EVIDEN

BullSequana EX

Getting Started Guide

86 A1 31FT 02 - April 2024

Trademarks and Acknowledgements

Hardware

April 2024

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Table of Contents

Preface

This guide explains how to set up the server.

See The Bull support web site for the most uptodate product information, documentation, firmware updates, software fixes and service offers: https://support.bull.com

Important **ATTENTION: Please read carefully the safety instructions before you perform the procedures described in this manual.**
Multilingual Safety Notices Guide

Intended Readers

This guide is intended for use by system administrators and operators.

Chapter 1. Connecting a BullSequana EX server

Important	**The steps in this chapter must be followed in the order indicated.**

See	The Installation Guide and the documentation set for more information.

1.1. Connecting the server to the power supply

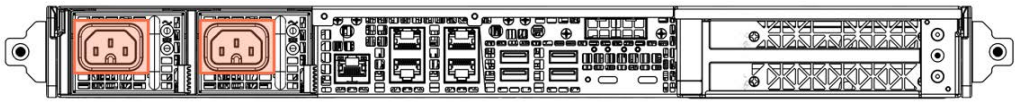
1. Connect the server to the power supply

Important	**The site power breaker must be OFF when the server is connected to the power supply. The site power supply must remain OFF until the system is ready to be powered on.**

1. Locate the power supply connection.

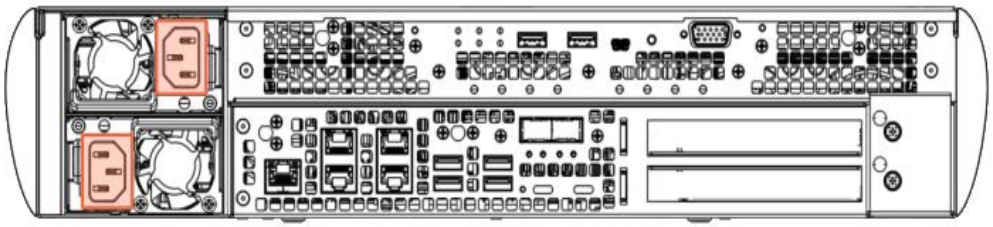
BullSequana EXR

Rear view



BullSequana EXD

Rear view



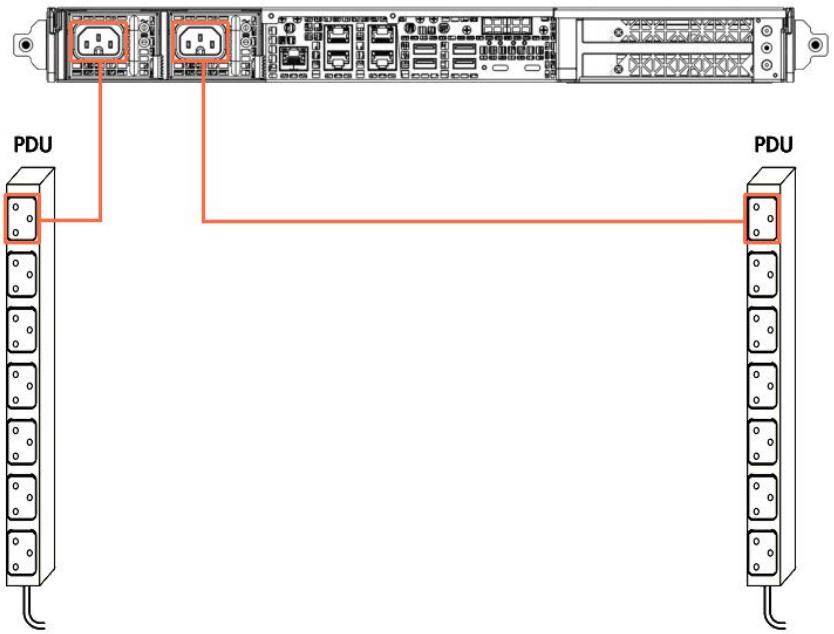
2. Connect the server to the Power Distribution Unit (PDU).

   Plug the power cable into power socket and the required PDU.

Note	If the server is installed in a rack cabinet, route the power cable along the cabinet flange to the PDU.

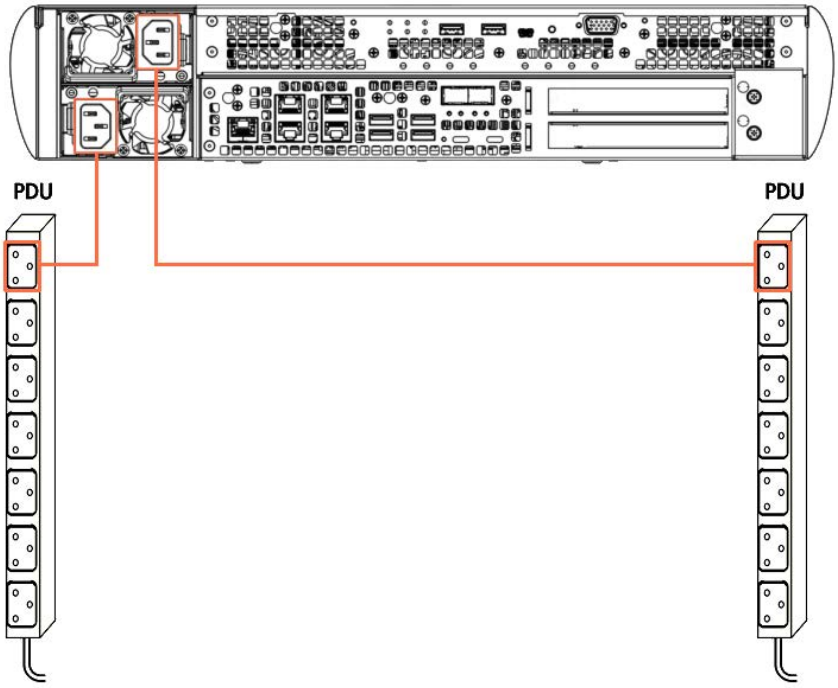
BullSequana EXR

Rear view



BullSequana EXD

Rear view



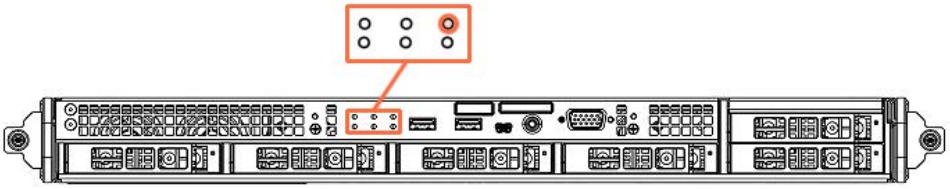
2. Power on the server to standby

1. Turn the site power breakers ON.
2. Check that the power status LED blinks green to indicate that the server is connected to the power supply.

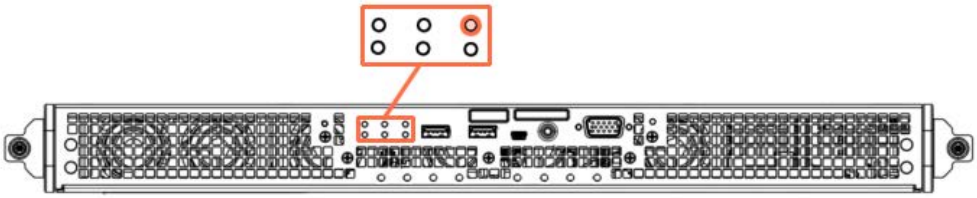
BullSequana EXR

Front view

2.5 inch SATA disk option

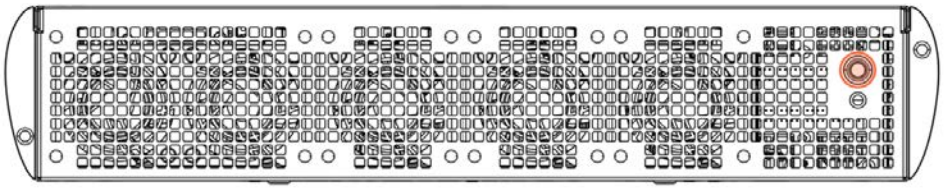


M.2 NVMe disk option



BullSequana EXD

Front view



1.2. Accessing the Server Hardware Console (SHC)

The Server Hardware Console (SHC) for BullSequana EX servers provides a web based interface to manage, configure and monitor the server.

The SHC is powered by OpenBMC, an open source implementation of the Baseboard Management Controller (BMC) firmware stack

See The SHC Reference Guide and the documentation set for more information.

The first connection to the SHC can be made using either an IP address allocated by DHCP or an auto-discovery tool.

1.2.1. Obtaining an address via a DHCP server

Prerequisites

- A DHCP server is installed on the network subnet
- The laptop used to access the BullSequana EX server is on the same network subnet

Procedure

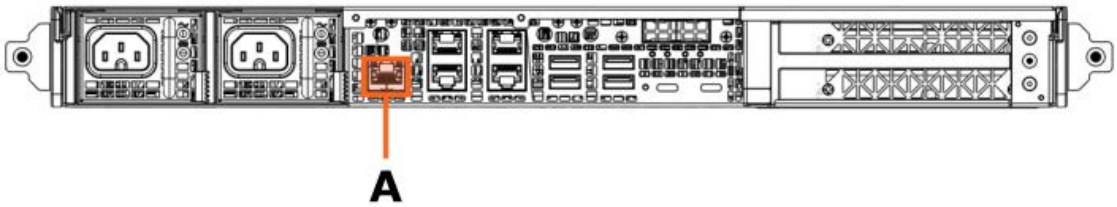
1. **Connect the server to the LAN**

   Connect the server BMC port to the LAN via a RJ45 Ethernet cable.

   Important **If a switch is used the ports must support a bandwidth of 1 Gb/s.**

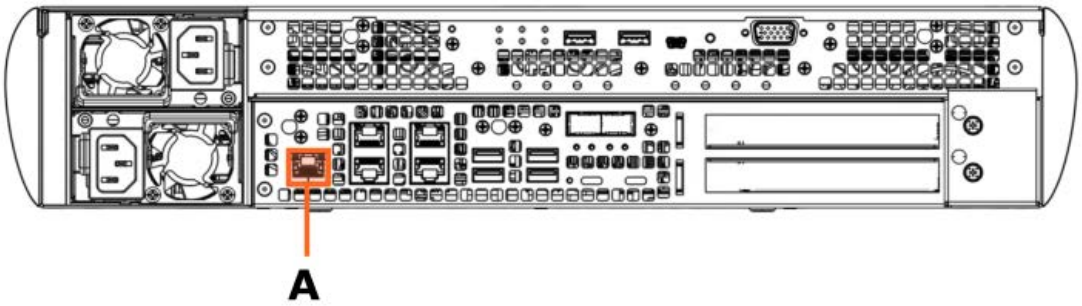
   BullSequana EXR

   Rear view



BullSequana EXD

Rear view



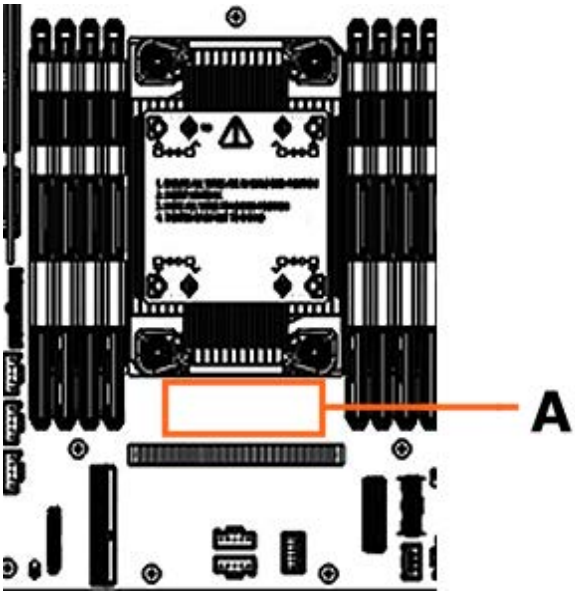
2. Check the LAN connection

Check the LEDs are on for the BMC port.

3. Obtain the MAC address for the server

1. Locate the label displaying the server MAC address on the motherboard near the processor assembly.

Top view



2. Note the server MAC address.

4. **Obtain an IP address for the server**

   There are two possibilities according to the network system management:

   - Retrieve an IP address from the DHCP server table
   - Ask the network system administrator to allocate a DHCP IP address using the MAC address of the server

5. **Note the IP address obtained**

1.2.2. Obtaining an IP address with an auto-discovery tool

Prerequisite

A laptop is connected to the server via the LAN

Procedure

Note	In this procedure the Bonjour browser is used as an example of an IP auto-discovery tool.

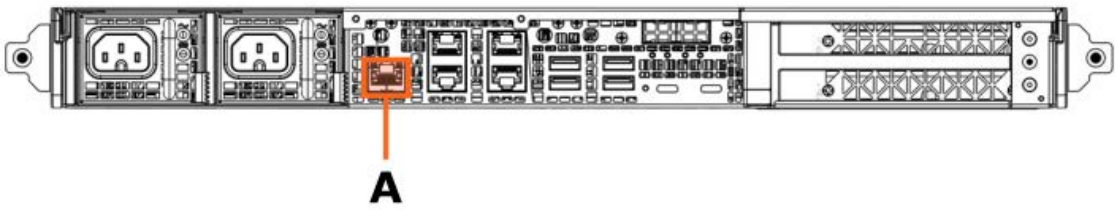
1. **Connect the server to the LAN**

   Connect the server BMC port to the LAN via a RJ45 Ethernet cable.

Important	**If a switch is used the ports must support a bandwidth of 1 Gb/s.**

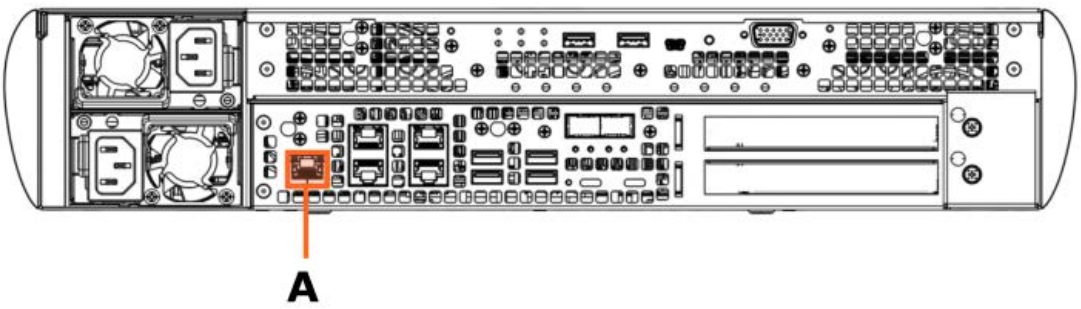
BullSequana EXR

Rear view



BullSequana EXD

Rear view



2. **Check the LAN connection**

   Check the LEDs are on for the BMC port.

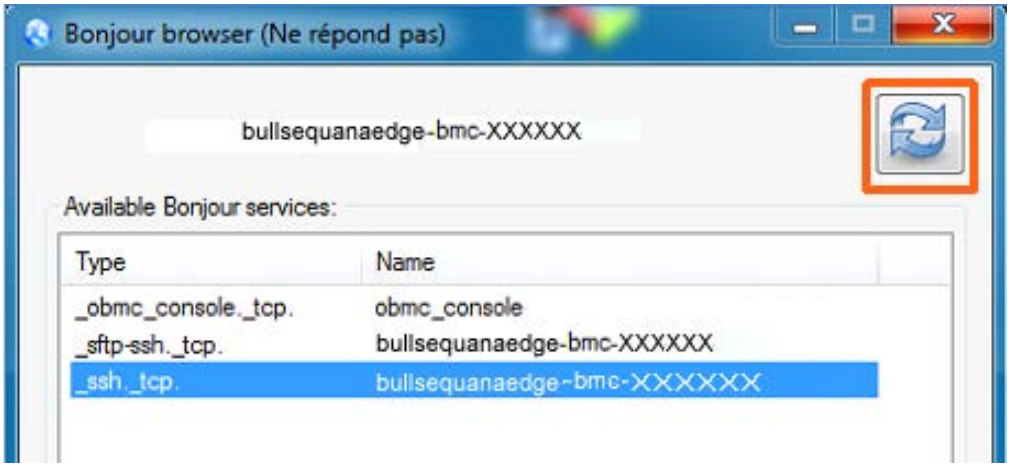
3. **Install Bonjour on the laptop**

   1. Download the latest **BonjourBrowserSetup.exe** file.
   2. Run **BonjourBrowserSetup.exe** to install Bonjour.

4. **Launch the Bonjour browser on the laptop**

5. **Refresh the Bonjour browser**

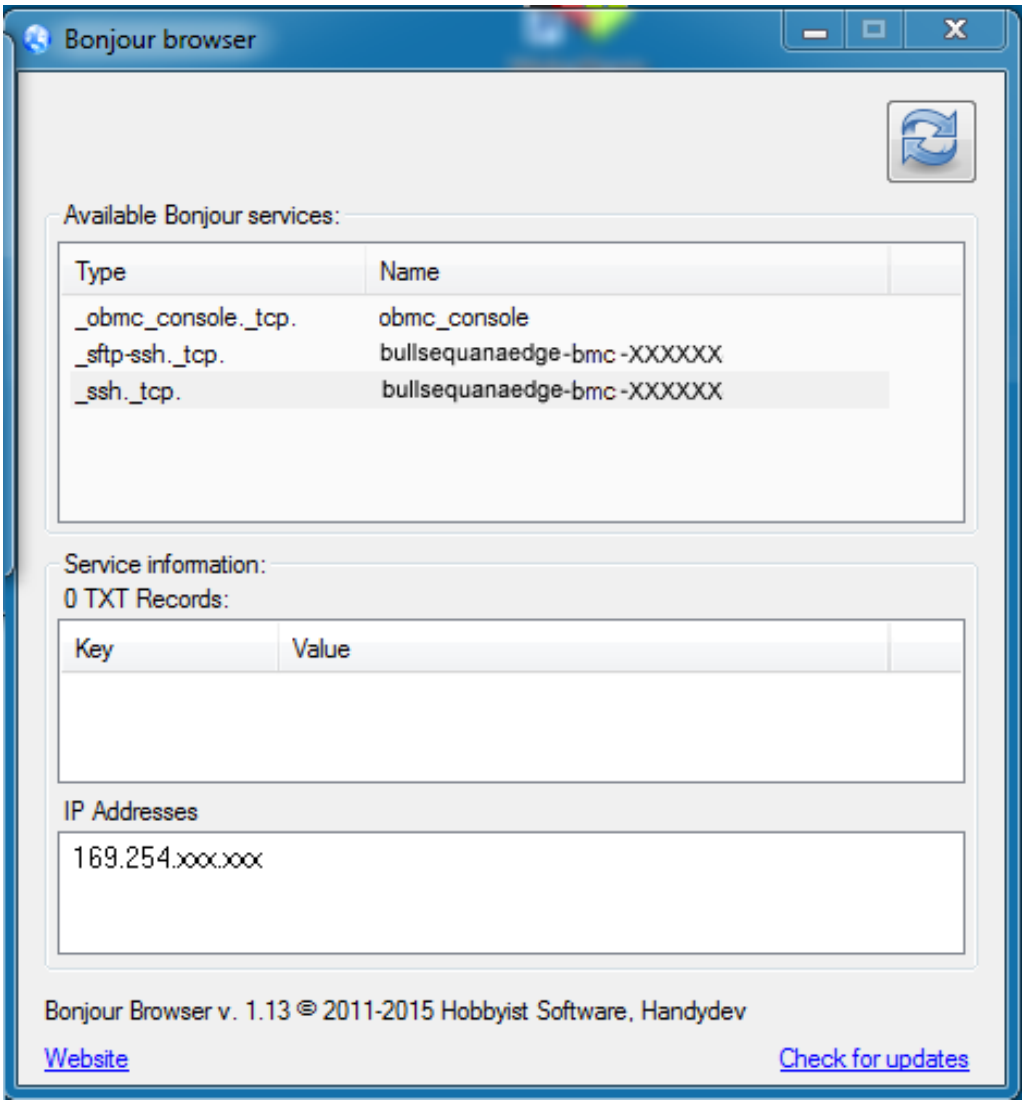
   1. Click the Refresh button at the top on the right of the browser window.



   2. The available services are displayed.

6. Note the server IP address

1. Select the **_ssh._tcp** Bonjour service for the server BMC.
2. The Bonjour server IP address is displayed in the **IP addresses** field.



3. Note the IP address indicated.

1.2.3. Connecting to the SHC for the first time

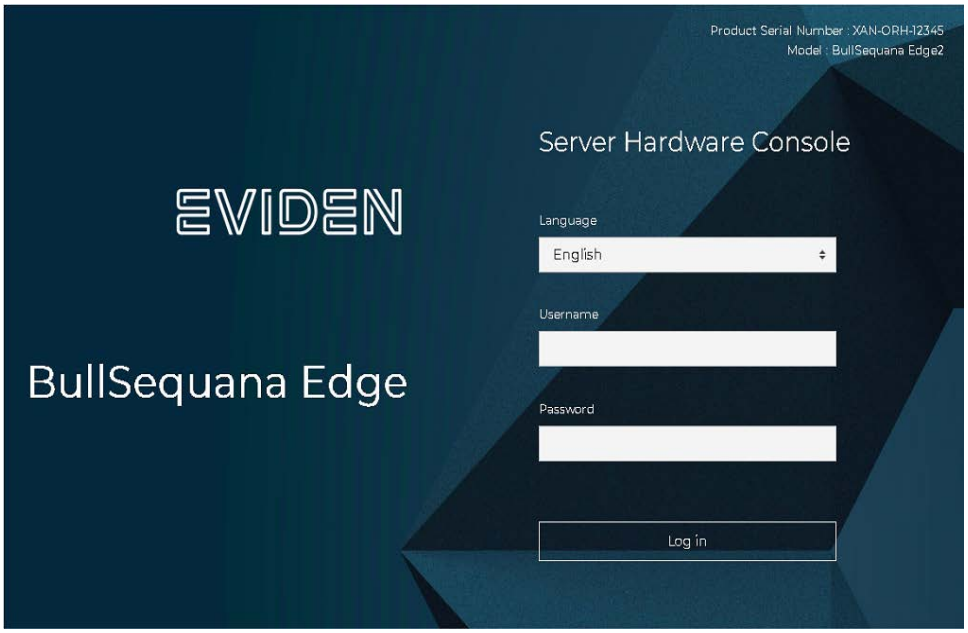
Prerequisites

- An IP address is available for the server
- Chrome or Firefox web browsers are recommended
- Setting the language of the web browser to English is recommended

Procedure

Note The connection to the SHC must be made using the https protocol.

1. Open a web browser on the laptop.
2. Enter the server IP address into the address bar, using the https secure protocol.
3. Ignore all security messages displayed, including advanced messages. The SHC authentication page opens.



4. Complete the Username and Password fields and click **Log in**. The **Overview** page opens.

SHC default user account	
Username	**admin**
Password	**0penBmc*** The 0 in the default password is the number zero.

See SHC Reference Guide for more information.

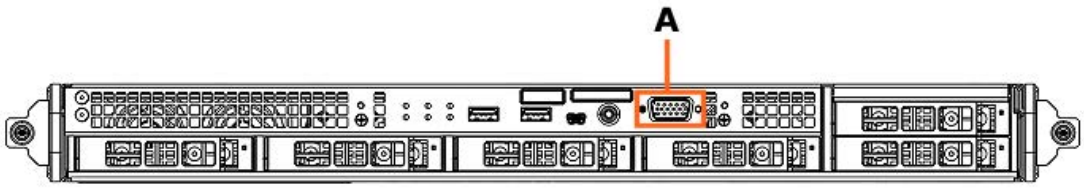
1.3. Connecting the server to a monitor (optional)

Connect a monitor to the VGA port (A).

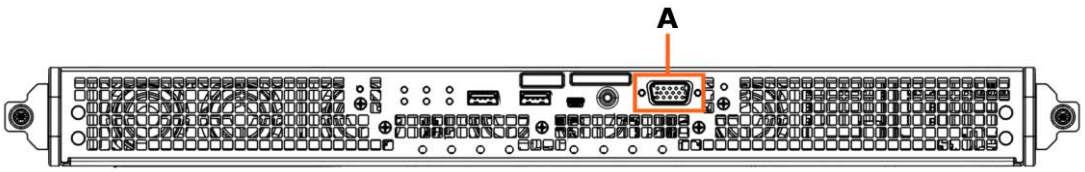
BullSequana EXR

Front view

2.5 inch SATA disk disk option

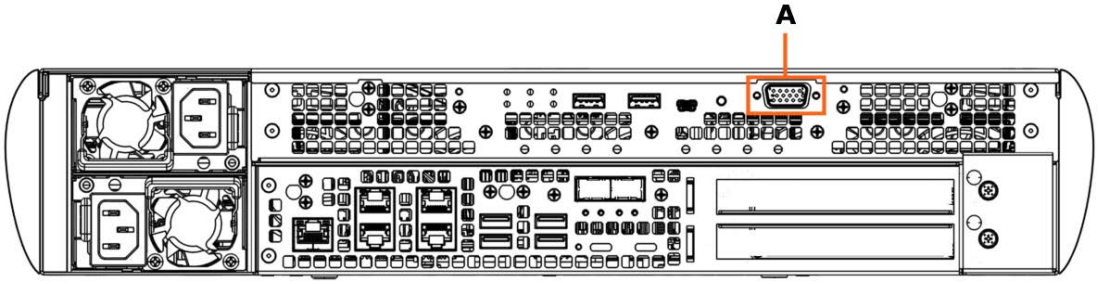


M.2 NVMe disk disk option



BullSequana EXD

Rear view



Chapter 2. Configuring general parameters

Note The parameters listed In this chapter are configured via the Server Hardware Console (SHC). A connection to the SHC must be in place, as previously described.

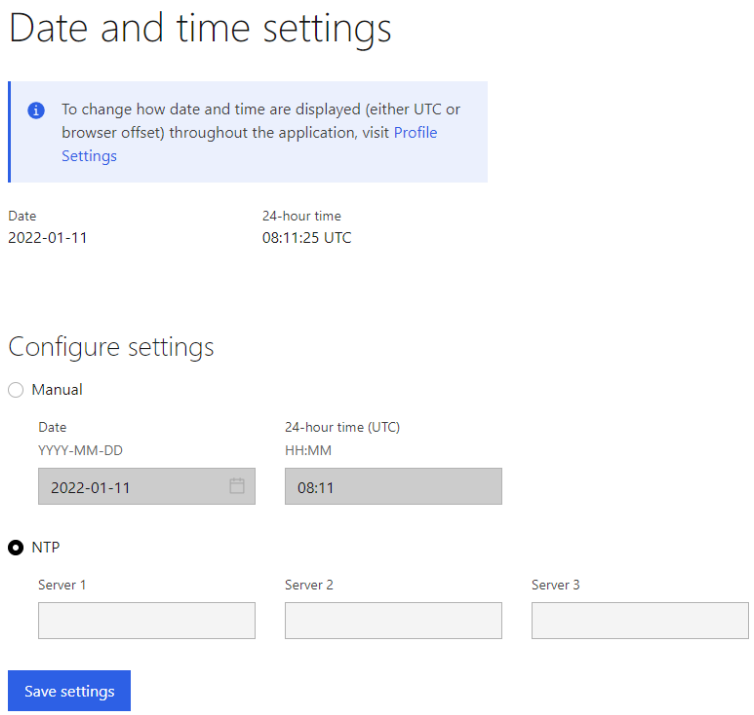
When a BullSequana EX is configured for the first time, it is advisable to note the following details:

Data required	Value
Hostname	
User name	
Password	
DNS server IP address(es)	
Gateway IP address	
NTP server IP address(es)	
Power restore policy	
Rsyslog IP address	
Rsyslog port	

2.1. Setting the date and time

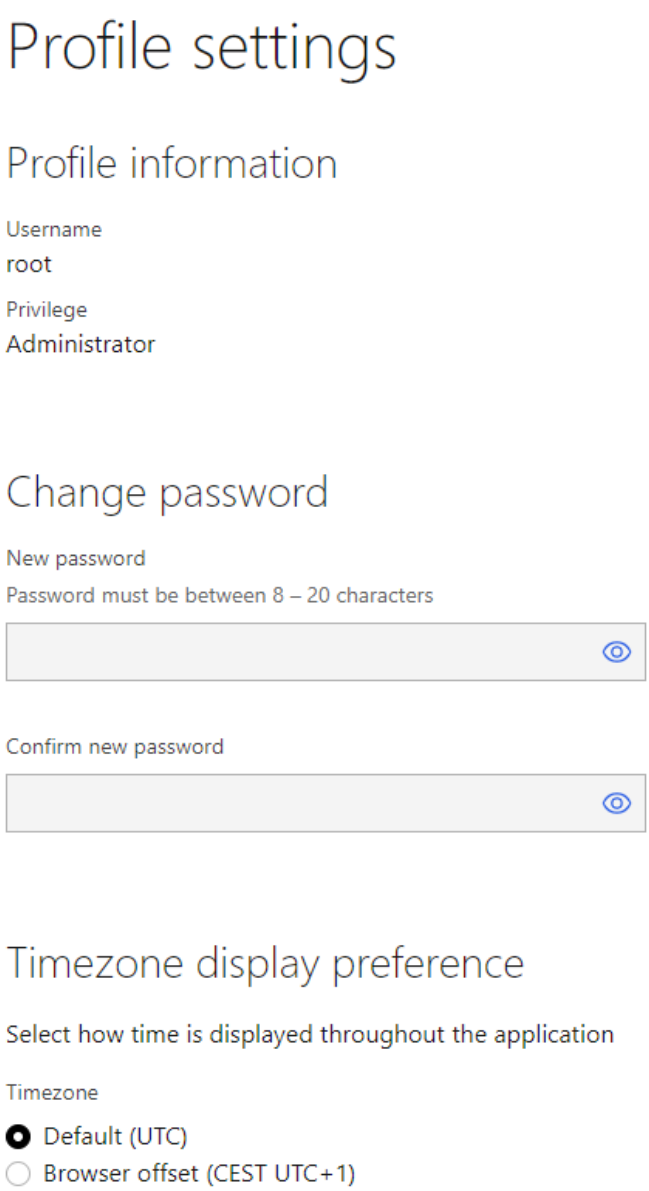
Note It is recommended to configure an NTP server. Time and date settings configured manually will be lost when the BMC is reset.

1. From the **Configuration** tab, click **Date and time settings**. The **Date and time settings** page opens.



2. Select the date and time configuration:
   - Manual
   - Network Time Protocol (NTP) servers
3. Click **Save settings.**

4. Click **Profile Settings** at the top of the page. The **Profile settings** page opens.

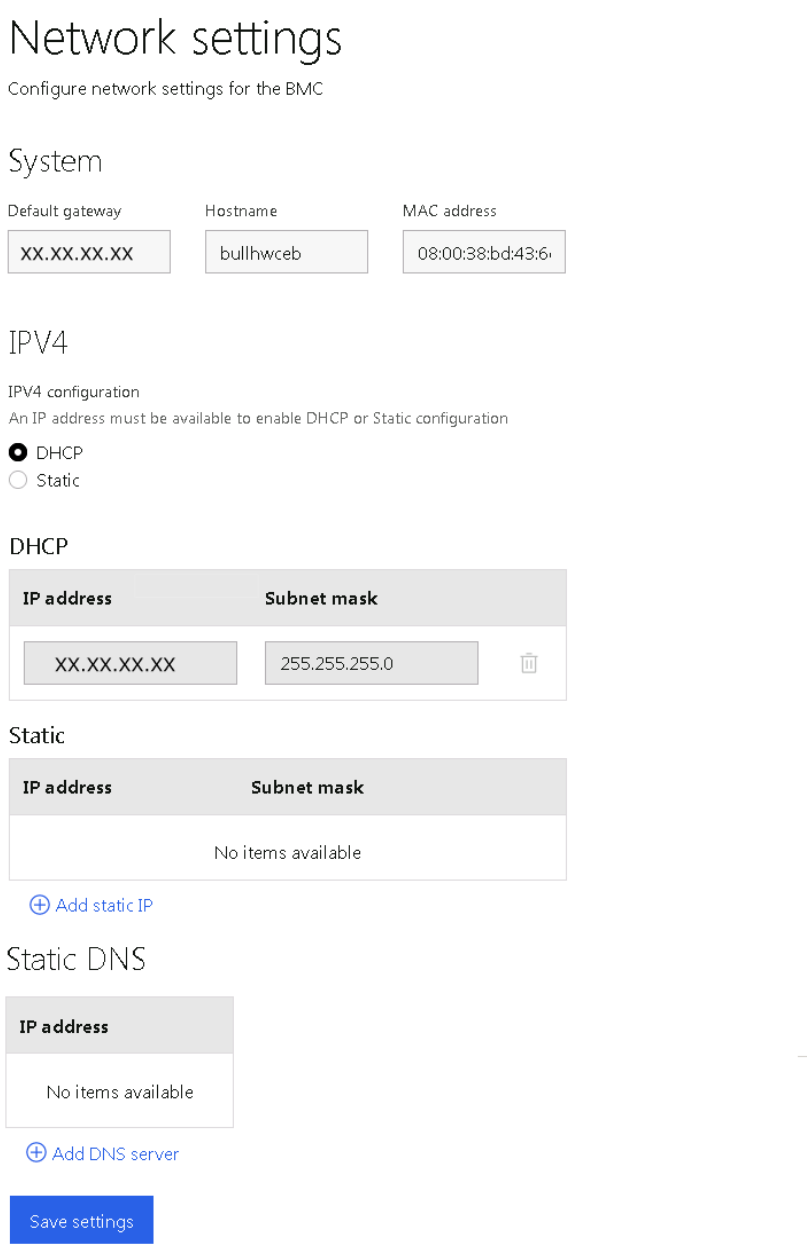


5. Select the timezone display:
   - Default
   - Browser offset
6. Click **Save settings**.

2.2. Configuring network settings

Note The server hostname may be modified in the screen below.

1. From the **Configuration** tab, click **Network settings**. The **Network settings** page opens.



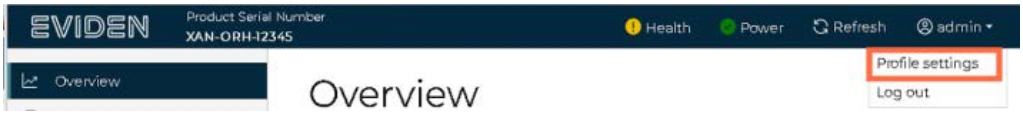
System	
Default gateway	Default gateway IP address
Hostname	The server host name
Mac address	The server MAC address
IP4V	
DHCP	When enabled, the server IP address is retrieved from a DHCP server
Static	When enabled, the server IP address is static
DHCP	
IP address	Server IP address
Subnet mask	Sub-net mask for the host
Static	
IP address	Server IP address
Subnet mask	Sub-net mask for the host
Add static IP	Click this button to add a static IP address
Static DNS	
IP address	DNS server IP address
Add DNS server	Click this button to add a DNS server address

2. Enter the system parameters: default gateway and hostname.
3. Select IPV4 configuration: DHCP or Static.
4. Add a static IP address, if required.
5. Add a DNS server if required.
6. Click **Save settings**.

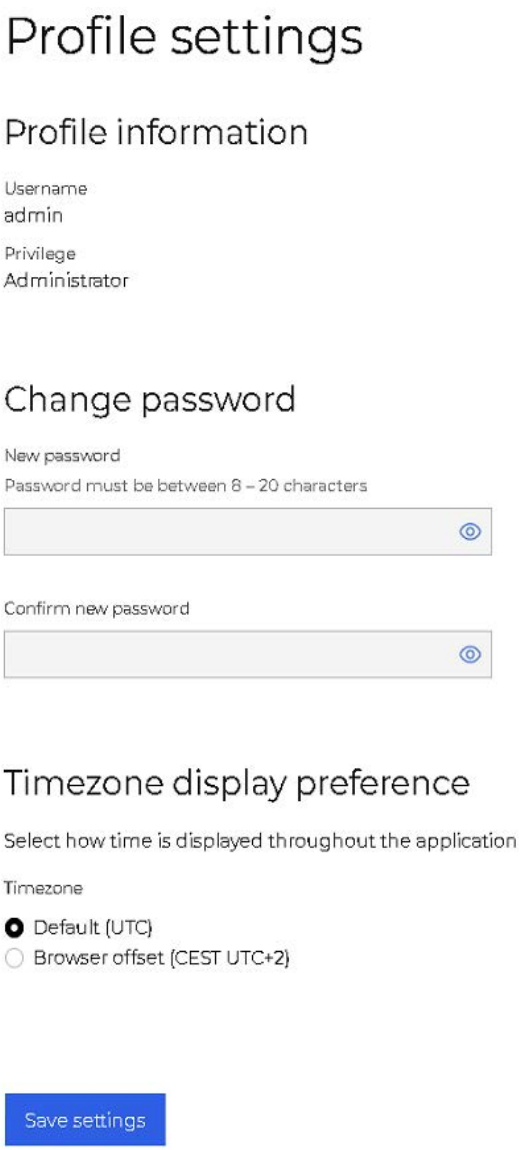
2.3. Changing the initial user password

Important **It is strongly recommended to change the initial password once the setup is completed, taking care to record the new account details for subsequent connections.**

1. From the user profile button, click **Profile settings**.



The **Profile settings** page opens.



2. Enter and confirm the new password.
   - The password must be between 8 and 20 characters long
   - The password must be a mixture of upper case letters, lower case letters, numbers and special characters
   - The password must be different from the user name
3. Click **Save settings**.

Note According to the localisation the timezone can also be changed, for example in France UTC+2 would be used.

2.4. Testing parameters

Stop and restart the Server Hardware Console (SHC) to verify that the new parameters have taken effect.

Procedure

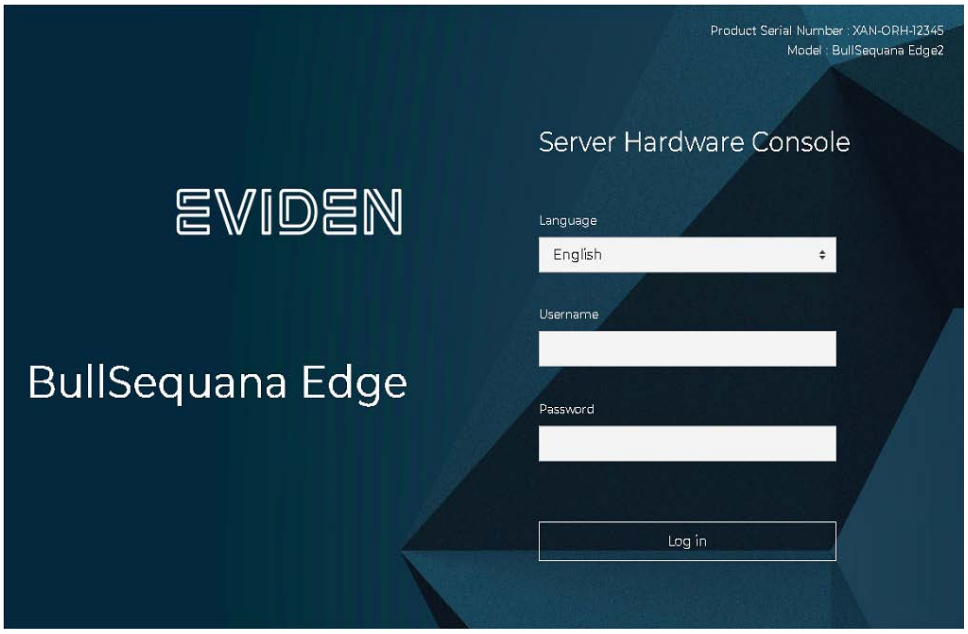
1. **Stop the SHC**

   From the user profile button, click **Log out** to stop the SHC.

2. **Start the SHC**

   Note The connection to the SHC must be made using the https protocol.

   1. Open a web browser on the laptop.
   2. Enter the server IP address into the address bar, using the https secure protocol.
   3. Ignore all security messages displayed, including advanced messages. The SHC authentication page opens.



Chapter 3. Installing an operating system

The operating system is installed from one of the following:

- A bootable USB drive
- A Pre-boot eXecution Environment (PXE)
- A virtual media device

Prerequisites

- The server power status is Off
- Depending on the installation option:
  - A bootable USB drive with the OS to be installed is plugged into a USB port
  - A Pre-boot eXecution Environment (PXE) has been set up and is accessible
  - The location for the virtual media ISO file is known

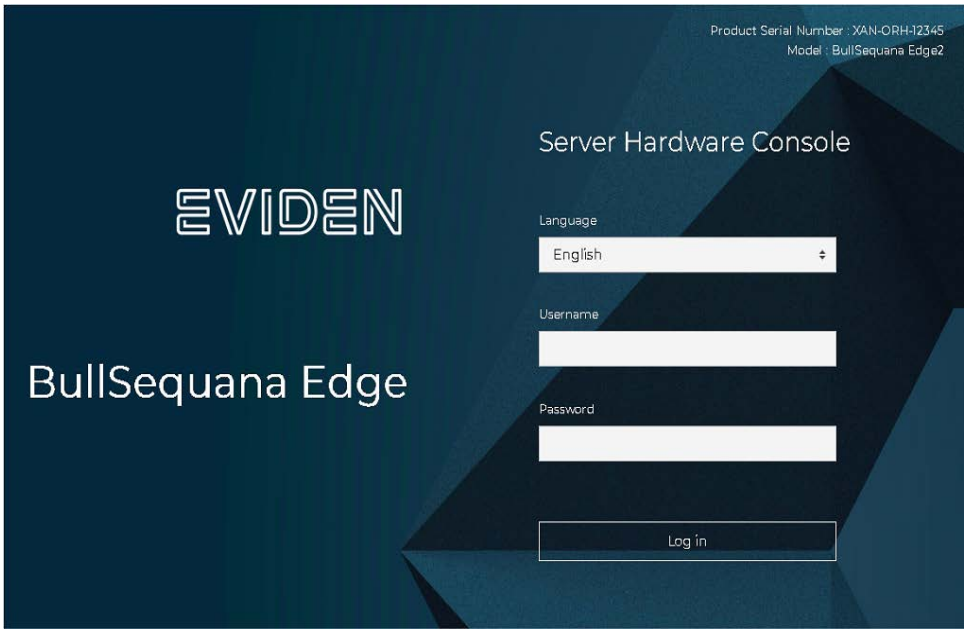
3.1. Installing an OS

Procedure

1. Connect to the SHC

Note The connection to the SHC must be made using the https protocol.

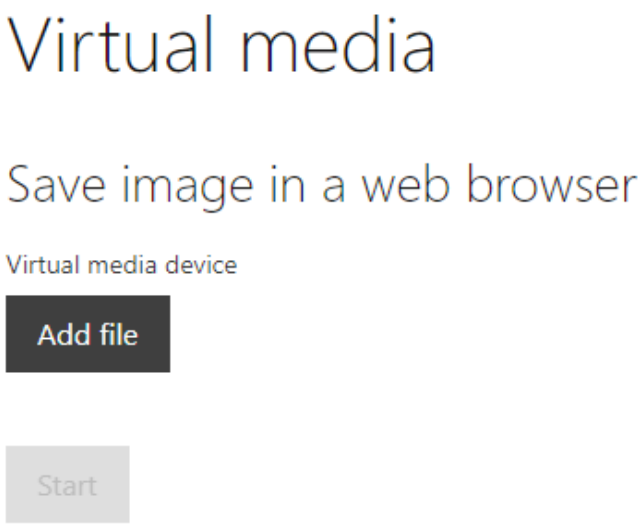
1. Open a web browser on the laptop.
2. Enter the server IP address into the address bar, using the https secure protocol.
3. Ignore all security messages displayed, including advanced messages. The SHC authentication page opens.



2. **Create a virtual media session if this OS installation option is to be used**

Note	Only users with Administrator privilege have access to this feature.

1. From the **Control** tab, click **Virtual media**. The **Virtual media** page opens.



2. Click **Add** file.
3. Select an ISO file for the boot.
4. Click **Start**.

3. **Power on the server**

1. From the **Control** tab, click **Server power operations**. The **Server power operations** page opens.
2. In the **Operations** section, click **Power on**.

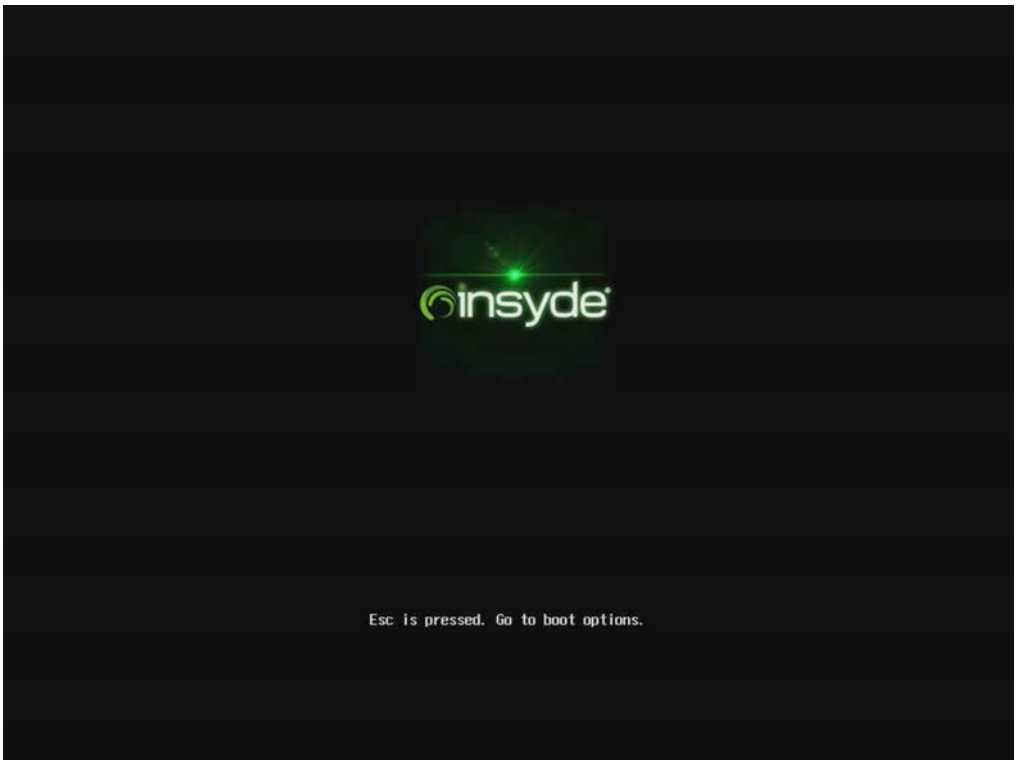
4. **Launch the remote system console**

From the **Control** tab, click **KVM**. The **KVM** page opens.

5. Access the BIOS interface

1. Wait a few minutes for the following screen to be displayed.

2. Press **[ESC]** to display the BIOS interface.

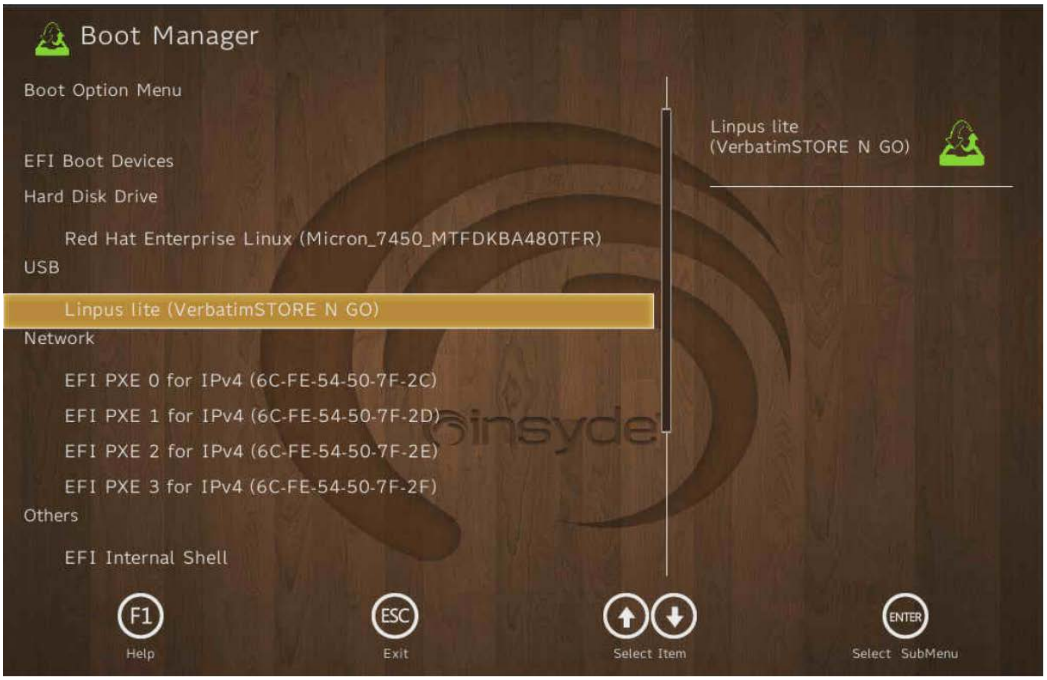


3. Select **Boot Manager** from the main menu using the navigation arrows and press **[Enter]**.

6. Define the boot device

1. Select the boot device and press **[Enter]**.

Boot device	Action
Bootable USB drive	Select the corresponding entry in the **USB** section
PXE server	Select the corresponding entry in the **Network** section
Virtual media ISO file	Select the corresponding entry in the **USB** section



2. Follow the instructions displayed to Install the OS.
3. Select the system settings required.

3.2. Booting the operating system (OS)

Note It is advisable to boot the OS using the BIOS interface for the first time in order to verify that the installation is correct. If OK, the operating system is booted in the normal way for subsequent boots.

Prerequisite

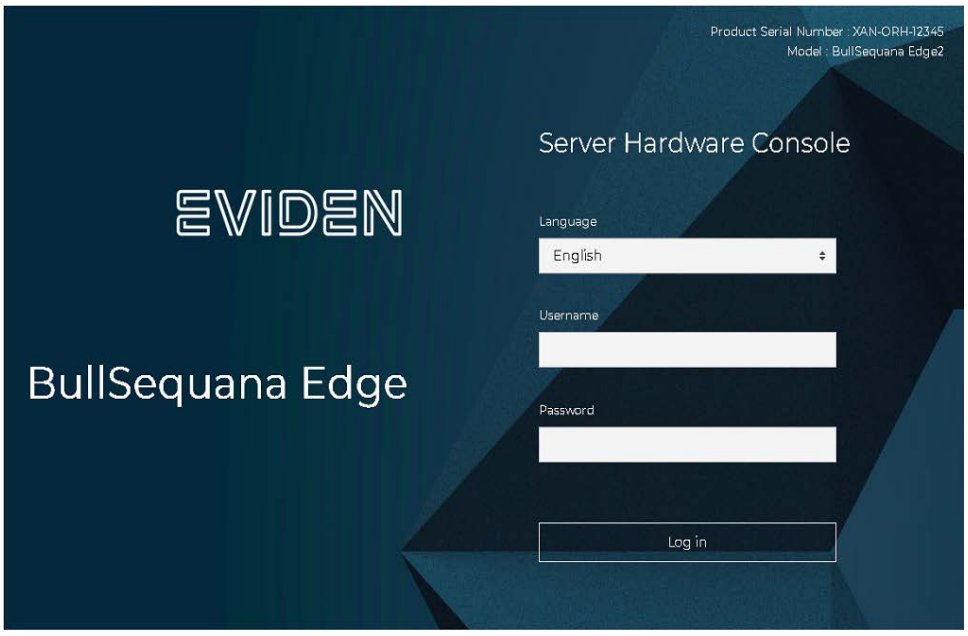
The server power status is Off.

Procedure

1. **Connect to the SHC**

Note The connection to the SHC must be made using the https protocol.

1. Open a web browser on the laptop.
2. Enter the server IP address into the address bar, using the https secure protocol.
3. Ignore all security messages displayed, including advanced messages. The SHC authentication page opens.



2. **Power on the server**

1. From the **Control** tab, click **Server power operations**. The **Server power operations** page opens.
2. In the **Operations** section, click **Power on**.

3. **Launch the remote system console**

From the **Control** tab, click **KVM**. The **KVM** page opens.

4. Access the BIOS interface

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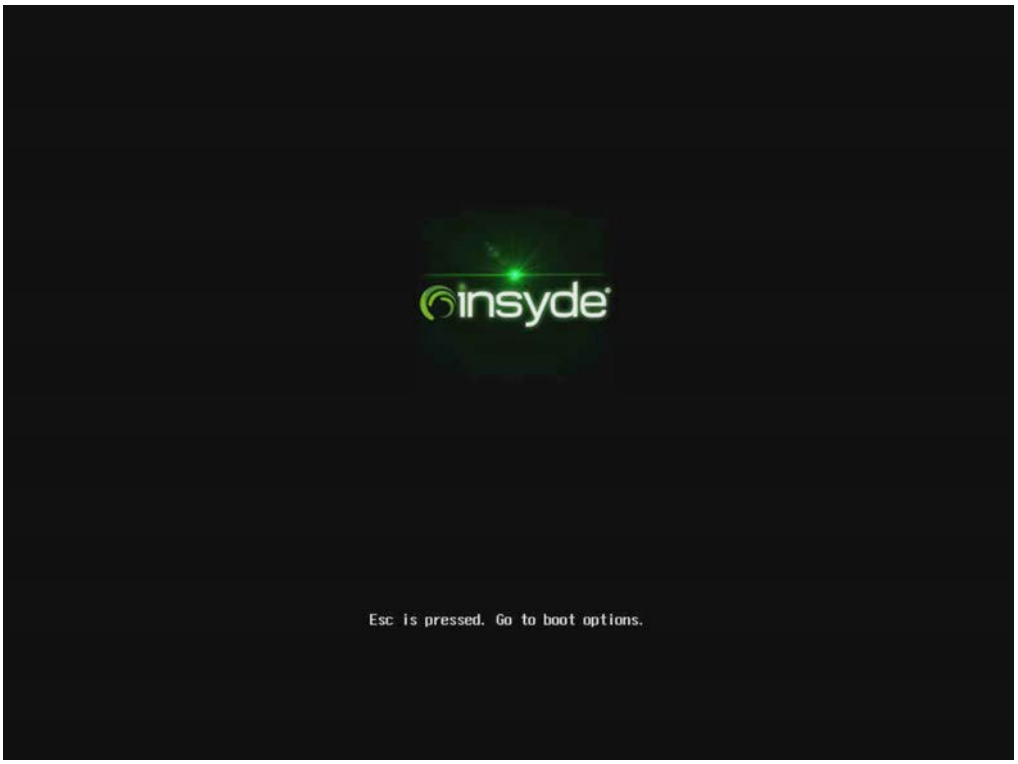
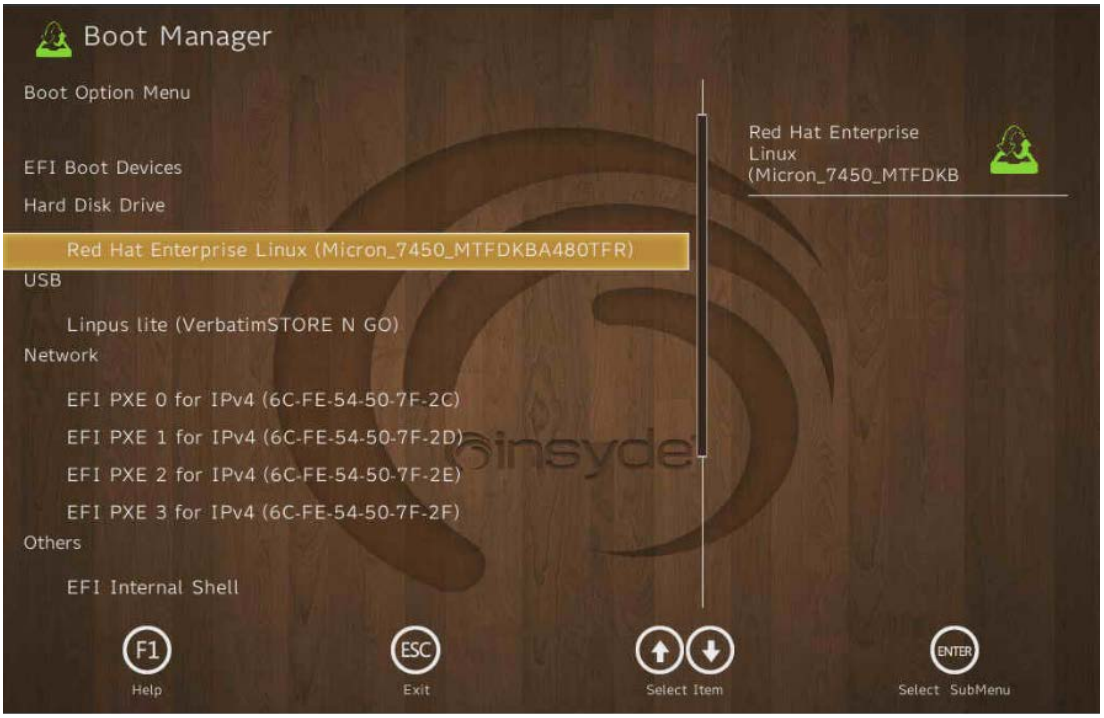


3. Select **Boot Manager** from the main menu using the navigation arrows and press **[Enter]**.

5. Select the boot option

1. Select the entry corresponding to the OS and press [Enter] to exit setup and complete the system boot.



2. Wait until the boot completes to verify that the operating system has installed correctly.

Chapter 4. Power operations

A BullSequana EX server can be powered on and off using:

- The power button at the front of the server
- The Server Hardware Console (SHC)

See The Description Guide for more information about the ports and LEDs and the SHC Reference Guide.

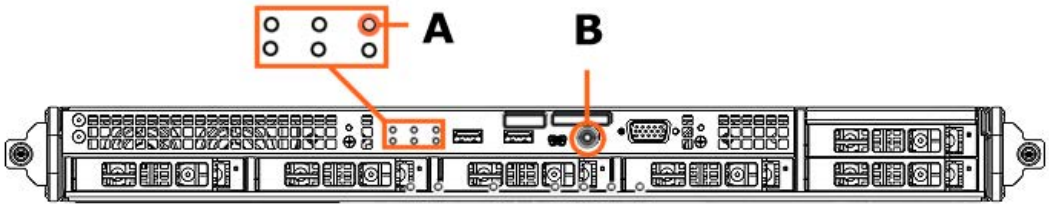
4.1. Powering on the server with the power button

1. Check that the power status LED (A) is blinking green to indicate that the server power status is Off.
2. Press the power button (B) for approximately two seconds.

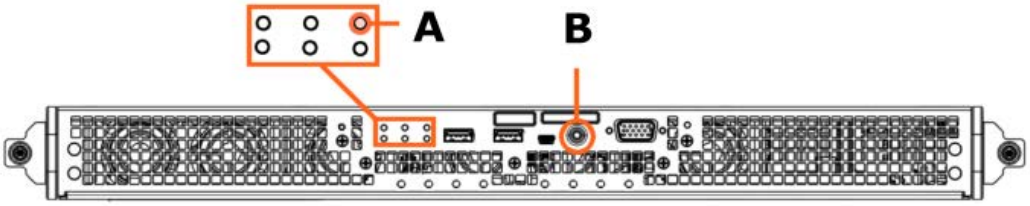
BullSequana EXR

Front view

2.5 inch SATA disk option

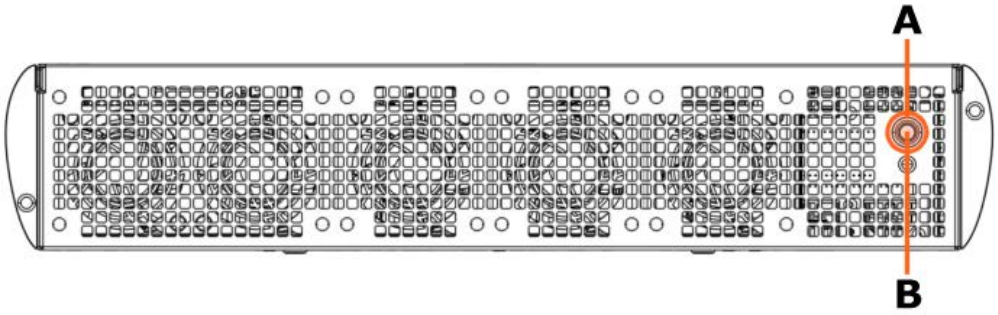


M.2 NVMe disk option

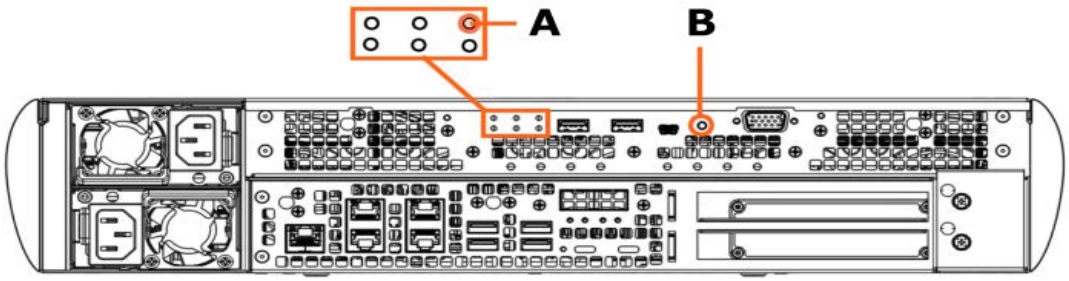


BullSequana EXD

Front view



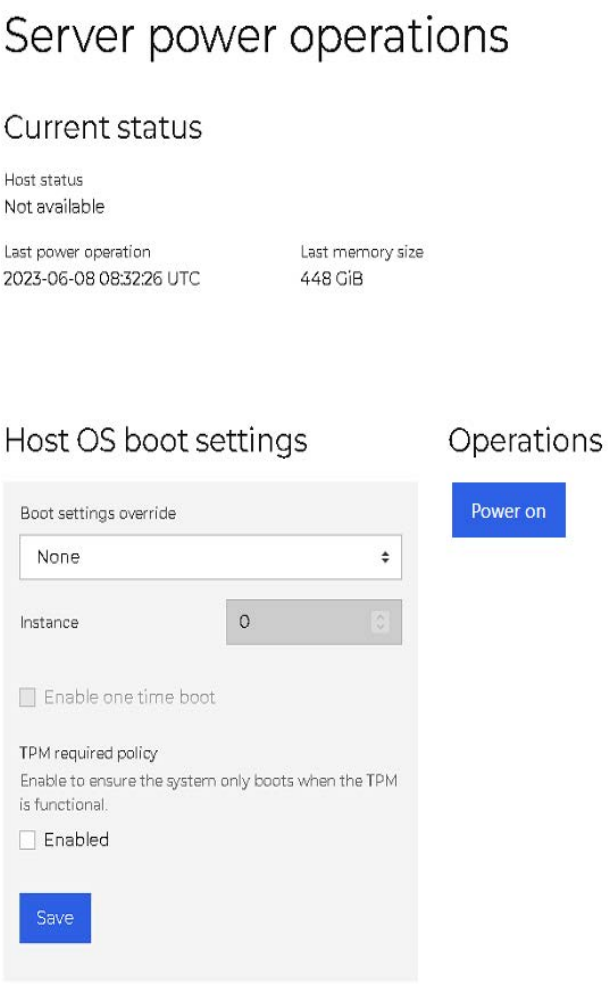
Rear view



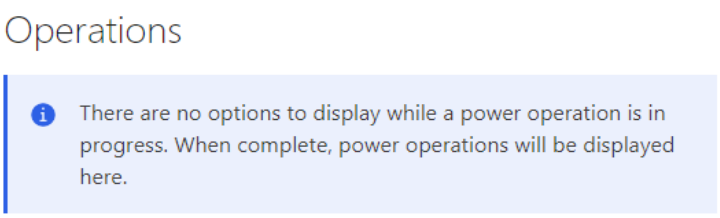
3. Check that the power button LED (A) is on and solid green to indicate that the server power status is Running.

4.2. Powering on from the SHC

1. From the **Control** tab, click **Server power operations**. The **Server power operations** page opens.
2. In the **Operations** section, click **Power on**.



A message is displayed.



Note After initiating the power on of the system, there is a 30 second delay before the update of the host power status to avoid sensor fluctuation. It is therefore necessary to wait 30 seconds before refreshing the Server power operations page of the Server Hardware Console (SHC) to see the updated power status after a power on.

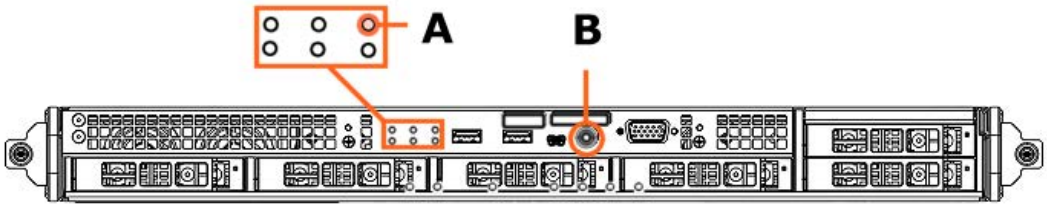
4.3. Powering off the server with the power button

1. Check that the power button LED (A) is on and solid green to indicate that the server power status is Running.
2. Press the power button (B) for approximately four seconds.

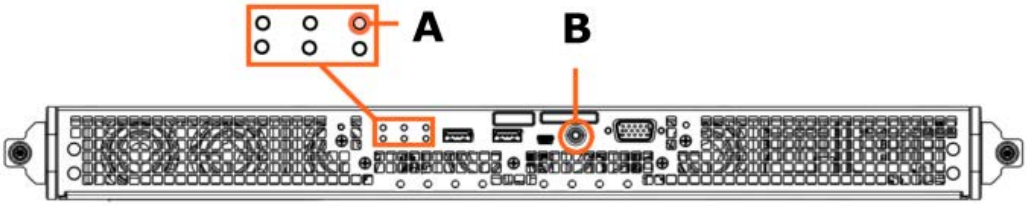
BullSequana EXR

Front view

2.5 inch SATA disk option

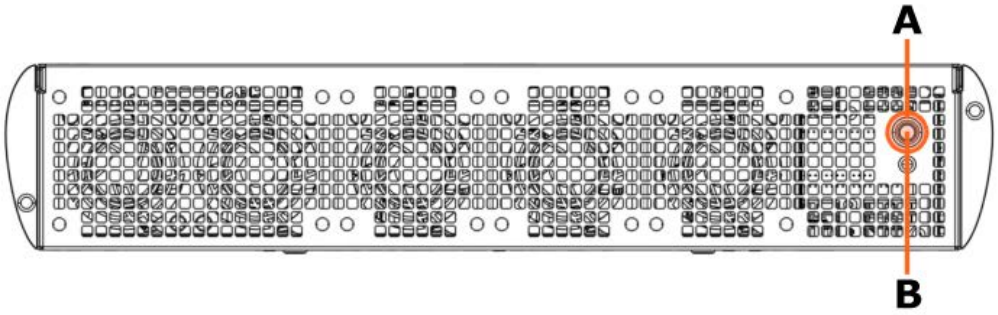


M.2 NVMe disk option

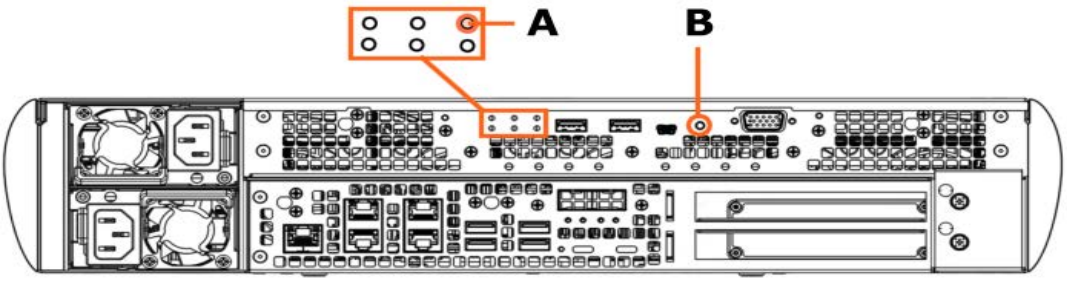


BullSequana EXD

Front view



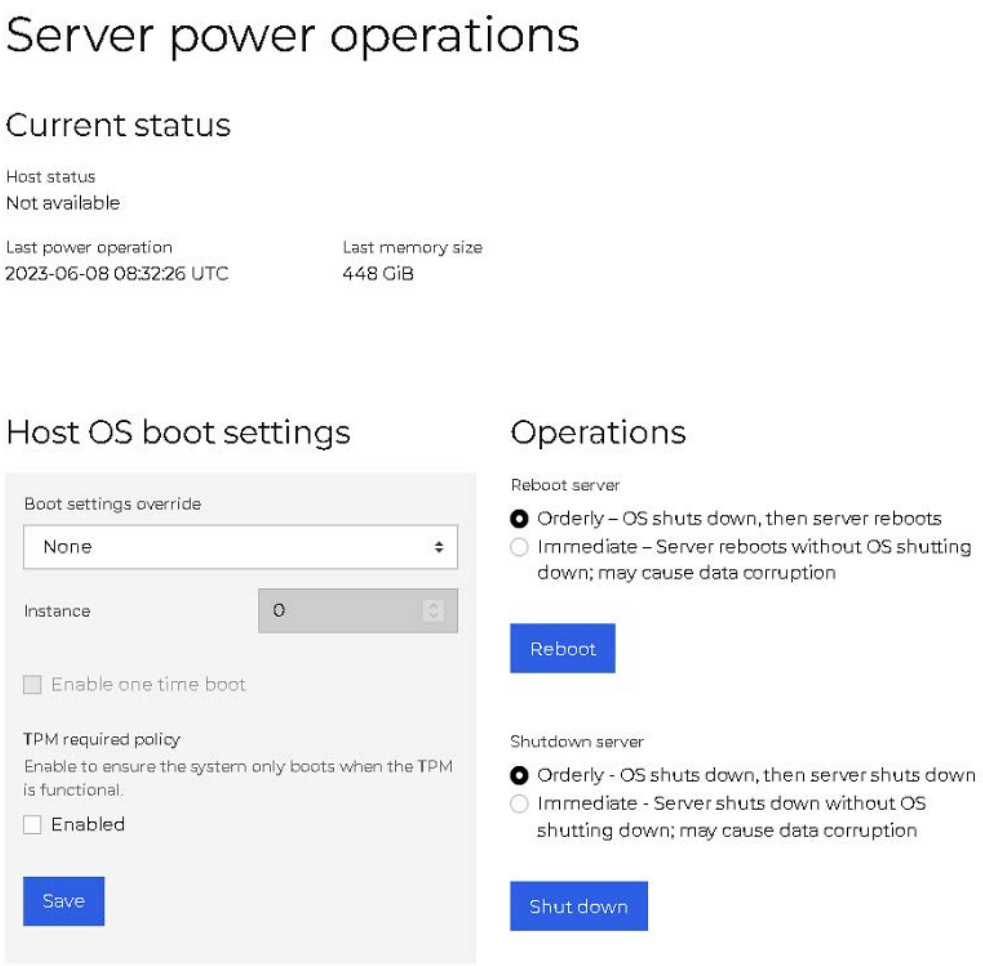
Rear view



3. Check that the power status LED (A) is blinking green to indicate that the server power status is Off.

4.4. Rebooting or shutting down from the SHC

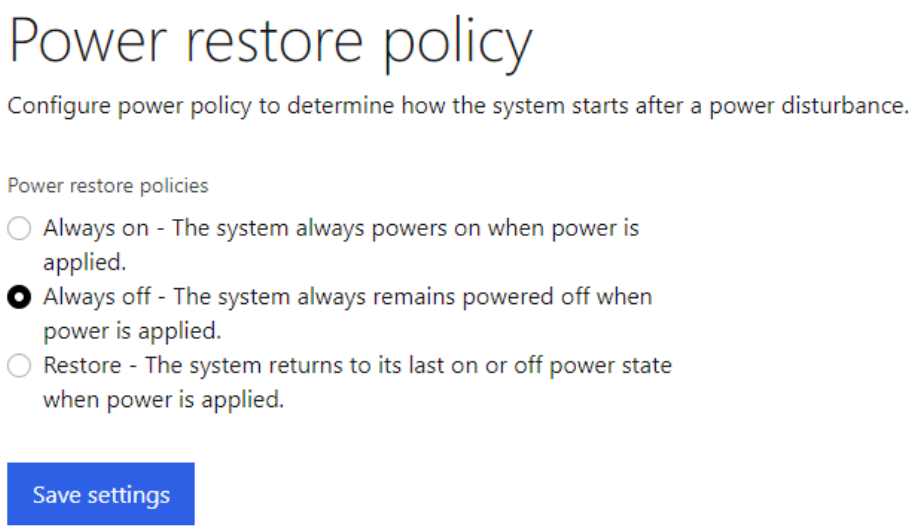
1. From the **Control** tab, click **Server power operations**. The **Server power operations** page opens.
2. In the **Operations** section, select the mode and click **Reboot** or **Shutdown**.



4.5. Configuring the power restore policy

The power restore policy determines how the system starts after a power disturbance.

1. From the **Control** tab, click **Power restore policy**. The **Power restore policy** page opens.



2. Select the policy.

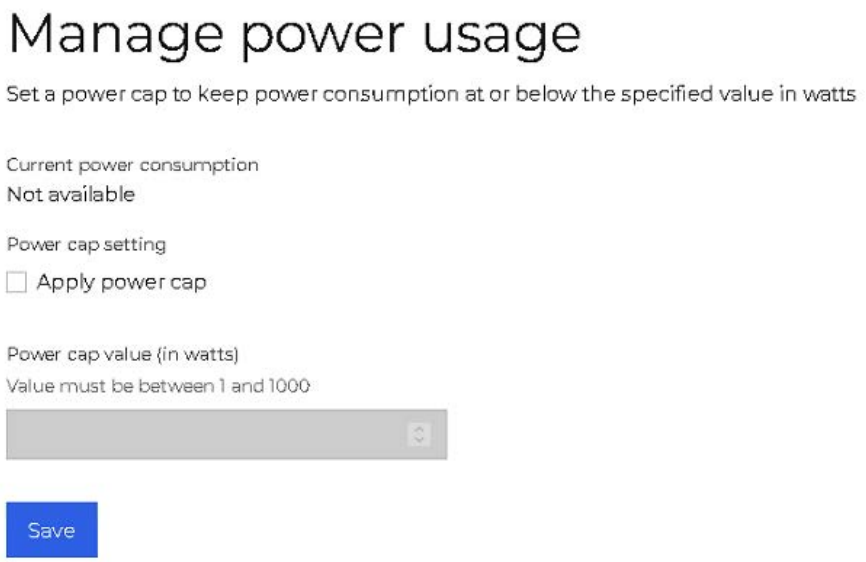
Power restore policy	Description
Always On	The system always powers on when power is applied
Always Off	The system always remains powered off when power is applied
Last state	The system returns to its last power state when power is applied

3. Click **Save Settings**.

4.6. Managing power usage

Note Only users with Administrator privilege have access to this feature.

1. From the **Control** tab, click **Manage power usage**. The **Manage power usage** page opens.



2. To set a power cap:
   a. Select **Apply power cap**.
   b. Set the power cap value in the **Power Cap Value (in watts)** box.
3. Click **Save**.

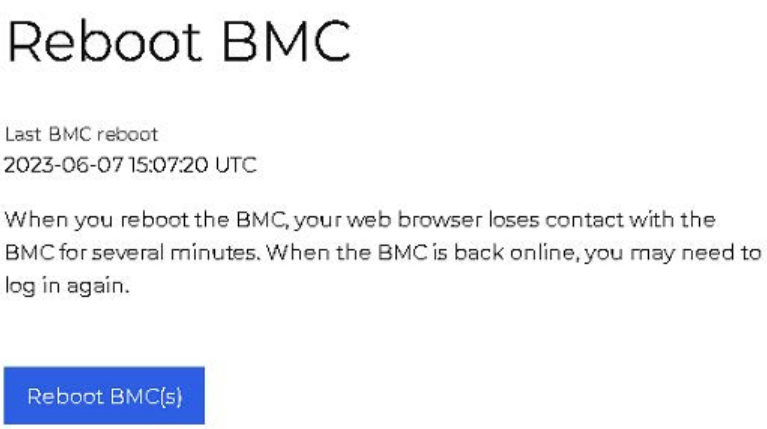
Note The power consumption and power cap value are indicated on the Overview page.

Chapter 5. Maintenance operations

5.1. Rebooting the BMC

Note Only users with Administrator privilege have access to this feature.

1. From the **Control** tab, click **Reboot BMC**. The **Reboot BMC** page opens.



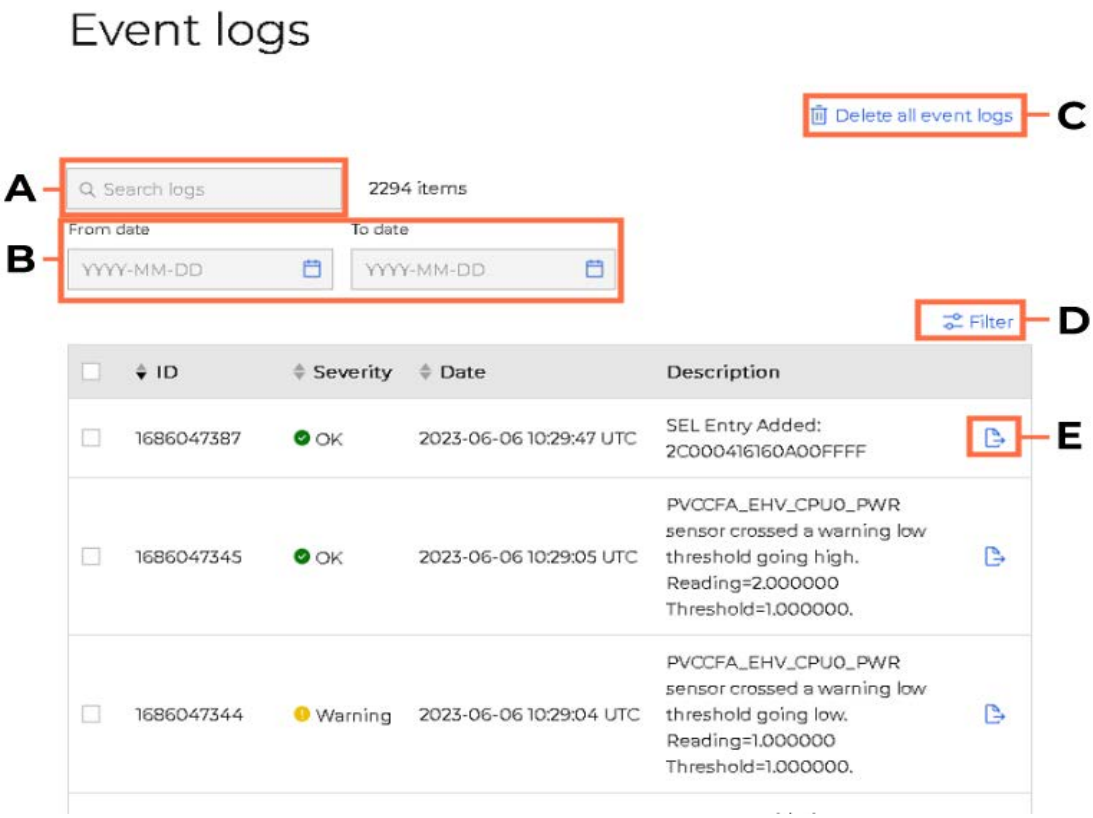
2. Click the **Reboot BMC** button and confirm.

   A success message is displayed.

5.2. Checking event logs

Displaying event logs

From the **Health** tab, click **Event logs**. The **Event logs** page opens.



Mark	Description
A	Alphabetical search
B	Date range search
C	Log deletion
D	Severity filter
E	Export of log to a json file

Filtering event logs

Enter one or more search criteria in the alphabetical search (A), date range (B) and severity (D) fields to filter the event logs displayed.

Exporting event logs

Click the arrow (E) to export an event log to a json file.

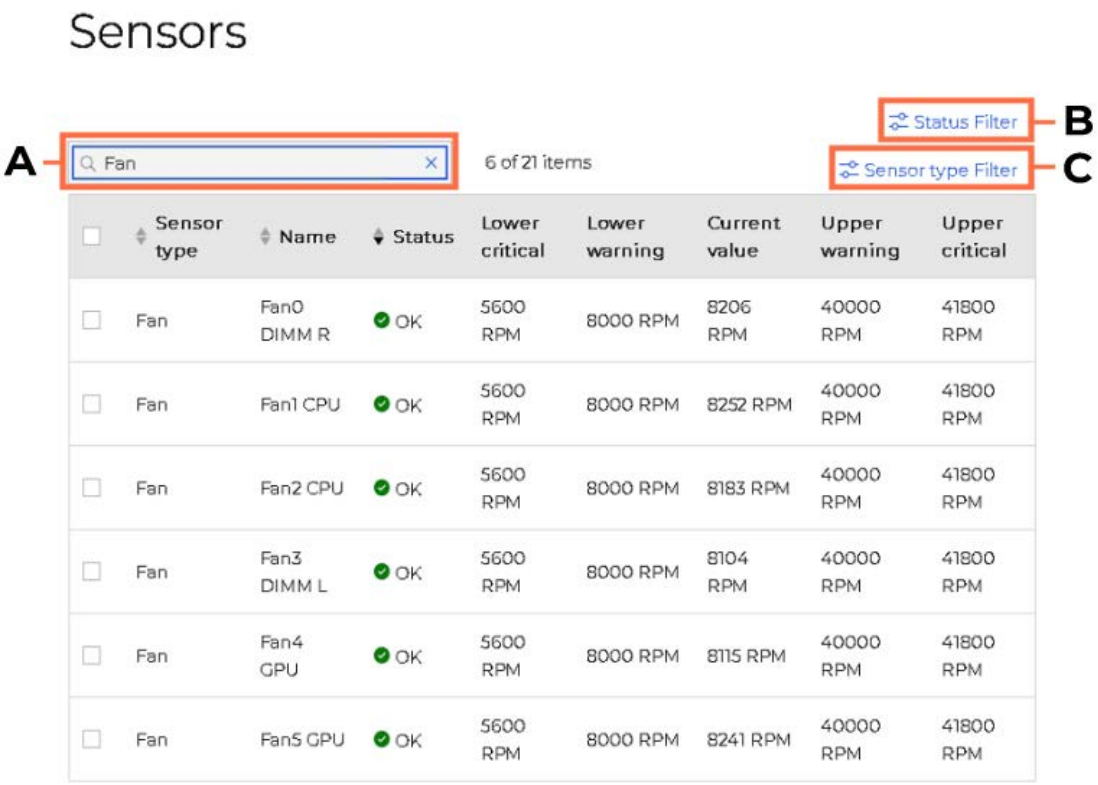
Deleting event logs

Click (C) to delete all event logs.

5.3. Checking the sensors

Displaying sensors

From the **Health** tab, click **Sensors**. The **Sensors** page opens.



Mark	Description
A	Alphabetical search
B	Status filter
C	Sensor type filter

Filtering sensors

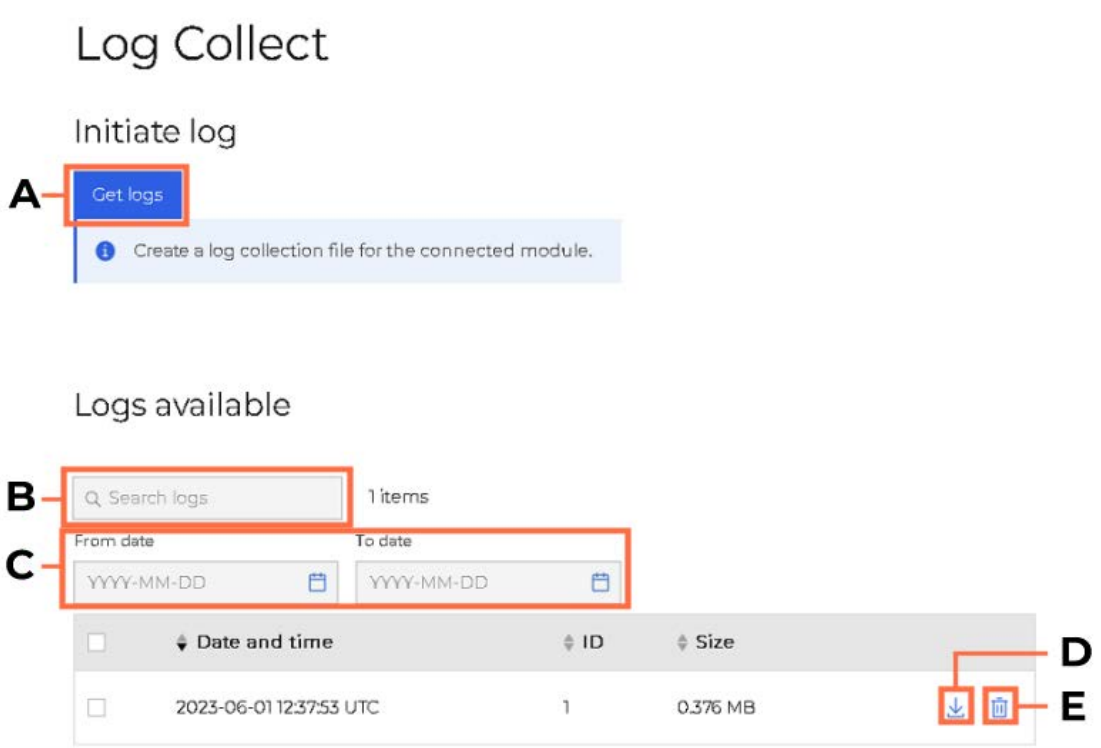
Enter one or more search criteria in the alphabetical search (A), date range (B) and severity (C) fields to filter the sensors displayed.

5.4. Collecting Logs

A log file is a collection of the logs for the connected server.

Displaying logs

From the **Health** tab, click **Log Collect**. The **Log Collect** page opens.



Mark	Description
A	Log file creation
B	Alphabetical search
C	Data range search
D	Log file download
E	Log file deletion

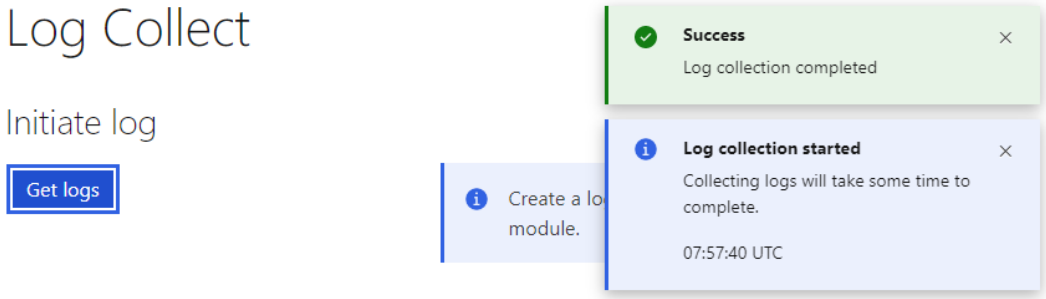
Filtering logs

Enter the search item (B) and / or the date range (C) to filter the log files displayed.

Collecting logs

Note	Due to space restrictions, it is advisable to delete the existing logs before perform a new log collect.

Click **Get logs** (A) to create a new log collection.



Exporting event logs

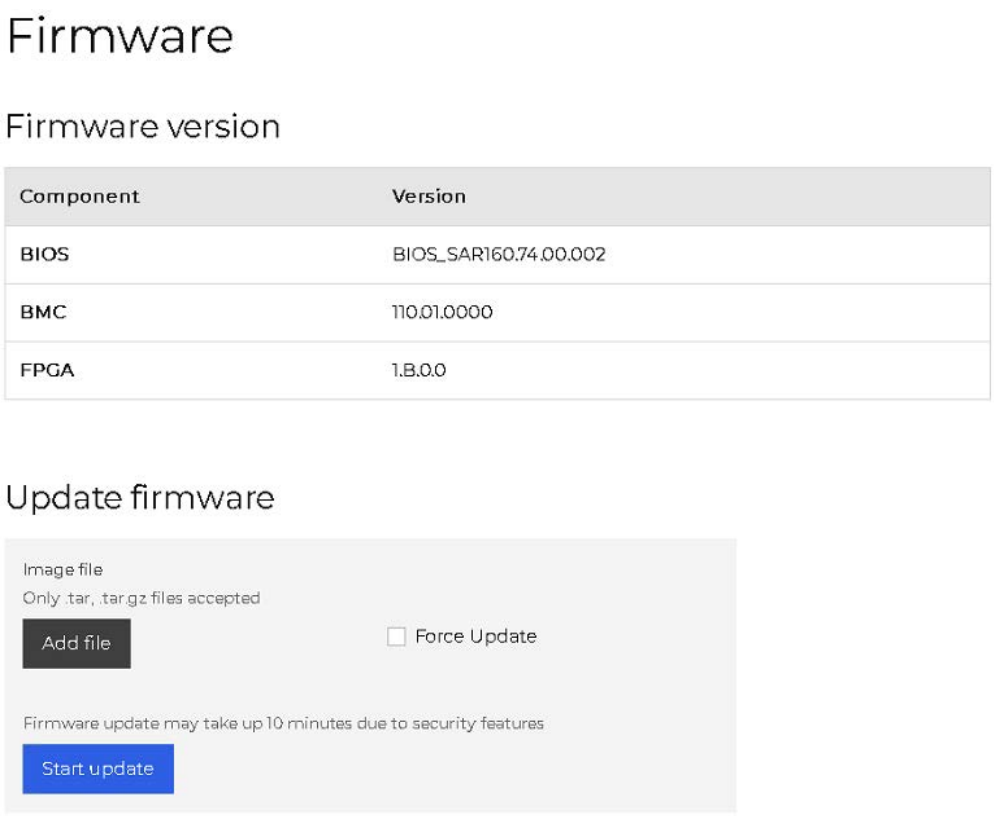
Click the arrow (D) to download a log file.

Deleting event logs

Click (E) to delete the log file.

5.5. Managing firmware versions

1. From the **Configuration** tab, click **Firmware**. The **Firmware** page opens.



2. To update a firmware version, click **Add file** to select the firmware version file, and click **Start update**

Notes

- It is strongly recommended to power off the system before updating the BIOS and FPGA firmware.
- Select the **Force Update** box to reinstall the same firmware version.