BullSequana S

# Release Note TS 06.02

86 A1 28FR 07 - August 2018

Atos

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**Hardware**

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**Bull Cedoc**
**357 avenue Patton**
**BP 20845**
**49008 Angers Cedex 01**
**FRANCE**

# Table of Contents

# Preface

This document gives information about all changes from the previous version.

It also gives information about restrictions,  known problems and the associated workarounds.

Finally it  lists the objects delivered in the Technical State and the features of the resources provided on the Resource and Documentation DVDs.

# Chapter 1. Overview

**Important** To fully address the Intel Meltdown/Spectre security alert, it is mandatory to update the Operating System.

## 1.1. Operating Systems Versions

It is recommended to use the following versions.

### 1.1.1. VMware ESXi

ESXi: 6.5u2 build 8294253

ESXi: 6.5u1 patch 02 build 7388607

**Note** Available on the Bull Support Website: https://support.bull.com

For BullSequana S200 server certification details check:

https://www.vmware.com/resources/compatibility/detail.php?deviceCategory=server&productid=44639

For BullSequana S400 server certification details check:

https://www.vmware.com/resources/compatibility/detail.php?deviceCategory=server&productid=44854

For BullSequana S800 server certification details check:

https://www.vmware.com/resources/compatibility/detail.php?deviceCategory=server&productid=44745

### 1.1.2. Linux

#### 1.1.2.1. Red Hat

RHEL 7.4: All models

RHEL 7.3 : All models

RHEL 6.9 : BullSequana S200 server and BullSequana S400 server only.

#### 1.1.2.2. Suse

SLES 12 SP2

### 1.1.3. Windows

Windows Server 2016 (with iaStorA.free.win8.64bit.4.3.0.1198 driver)

## 1.2. New Features and Changes

### 1.2.1. BIOS_SKL040

- Enable StaleAtoSEn BIOS setting by default to improve performance

**See** Chapter 4. Recommendations for more information on performance improvement

- Fix S800 USB booting timeout for VMware
- UPI warning message sent to BMC only when failure in fast mode
- Suppress UPI warning for non-existing UPI link
- Avoid errors on Intel® Xeon® Scalable processors with only two UPI links
- Fix in DMAR table avoiding error messages with RHEL
- Fix Bootdev issues with bootable USB or VMware
- Provide relevant memory module location information in case of memory failure or warning (module/socket/iMC/channel/dim/rank)
- Fix SRAT APIC and X2APIC affinity structures

### 1.2.2. EMM33_BMC

- In Messages log, BIOS messages are not displayed as BMC messages anymore
- Support of OEM model 38 in SNMP traps

### 1.2.3. FPGA_CPB

- Logic used to run RPL_FAN at full speed changed
- ID LED turning ON or OFF logic moved to IOCPLD

## 1.3. Resolved Issues

### CPU Power Consumption Sensors

The CPU power consumption sensors now reports correct values.

### WEO fault Message

A WEO fault message is no longer issued when the WEO sensor has no reading.

### Boot Manager Entries

When there are more than 15 entries in the boot manager, each entry is now assigned a unique EFI network number.

### Memory Module Messages during BIOS Initialization

Inconsistent warning messages about the memory modules are no longer issued during BIOS initialization.

### Updating Firmware from the Server Hardware Console (SHC)

When a firmware update is successful, the following message is no longer displayed:
*Please wait for the connection to be established*.

### Missing Processors When Booting the server

There no longer processors missing from the configuration with the following message in the SEL:

```
2018-05-14 18:14:01 BMC Message BIOS Init Warning Message on Module: 0 DIMM:
([Major-code:58h; Minor-code:02h])
```

# Chapter 2. Known Restrictions and Issues

## 2.1. FAN Regulation Messages

### Issue

There are cases where the fan regulation is not optimal. This results in messages in the System Event Log (SEL) such as:

```
Fan at or below critical speed
```

In some cases, the FAN may be also seen as unavailable.

### Workaround

No workaround

## 2.2. Mounting Drives as Virtual Media

### Issue

Mounting two drives as virtual media may cause the Server Hardware Console (SHC) to reboot

### Workaround

Mount only one media at a time

## 2.3. PEB Ethernet Activity LEDs

### Issue

The Ethernet activity LEDs on the PEB are always amber, even when the module is powered off.

## 2.4. Hot Plug of the Broadcom P210tp PCI card

### Issue

The hot plug feature of the Broadcom PCI card BCM 957416A4160C does not currently work.

### Workaround

Insert or remove the card only when the operating system is stopped.

## 2.5. Memory Module exclusion

### Issue

Excluding a memory module from the SHC has no effect.

### Workaround

Use the Hardware Management CLIs to exclude a memory module.

## 2.6. Serial On LAN (SOL) activation

### Issue

When using the ipmi command "SOL activate" for Serial On LAN, there are issues with the keyboard.

### Workaround

Open a ssh session on the SHC and use the terminal command.

## 2.7. Partitioning a BullSequana S800 Server

### Issue

Partitioning a BullSequana S800 server into two partitions, one that includes modules 0 and 3 and a second that includes modules 1 and 2, is not possible yet.

### Workaround

The available partitioning schemes are:

- Two partitions:
  - Three modules and one module: all schemes are available
  - Two modules and two modules: only the (module 0, module 1) and (module 2 , module 3) scheme is available
- Four partitions

## 2.8. Mounting Virtual Media Files from the Remote Console

### Issue

Installing software from a very large ISO file via the Remote Console may fail with several medium errors reported.

### Workaround

Use smaller ISO files.

## 2.9. Using SR-IOV

### Issue

On a BullSequana S400 or S800 server, attempting to assign the SR-IOV passtrough to a virtual machine fails, resulting in the following error message: *unsupported configuration: host does not support passthrough of host PCI devices*

### Restriction

SR-IOV is not supported on Virtual Machines running SLES 12 SP2.

## 2.10. Power Supply Unit (PSU) Redundancy Sensor

### Issue

The Power Redundancy sensor is shown NORMAL on the SHC although one PSU is detected absent.

### Workaround

Ignore the Power Redundancy sensor and use the PSU sensors to check power supply.

## 2.11. Fan Messages at Power On

### Issue

Power On results in eight inconsistent fan status messages being issued.

### Workaround

Ignore the messages.

## 2.12. Updating the Server Hardware Console (SHC)

### Issue

Updating the SHC firmware results in the Alert Setting Policies page being cleared.

### Workaround

If you have modified the Alert Policies default settings, collect settings before the SHC update and restore them afterward.

## 2.13. Dismounting and Mounting Back a Module from a Partition

### Issue

On a multi-module with a partition made of two modules, partitioning after having dismounted and mounted back a module from the partition is not possible from the SHC.

### Workaround

Use the *bsmSetPartitions* CLI command instead.

## 2.14. Locating an FDB Disk

### Issue

The command designed to locate a failed FDB disk fails to switch on the disk's LED, making it impossible to locate it.

### Workaround

**See** BullSequana S Description Guide, 86 A1 13FR, to locate FDB disks.

## 2.15. PXE Boot with a Mellanox_ConnectX-4Lx Adapter

### Issue

Booting is not possible on a server equipped with a Mellanox_ConnectX-4Lx adapter because UEFI firmware is not installed by default.

### Workaround

To be able to boot, install the UEFI firmware:

1. List the server adapters.

**Command**

```
/opt/mellanox/bin/mst start
```

**Command**

```
/opt/mellanox/bin/mst status
```

**Output**

```
------------------------------------------------------------------------------
MST devices:
------------
mt4117_pciconf0
mt4117_pciconf1
------------------------------------------------------------------------------
```

2. If necessary, update the Mellanox_ConnectX-4Lx adapter firmware to the version available in the current Technical State.

**Command**

```
/opt/mellanox/bin/flint-d mt4117_pciconf0 -i
/tmp/fw-ConnectX4Lx-rel-14_21_1000-MCX4121A-XCA_Ax-FlexBoot-3.5.305.bin burn
```

**Output**

```
------------------------------------------------------------------------------
Current FW version on flash:  14.20.1010
    New FW version:              14.21.1000

 Do you want to continue ? (y/n) [n] : y

Burning FW image without signatures - OK
Restoring signature                   - OK
-I- To load new FW run mlxfwreset or reboot machine.
------------------------------------------------------------------------------
```

3. Get the UEFI ROM matching the adapter firmware from:

   http://www.mellanox.com/page/products_dyn?product_family=257&mtag=UEFI


4. Update the UEFI ROM.

**Command**

```
/opt/mellanox/bin/flint-d mt4117_pciconf1 -allow_rom_change brom /tmp/14_14_22_RELEASE_0x1015.efirom
```

**Output**

```
------------------------------------------------------------------------------
    Current ROM info on flash: type=PXE version=3.5.305 cpu=AMD64
    New ROM info:              type=UEFI version=14.14.22 cpu=AMD64

-I- Preparing to burn ROM ...
Burning ROM image    - OK
Restoring signature  - OK
------------------------------------------------------------------------------
```

5. Enable the HII EFI Menu in Device Manager.

**Command**

```
/opt/mellanox/bin/mlxconfig-d mt4117_pciconf0 set UEFI_HII_EN=1
```

**Output**

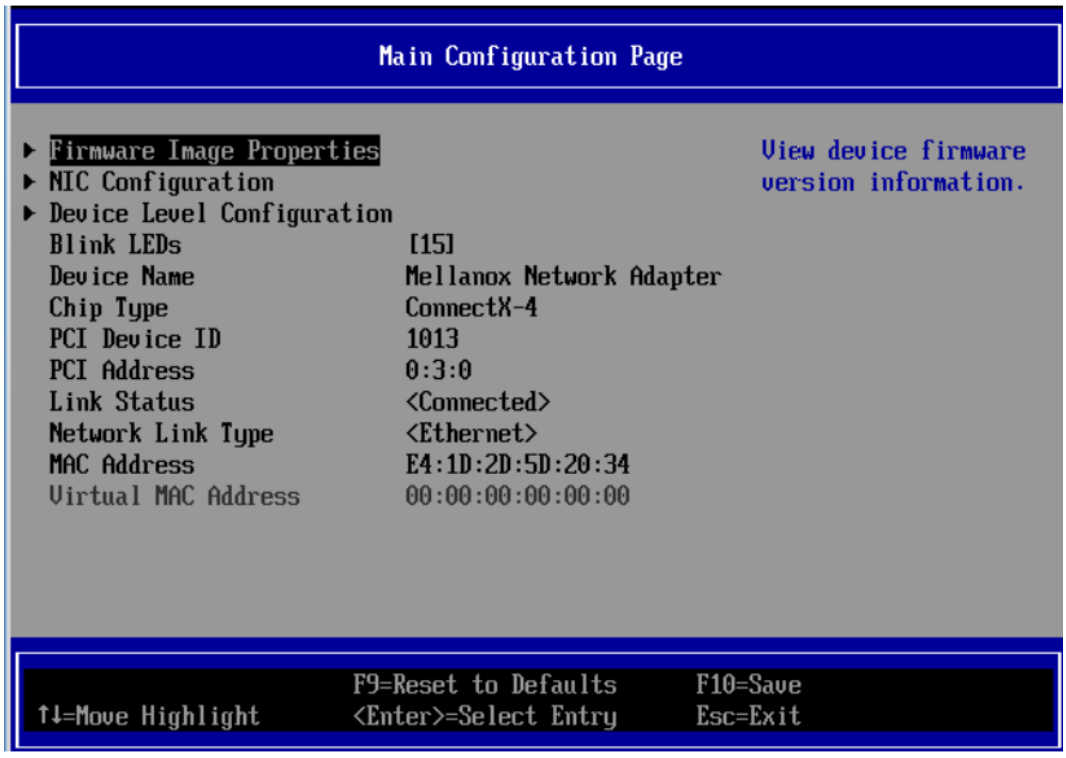
```
------------------------------------------------------------------------------
Device #1:
----------

Device type:    ConnectX4LX
Name:           N/A
Description:    N/A
Device:         mt4117_pciconf1

Configurations:                                 Next Boot       New
         UEFI_HII_EN                            True(1)         True(1)

 Apply new Configuration? ? (y/n) [n] : y
Applying... Done!
-I- Please reboot machine to load new configurations.
------------------------------------------------------------------------------
```

You can now boot using UEFI.




## 2.16. bsmBiosSettings CLI Command

### Issue

At times, the bsmBiosSettings.sh CLI command may hang, displaying infinite lines on screen.

### Workaround

Kill and restart the command.

## 2.17. IO Port Resource Message

### Issue

On specific configurations, the following message may be issued in the Message log when booting:
*Lacking IO port resource*

### Workaround

Ignore the message.

## 2.18. Non Maskable Interrupt

### Issue

On specific configurations with servers running Linux, it is not always possible to get a dump when using NMI.

### Workaround

Set the Linux boot crashkernel parameter value to 2048.

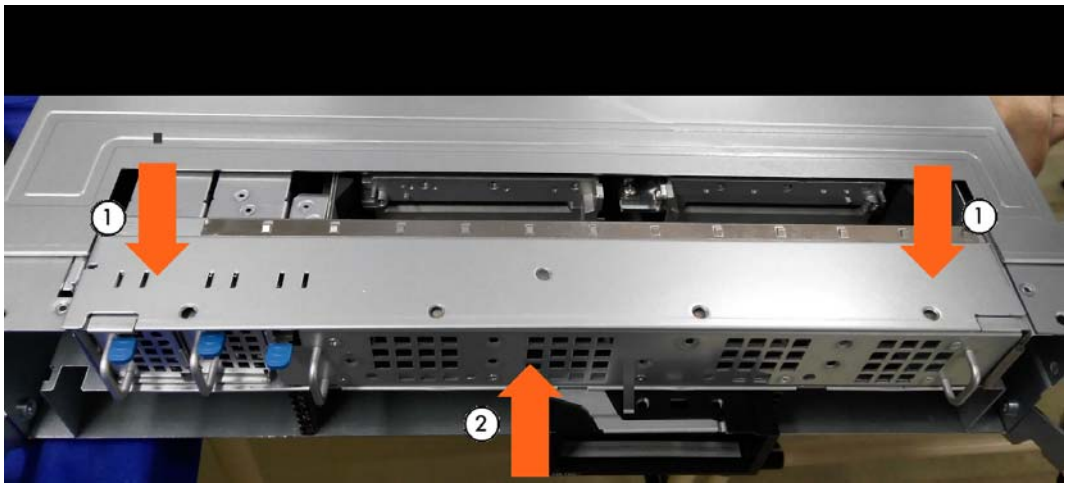
## 2.19. Storage Unit insertion in a multi-module

### Issue

For BullSequana S400 server or BullSequana S800 server there are cases where the storage drawer does not insert smoothly into the compute box.

### Workaround

1. Carefully press on the top cover of the storage drawer
2. Insert the storage drawer into the compute box.



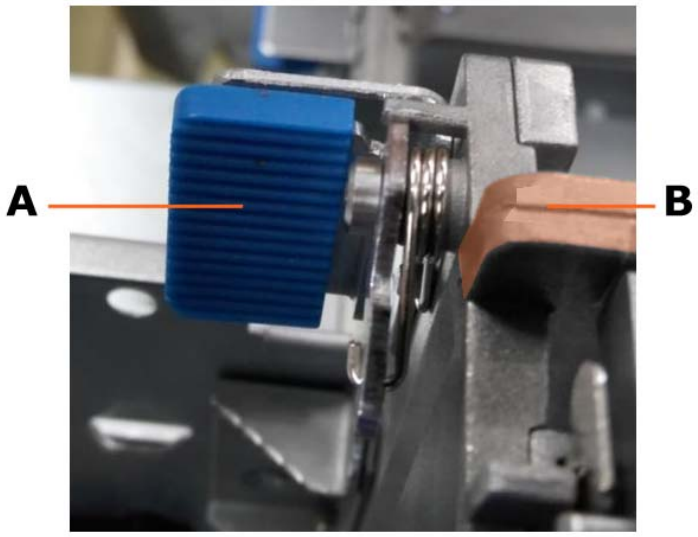
## 2.20. Locking a 2.5” Disk Storage Unit

### Issue

In some cases the latch does not insert properly into the locking bracket

### Workaround

1. Check that the latch (A) is parallel to the top of the side wall (B) as shown below.




2. Press the latch (A) down to secure the HDD cage in place.

# Chapter 3. Delivery Content

## 3.1. Delivered items

- Documentation, firmware and customer tools are delivered on the Resources and Documentation DVDs
- BSMHW_NG and iCare are delivered on the Resources and Documentation DVDs
- VMware ESXi Installer is delivered, if ordered, on a bootable USB key

## 3.2. Documentation

**Note** (*) indicates a new version, (**) indicates a new item.

| Name | Description | Version |
|---|---|---|
| BullSequana S Customer Documentation Portfolio | Complete documentation dedicated to the customer. | 06 (*) |
| BullSequana S Field Documentation Portfolio | Complete documentation dedicated to the field. | 05 (*) |

## 3.3. Platform Firmware

**Notes**
- (*) indicates a new version, (**) indicates a new item
- The Voltage Regulator configuration files are no longer included in Technical States. They are now installed dynamically by the embedded controller.

| Name | Description | Version |
|---|---|---|
| BIOS_SKL040 | BIOS firmware for Intel® Xeon® Scalable processors | 40.57.03 build 107 (*) |
| CPLD_IO_CPB | Flash image for the IO CPLD component on the CPB board. | 2.5.6.0 (*) |
| CPLD_NBB | Flash image for the CPLD component on the NBB board. | 2.2.0 (*) |
| CPLD_P_CPB | Flash image for the CPLD component on the CPB board. | 2.4.8.0 (*) |
| EMM33_BMC | Server Hardware Console (SHC) firmware. | 33.24.00 build 179 (*) |
| ESXi_6.5_BullSequana_S | VMware supervisor. | 6.5u2 build 8294253 (*) |
| FPGA_CPB | FPGA firmware for theCPB board | 2.5.5.0 (*) |

| Name | Description | Version |
|---|---|---|
| FPGA_FLASH_M3WEO | Flash image for the embedded firmware of the sWitch Ethernet One Gigabit (WEO). | 1.0.0 |
| FPGA_W3WEO | FPGA image for the sWitch Ethernet One Gigabit (WEO). | 1.0.0 (0.0.0) |
| FW_PEB | Flash image for the SPI 4Mbit 85MHz 8SOIC 256Byte per page. | 2.b.9 |
| FW_URS | Flash for the SPI 4Mbit 75MHz 8SO. | 0.0.1 |

## 3.4. Adapter Firmware

**Note** (*) indicates a new version, (**) indicates a new item.

| Name | Version |
|---|---|
| Broadcom_PCIe_BCM957416A4160C | 20.8.166.0 (*) |
| Emulex_PCIe_LPe12002-M8 | fw202a3 - UniversalBootCode1140a6<br>OneCommandManagerCLI 11.4.204.12 |
| Emulex_PCIe_LPe31002-M6 | 11.4.204.20<br>OneCommandManagerCLI 11.4.204.12 |
| Emulex_PCIe_LPe31004-M6 | 11.4.204.25<br>OneCommandManagerCLI 11.4.204.12 |
| Ethernet_Intel_I350-X520 | 22.9 |
| INTEL_PCIe_OPA_HFI | 10.4.2.0.7-110 |
| LSI_MegaRaid_SAS_9361-8i | Package 24.21.0-0012<br>Firmware 4.680.00-8249 |
| LSI_MegaRaid_SAS_9361-16i | Package 24.21.0-0012<br>Firmware 4.680.00-8249 |
| LSI_SAS_9300-8i | 15.00.02.00/8.35.04.00 |
| LSI_SAS_9305-16i | 15.00.00/8.35.00 |
| Mellanox_ConnectX-4Lx | 14.21.1000/3.5.305 |
| Mellanox_ConnectX-5 | 16.21.1000/3.5.305 |

## 3.5. Customer Tools

**Note** (*) indicates a new version, (**) indicates a new item.

| Name | Description | Version |
|---|---|---|
| EMM_DEFAULT_BIOS_SETTINGS | Bios default settings file. | 1.2 (*) |
| EMM_REGS_DUMP | This set of files gives the list of registers to dump in CPU and FPGA devices in case of CATERR detection or of IPMI dump command. | 1.0 |
| EMM33_BMC_Bckp | The backup image of the Server Hardware Console (SHC) firmware. | 33.14.00 build 2 |
| mc-setup | A Linux Utility used to discover the embedded management board's MAC address and to change the embedded management board's IP address. | 1.2.1 build 2 |
| psetup | A Windows Utility used to discover the embedded management board's MAC address and to change the embedded management board's IP-address. | 1.2.4 |

## 3.6. Management Information Base (MIB)

**Note** (*) indicates a new version, (**) indicates a new item.

| Name | Description | Version |
|---|---|---|
| MIB_bull_PlatformManagement | Defines Platform Management SNMP interfaces of Bull servers. | 201807171200Z (*) |
| MIB_PlatformEventTraps | The Platform Event Trap definition file. This MIB (Management Information Base) file is used by SNMP (Simple Network Management Protocol) managers to receive server hardware events. | 2.3.6 |

## 3.7. Bull Admin Tools

**Note** (*) indicates a new version, (**) indicates a new item.

| Name | Description | Version |
|---|---|---|
| BSMHW_NG | A set of prompt commands, based on free IPMI open source commands, used to manage server or device hardware. These commands can be used to return information and status and/ or to remotely control and configure server hardware. | 1.5.4 (*) |
| Bull_Admin_Tools_VM_ Appliance | An appliance that delivers Bull Administration tools on CentOS system. | 2.2.0 (**) |
| iCare | A WEB application used for hardware unit maintenance. Both Linux and Windows versions are provided. | 2.3.1 (*) |

# Chapter 4. Recommendations

## 4.1. Upgrading to Technical State 06.02

Due to changes in some hardware interfaces, it is required to carry out an AC cycle after the upgrade to TS 06.02.

## 4.2. Server Hardware Console (SHC)

For the first use of the TS 06.02, it is strongly recommended to clear the Internet browser's cache before using the SHC. It is not necessary to do it again afterward.

## 4.3. Server Hardware Console (SHC) Firmware Update

- It is strongly recommended to power off the system before updating the SHC firmware. Otherwise, some slave modules may be lost.
- If the PCIe slot 0 is not visible after updating the SHC, do an AC/Off - AC/On to see the slot.

## 4.4. FPGA_CPB Update

It is mandatory to update the SHC firmware before updating the FPGA_CPB firmware.

## 4.5. Excluding/Including a Memory Module

It is strongly recommended to only use the BSM CLI commands to include/exclude a memory module.

## 4.6. Performance Improvement

1. When upgrading to TS 06.02, it is recommended to update the defaultbiossetup file to v1.2 and to manually set the StaleAtoSEn value at least once:

   a. Check the StaleAtoSEn value.

```
BsmBiosSettings.sh -H ip -u user -p pwd -a get -n 'UPI.StaleAtoSOptEn'
```

   b. Set the StaleAtoSEn value.

```
BsmBiosSettings.sh -H ip -u user -p pwd -a set -n 'UPI.StaleAtoSOptEn 1'
```

2. For systems that are running SAP Hana/SAP BW, except BullSequana S200 servers, some BIOS settings may be tuned to improve performance with Intel® Xeon® Scalable processors by disabling HW prefetchers and adjusting IRQ/RRQ threshold.

```
bsmBiosSettings.sh -H ip -u user -p pwd -a set –n 'CPU.DCUStreamerPrefetcherEnable 0'
bsmBiosSettings.sh -H ip -u user -p pwd -a set –n 'CPU.DCUIPPrefetcherEnable 0'
bsmBiosSettings.sh -H ip -u user -p pwd -a set –n 'CPU.MlcSpatialPrefetcherEnable 0'
bsmBiosSettings.sh -H ip -u user -p pwd -a set –n 'CPU.MlcStreamerPrefetcherEnable 0'
bsmBiosSettings.sh -H ip -u user -p pwd -a set –n 'UPI.IrqThreshold 3'
```

## 4.7. Ethernet Ports with VMware

### 4.7.1. Ethernet Ports Limitations

The number of Ethernet ports supported by VMware is limited:

- Combination of 1GB and 10 GB ports: four 1GB ports and sixteen 10GB ports
- i40en 10GB (Intel) ports: eight ports

### 4.7.2. Disabling Ethernet Ports

1. Set up the server in Single Point of Management network configuration.

**See** BullSequana S Configuration Guide, 86 A1 27FR,for more information

2. Disable Ethernet ports using BSM CLI commands.

**Module 1**

```
./bsmBiosSettings.sh -H <module IP address>  -u super -p pass -a set -n 'PCI.PciePortDisable_47     0'
```

**Module 2**

```
./bsmBiosSettings.sh -H <module IP address>  -u super -p pass -a set -n 'PCI.PciePortDisable_89     0'
```

**Module 3**

```
./bsmBiosSettings.sh -H <module IP address>  -u super -p pass -a set -n 'PCI.PciePortDisable_131     0'
```

**See** BullSequana S Remote Hardware Management CLI Reference Guide, 86 A1 19FR, for more information

## 4.8. QAT and RedHat

It is strongly recommended to disable the QAT (Quick Assist Technology) option under RedHat as it does not work correctly.

This option is disabled by default in the BIOS settings.

## 4.9. MicroSD cards in URS

In order to work properly in the Internal Dual RAID board, the microSDs must be formatted correctly. Please use only those provided by Atos representatives.

# Chapter 5. Information

## 5.1. Enabling Trusted Platform Module (TPM)

| | |
|---|---|
| **Important** | **Before enabling the TPM feature, it is mandatory to verify that its usage complies with local laws, regulations and policies and get approvals or licenses where applicable. Bull SAS will not be responsible for any related liabilities to any compliance issues arising from your usage of TPM violating the above mentioned requirements.** |

| | |
|---|---|
| **Important** | 在启用**TPM**功能之前，您必须确认其使用符合当地法律，法规和政，并在适用情况下获得批准或许可。<br>违反上述要求，**Bull SAS**<br>将不承担由于您使用**TPM**而导致的任何合规问题的相关责任。 |

## 5.2. Embedded Controller (BMC) IP Address

Contrary to what is indicated in the BullSequana S Getting Started Guide, 86 A1 22FR, the default IP setting of the embedded controller is DHCP.

## 5.3. bsmFwGlobalUpg CLI Command

**Note** The bsmFwGlobalUpg CLI command is missing from the documentation portfolios associated to the Technical State 06.02. All the command information is provided below.

The bsmFwGlobalUpg command is used to check the installed firmware versions and, if necessary, to upgrade them with the versions on the Resource and Documentation DVD or on the SD card.

**W018** **WARNING**

**W018:**
**It is mandatory to consult the documentation delivered with the firmware files before proceeding to update firmware.**
**The update process may take some time and MUST NOT be interrupted.**
**No other actions may be performed during the process.**
**Only qualified personnel are authorized to update firmware.**

When the command is accepted, the return code is 0. If the command fails, the return code is -1.

### Prerequisite

Insert the Resource and Documentation DVD in the drive

### 5.3.1. Options

| | |
|---|---|
| -h | Displays command usage |
| -V | Displays BSM version |
| -a action | Possible values:<br>list:<br>with -D option: lists the component firmware provided on the Resource and Documentation DVD<br>with -t option: lists the components firmware provided on the SD card Technical State<br>without option: lists the SD card Technical State numbers present<br>check: checks the installation prerequisites for all the components that need upgrading<br>diff:<br>with -D option: compares the firmware versions installed with the versions on the Resource and Documentation DVD for all components<br>with -t option: compares the firmware versions installed with the versions on the SD card Technical State<br>upg: upgrades all the components that can be upgraded with the versions available on the Resource and Documentation DVD |

| | |
|---|---|
| | copy: copy Technical State iso image components firmware on the SD card<br><br>upd: updates all the components firmware with the version available on the SD card Technical State specified with -t option |
| -D directory | DVD mount point (full path) |
| -f | Forces the execution of the prerequisite actions (ex: powering off modules of the platform) before upgrade |
| -T action_to | Timeout for the upgrade of the prerequisites in minutes (default is 3) |
| -L later | y(yes): checks and upgrades earlier and later versions (default)<br>n(no): checks and upgrades earlier versions |
| -M module_id | Module identifier (from 0 to 15, 'all' for the whole platform). If not set, the action is done on all the modules of the partition. |
| -H host | Module IP address or DNS name |
| -t ts_number | Technical State number available on the SD card |
| -u user | MC user |
| -p password | MC user password |
| -o outfile | Output file name to which stdout and stderr outputs are redirected |
| -d | Debug mode |

## 5.3.2. General Syntax

```
bsmFwGlobalUpg.sh [-h | -V] -a action [-D dir] [-t ts_number] [-H host -u
user -p password] [-M module_id] [-f [-T action_to]] [-L y|n] [-r] [-o
outfile] [-d]
```

## 5.3.3. Examples

This section includes examples for the action option.

### 5.3.3.1. Upgrade all the modules of the platform and force the execution of the prerequisite actions

**Command**

```
$ bsmFwGlobalUpg.sh -H X.X.X.X -u super -p pass -D /STV/PRODUCTS/Customer/ -a upg -M all -f
Are you sure you want to upgrade all modules of the platform
and force the execution of the prerequisite actions?(y/n)
```

### 5.3.3.2. Upgrade all the modules of the platform

**Command**

```
$ bsmFwGlobalUpg.sh -H X.X.X.X -u super -p pass -D /STV/PRODUCTS/Customer/ -a upg -M all
Are you sure you want to upgrade all modules of the platform? (y/n)
```

#### 5.3.3.3. Upgrade all the modules of the partition and force the execution of the prerequisite actions

**Command**

```
$ bsmFwGlobalUpg.sh -H X.X.X.X -u super -p pass -D /STV/PRODUCTS/Customer/ -a upg -f
```

```
Are you sure you want to upgrade all modules of the partition
and force the execution of the prerequisite actions?(y/n)
```

#### 5.3.3.4. Upgrade one module and force the execution of the prerequisite actions

**Command**

```
$ bsmFwGlobalUpg.sh -H X.X.X.X -u super -p pass -D /STV/PRODUCTS/Customer/ -a upg -f -M0
```

```
Are you sure you want to upgrade module 0
and force the execution of the prerequisite actions?(y/n)
```

#### 5.3.3.5. List Component Firmware Details provided on the Resource and Documentation DVD

**Syntax**

```
bsmFwGlobalUpg.sh -a list -D dir [-H host -u user -p password] [-o outfile]
```

**Note** If the -H, -u and -p options are present, only the firmware for the same machine type (same PRODUCT_ID) rather than the remote host specified is displayed.

**Command**

```
$ bsmFwGlobalUpg.sh -a list -D /STV/PRODUCTS/Customer/ -H X.X.X.X -u super -p <password>
```

#### 5.3.3.6. List Component Firmware Details provided on SD card

**Syntax**

```
bsmFwGlobalUpg.sh -a list -t ts_number [-H host -u user -p password] [-o
outfile]
```

**Note** If the -H, -u and -p options are present, only the firmware for the same machine type (same PRODUCT_ID) rather than the remote host specified is displayed.

**Command**

```
$ bsmFwGlobalUpg.sh -a list -t 004.00 -H X.X.X.X -u super -p <password>
```

#### 5.3.3.7. List the SD card Technical State

**Syntax**

```
bsmFwGlobalUpg.sh -a list [-H host -u user -p password] [-o outfile]
```

**Command**

```
$ bsmFwGlobalUpg.sh -a list -H X.X.X.X -u super -p <password>
```

### 5.3.3.8. Compare Firmware Versions

**Syntax**

```
bsmFwGlobalUpg.sh -a diff -D dir -H host -u user -p password [-M module_id]
[-o outfile]
```

**Command**

```
$ bsmFwGlobalUpg.sh -a diff -D /STV/PRODUCTS/Customer/ -H X.X.X.X -u super -p <password>
```

**Result Values**

| Result | Description |
|---|---|
| unknown | The installed firmware version is not known |
| EARLIER | The installed firmware version is earlier than the one on the Resource and Documentation DVD |
| LATER | The installed firmware version is later than the one on the Resource and Documentation DVD |
| OK | The installed firmware version and the one on the Resource and Documentation DVD are the same |

### 5.3.3.9. Check Installation Prerequisites

**Note** It is possible to check either the earlier versions or the earlier and the later versions against the versions on the Resource and Documentation DVD, using the -L option.

**Syntax**

```
bsmFwGlobalUpg.sh -a check -D dir -H host -u user -p password [-M module_id]
[-L y|n] [-o outfile]
```

**Command**

```
$ bsmFwGlobalUpg.sh -a check -D /STV/PRODUCTS/Customer/ -H X.X.X.X -u super -p <password> -L yes
```

**Result Values**

| Status | Description |
|---|---|
| unknown | The installed firmware version is not known |
| OK | No need to upgrade |
| OK to upg | Upgrade needed and possible |
| Other tool to upg | Upgrade needed but not possible with this command. It must be performed with a different tool |
| KO | Upgrade needed but impossible |
| KO : pre_check XXX failed | Upgrade needed but the prerequisites must be upgraded first: use the -f option to force the upgrade of the prerequisites |

### 5.3.3.10. Copy Technical State iso image components firmware on the SD card

**Syntax**

```
bsmFwGlobalUpg.sh -a copy -D dir -H host -u user -p password [-M module_id]
```

### 5.3.3.11. Update the component firmware with the version on the SD card

**Syntax**

```
bsmFwGlobalUpg.sh -a copy -t ts_number -H host -u user -p password [-M
module_id | all]
```

# Chapter 6. History of Previous Versions

## 6.1. TS 05.04 (June 2018)

### New features and changes

#### EMM33_BMC

New release fixing the following issues:

- Incorrect system name displayed by the NFC tag
- DFM LEDs turning on red randomly

#### FPGA_CPB

New release fixing the following issue:
DFM fans always running at full speed

### Resolved Issues

#### Incorrect system name displayed by the NFC tag

There are no longer errors in the system name displayed by the NFC tag.

#### DFM LEDs turning on red randomly

The DFM LEDs do not become red randomly anymore.

#### DFM fans always running at full speed

The DFM fans are now running at suitable speed.

## 6.2. TS 05.03 (May 2018)

### New features and changes

#### EMM33_BMC

- New release fixing the following issue:
  DFM fans randomly unavailable with TS 05.02.

### Resolved Issues

#### DFM fans randomly unavailable with TS 05.02

With the present release of the EMM33_BMC firmware, the fans are running normally, without random faults.

## 6.3. TS 05.02 (March 2018)

### New features and changes

#### BIOS_SKL040

- Intel fix for Spectre and Meltdown issues
- Memory SddcPlusOne RAS feature enabled by default.
- Fixed excluded dimm display in setup memory topology.
- Improved PatrolScrubbing logging messages on error.
- The integrated Gbe controller is now reported to the Server Hardware Console (SHC).
- Improved dmidecode type9 display for PCIe slots information.
- The Press Esc line is now displayed at 60% of window height for small screens.
- Added Rank Sparing RAS feature (1 or 2 spare ranks).
- Improved RAS messages sent to SHC for SDDC, ADDDC, RankSparing, Leaky Bucket RAS features.

#### EMM33_BMC

- Changed display of identification LED for better understanding of actions.
- SEL events can be displayed in multiple or single web pages.
- Added the SEL binary file to Collect Log files.
- Partitioning is now available from the SHC, including from a slave console.
- Boot device and instance can be selected from the SHC. This is used to set parameters that direct the system boot to a particular option after a system power up or reset. This feature is the same as the IPMI boot device option.
- PCIe hot plug is available under Red Hat and Suse only.
- On the Power Management web page, Force Power Off, Force Power Cycle, Hard Reset and Diagnostic Dump commands need to be confirmed.
- The “super” user name can be modified from the SHC.
- Implemented reset to default function.

#### FPGA_CPB

- Fans run at FULL SPEED when the SHC hangs in power on state.

### Resolved Issues

#### Simultaneous power on of different partitions

Powering on two modules of different partitions simultaneously is now possible.

#### FPGA Update on a BullSequana S800 Server

Inconsistent messages are no longer issued at power on after updating the FPGA on a BullSequana S800 server.

#### BullSequana S200 Server BIOS Update with Error in SEL

Inconsistent messages are no longer issued when the BIOS update is successful.

### Unable to Update Bios with the Preserved Nvram Option

Updating the BIOS firmware from the SHC with the preserved Nvram option is now possible. On a multi-module server, every module is updated successfully.

### ESXi 6.5 Installation Failure on USB Raid SD Card (URS)

Installing ESXi 6.5 on a USB Raid SD Card (URS) with Virtual Media is now possible without failure.

### Updating the SHC firmware on a multi-module server

The SHC will not show the firmware update as completed if it is not completed on all modules.

## 6.4. TS 04.02 (January 2018)

This Technical State 04.02 is a patched one compared to the Technical State 04.01. It addresses the Intel Meltdown/Spectre patch.

**See** The Technical Support Bulletin 400-18-02 for more details, available on the Bull Support Website: https://support.bull.com

## 6.5. TS 04.01 (December 2017)

First delivery

**Bull Cedoc**
**357 avenue Patton**
**BP 20845**
**49008 Angers Cedex 01**
**FRANCE**