BullSequana Edge

Release Note TS 14.01

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Hardware

May 2020

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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

1.1.2. VMware ESXi

- ESXi 6.5u2 and higher

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

- 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 Baseboard Management Controller (BMC) settings

1.2.2. 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

1.2.3. OMF_MIPCS

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

1.3. 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.

Chapter 2.   Known restrictions and issues

2.1.   Platform restrictions and issues

2.1.1.   Baseboard Management Controller (BMC) user accounts

Restriction

It is not yet possible to create user accounts with different access rights. All user accounts have the same rights.

2.1.2.   BIOS firmware version file

Issue

In rare cases, after a BIOS firmware update, the BIOS version file is not generated.

Workaround

If this issue occurs, set the Server Power Restore Policy to Always Off from the Server Hardware Console (SHC).

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. Updating to Technical State (TS) 14.01

The global update feature is affected by the introduction of signed firmware in this TS.

To update a system to TS 14.01, perform the following steps:

1. Update the Baseboard Management Controller (BMC) firmware individually using MISM or the SHC.

2. Perform a global upgrade using MISM.

3.2. Updating the BIOS or CPLD firmware

The system must be switched to idle or off before updating the BIOS or CPLD firmware.

3.3. First network configuration

To establish BMC connection for the first time, it is strongly recommended to use the RJ45 port 0 at the back of the server.
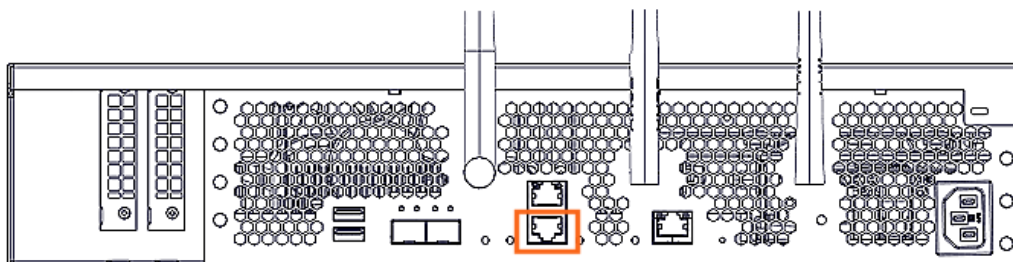
See   BullSequana Edge Description Guide, 86 A1 65FR for more information on the server ports

3.4. BMC default user account

Check that another BMC user account has been created before deleting the default user account (admin). Otherwise future connections to the BMC will be impossible.

3.5. Physical mobile networks

It is strongly recommended to connect only one physical mobile network (miniPCIe).

3.6. Machine Intelligence System Management (MISM)

3.6.1. Updating MISM

To update Machine Intelligence System Management (MISM) from a version lower than 2.0.2, it is necessary to uninstall any previous versions before installing the new version.

3.6.2. 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.

3.6.3. Host discovery in the monitoring console (Zabbix)

Once the discovery of a host is complete, disable the Discovery Action. This will prevent irrelevant severe problems to be listed and modifications can now be applied to the host.

Chapter 4. Information

4.1. Installing the server on a VESA holder

The following recommendation regarding the installation of the server on a VESA holder is missing from the BullSequana Edge Installation Guide, 86 A1 67FR. It will b added to the guide in the next delivery.

W088 ⚠️ **WARNING**
W088:
To secure the server safely to the wall the correct type of screw anchor must be used. The screw anchors should be designed for the wall construction material (wood, concrete, etc.) and capable of bearing a weight of up to 30 kg.

4.2. Flashing the BIOS firmware

Use the following procedure when reflashing the BIOS firmware with the same version is not possible through conventional means.

1. Extract the BIOS firmware file using the following command:

```
$ tar -xvzf BIOS_SKD080.XX.XX.XXX.tar.gz
```

2. Copy the `image-bios` file to the /tmp directory of the Baseboard Management Controller (BMC).

3. Flash the BIOS firmware using the following command:

```
$ update_bios.sh /tmp/image-bios
```

4.3. Resetting the BMC to default factory settings

Consequences of the reset

Resetting the BMC to default factory settings results in the loss of all customized parameters. This includes the following:

- Deletion of all BMC user accounts except the admin default account
- Reset of the password of the admin default account to its default value
- Loss of the network configuration including both connection IP addresses (with gateway)
- Loss of IPV4 custom route configuration
- Reset of the name of the server to its default value
- Reset of the time and date and loss of the time servers
- Loss of the rsyslog configuration
- Deletion of all events
- Deletion of all BMC logs and dumps previously collected

Procedure

1. Export the BMC credentials using the following command:

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

Note Any BMC user account with administrator rights may be used.

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
```

3. Reboot the BMC using the SHC or MISM.

4.4. IPMI Out Of Band (OOB) support

By default, IPMI OOB support is disabled for the BullSequana Edge server BMC.

Enabling IPMI OOB support

1. Export the BMC credentials using the following command:

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

Note Any BMC user account with administrator rights may be used.

2. Perform a 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
```

3. Reboot the BMC using the SHC or MISM.

Note After the reset to default factory settings of the BMC, only the admin default user account with its default password can be used to connect to the BMC.

4. Enable IPMI OOB support using the following command:

```
curl -c cjar -b cjar -k -H "Content-Type: application/json" -X PUT -d '{"data": "true"}'
https://${bmc}/xyz/openbmc_project/ipmi/support/attr/Functional
```

5. Check that IPMI OOB support is enabled using the following command:

```
curl -c cjar -b cjar -k -H "Content-Type: application/json" -X GET
https://${bmc}/xyz/openbmc_project/ipmi/support/attr/Functional
```

IPMITOOL commands can now be used to manage the server.

Disabling IPMI OOB support

1. Export the BMC credentials using the following command:

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

Note Any BMC user account with administrator rights may be used.

2. Disable IPMI OOB support using the following command:

```
curl -c cjar -b cjar -k -H "Content-Type: application/json" -X PUT -d '{"data": "false"}'
https://${bmc}/xyz/openbmc_project/ipmi/support/attr/Functional
```

3. Check that IPMI OOB support is disabled using the following command:

```
curl -c cjar -b cjar -k -H "Content-Type: application/json" -X GET
https://${bmc}/xyz/openbmc_project/ipmi/support/attr/Functional
```

IPMITOOL commands can no longer be used to manage the server.

Chapter 5. Delivery content

5.1. 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

5.2. Documentation

Note   New versions are in highlighted in grey.

Name	Description	Version
BullSequana Edge Customer Documentation Portfolio	Complete documentation dedicated to the customer	04
BullSequana Edge Field Documentation Portfolio	Complete documentation dedicated to the field	04

5.3. Platform firmware

Note   New versions are in highlighted in grey.

Name	Description	Version
BIOS_SKD080	BIOS firmware	80.16.01 build 002
CPLD_MIPCS	Flash image for the CPLD component	4.2.0.0
OMF_MIPCS	Baseboard Management Controller (BMC) firmware	25.00 build 0295
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
VR_PVDDQ_AB_CPU0_MIPCS	Configuration file for memory voltage regulator on the motherboard	1.0.0
VR_PVDDQ_DE_CPU0_MIPCS	Configuration file for memory voltage regulator on the motherboard	1.0.0

5.4. Administration Tools

Note New versions are in highlighted in grey.

Name	Description	Version
MISM	A web application used for hardware maintenance	2.0.9

Chapter 6.   History of previous versions

6.1.   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.

6.2.   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.

6.3. TS 04.01 (June 2019)

First delivery

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