

Release Note TS 016.02

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Hardware

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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 DVD.

Chapter 1. Overview

1.1. Operating systems

The following versions are supported for BullSequana Edge servers.

1.1.1. Red Hat

- RHEL 7.6
- RHEL 8

1.1.2. VMware ESXi

- ESXi 6.5u2 and higher
- ESXi 7.0u1

For certification details check:

<https://www.vmware.com/resources/compatibility/detail.php?deviceCategory=server&productid=48883>

1.1.3. Windows

- Windows Server 2019

1.2. New features and changes

1.2.1. BIOS_SKD080

- Send TPM status to EMM
- Update Gbe X722 PXE driver to 4.3.05

1.2.2. CPLD_MIPCS

Factory reset detection logic

1.2.3. OMF_MIPCS

OpenBMC 2.8 merged code and associated features

1.2.4. LORA_SOFT_KIT

- First official release
- Support RedHat 7 distribution
- Support RedHat 8 distribution

1.2.5. MISM

- There are two separate deliverables for MISM:
 - MISM_full for full installation
 - MISM_light for light installation or update, which contains only AWX playbooks, AWX plugins, Zabbix templates, Zabbix external scripts and shell scripts
- MISM is delivered with a backup and a restore script for AWX and Zabbix databases
- The installation of Python tzlocal is optional: date will have no time localization indication (+02, -01...) if not installed

1.3. Resolved issues

- **Server Hardware Console (SHC) user accounts**

It is now possible to create user accounts with different access rights.

- **Intrusion detection**

False intrusion detections no longer appear in the **Intrusion Detection** page of the SHC and in the event logs.

- **Cold or Warm Reboot**

The **Immediate Reboot** (formerly **Cold reboot**) or **Orderly Reboot** (formerly **Warm reboot**) buttons in the **Server power operations** page of the SHC function now correctly.

Chapter 2. Known restrictions and issues

2.1. Platform restrictions and issues

2.1.1. Baseboard Management Controller (BMC) firmware update

Issue

During the update of the BMC firmware via the SHC or MISM, a message indicating the failure to upload the file is displayed.

Workaround

Check the version of the BMC firmware after the update:

- If the version is correct, the update is successful and the message can be ignored.
- If the version is incorrect, relaunch the update.

Note This issue is encountered only during the update of the system to TS 16.02 but not anymore afterward.

2.1.2. BIOS and CPLD firmware update

Issue

After the update of the BIOS or CPLD firmware, the firmware stays in active mode when it should be in functional mode.

Workaround

Reboot the BMC to get a functional firmware.

2.1.3. Failed BIOS firmware update

Issue

After the BIOS firmware update, an error message (Unable to activate image) is displayed in the SHC **Firmware** page whereas the update is indicated as successful in the event log.

Workaround

The update is successful. Reboot the BMC to get a correct **Firmware** page.

2.1.4. LDAP authentication

Restriction

Configuring LDAP authentication is not yet possible.

2.1.5. Date and time setting

Issue

It is not possible to set the date and time manually in this release, even as an administrator.

Workaround

To set the date and time, use a NTP server.

See BullSequana Edge Server Hardware Console Reference Guide, 86 A1 05FS for more information

2.1.6. Switching from DHCP to Static IP Address

Issue

In the **BMC network settings** page of the SHC, when switching from DHCP mode to the Static IP Address, the IP address details entered in the fields are deleted when the **Save Settings** button is clicked. There is therefore a high risk of ending without any IP address at all.

Workaround

To avoid this issue, click the **Add IPV4 address** button before modifying any information in the fields and only then click the **Save Settings** button.

See Section 4.1.4. Assigning a static IP address of the BullSequana Edge Server Hardware Console Reference Guide, 86 A1 05FS, for the complete correct procedure.

2.1.7. Baseboard Management Controller (BMC) SSL certificate

Issue

A certificate error appears in the event log and prevents any curl commands from running.

Workaround

Check that the NTP server is correctly configured and update the certificate again.

2.1.8. Intrusion detection

Issue

When the system is powered off, intrusion attempts are not detected.

Workaround

The intrusion attempts which occurred while the system was off are eventually detected once the server is powered on.

2.1.9. Intrusion status

Issue

It is not possible to clear the intrusion status in the **Chassis intrusion** page of the SHC.

Workaround

This is a display error in the **Chassis intrusion** page. Check the event log to see if the intrusion status has been cleared.

2.2. Software restrictions and issues

2.2.1. Installing VMware ESXi using a PXE server

Issue

During the installation of VMware ESXi with a PXE server, the sequence hangs just after loading the `vmkusb` VMware driver.

Workaround

Disable USB support in the BIOS before the OS installation and enable it again once the installation is done.

Chapter 3. Recommendations

3.1. Technical State (TS) numbering

The numbering of Technical States, TS xy.zz, is done as follows:

- An increase in x indicates that this TS provides new features. It is strongly recommended to install it in order to benefit from these features. It may also include fixes.
- An increase in y indicates a maintenance TS. It provides a set of fixes and it is recommended to install it. If a problem is reported on a previous TS, it is requested to move to the last such TS first before issuing a ticket.
- An increase in the minor number zz indicates a patched TS that fixes a specific issue. Installing it is not mandatory unless you may encounter this issue or it is declared as a hot fix that may affect most clients.

3.2. Firmware updates

3.2.1. Updating the system globally to a Technical State (TS)

If MISM is used to update the system globally to a TS, it is strongly recommended to install the newest MISM version first.

3.2.2. Updating the BIOS or CPLD firmware

The system must be powered off before updating the BIOS or CPLD firmware.

3.3. Date and time setting

If the date and time have been set manually, they are lost after a reboot or update of the BMC and must be set again. To avoid having to set the date and time again after each reboot or update of the BMC, set them using a NTP server.

See BullSequana Edge Server Hardware Console Reference Guide, 86 A1 05FS for more information

3.4. Debugging the system

When experiencing any issue with the system, it is strongly recommended to collect the BMC logs. The logs usually contain the information that will help solve the issue.

See Section 2.4. Collecting BMC logs of the BullSequana Edge Server Hardware Console Reference Guide, 86 A1 05FS, for the complete procedure.

3.5. Machine Intelligence System Management (MISM)

3.5.1. Zabbix version compatibility

MISM is not compatible Zabbix 5 and higher.

3.5.2. Installing/Updating MISM

To update MISM from a version preceding 2.0.2, perform the following steps:

1. Backup the playbooks created by the user.
2. Uninstall any previous versions.
3. Install the new version.

3.5.3. Installing/Updating to MISM 2.1.1

To install/update to version 2.1.1, perform the following steps:

1. From the install directory, go to the Dockerfiles directory.

```
$ cd Dockerfiles
```

2. Edit the `zabbix.env` file.

```
$ cat zabbix.env
```

3. Change the `POSTGRES_USER=zabbix` line to `POSTGRES_USER=mism`.
4. Install version 2.1.1.

3.5.4. Updating firmware from the Technical State (TS) with MISM

The `TechnicalState.iso` file must be mounted using one of the following methods:

- from the `/mnt` root directory before starting containers
- from a `/mnt` sub-directory. The path to the file must be changed

If the `TechnicalState.iso` file is mounted after starting the containers, the containers must be restarted.

Chapter 4. Delivery content

4.1. Delivered items

- Documentation and firmware are delivered on the Resource and Documentation DVD
- Machine Intelligence System Management (MISM) is delivered on the Bull support website: <http://support.bull.com>

4.2. Documentation

Note A new version is highlighted in grey.

Name	Description	Version
BullSequana Edge Customer Documentation Portfolio	Complete documentation dedicated to the customer	06
BullSequana Edge Field Documentation Portfolio	Complete documentation dedicated to the field	06

4.3. Platform firmware

-
- Notes**
- A new product row is highlighted in grey.
 - A new version is highlighted in grey.
-

Note New versions are in highlighted in grey.

Name	Description	Version
BIOS_SKD080	BIOS firmware	80.18.02 build 003
CPLD_MIPCS	Flash image for the CPLD component	4.3.0.0
Lora_Soft_Kit	Toolkit for using the LoRa Wireless Communication Module	1.0
OMF_MIPCS	Server Hardware Console (SHC) firmware	40.00 build 0488
VR_PCH_CPU0_MIPCS	Configuration file for processor voltage regulator on the motherboard	1.0.0
VR_PVCCIN_CPU0_MIPCS	Configuration file for processor voltage regulator on the motherboard	1.0.0
VR_PVCCIO_CPU0_MIPCS	Configuration file for processor voltage regulator on the motherboard	1.0.0

Name	Description	Version
VR_PVDDQ_AB_CPU0_MI PCS	Configuration file for memory voltage regulator on the motherboard	1.0.0
VR_PVDDQ_DE_CPU0_MI PCS	Configuration file for memory voltage regulator on the motherboard	1.0.0

4.4. Administration Tools

Note A new version is highlighted in grey.

Name	Description	Version
MISM	A web application used for hardware maintenance	2.1.3

Chapter 5. History of previous versions

5.1. TS 15.02 (August 2020)

New features and changes

BIOS_SKD080

- Fix for Automatic failover booting feature
- Reference Code version RC 06.D51
- Fixes for Windows Server 2019 certification for Secure Boot and memory options (one DIMM set per channel, unused channels set disabled)

OMF_MIPCS

- Adding network routes feature
- Log collect feature

Resolved issues

- **Connection to the BMC in Zeroconf mode**

Connection to the Baseboard Management Controller (BMC) in Zeroconf mode using the BMC port is now possible.

- **BIOS firmware version file**

The BIOS version file is now correctly generated after a firmware update.

- **BMC reboot on a powered off host**

Rebooting the BMC on a powered off host does not automatically restart the host anymore.

- **Automatic boot to PXE interfaces**

The automatic boot runs correctly, without requiring human intervention anymore.

- **Visibility of the host serial number in the BIOS**

The host serial number is now visible in the BIOS when it is accessed via a guest Operating System (OS).

5.2. TS 14.01 (May 2020)

New features and changes

BIOS_SKD080

- Generate signed BIOS image
- Reference Code version RC 06.D34
- Updated Intel Xeon Skylake-D processor microcode to version 02000065
- Updated the Management Engine (ME) SPS firmware to version SPS_ SoC-X_04.00.04.112
- Detect chassis intrusion in standby, during boot and in runtime and take actions based on BMC settings

MISM

- New Zabbix template for BullSequana Edge Host
- New Zabbix template for BullSequana Edge Map
- BullSequana Edge Zabbix Icons
- Added two missing sensors as items and their associated graph in Zabbix
 - Power psu-iout (Amperes)
 - Total power (Watts)
- Prerequisites helping script with NO warranty

OMF_MIPCS

- IPMI Out Of Band support
- Signed firmware support for BIOS, BMC and CPLD firmware

Resolved issues

- **Sensor display in Idle or Off state**
Sensor display values are now correctly implemented for systems in Idle or Off state.
- **Date and hour settings in the Server Hardware Console (SHC)**
Manually setting the date and hour is now possible from the SHC.
- **Powering the server off**
Powering off the server using the Power button is now possible.
- **Encrypted passwords**
Password encryption in the controlling console (Ansible Tower) is now fully implemented and no longer hinders job launches.

5.3. TS 06.02 (December 2019)

New features and changes

BIOS_SKD080

- Print BMC and CPLD Version in BIOS log
- Chassis intrusion detection (Note: if chassis is open, the system will not boot)

OMF_MIPCS

New user 'admin' has been created

After the update of the BMC firmware to the version provided in this TS, it is necessary to run the following commands in ssh so that the new user information is taken into account:

1. Export the BMC credentials using the following command:

```
export bmc=<user>:<pwd>@<BMC IP>
```

2. Perform the reset to default factory settings of the BMC using the following command:

```
curl -b cjar -k -H 'Content-Type: application/json' -X POST -d '{"data":[]}'  
https://${bmc}/xyz/openbmc_project/software/action/Reset
```

MISM

- Full installation through install.sh and start/stop.sh scripts
- Zabbix monitoring

Resolved issues

- **KVM interface in the Server Hardware Console (SHC)**

Using the Refresh button no longer makes the Keyboard Video Mouse page unavailable.

- **Wireless connection configuration**

Configuring LTE or WiFi for BMC is now possible through the SHC.

- **BMC WiFi connection**

The user is now warned that the entered password is incorrect and the connection unsuccessful.

- **BMC WiFi connection after a BMC reboot**

Connection to the BMC WiFi is now automatically restored after rebooting the BMC.

5.4. TS 05.01 (September 2019)

New features and changes

BIOS_SKD080

- New Bakerville Code Drop 14
- Support for sending memory module and PCIe errors to the Server Hardware Console (SHC)
- Update to SMBIOS Type 0/1 Information
- Send processor microcode version information to the SHC
- Send processor SKU number, PCH information, processor signature and number of enabled cores to the SHC

OMF_MIPCS

Identification of failing components including physical position

MISM

- MIPM renames as MISM
- start/stop/uninstall/remove_user_data scripts
- add_playbooks separate script to allow light delivery after first install

Resolved issues

Server Hardware Console (SHC) user accounts

Creating a new user account in the SHC web interface is now possible.

5.5. TS 04.01 (June 2019)

First delivery

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