] -m model –H host [–u user –p password] [-o
outfile] –M generation -w unit –a setPowerBudget –x value

-M generation   Model generation : For novascale NS4xxF2 model, model
                generation must be F.

-w unit         Unit in which is expressed the returned result. Possible
                values are watt, btuphr or percent.

-x value        Total Power Budget to be set. This value must be greater
                than the min Power Limit value and less than the max
                Power Limit value returned with the getNMCapibilities
                action.
```

Example:

```
$ bsmHWpm.sh -m lanplus –H 199.182.100.160 –u root -p bull –a
setPowerBudget –x 350 –M F –w watt
```

```
Power budget is set.
```

```
$ bsmHWpm.sh -m lanplus –H 199.182.100.160 –u root -p bull –a
setPowerBudget –x 350 –M F –w btuph
```

```
Power budget is set.
```

bsmHWpm.sh -a getPowerConsumption –M F

The **getPowerConsumption** action is used to get warning threshold, failure threshold, system instantaneous headroom, and system peak headroom (in watts or BTU/h) and also instantaneous power consumption (in Ampere).

```
bsmHWpm.sh [-h] [-l level] -m model –H host [–u user –p password] [-o
outfile] –M generation -w unit –a getPowerConsumption

-M generation   Model generation : For novascale NS4xxF2 model, model
                generation must be F.
```

```
-w unit         Unit in which is expressed the returned result. Possible
                values are watt or btuphr.
```

Example:

```
$ bsmHWpm.sh -m lanplus –H 199.182.100.160 –u root -p bull –M F –w
watt –a getPowerConsumption
```

```
Power consumption information
System Board System Level
Reading                : 140 W
Warning threshold      : 917 W
Failure threshold      : 966 W

Amperage value: 0.6 A
Headroom
Statistic                      Reading
System Instantaneous Headroom : 1264 W
System Peak Headroom          : 1230 W
```

```
$ bsmHWpm.sh -m lanplus –H 199.182.100.160 –u root -p bull –M F –w
btuph –a getPowerConsumption
```

```
Power consumption information
System Board System Level
Reading                : 477 BTU/hr
Warning threshold      : 3129 BTU/hr
Failure threshold      : 3296 BTU/hr

Amperage value: 0.6 A
Headroom
Statistic                      Reading
System Instantaneous Headroom : 824633721 BTU/hr
System Peak Headroom          : 1889785610 BTU/hr
```

bsmHWpm.sh -a getPowerConsumptionHistory –M F

The **getPowerConsumptionHistory** action is used to get the average and the peak power consumption history (in watts or BTU/h) for the last minute, last hour, last day, and the last week.

```
bsmHWpm.sh [-h] [-l level] -m model –H host [–u user –p password] [-o
outfile] –M generation -w unit –a getPowerConsumptionHistory

-M generation   Model generation : For novascale NS4xxF2 model, model
                generation must be F.

-w unit         Unit in which is expressed the returned result. Possible
                values are watt or btuphr.
```

Example:

```
$ bsmHWpm.sh -m lanplus –H 199.182.100.160 –u root -p bull –M F –w
watt –a getPowerConsumptionHistory
```

```
Power Consumption History

Statistic                 Last Minute  Last Hour  Last Day  Last Week

Average Power Consumption     0 W         0 W       0 W       0 W
Max Power Consumption         0 W         0 W       0 W       0 W
Min Power Consumption         0 W         0 W       0 W       0 W

Max Power Time
Last Minute     : Tue Apr 06 13:46:58 2010
Last Hour       : Tue Apr 06 13:24:33 2010
Last Day        : Mon Apr 05 14:37:09 2010
Last Week       : Sat Apr 03 19:55:13 2010
Min Power Time
Last Minute     : Tue Apr 06 13:46:58 2010
Last Hour       : Tue Apr 06 12:34:19 2010
Last Day        : Mon Apr 05 13:34:19 2010
Last Week       : Tue Apr 06 13:46:58 2010
```

```
$ bsmHWpm.sh -m lanplus –H 199.182.100.160 –u root -p bull –M F –w
btuph –a getPowerConsumptionHistory
```

```
Power Consumption History

Statistic                   Last Minute     Last Hour     Last Day
Last Week

Average Power Consumption  549755813 BTU/hr   549755813 BTU/hr
549755813 BTU/hr  549755813 BTU/hr
Max Power Consumption      549755813 BTU/hr     2095944040 BTU/hr
2095944040 BTU/hr  1340029796 BTU/hr
Min Power Consumption      549755813 BTU/hr     549755813 BTU/hr
549755813 BTU/hr  549755813 BTU/hr

Max Power Time
Last Minute     : Tue Apr 06 13:47:58 2010
Last Hour       : Tue Apr 06 13:24:33 2010
Last Day        : Mon Apr 05 14:37:09 2010
Last Week       : Sat Apr 03 19:55:13 2010
Min Power Time
Last Minute     : Tue Apr 06 13:47:58 2010
Last Hour       : Tue Apr 06 12:34:19 2010
Last Day        : Mon Apr 05 13:34:19 2010
Last Week       : Tue Apr 06 13:47:58 2010
```

bsmHWpm.sh -a enablePower –M F

The **enablePower** action is used to enable set power cap.

```
bsmHWpm.sh [-h] [-l level] -m model –H host [–u user –p password] [-o
outfile] –M generation –a enablePower

-M generation   Model generation : For novascale NS4xxF2 model, model
                generation must be F.
```

Example:

```
$ bsmHWpm.sh -m lanplus –H 199.182.100.160 –u root -p bull –M F –a
enablePower
```

```
Power cap is enabled.
```

bsmHWpm.sh -a disablePower –M F

The **disablePower** action is used to disable set power cap.

```
bsmHWpm.sh [-h] [-l level] -m model –H host [–u user –p password] [-o
outfile] –M generation–a disablePower

-M generation   Model generation : For novascale NS4xxF2 model, model
                generation must be F.
```

Example:

```
$ bsmHWpm.sh -m lanplus –H 199.182.100.160 –u root -p bull –M F –w
watt –a disablePower
```

```
Power cap is disabled.
```

bsmHWpm.sh -a getLan –M F

The **getLan** action is used to get information about the activity and share type for Ethernet port used by the BMC.

```
bsmHWpm.sh [-h] [-l level] -m model –H host [–u user –p password] [-o
outfile] –M generation–a getLan

-M generation   Model generation : For novascale NS4xxF2 model, model
                generation must be F.
```

Example:

```
$ bsmHWpm.sh -m lanplus –H 199.182.100.160 –u root -p bull –M F –a
getLan
```

```
dedicated
```

bsmHWpm.sh -a getActiveLan –M F

The **getLan** action is used to get information about the activity and share type for Ethernet port used by the BMC.

```
bsmHWpm.sh [-h] [-l level] -m model –H host [–u user –p password] [-o
outfile] –M generation–a getActiveLan

-M generation   Model generation : For novascale NS4xxF2 model, model
                generation must be F.
```

Example:

```
$ bsmHWpm.sh -m lanplus –H 199.182.100.160 –u root -p bull –M F –a
getActiveLan
```

```
dedicated
```

bsmHWpm.sh -a getMac –M F

The **getMac** action is used to get servers ethernet port's MAC addresses and particularly the BMC ones. This action can be used only if iDRAC card is present.

```
bsmHWpm.sh [-h] [-l level] -m model –H host [–u user –p password] [-o
outfile] –M generation–a getMac

-M generation   Model generation : For novascale NS4xxF2 model, model
                generation must be F.
```

Example:

```
$ bsmHWpm.sh -m lanplus –H 199.182.100.160 –u root -p bull –M F –w
watt –a getMac
```

```
System LOMs
NIC Number      MAC Address             Status

0               64:f9:b8:cf:00:00       Enabled
1               64:f9:b8:d1:00:00       Enabled
2               64:f9:b8:d3:00:00       Enabled
3               64:f9:b8:d5:00:00       Enabled
```

bsmOSpm

The **bsmOSpm** command, is used to control the CPU policy and frequency of platform via cpufrequtils package.

Usage

```
bsmOSpm.sh [-h] [-l level] -m model –H host [–u user] [-o outfile] [-I
idfile] [-d cfgdir] [-C configfile] [-D pathdir] –a action arglist
```

`-a action`	Action.
`-h`	Displays command usage.
`-m` *`model`*	Remote host OS: linux.
`-H` *`host`*	Remote target name or IP address.
`-l` *`level`*	Specifies the severity of the messages to be logged in syslog. 0 : no message is logged (default). 1 : only the FAILED completion of the command is logged. 3 : FAILED and successful completion of the command are logged.
`-u` *`user`*	Username for remote connection via ssh.
`-C` *`configfile`*	Config file used for remote connection (default is “”].
`-I` *`idfile`*	Identity file used for remote connection (default is *id_dsa*).
`-d` *`cfgdir`*	Full path directory containing config file and_identity file.
`-D` *`pathdir`*	Full path directory containing script bsmOSpm_local on remote host.
`-o` *`outfile`*	Output file name where **stdout** and **stderr** outputs are redirected.
`arglist`	list of arguments specific to the action.

Return Codes

0	command accepted.
-1	command failed.

bsmOSpm.sh -a getPolicy

The **getPolicy** action is used to get the governor and the frequency range of one or all CPUs.

```
bsmOSpm.sh [-h] [-l level] -m model –H host [–u user] [-o outfile] [-I
idfile] [-d cfgdir] [-C configfile] [-D pathdir] –a getPolicy [-c CPU]


-c cpu          CPU concerned by the action (number, all, synth (default
                value)).
```

Example:

```
$ bsmOSpm.sh -m linux –H 199.184.238.37 –u root –a getPolicy –c synth
```

```
CPUs ( 0 to 7) 2000000 kHz ( 68 %) - 2560000 kHz ( 87 %) – userspace

or

CPUs 0,1,2,4,5,6,7 2000000 kHz ( 68 %) - 2560000 kHz ( 87 %) -
userspace
CPUs 3 2560000 kHz ( 87 %) - 2940000 kHz ( 100 %) - userspace
```

```
$ bsmOSpm.sh -m linux –H 199.184.238.37 –u root –a getPolicy –c all
```

```
CPU 0 2000000 kHz ( 68 %) - 2560000 kHz ( 87 %) - userspace
CPU 1 2000000 kHz ( 68 %) - 2560000 kHz ( 87 %) - userspace
CPU 2 2000000 kHz ( 68 %) - 2560000 kHz ( 87 %) - userspace
CPU 3 2000000 kHz ( 68 %) - 2560000 kHz ( 87 %) - userspace
CPU 4 2000000 kHz ( 68 %) - 2560000 kHz ( 87 %) - userspace
CPU 5 2000000 kHz ( 68 %) - 2560000 kHz ( 87 %) - userspace
CPU 6 2000000 kHz ( 68 %) - 2560000 kHz ( 87 %) - userspace
CPU 7 2000000 kHz ( 68 %) - 2560000 kHz ( 87 %) - userspace
```

```
$ bsmOSpm.sh -m linux –H 199.184.238.37 –u root –a getPolicy –c 5
```

```
CPU 5 2000000 kHz ( 68 %) - 2560000 kHz ( 87 %) - userspace
```

bsmOSpm.sh -a setPolicy

The **setPolicy** action is used to set the CPU governor and in case of governor *userspace* to set the frequency range for all CPUs.

```
bsmOSpm.sh [-h] [-l level] -m model –H host [–u user] [-o outfile] [-I
idfile] [-d cfgdir] [-C configfile] [-D pathdir] –a setPolicy –g governor
[-y freq_min –x freq_max]
```

`-g governor` cpufreq governor. Values available are *userspace, ondemand, performance*.

`-y freq_min` minimum CPU frequency the governor may select (only if governor *userspace* is specified). The frequency may be specified in kHz or in percent of the maximum frequency possible (hardware limit).

`-x freq_max` maximum CPU frequency the governor may select (only if governor *userspace* is specified). The frequency may be specified in kHz or in percent of the maximum frequency possible (hardware limit).

Example:

```
$ bsmOSpm.sh -m linux –H 199.184.238.37 –u root –a setPolicy –g
ondemand
```

```
OK CPUs (0 to 15)  ondemand
```

```
$ bsmOSpm.sh -m linux –H 199.184.238.37 –u root –a setPolicy –g
userspace –y 77% -x 87%
```

```
OK CPUs (0 to 15)  77%  -  87% userspace
```

```
$ bsmOSpm.sh -m linux –H 199.184.238.37 –u root –a setPolicy –g
userspace –y 2000000 -x 2560000
```

```
OK CPUs (0 to 15)  2000000 kHz (68%)  -  2560000 kHz (87%)  userspace
```

bsmOSpm.sh -a getCurrentFreq

The **getCurrentFreq** action is used to get the current frequency of one or all CPUs.

```
bsmOSpm.sh [-h] [-l level] -m model –H host [–u user] [-o outfile] [-I
idfile] [-d cfgdir] [-C configfile] [-D pathdir] –a getCurrentFreq [-c
CPU]
```

```
-c cpu          CPU concerned by the action (number, all, synth (default
                value)).
```

Example:

```
$ bsmOSpm.sh -m linux –H 199.184.238.37 –u root –a getCurrentFreq –c
synth
```

```
CPUs ( 0 to 7) 2128000 kHz
```

```
$ bsmOSpm.sh -m linux –H 199.184.238.37 –u root –a getCurrentFreq –c 6
```

```
CPU 6 2394000 kHz
```

bsmOSpm.sh -a setCurrentFreq

The **setCurrentFreq** action is used to set the current frequency for one or all CPUs.

```
bsmOSpm.sh [-h] [-l level] -m model –H host [–u user] [-o outfile] [-I
idfile] [-d cfgdir] [-C configfile] [-D pathdir] –a setCurrentFreq [-c
CPU]
```

```
-c cpu          CPU concerned by the action (number, all, synth (default
                value)).

-f freq         CPU frequency to be set. The governor must be set to
                userspace and loaded. The frequency may be specified in
                kHz or in percent of the maximum frequency possible
                (hardware limit).
```

Example:

```
$ bsmOSpm.sh -m linux –H 199.184.238.37 –u root –a setCurrentFreq –f
2394000 –c all
```

```
OK CPUs ( 0 to 7) 2394000 kHz
```

```
$ bsmOSpm.sh -m linux –H 199.184.238.37 –u root –a setCurrentFreq –f
2394000 –c 6
```

```
OK CPU 6 2394000 kHz
```

bsmOSpm.sh -a getHWlimits

The getHWlimits action is used to get the minimum and maximum CPU frequency allowed.

```
bsmOSpm.sh [-h] [-l level] -m model –H host [–u user] [-o outfile] [-I
idfile] [-d cfgdir] [-C configfile] [-D pathdir] –a getHWlimits [-c CPU]
```

```
-c cpu          CPU concerned by the action (number, all, synth (default
                value)).
```

Example:

```
$ bsmOSpm.sh -m linux –H 199.184.238.37 –u root –a getHWlimits –c all
```

```
CPU 0 1596000 kHz ( 54 %) - 2927000 kHz (100 %)
CPU 1 1596000 kHz ( 54 %) - 2927000 kHz (100 %)
CPU 2 1596000 kHz ( 54 %) - 2927000 kHz (100 %)
CPU 3 1596000 kHz ( 54 %) - 2927000 kHz (100 %)
CPU 4 1596000 kHz ( 54 %) - 2927000 kHz (100 %)
CPU 5 1596000 kHz ( 54 %) - 2927000 kHz (100 %)
CPU 6 1596000 kHz ( 54 %) - 2927000 kHz (100 %)
CPU 7 1596000 kHz ( 54 %) - 2927000 kHz (100 %)
CPU 8 1596000 kHz ( 54 %) - 2927000 kHz (100 %)
CPU 9 1596000 kHz ( 54 %) - 2927000 kHz (100 %)
CPU 10 1596000 kHz ( 54 %) - 2927000 kHz (100 %)
CPU 11 1596000 kHz ( 54 %) - 2927000 kHz (100 %)
CPU 12 1596000 kHz ( 54 %) - 2927000 kHz (100 %)
CPU 13 1596000 kHz ( 54 %) - 2927000 kHz (100 %)
CPU 14 1596000 kHz ( 54 %) - 2927000 kHz (100 %)
CPU 15 1596000 kHz ( 54 %) - 2927000 kHz (100 %)
```

```
$ bsmOSpm.sh -m linux –H 199.184.238.37 –u root –a getHWlimits –c 3
```

```
CPU 3 1596000 kHz ( 54 %) - 2927000 kHz (100 %)
```

bsmPDUpower

The **bsmPDUpower** command is used for monitoring and administration of Power Distribution Units (PDUs). This includes getting the overall outlets total power consumption of the PDU (and also the warning and critical consumption thresholds) and for switched PDUs, poweron/poweroff of the PDU outlets, and getting their status. The command uses SNMP get and set requests to the SNMP agent of the PDU.

Restrictions

Actually, only PDUs from APC are supported. For APC metered rack PDUs, only action *getPowerConsumption* is available.

The Firmware Revision of APC PDUs must be equal or higher to v3.

Usage

```
bsmPDUpower.sh [-h] [-l level] -m model –H host [-o outfile] –a action
arglist
```

`-a action`	Action.
`-h`	Displays command usage.
`-m model`	PDU model: apc.
`-H host`	DNS name or IP address of the PDU.
`-l level`	Specifies the severity of the messages to be logged in syslog. 0 : no message is logged (default). 1 : only the FAILED completion of the command is logged. 3 : FAILED and successful completion of the command are logged.
`-o outfile`	Output file name where **stdout** and **stderr** outputs are redirected.
`arglist`	list of arguments specific to the action.

Return Codes

0	command accepted.
-1	command failed.

bsmPDUpower.sh -a on/off

The **on** and **off** actions are used to set on or off one or all outlets of switched PDUs.

```
bsmOSpm.sh [-h] [-l level] -m model –H host [-o outfile] –a on/off [-p
SNMP port] [-S SNMPv] [[-C community]|[-u user –L seclevel –A authPass –P
authPro –X privPass –x privPro]] [-c outlet] [-T timeout]
```

`-p port`	SNMP port (default value: 161)
`-S SNMPv`	SNMP version : 1 (default value), 2c, 3
`-C community`	SNMPv1 community (default value 'private' pour actions *on* and *off*
`-L seclevel`	SNMPv3 SecurityLevel (noAuthNoPriv | authNoPriv | authPriv)
`-u user`	SNMPv3 user.
`-A authPass`	SNMPv3 authentification passphrase (15 to 32 ASCII characters)
`-P authPro`	SNMPv3 authentification protocol (default value 'MD5')
`-X privPass`	SNMPv3 privacy passphrase (15 to 32 ASCII characters, different than –authPass)
`-x privPro`	SNMPv3 privacy protocol (default value 'DES')
`-c outlet`	number or name of one outlet of PDU (default value 'all' : all outlets are switched on or off)
`-T timeout`	`SNMP timeout (default value : 30 seconds)`

Example:

```
$ bsmPDUpower.sh –H 129.182.6.177 –a off –m apc –S 3 –L authPriv –u
$user –A $authpass –P md5 –X $privpass –x des –c all
```

```
Outlet1 power: Off(2)
Outlet2 power: Off(2)
Outlet3 power: Off(2)
Outlet4 power: Off(2)
Outlet5 power: Off(2)
Outlet6 power: Off(2)
Outlet7 power: Off(2)
Outlet8 power: Off(2)
```

```
$ bsmPDUpower.sh –H 129.182.6.177 –a on –m apc –S 3 –L authPriv –u
$user –A $authpass –P md5 –X $privpass –x des –c 5
```

```
Outlet5 power: On(1)
```

bsmPDUpower.sh -a status

The **status** action is used to get the status for one or all outlets of switched PDUs.

```
bsmPDUpower.sh [-h] [-l level] -m model –H host [-o outfile] –a status [-
p SNMP port] [-S SNMPv] [[-C community]|[-u user –L seclevel –A authPass
–P authPro –X privPass –x privPro]] [-c outlet] [-T timeout]
```

`-p port`	SNMP port (default value: 161)
`-S SNMPv`	SNMP version : 1 (default value), 2c, 3
`-C community`	SNMPv1 community (default value 'public' for *status* action
`-L seclevel`	SNMPv3 SecurityLevel (noAuthNoPriv | authNoPriv | authPriv)
`-u user`	SNMPv3 user.
`-A authPass`	SNMPv3 authentification passphrase (15 to 32 ASCII characters)
`-P authPro`	SNMPv3 authentification protocol (default value 'MD5')
`-X privPass`	SNMPv3 privacy passphrase (15 to 32 ASCII characters, different than –authPass)
`-x privPro`	SNMPv3 privacy protocol (default value 'DES')
`-c outlet`	number or name of one outlet of PDU (default value 'all' : all outlets are switched on or off)
`-T timeout`	`SNMP timeout (default value : 30 seconds)`

Example:

```
$ bsmPDUpower.sh –H 129.182.6.177 –a status –m apc –S 3 –L authPriv –u
$user –A $authpass –P md5 –X $privpass –x des –c all
```

```
Power Distribution Unit: 129.182.6.177, MODEL: “AP7922”, Serial Nb:
“ZA0904000484”, Firm Rev: “v3.5.7”
Outlet1 power: Off(2)
Outlet2 power: Off(2)
Outlet3 power: Off(2)
Outlet4 power: Off(2)
Outlet5 power: On(1)
Outlet6 power: Off(2)
Outlet7 power: Off(2)
Outlet8 power: Off(2)
```

```
$ bsmPDUpower.sh –H 129.182.6.177 –a status –m apc –S 1 –C public –c 4
```

```
Power Distribution Unit: 129.182.6.177, MODEL: “AP7922”, Serial Nb:
“ZA0904000484”, Firm Rev: “v3.5.7”
Outlet4 power: Off(2)
```

bsmPDUpower.sh -a getPowerConsumption

The **getPowerConsumption** action is used to get the power consumption (in Watts) for all outlets of PDUs.

```
bsmPDUpower.sh [-h] [-l level] -m model –H host [-o outfile] –a
getPowerConsumption [-p SNMP port] [-S SNMPv] [[-C community]|[-u user –L
seclevel –A authPass –P authPro –X privPass –x privPro]] [-T timeout]
```

`-p port`	SNMP port (default value: 161)
`-S SNMPv`	SNMP version : 1 (default value), 2c, 3
`-C community`	SNMPv1 community (default value 'public' for *getPowerConsumption* action
`-L seclevel`	SNMPv3 SecurityLevel (noAuthNoPriv | authNoPriv | authPriv)
`-u user`	SNMPv3 user.
`-A authPass`	SNMPv3 authentification passphrase (15 to 32 ASCII characters)
`-P authPro`	SNMPv3 authentification protocol (default value 'MD5')
`-X privPass`	SNMPv3 privacy passphrase (15 to 32 ASCII characters, different than –authPass)
`-x privPro`	SNMPv3 privacy protocol (default value 'DES')
`-T timeout`	`SNMP timeout (default value : 30 seconds)`

Example:

The output displays the power consumption, the high power level, the critical power level, the minimal consumption and the associated return code.

Ex:
power=10;5000;7000;0

power consumption:10
high power level: 5000
critical power level: 7000
minimal consumption: 0

Output OK:
Power OK: 10|power=10;5000;7000;0

Output WARNING:
Power WARNING: High power level detected: 5500|power=5500;5000;7000;0

Output CRITICAL:
Power CRITICAL: Critical power level detected: 7500|power=7500;5000;7000;0

```
$ bsmPDUpower.sh –H 129.182.6.177 –a getPowerConsumption –m apc
```

```
Power OK: Reading 5 Watts|power=5;5520;7360;0
```

bsmHMCpm

bsmHMCpm.sh is used to enable the power saver mode ON/OFF for an ESCALA server managed by an HMC, or to get the power saver mode status.

Usage

Escala Privilege Line servers

```
bsmHMCpm.sh [-h] [-q] -a action -M hwmanager –u user –B CECname –I idfile
-C configfile [-d cfgdir] [-T timeout] [-o outfile] [-l level]
```

`-h`	Displays command usage.
`-l level`	Specifies the severity of the messages to be logged in syslog. 0 : no message is logged (default). 1 : only the FAILED completion of the command is logged. 3 : FAILED and successful completion of the command are logged.
`-q`	Quiet option: stops all outputs (**stdout, sdterr,** or *`outfile`* (if **-o** option is specified).
`-a action`	Action: `getPowerSaverMode, setPowerSaverMode`.
`-M hwmanager`	HMC IP address for PL servers.
`-u user`	User for ssh connection to the HMC for PL servers.
`-I idfile`	Identity key file used to perform connection to the HMC with ssh.
`-C configfile`	ssh client configuration file used to perform non-prompt connection to the HMC.
`-d cfgdir`	Directory where identity key file and ssh client configuration file are installed (default value is **../etc/ssh**).
`-B targetname`	managed system name (CECname) for PL servers.
`-T timeout`	SSH connection timeout (default value is 30s).
`-o outfile`	Output file name to which **stdout** and **stderr** outputs are redirected.

bsmHMCpm.sh -a getPowerSaverMode

The **getPowerSaverMode** action is used to get the status (Enabled or Disabled) of the power saver mode (active or inactive).

```
bsmHMCpm.sh [-h] [-q] -a getPowerSaverMode -M hwmanager –u user
–B CECname –I idfile -C configfile [-d cfgdir] [-T timeout] [-o outfile]
[-l level]
```

Example:

```
$ bsmHMCpm.sh -M 129.183.12.80 –a getPowerSaverMode –I id_dsa –C
config_bsm -u hscroot –d /etc/ssh –B “PL250R+ -FLEURS- Violette”
```

```
The power saver mode is Disabled on “PL250R+ -FLEURS- Violette”
```

bsmHMCpm.sh -a setPowerSaverMode

The **setPowerSaverMode** action is used to enable or not the Power Saver mode.

```
bsmHMCpm.sh [-h] [-q] -a setPowerSaverMode –x 0|1 -M hwmanager –u user
–B CECname –I idfile -C configfile [-d cfgdir] [-T timeout] [-o outfile]
[-l level]

-x value        0: to disable the Power saver mode.

                1: to enable the Power saver mode.
```

Example:

```
$ bsmHMCpm.sh -M 129.183.12.80 –a setPowerSaverMode –x 1 –I id_dsa –C
config_bsm -u hscroot –d /etc/ssh –B “PL250R+ -FLEURS- Violette”
```

```
The power saver mode is Enabled on “PL250R+ -FLEURS- Violette”
```

bsmGetConfParam

bsmGetConfParam.sh is used to get the values of various configuration parameters.

Usage

```
bsmGetConfParam.sh [-h] [-l level] -a action -m model -H host [-u user]
[-p password] [-Y cipher] [-o outfile]
```

`-h`	Displays command usage.
`-l level`	Specifies the severity of the messages to be logged in syslog. 0 : no message is logged (default). 1 : only the FAILED completion of the command is logged. 3 : FAILED and successful completion of the command are logged.
`-a action`	Action: `getPowerRestorePolicy, getTemperatureControlPoint`.
`-m model`	Target server model: lanplus, ipmilan.
`-H host`	BMC target IP address.
`-u user`	BMC user.
`-p password`	User password.
`-Y cypher`	Cipher suite ID to be used by lanplus interface (default is 3)
`-o outfile`	Output file name to which **stdout** and **stderr** outputs are redirected.

bsmGetConfParam.sh -a getPowerRestorePolicy

The **getPowerRestorePolicy** action is used to get the power restore policy (On, Off or Restore) which is applied to the system after an AC power loss.

```
bsmGetConfParam.sh [-h] -a getPowerRestorePolicy -m model -H host [-u
user] [-p password] [-Y cipher] [-o outfile] [-l level]
```

Example:

```
$ bsmGetConfParam.sh -m lanplus -H 172.31.90.21 -u super -p pass
-a getPowerRestorePolicy
```

```
Power Restore Policy is : on
```

bsmGetConfParam.sh -a getTemperatureControlPoint

The **getTemperatureControlPoint** action is used to get the temperature control point.

```
bsmGetConfParam.sh [-h] -a getTemperatureControlPoint -m model -H host
[-u user] [-p password] [-Y cipher] [-o outfile] [-l level]
```

Example:

```
bsmGetConfParam.sh -m lanplus -H 172.31.90.21 -u super -p pass
-a getTemperatureControlPoint
```

```
Temperature control point is : 13
```

bsmSetConfParam

bsmSetConfParam.sh is used to set the values of various configuration parameters.

Usage

```
bsmSetConfParam.sh [-h] [-l level] -a action -m model -H host [-u user]
[-p password] [-Y cipher] [-o outfile]
```

`-h`	Displays command usage.
`-l level`	Specifies the severity of the messages to be logged in syslog. 0 : no message is logged (default). 1 : only the FAILED completion of the command is logged. 3 : FAILED and successful completion of the command are logged.
`-a action`	Action: `setPowerRestorePolicy, setTemperatureControlPoint`.
`-m model`	Target server model: lanplus, ipmilan.
`-H host`	BMC target IP address.
`-u user`	BMC user.
`-p password`	User password.
`-Y cypher`	Cipher suite ID to be used by lanplus interface (default is 3)
`-o outfile`	Output file name to which **stdout** and **stderr** outputs are redirected.

Return Codes

0 command accepted.

-1 command failed.

bsmSetConfParam.sh -a setPowerRestorePolicy

The **setPowerRestorePolicy** action is used to set the power restore policy (On, Off or Restore) which will be apply to the system after an AC power loss.

```
bsmSetConfParam.sh [-h] -a setPowerRestorePolicy -m model -H host
-x value [-u user] [-p password] [-Y cipher] [-o outfile] [-l level]

-x value        on: chassis always powers up after AC/mains is applied or
                returns..

                off: chassis always stays powered off after AC/mains is
                applied, power pushbutton or command required to power on
                system.

                restore: after AC is applied or returns, poweris restored
                to the state that was in effect when AC/mains was removed
                or lost.
```

Example:

```
$ bsmSetConfParam.sh -m lanplus -H 172.31.90.21 -u super -p pass
-a setPowerRestorePolicy –x on
```

bsmSetConfParam.sh -a SetTemperatureControlPoint

The **setTemperatureControlPoint** action is used to set the temperature control point.

```
BsmSetConfParam.sh [-h] -a setTemperatureControlPoint -m model -H host
-x value [-u user] [-p password] [-Y cipher] [-o outfile] [-l level]

-x value    Temperature control point to be set. This value must be an
            integer in Celsius degrees.
```

Example:

```
bsmSetConfParam.sh -m lanplus -H 172.31.90.21 -u super -p pass
-a setTemperatureControlPoint –x 20
```

Appendix A: Server ON / OFF Status Codes

This appendix lists the interconnection between the ON / RUNNING / TRANSIENT / OFF states returned by the `bsmpower.sh -a status` command and the server states.

OFF corresponds to server states:

- INACTIVABLE
- INACTIVE

TRANSIENT corresponds to server states:

- POWERING ON
- POWERING ON FAILED
- TIMEOUT DURING POWER ON
- POWERING ON SUSPENDED
- POWERING DOWN
- POWER DOWN FAILED
- TIMEOUT DURING POWER DOWN

ON corresponds to server states:

- DOMAIN HALTED
- POWERED ON - LOADING BIOS
- BIOS READY - STARTING EFI
- BIOS LOADING TIMEOUT
- RECOVERING BIOS
- TIMEOUT DURING START EFI

RUNNING corresponds to server states:

- EFI STARTED - BOOTING OS
- RUNNING

Appendix B: User/Password Internal Authentication File

User/Password Authentication

Most of the Hardware Management Commands need a user/password authentication in order to access a target identified by:

- the PAP manager (specified by "-M hwmanager") for NovaScale 5005 & 6000 Series servers,
- the platform manager (specified by "-H host") for NovaScale 4000 Series servers, Express 5800 servers and NovaScale servers using the ipmilan model,
- the FTP server site (specified by "-S ftpserver") for the bsmpamcmd command,
- or any generic device identified by its IP address.

The "password" information used by the Hardware Management Commands may be either specified in the command, or extracted from an authentication internal file if no "password" is specified in the command.

This internal authentication file contains the list of targets (PAP managers, platform managers, FTP servers, or generic devices), identified by their role (manager, FTP server, or device) and their DNS name or IP address, that can be accessed with dedicated users/passwords.

This file is created and managed using the **bsmcfg_auth_cmd** command.
The **bsmcfg_auth_cmd** command allows to:

- add an entry defined by: `user + password + target`
- delete an entry defined by: `user + target`
- get the encoded password for an entry defined by: `user + target`
- get the decoded password for an entry defined by: `user + target`
- list the entries.

The "password" information is stored in the authentication internal file as a base64 encoded string.

bsmcfg_auth_cmd command

Usage

```
bsmcfg_auth_cmd.sh [-h] [-a action] [-M manager] [-H manager] [-S
ftpserver] [-D ipaddr] [-u user] [-p password]
```

`-h`	Displays command usage.
`-a action`	Action on the internal authentication file: `add, del, getE, getD, list.`
`-M manager`	DNS name or PAP Manager IP address (NovaScale 5005 and 6000 Series servers).
`-H manager`	DNS name or platform Manager IP address (NovaScale servers using the tiger, nec, or ipmilan model).
`-S ftpserver`	DNS name or FTP server IP address
`-D ipaddr`	Generic Device IP address
`-u user`	Manager or FTP server user.
`-p password`	Manager or FTP server user password.

Notes

- -M *manager* , -H *manager* , -D *ipaddr* and -S *ftpserver* parameters are exclusive.
- For NovaScale servers using the ipmilan model, it is possible to use the same user/password authentication for all the present servers. This can be done by setting "*" as manager parameter.

Return Codes

0 command accepted.

-1 command failed.

add

This action is used to add in the internal authentication file, a target to the list of targets that can be accessed with a dedicated user/password.

Usage:

```
bsmcfg_auth_cmd.sh -a add -u user -p password [-M manager] [-H manager]
[-S ftpserver] [-D ipaddr]
```

Note -M or -H or -S or -D parameter is mandatory.

Examples:

```
$ bsmcfg_auth_cmd.sh -a add -u pap -p pappwd -M paptest2
```

```
Key entry successfully added
```

```
$ bsmcfg_auth_cmd.sh -a add -u MWA -p mwapwd -H 129.182.6.151
```

```
Key entry successfully added
```

```
$ bsmcfg_auth_cmd.sh -a add -u ftpuser -p ftppwd -S MyFtpServer
```

```
Key entry successfully added
```

```
$ bsmcfg_auth_cmd.sh -a add -u devuser -p devpwd -D 129.182.3.3
```

```
Key entry successfully added
```

```
$ bsmcfg_auth_cmd.sh -a add -u MWA2 -p mwa2pwd -H “*”
```

getE

This action is used to extract, from the internal authentication file, the encoded password needed to access a target with a dedicated user.

Usage:

`bsmcfg_auth_cmd.sh -a getE -u` *`user`* `[-M` *`manager`*`] [-H` *`manager`*`] [-S` *`ftpserver`*`] [-D` *`ipaddr`*`]`

Note -M or -H or -S or -D parameter is mandatory.

Examples:

```
$ bsmcfg_auth_cmd.sh -a getE -u pap -M paptest2
```

```
xxxxxx
```

```
$ bsmcfg_auth_cmd.sh -a getE -u MWA -H 129.182.6.151
```

```
yyyyyy
```

```
$ bsmcfg_auth_cmd.sh -a getE -u ftpuser -S MyFtpServer
```

```
zzzzzz
```

```
$ bsmcfg_auth_cmd.sh -a getE -u devuser -D 129.182.3.3
```

```
yyyyyy
```

```
$ bsmcfg_auth_cmd.sh -a getE -u MWA2 -H "*"
```

```
vvvvvv
```

getD

This action is used to extract, from the internal authentication file, the password needed to access a target with a dedicated user.

Usage:

```
bsmcfg_auth_cmd.sh -a getD -u user [-M manager] [-H manager]
[-S ftpserver] [-D ipaddr]
```

Note -M or -H or -S or -D parameter is mandatory.

Examples:

```
$ bsmcfg_auth_cmd.sh -a getD -u pap -M paptest2
```

```
pappwd
```

```
$ bsmcfg_auth_cmd.sh -a getD -u MWA -H 129.182.6.151
```

```
mwapwd
```

```
$ bsmcfg_auth_cmd.sh -a getD -u ftpuser -S MyFtpServer
```

```
ftppwd
```

```
$ bsmcfg_auth_cmd.sh -a getD -u devuser -D 129.182.3.3
```

```
devpwd
```

```
$ bsmcfg_auth_cmd.sh -a getD -u MWA2 -H "*"
```

```
mwa2pwd
```

del

This action is used to delete, in the internal authentication file, a target from the list of targets that can be accessed with a dedicated user.

Usage:

```
bsmcfg_auth_cmd.sh -a del -u user [-M manager] [-H manager]
[-S ftpserver] [-D ipaddr]
```

Note -M or -H or -S or -D parameter is mandatory.

Examples:

```
$ bsmcfg_auth_cmd.sh -a del -u pap -M paptest2
```

```
Key entry successfully deleted
```

```
$ bsmcfg_auth_cmd.sh -a del -u MWA -H 129.182.6.151
```

```
Key entry successfully deleted
```

```
$ bsmcfg_auth_cmd.sh -a del -u ftpuser -S MyFtpServer
```

```
Key entry successfully deleted
```

```
$ bsmcfg_auth_cmd.sh -a del -u devuser -D 129.182.3.3
```

```
Key entry successfully deleted
```

```
$ bsmcfg_auth_cmd.sh -a del -u MWA2 -H "*"
```

```
Key entry successfully deleted
```

list

This action is used to display the contents of the internal authentication file, that means the list of targets that can be accessed with their user/password.

Usage:

```
bsmcfg_auth_cmd.sh -a list
```

Example:

```
$ bsmcfg_auth_cmd.sh -a list
```

```
<?xml version="1.0"?>
 <auth_entries>
  <auth_entry keyname="HWMGR_mgr1" password="cHdkMQ%3D%3D" user="usr1" />
  <auth_entry keyname="HWMGR_mgr2" password="d3h5" user="usr2" />
  <auth_entry keyname="FTPSRV_srv1" password="cHdkMQ%3D%3D" user="usr1" />
  <auth_entry keyname="DEV_ipaddr1" password="ZGV2cHdk" user="devuser" />
  <auth_entry keyname="HWMGR_*" password="d3h6" user="MWA2" />
</auth_entries>
```

Index

BULL CEDOC
357 AVENUE PATTON
B.P.20845
49008 ANGERS CEDEX 01
FRANCE

REFERENCE
86 A2 58FA 04