BullSequana Edge

Server Hardware Console Reference Guide

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Hardware

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Preface

This guide explains how to use the Server Hardware Console (SHC) to manage a BullSequana Edge.

See The Bull support web site for the most up-to-date product information, documentation, firmware updates, software fixes and service offers: http://support.bull.com

Intended Readers

This guide is intended for use by system administrators and operators

Chapter 1. Getting started

1.1. Overview

The BullSequana Edge Server Hardware Console (SHC) 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 Controllers (BMC) firmware stack.

1.2. Connect to the Server Hardware Console (SHC)

Important **The https protocol must always be used to connect to the SHC.**

Prerequistes

A laptop is connected to the BullSequana Edge server

A Chrome or Firefox browser is installed on the laptop

The BullSequana Edge BMC has an IP address allocated

See The BullSequana Edge Getting Started Guide for more information about allocating an IP address to the BullSequana Edge BMC.

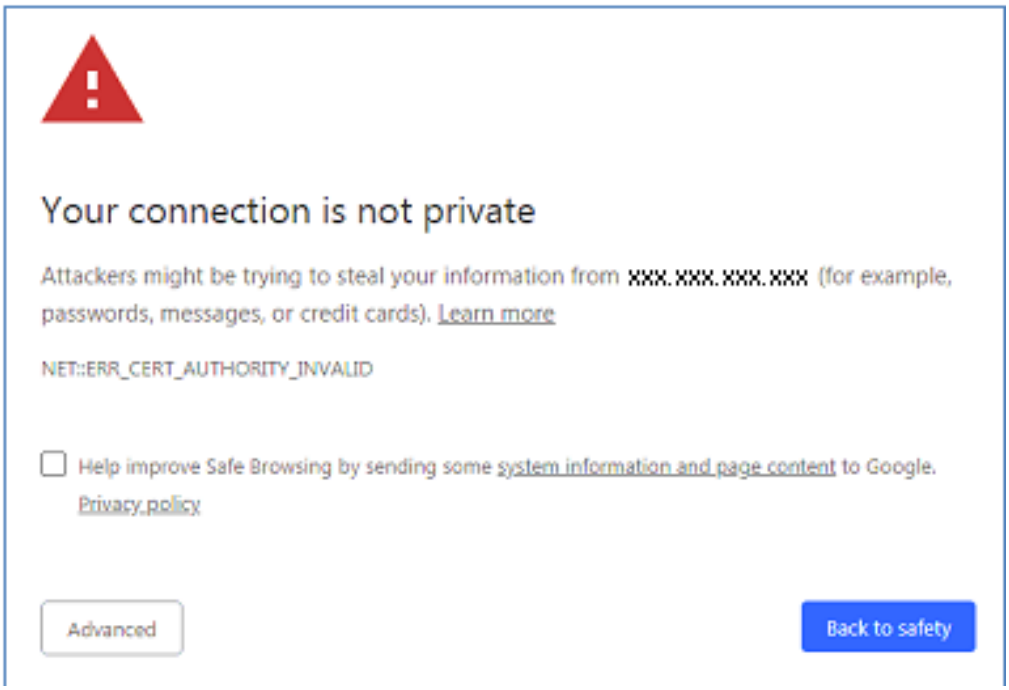
Procedure

1. **Enter the BMC IP address into the web browser address bar using the https protocol**

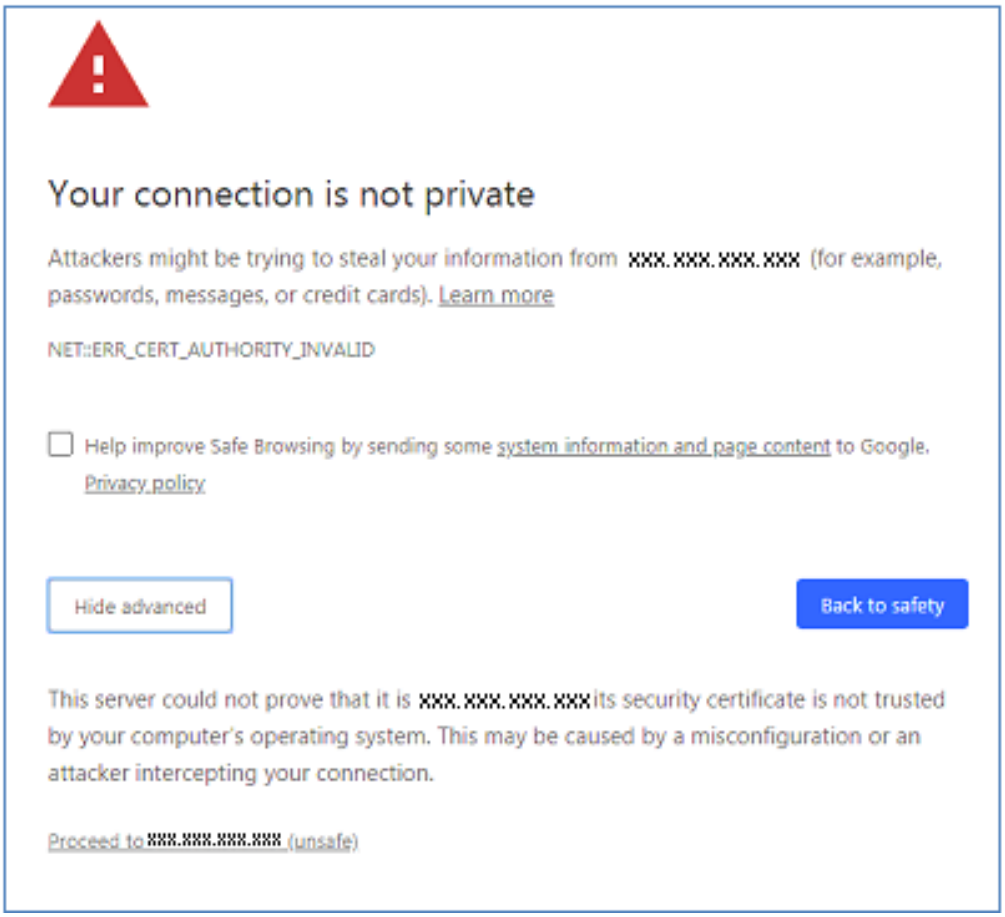
   Note The BMC IP address allocated will be in the https://192.168.xxx.xxx or the https://169.254.xxx.xxx ranges.

2. **Ignore any security warning messages that are displayed**

   1. The following screens are displayed for the first connection with the Chrome browser.



2. Click **Advanced.**



3. Click **Proceed to XXX.XXX.XXX.XXX**
4. The Server Hardware Console (SHC) authentication page opens.

1.3. Log in to the Server Hardware Console (SHC)

Prerequistes

A laptop is connected to the BullSequana Edge server

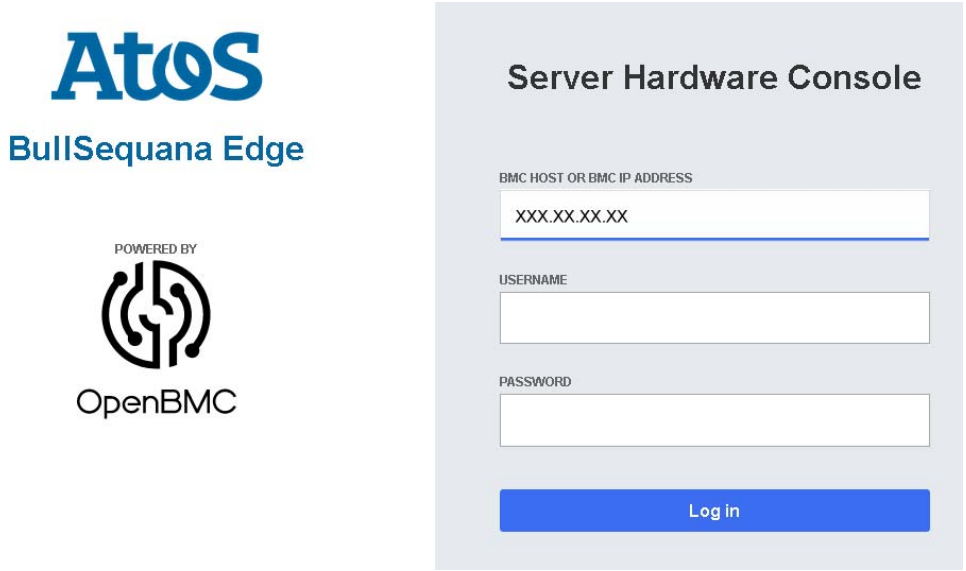
A Chrome or Firefox browser is installed on the laptop

The BullSequana Edge BMC has an IP address allocated

Procedure

1. **Connect to the SHC**

   The Server Hardware Console (SHC) authentication page opens.



2. **Complete the SHC log in details**

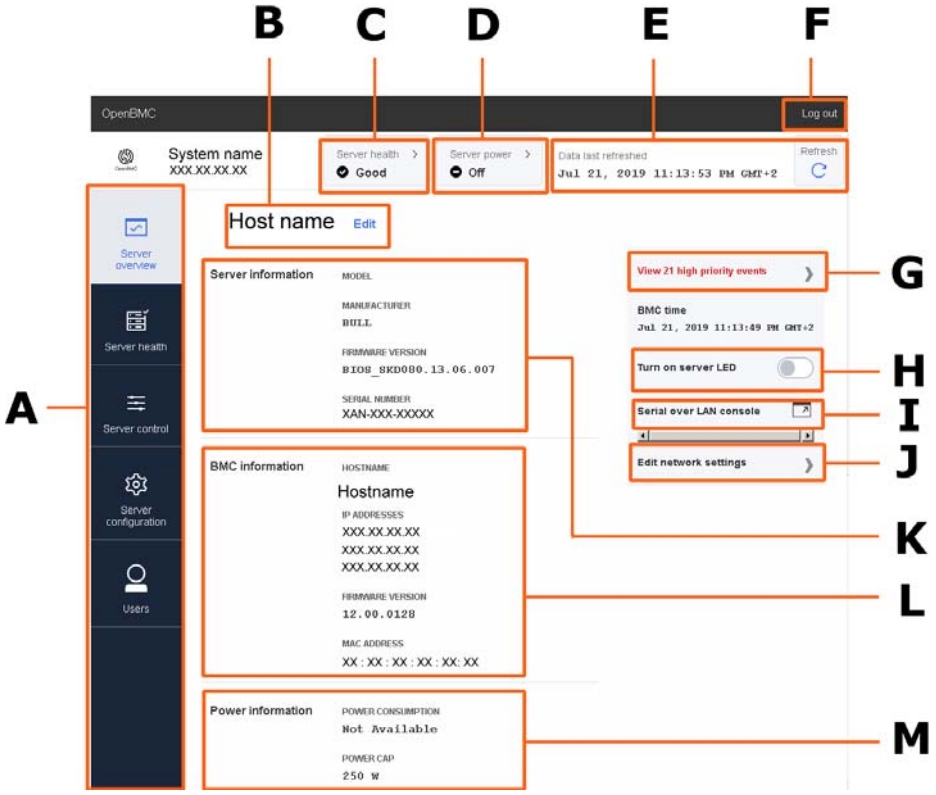
   Complete the **Username** and **Password** fields and click **Log in**.

Note	The default username is **admin** and the default password is **pass**. For security reasons it is strongly recommended that these are changed at the first log in.

1.4. The Server overview page

The Server overview page provides a summary of the BullSequana Edge system details and status. It also includes links to some server management and configuration features.

Note Some operations, for example, turning on the server LED, can be performed both from the shortcut (H) on the Server overview page or via the feature tab on the left hand side (A).



Mark	Description
A	Feature tabs with sub-items used to monitor, manage and configure a BullSequana Edge
B	The host name for the server. Click Edit to change the host name.
C	Summary of the server health status with a link to the Event log page
D	Server power state
E	Refresh button for the overview page with the date and time of the last refresh
F	Log out button
G	Number of high priority SELs. Click the link for more details.
H	Button to turn on the server identification LED on the front of the server
I	Link to the Serial over LAN (SoL) console page
J	Link to the Network Settings page
K	Summary of the server information
L	Summary of the BMC information
M	Summary of the power information

1.5. Server Hardware Console (SHC) features

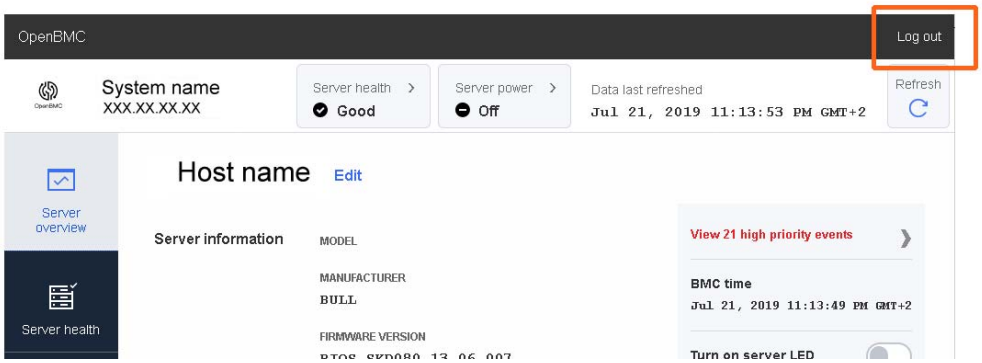
The SHC tabs include features to:

- Provide an overview of the server
- Monitor the health of the server
- Manage the server
- Configure the server
- Configure user settings for the server

Tab	Menu item
Server overview	Server information
	BMC information
	Power information
	Events
Server health	Event log
	Hardware status
	Sensors
	System logs
Server control	Server power operations
	Manage power usage
	Server LED
	Reboot BMC
	Serial over LAN console
	KVM
	Intrusion Detection
Server configuration	Network settings
	Firmware
	Date and time settings
Users	Manage user accounts

1.6. Stopping the Server Hardware Console (SHC)

Click the **Logout** button in the top right corner to stop the SHC.



Chapter 2. Monitoring the server

2.1. Checking the System Event Logs (SEL)

Prerequisites

A laptop computer with the Chrome or Firefox browser installed

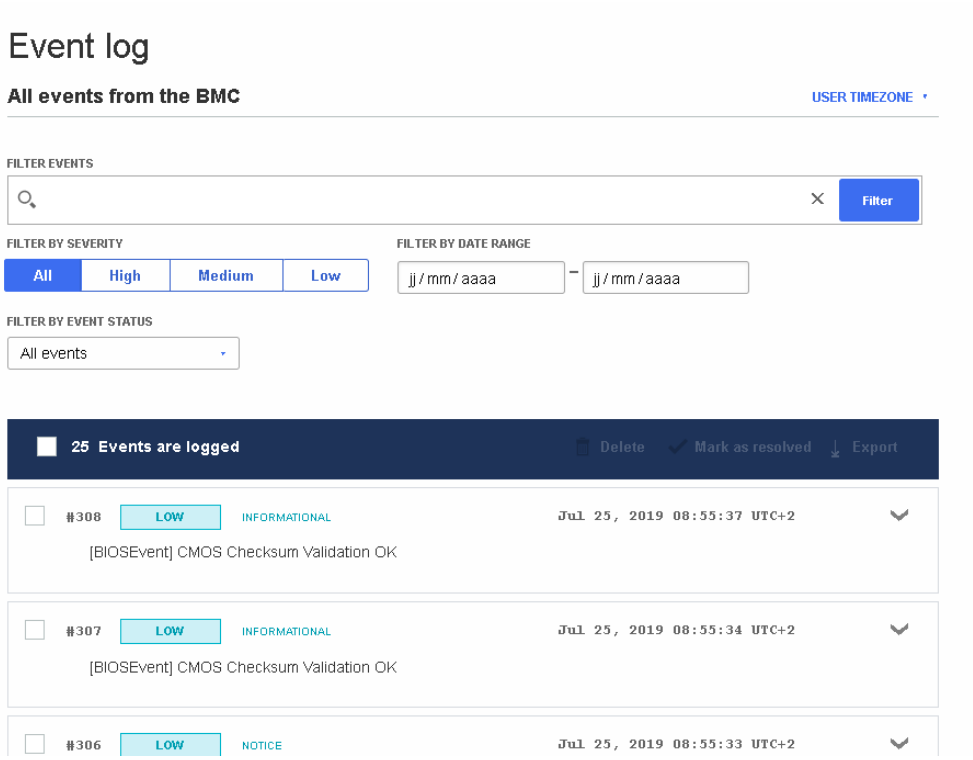
The laptop is connected to the BullSequana Edge BMC port

The server BMC has an IP address allocated

The BullSequana Edge server is in the powered on state

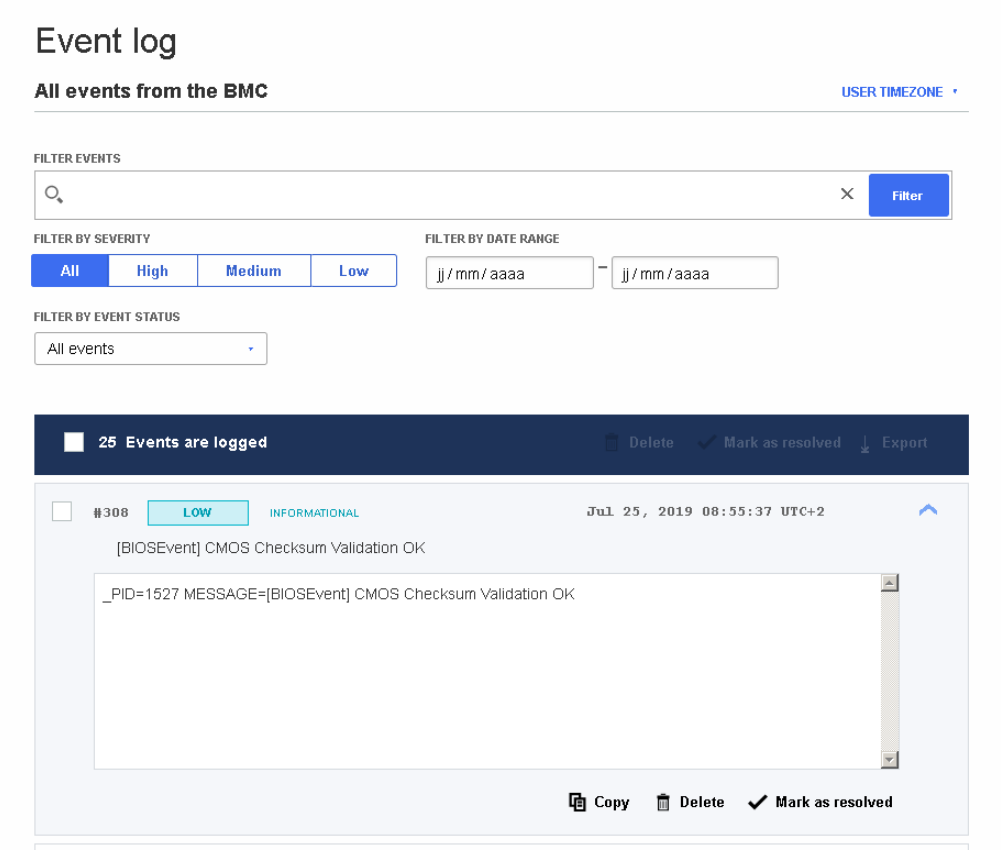
Procedure

1. Connect to the Server Hardware Console (SHC).
2. From the **Server health** tab, click **Event log**. The **Event log** page opens.



3. Enter the event name or number in the search field.
4. Set the severity and date range parameters.
5. Click **Filter**.

6. Click the downward pointing arrow on the right hand side to expand the information details for a log.



7. Use the available options to **Copy**, **Delete** or **Mark as resolved** for events that were in a High or Medium state and have been corrected.
8. **Export** the logs, as required.

Note The SELS are exported as .json data files.

2.2. Checking the hardware status

Prerequisites

A laptop computer with the Chrome or Firefox browser installed

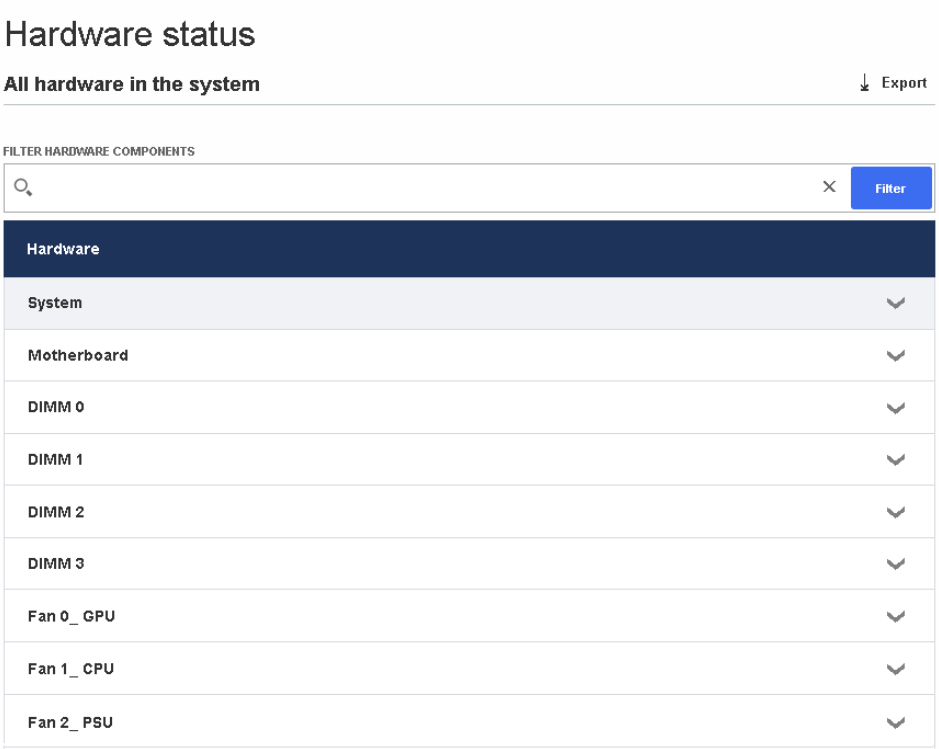
The laptop is connected to the BullSequana Edge BMC port

The server BMC has an IP address allocated

The BullSequana Edge server is in the powered on state

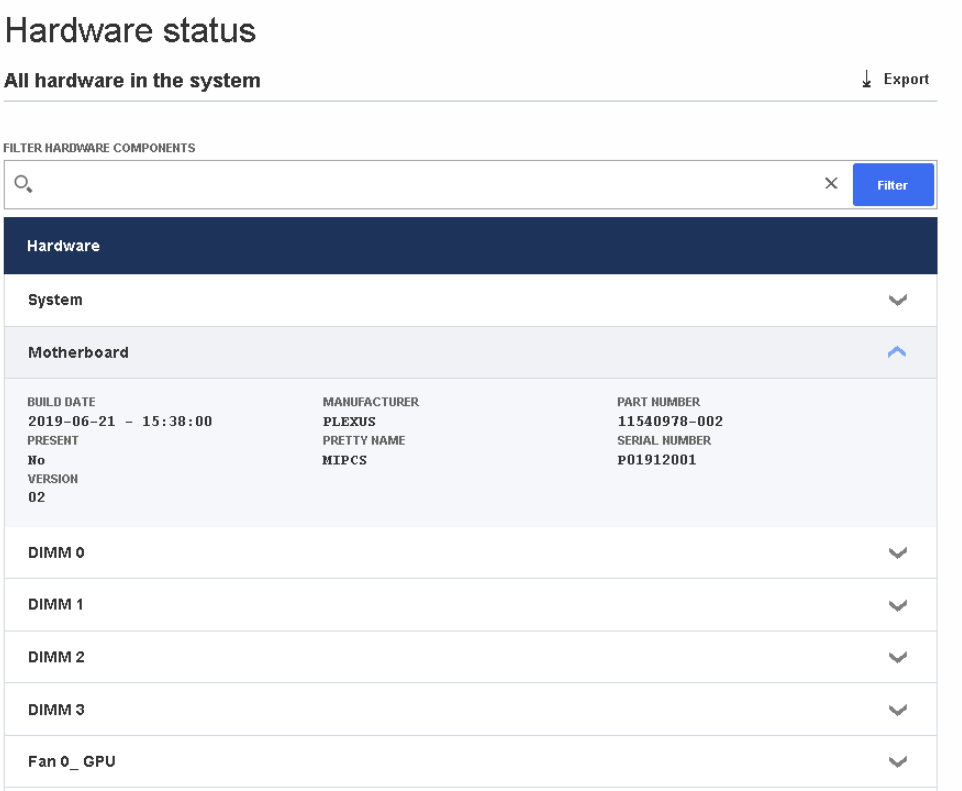
Procedure

1. Connect to the Server Hardware Console (SHC).
2. From the **Server health** tab, click **Hardware status**. The **Hardware status** page opens.



3. Enter the hardware component in the search field.
4. Click **Filter**.

5. Click the downward pointing arrow on the right hand side to expand the information details for a component. Full details including the presence status for the component is displayed.



6. **Export** the hardware details, as required.

Note The hardware details are exported as .json data files.

2.3. Checking the sensors

Prerequisites

A laptop computer with the Chrome or Firefox browser installed

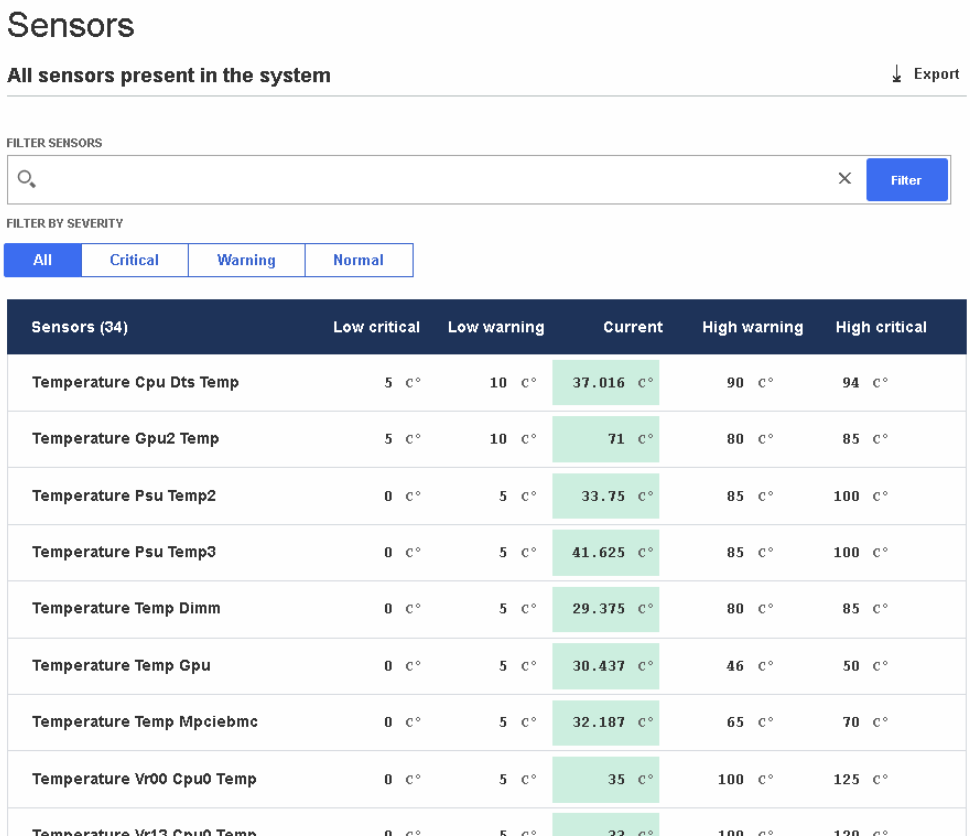
The laptop is connected to the BullSequana Edge BMC port

The server BMC has an IP address allocated

The BullSequana Edge server is in the powered on state

Procedure

1. Connect to the Server Hardware Console (SHC).
2. From the **Server health** tab, click **Sensors**. The **Sensors** page opens.



Sensors (34)	Low critical	Low warning	Current	High warning	High critical
Temperature Cpu Dts Temp	5 C°	10 C°	37.016 C°	90 C°	94 C°
Temperature Gpu2 Temp	5 C°	10 C°	71 C°	80 C°	85 C°
Temperature Psu Temp2	0 C°	5 C°	33.75 C°	85 C°	100 C°
Temperature Psu Temp3	0 C°	5 C°	41.625 C°	85 C°	100 C°
Temperature Temp Dimm	0 C°	5 C°	29.375 C°	80 C°	85 C°
Temperature Temp Gpu	0 C°	5 C°	30.437 C°	46 C°	50 C°
Temperature Temp Mpciebmc	0 C°	5 C°	32.187 C°	65 C°	70 C°
Temperature Vr00 Cpu0 Temp	0 C°	5 C°	35 C°	100 C°	125 C°
Temperature Vr13 Cpu0 Temp	0 C°	5 C°	33 C°	100 C°	120 C°

3. Enter the sensor name in the search field.
4. Set the severity parameter.
5. Click **Filter**.
6. Use the **Export** option to export the sensor states, as required.

Note The sensor states are exported as .json data files.

2.4. Checking the system logs

Prerequisites

A laptop computer with the Chrome or Firefox browser installed

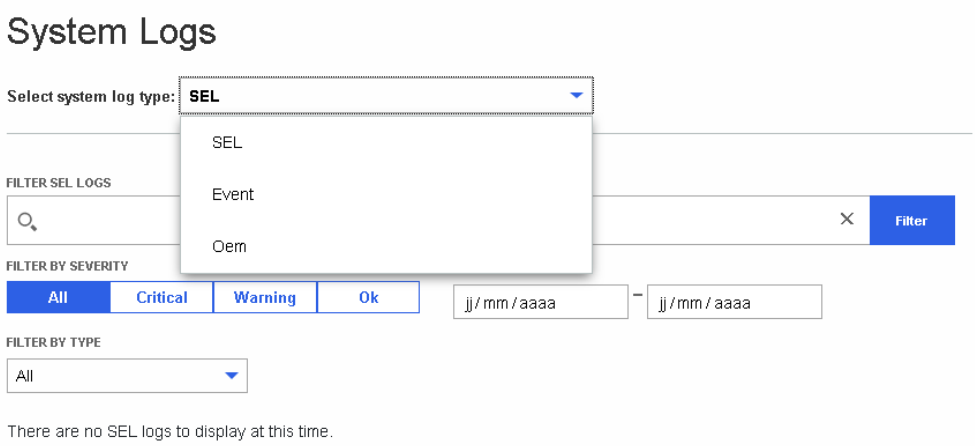
The laptop is connected to the BullSequana Edge BMC port

The server BMC has an IP address allocated

The BullSequana Edge server is in the powered on state

Procedure

1. Connect to the Server Hardware Console (SHC).
2. From the **Server health** tab, click **System logs**. The **System logs** page opens.



3. Select the system log type from the drop down list.
4. Set the log name, severity and date range parameters.
5. Click **Filter**.

Chapter 3. Controlling the server

3.1. Checking power status

Prerequisites

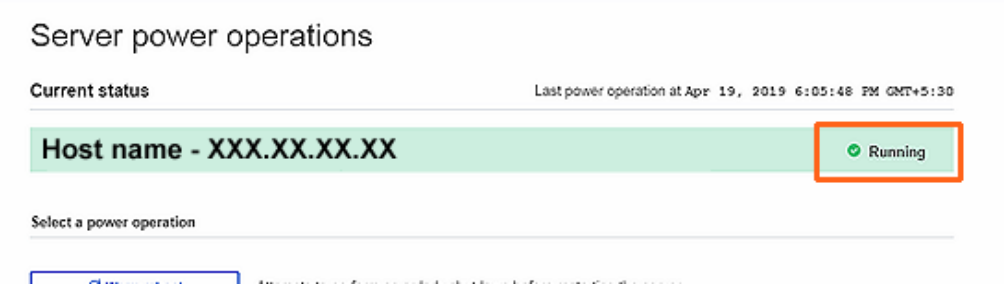
A laptop computer with the Chrome or Firefox browser installed

The laptop is connected to the BullSequana Edge BMC port

The server BMC has an IP address allocated

Procedure

1. From the **Server control** tab, click **Server power operations**. The **Server power operations** page opens.



2. Check the current status. Three power states are possible **Unreachable, Off** or **Running**. The date and time of the last power operation is also indicated.

3.2. Powering on the server

Important **The https protocol must always be used to connect to the SHC.**

Prerequisites

A laptop computer with the Chrome or Firefox browser installed

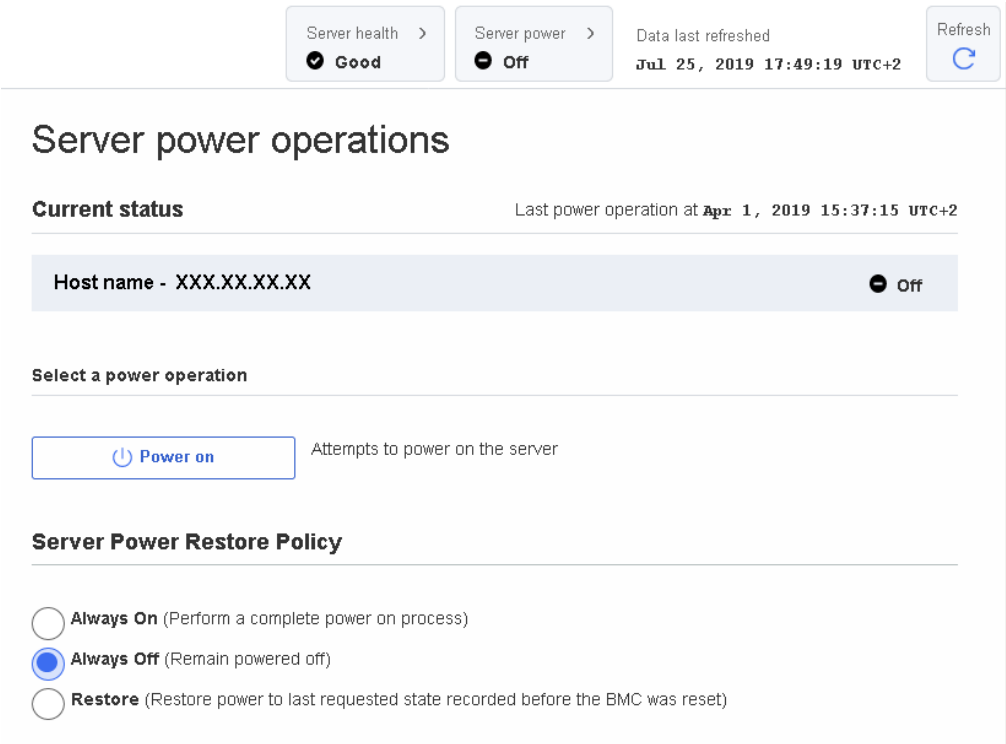
The laptop is connected to the BullSequana Edge BMC port

The server BMC has an IP address allocated

The BullSequana Edge is in standby power mode

Procedure

1. From the **Server control** tab, click **Server power operations**. The **Server power operations** page opens.



2. Click **Power on**.
3. Select the power restore policy required

3.3. Powering off the server

W087 **WARNING**

W087:
The Cold reboot and Immediate shutdown buttons should only be used if the Operating System is unable to respond to a Warm reboot or Orderly shutdown request.
These sequences may result in data loss and file corruption.

Note A BullSequana Edge can also be powered off by pushing the front power button or via the Machine Intelligence System Management (MISM) console.

See The BullSequana Edge Getting Started Guide or the BullSequana Edge MISM Console User's Guide for more information.

Prerequisites

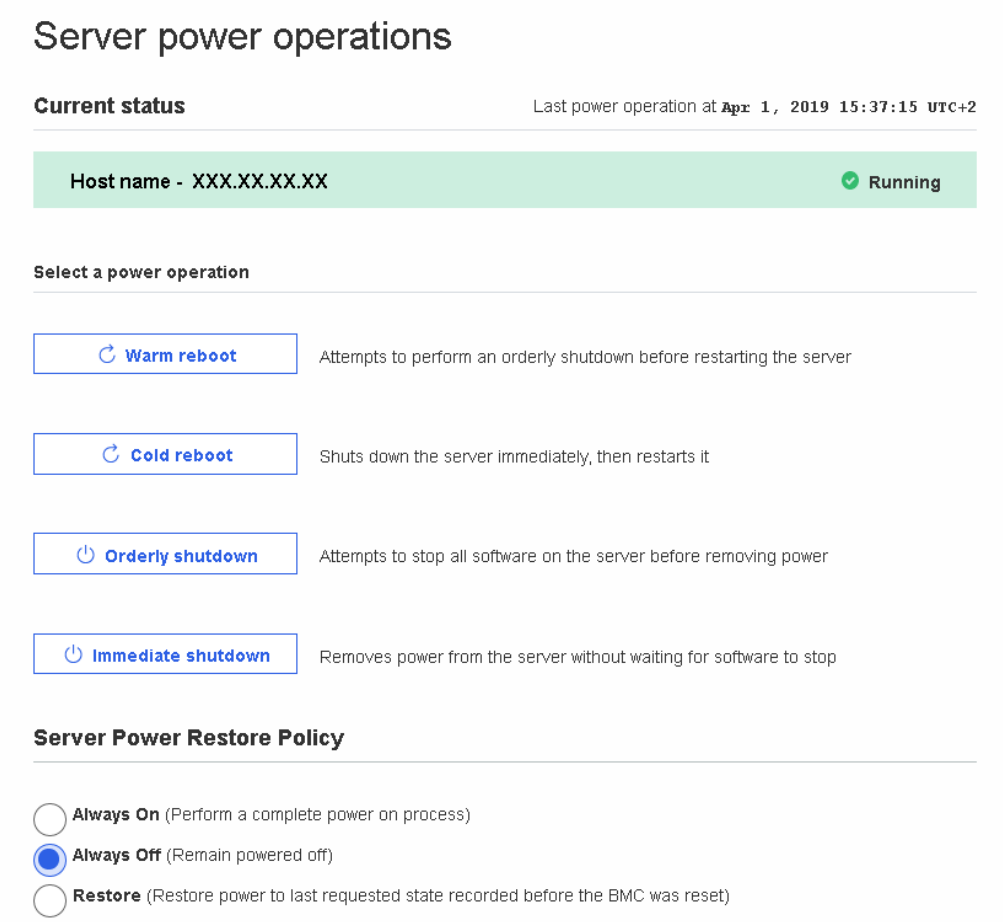
A laptop computer with the Chrome or Firefox browser installed

The laptop is connected to the BullSequana Edge BMC port

The server BMC has an IP address allocated

The BullSequana Edge server is in the powered on state

Procedure



Power Restore Policy	Description
Always On	Returns the server to power on mode with the BMC ON and the OS launched.
Always Off	Returns the server to standby power mode with the BMC ON but the OS is not launched.
Restore	Returns the server to the power mode already in place before the reboot.

4. Click the power operation required.
5. Select the power restore policy required.

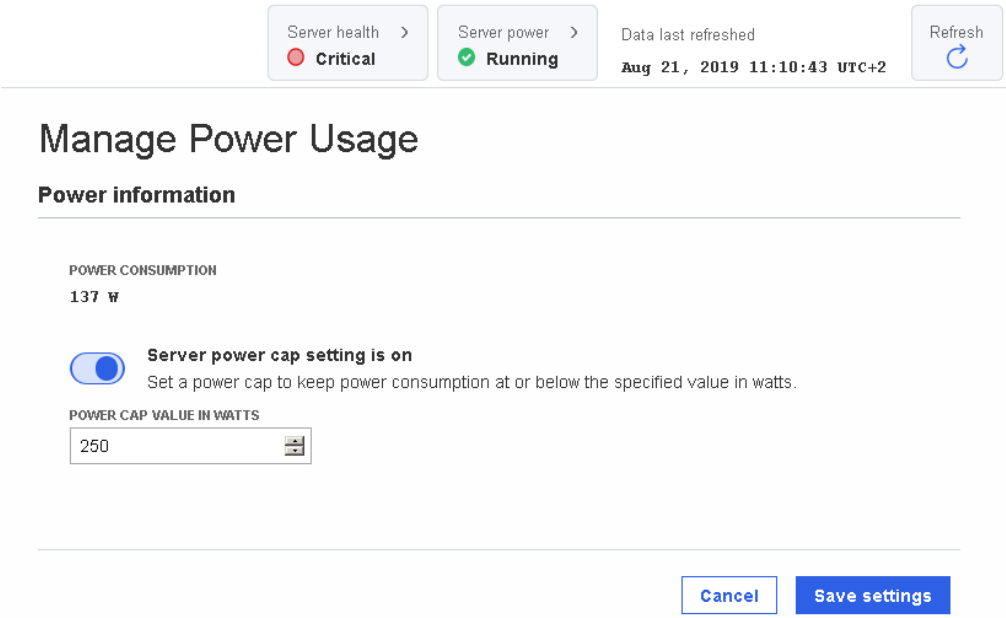
3.4. Managing power usage

Prerequisites

Remote access to the SHC

Procedure

1. From the **Server control** tab, click **Manage power usage**. The **Manage Power Usage** page opens.



2. Change the power cap settings as required.
3. Click **Save settings**.

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

3.5. Enabling / disabling the identification LED

Prerequisites

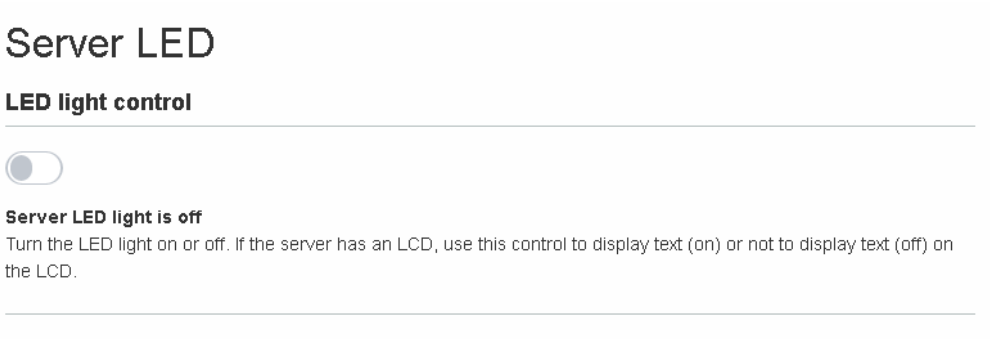
A laptop computer with the Chrome or Firefox browser installed

The laptop is connected to the BullSequana Edge BMC port

The server BMC has an IP address allocated

Procedure

1. From the **Server control** tab, click **Server LED**. The **Server LED** page opens.



2. Turn the server identification LED off / on.

See The Description Guide to locate the blue server identification LED at the front of the server.

3.6. Rebooting the Baseboard Management Controller (BMC)

Prerequisites

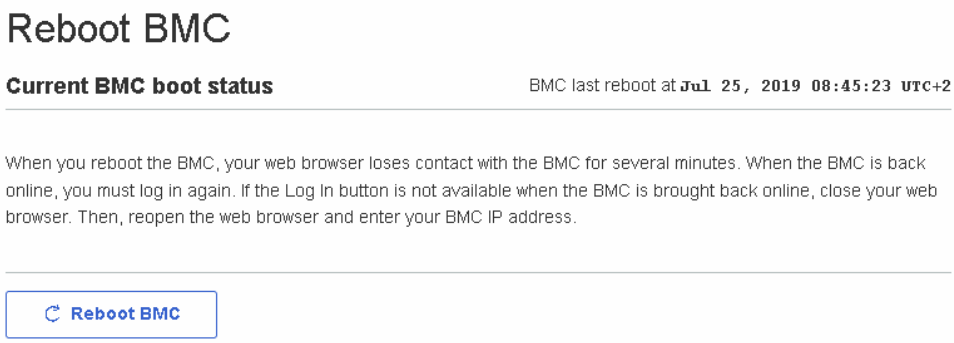
A laptop computer with the Chrome or Firefox browser installed

The laptop is connected to the BullSequana Edge BMC port

The server BMC has an IP address allocated

Procedure

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



2. Click the **Reboot BMC** button to reboot the BMC.

Note When the BMC is rebooted the browser loses contact with the BMC for several minutes. The normal log in procedure must be performed when the BMC is back online. If the log in button is not available, close the browser, reopen it and enter the BMC IP address.

3.7. Connecting to the Serial over LAN (SoL) console

Prerequisites

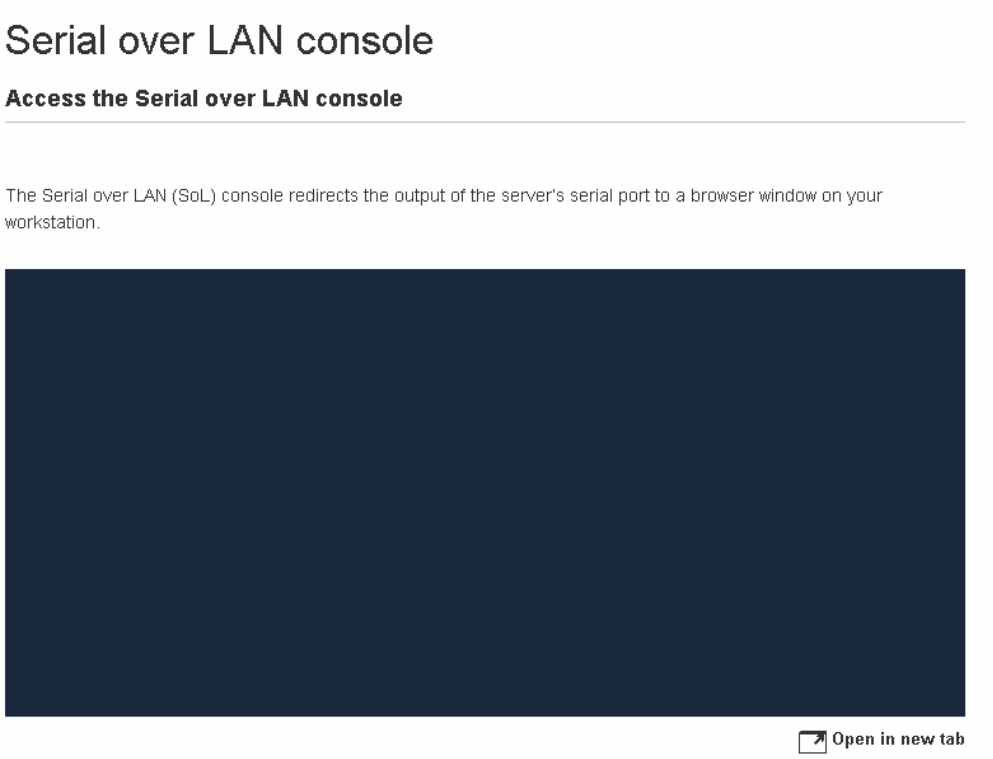
A laptop computer with the Chrome or Firefox browser installed

The laptop is connected to the BullSequana Edge BMC port

The server BMC has an IP address allocated

Procedure

1. From the **Server control** tab, click **Serial over LAN console**. The **Serial over LAN console** page opens.



2. If required, click the **Open in new tab** link to open the console in a new window.

3.8. Connecting to the Keyboard Video Mouse (KVM)

KVM is used by the remote console to transmit the screen data to the administrator machine and the keyboard and mouse data back to the host.

Prerequisites

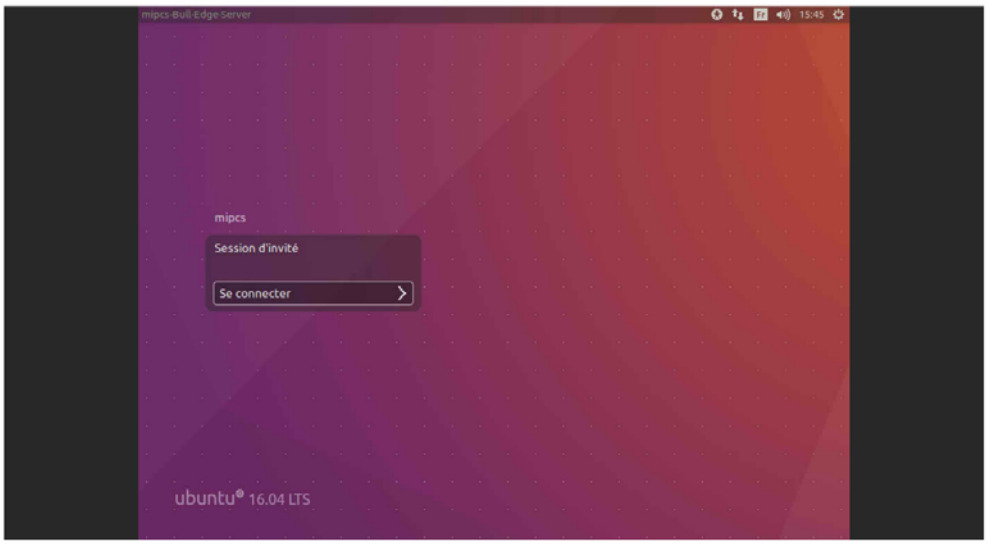
A laptop computer with the Chrome or Firefox browser installed

The laptop is connected to the BullSequana Edge BMC port

The server BMC has an IP address allocated

Procedure

From the **Server control** tab, click **KVM**. The **KVM** page opens.



3.9. Managing intrusions

Different actions can be configured in the event of an intrusion being detected by the BullSequana Edge server intrusion detection switch. The history and of the intrusions detected are recorded in the System Event Logs.

3.9.1. Configuring actions for intrusions

Prerequisites

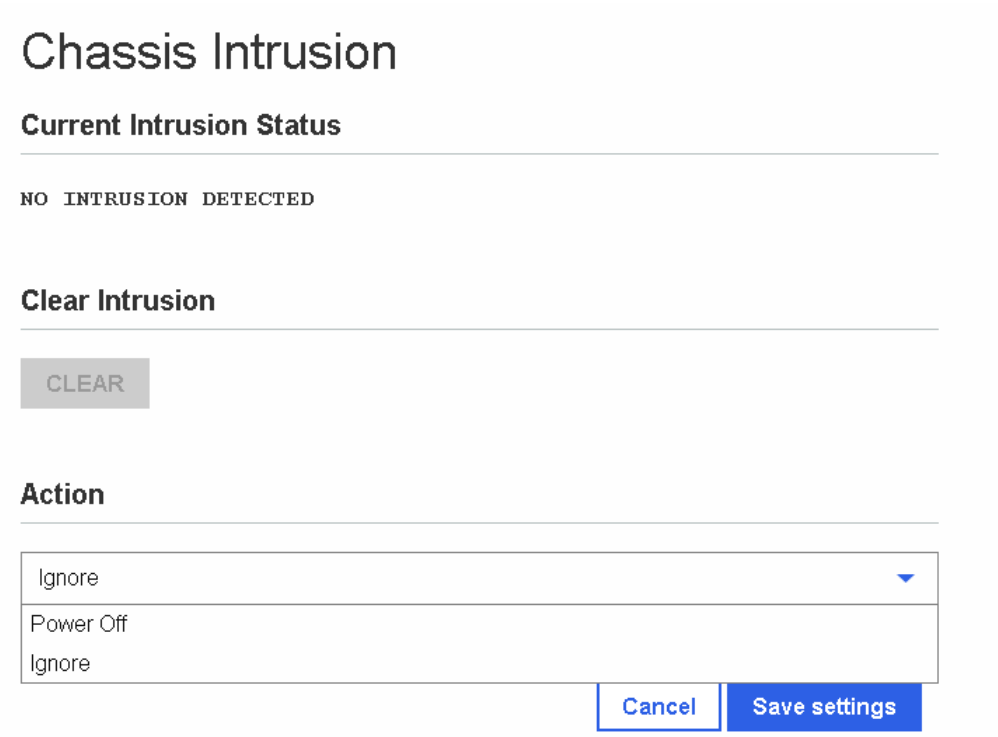
A laptop computer with the Chrome or Firefox browser installed

The laptop is connected to the BullSequana Edge BMC port

The server BMC has an IP address allocated

Procedure

1. From the **Server control** tab, click **Intrusion Detection**. The **Intrusion Detection** page opens.



2. Select the action, **Power Off** or **Ignore**, for any intrusions detected.

Important	**If the Power Off actions is set, the BullSequana Edge server will not start until the intrusion is removed from the Current Intrusion Status list.**

3. Click **Save settings**.

3.9.2. Checking intrusions detected

Prerequisites

A laptop computer with the Chrome or Firefox browser installed

The laptop is connected to the BullSequana Edge BMC port

The server BMC has an IP address allocated

Procedure

1. From the **Server control** tab, click **Intrusion Detection**. The **Intrusion Detection** page opens.

2. All intrusions detected are listed under **Current Intrusion Status.**

3.9.3. Clearing intrusions detected

Prerequisites

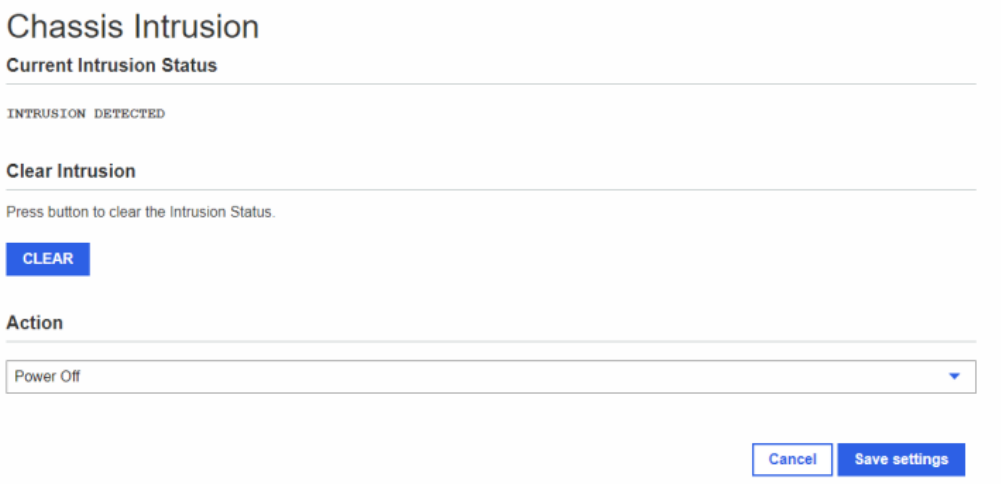
A laptop computer with the Chrome or Firefox browser installed

The laptop is connected to the BullSequana Edge BMC port

The server BMC has an IP address allocated

Procedure

1. From the **Server control** tab, click **Intrusion Detection**. The **Intrusion Detection** page opens.



2. Click **CLEAR** to remove any actions detected from the list.

Chapter 4. Configuring the server

4.1. Configuring network settings

4.1.1. Configuring common settings

Prerequisites

A laptop computer with the Chrome or Firefox browser installed

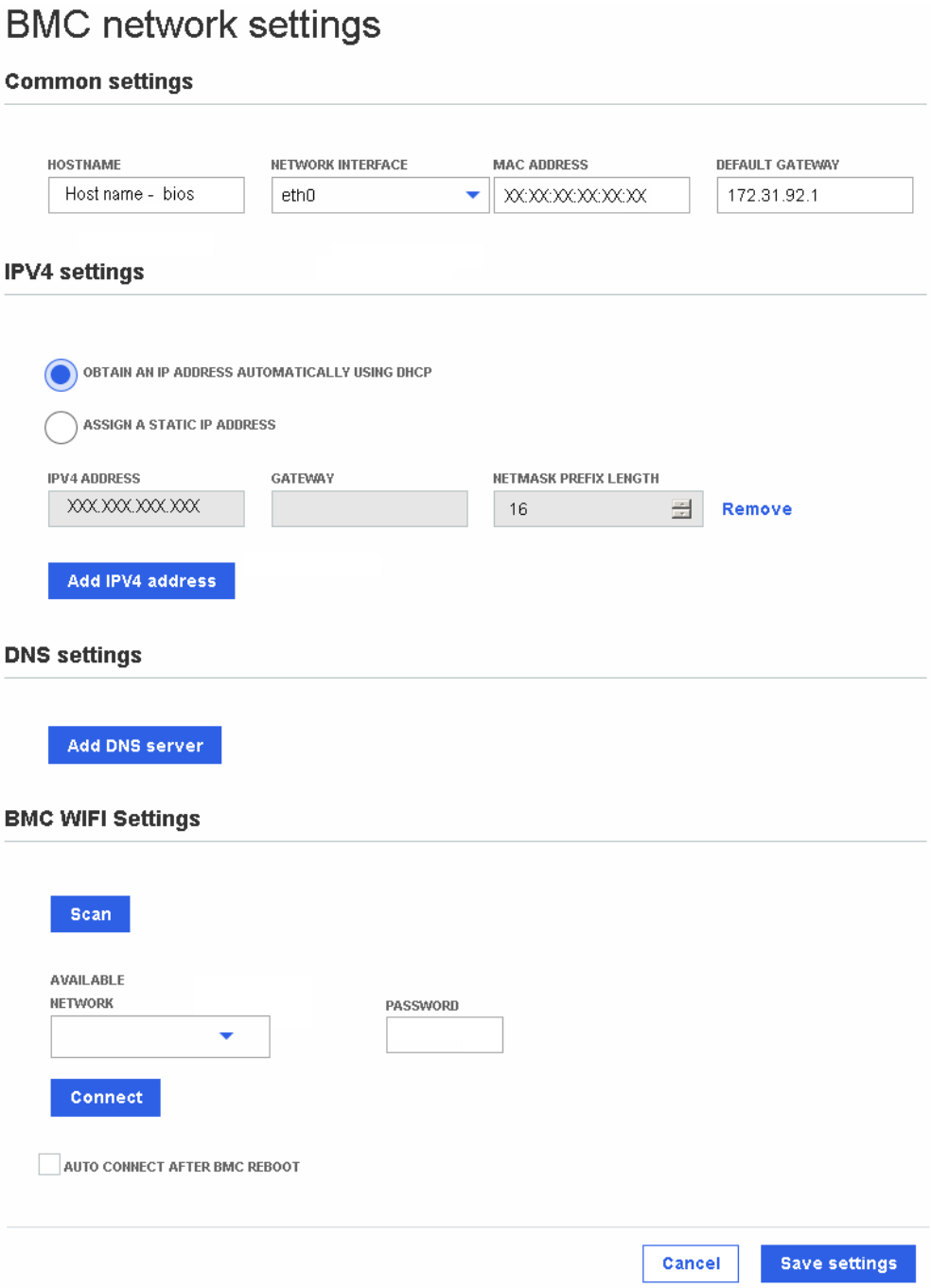
The laptop is connected to the BullSequana Edge BMC port

The server BMC has an IP address allocated

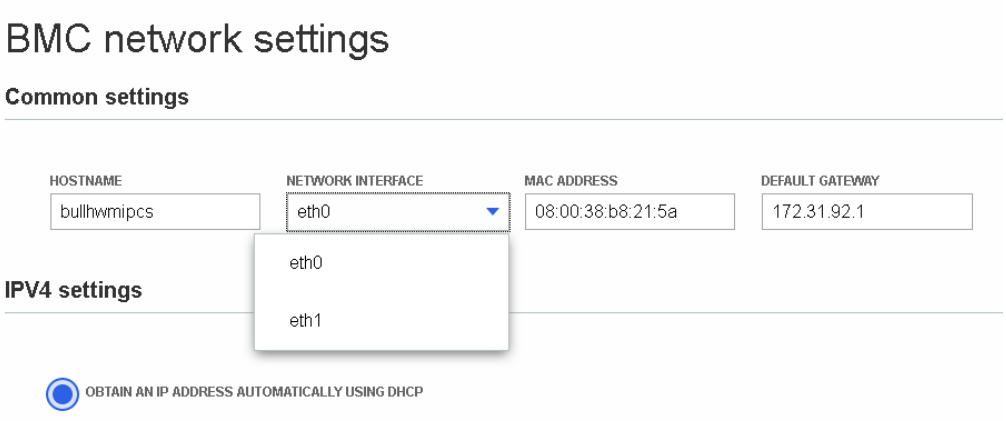
The laptop computer is connected to the LAN

Procedure

1. From the **Server configuration** tab, click N**etwork settings**. The **Network Settings** page opens.



2. In the **Common settings** section, select the network interface from the drop-down list.



Note The MAC address and default gateway for the BMC are configured automatically.

3. If required, enter the settings for the MAC address and default gateway.
4. Click **Save settings.**

4.1.2. Configuring IPV4 address with DHCP

Prerequisites

A laptop computer with the Chrome or Firefox browser installed

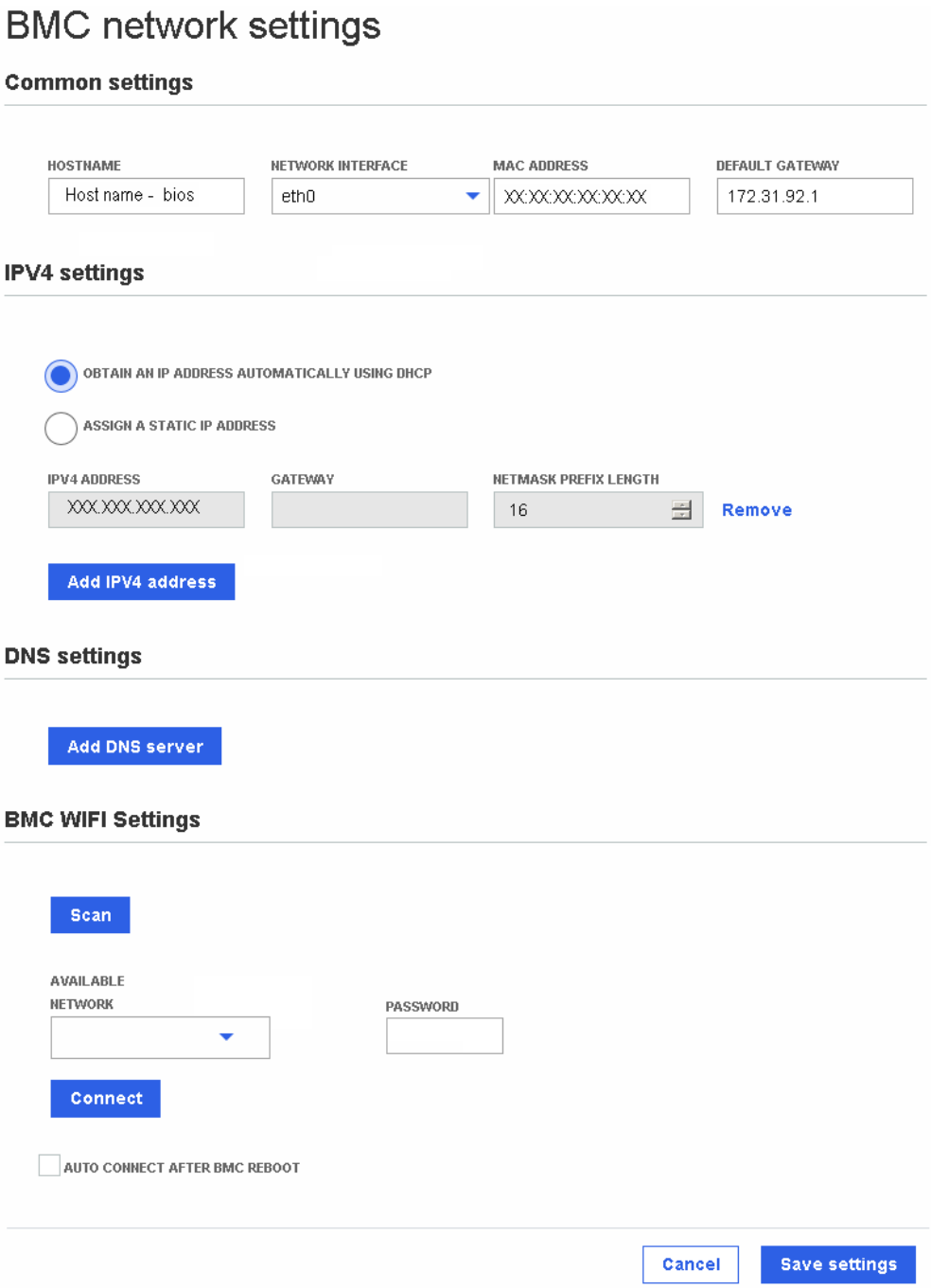
The laptop is connected to the BullSequana Edge BMC port

The server BMC has an IP address allocated

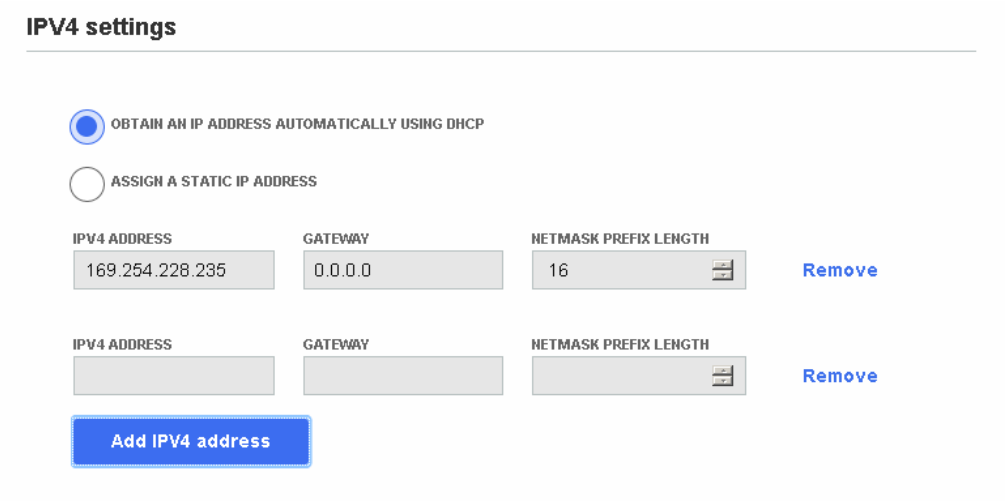
The laptop computer is connected to the LAN

Procedure

1. From the **Server configuration** tab, click N**etwork settings**. The **Network Settings** page opens.



2. In the **IPV4 settings** section, click **OBTAIN AN IP ADDRESS AUTOMATICALLY USING DHCP.**



3. Click **Save settings.**

4.1.3. Assigning a static IP address

Prerequisites

A laptop computer with the Chrome or Firefox browser installed

The laptop is connected to the BullSequana Edge BMC port

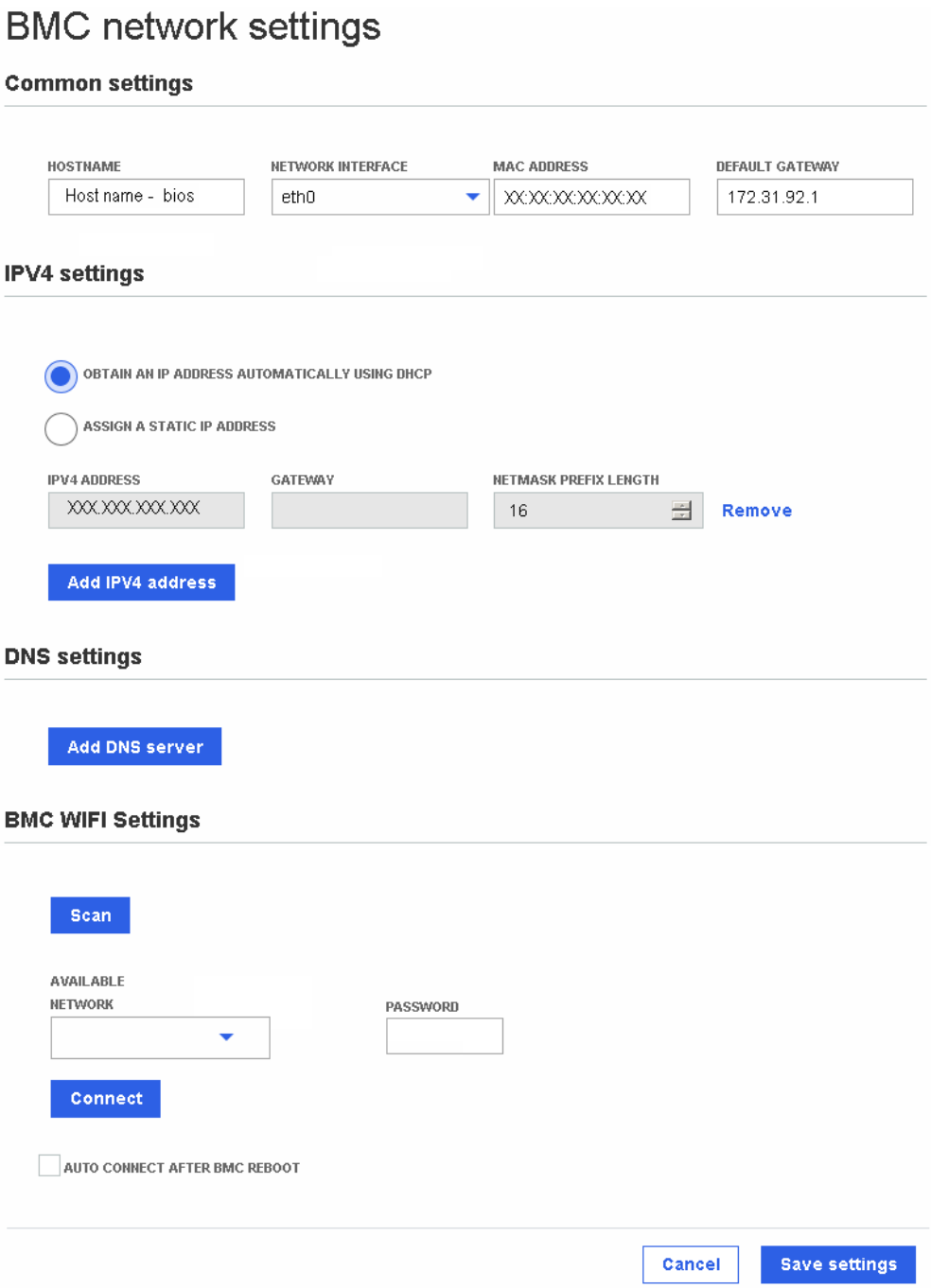
The server BMC has an IP address allocated

The laptop computer is connected to the LAN

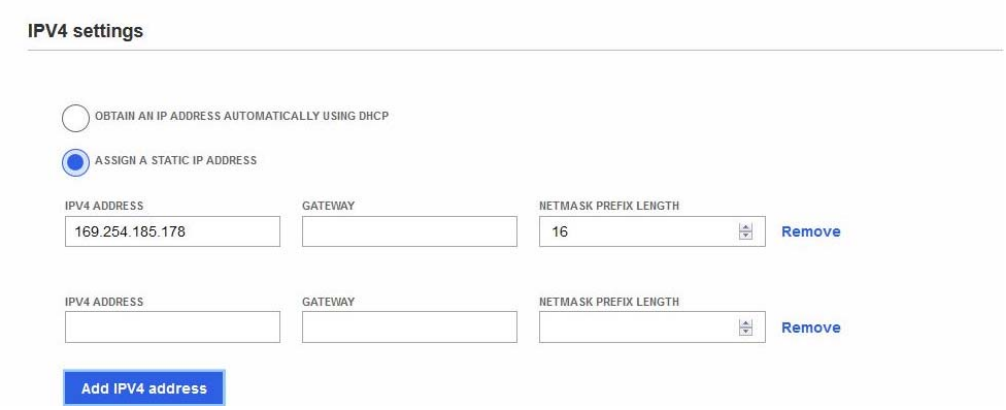
The network parameters for static IP addresses are known

Procedure

1. From the **Server configuration** tab, click N**etwork settings**. The **Network Settings** page opens.



2. In the **IPV4 settings** section, click **ASSIGN A STATIC IP ADDRESS**.



3. Click **Remove** to remove the existing IP address.
4. Enter the network parameters for the static IP address.
5. Click **Save settings.**
6. Click **Add IPV4 address** if additional addresses are to be configured.

4.1.4. Configuring DNS settings

Prerequisites

A laptop computer with the Chrome or Firefox browser installed

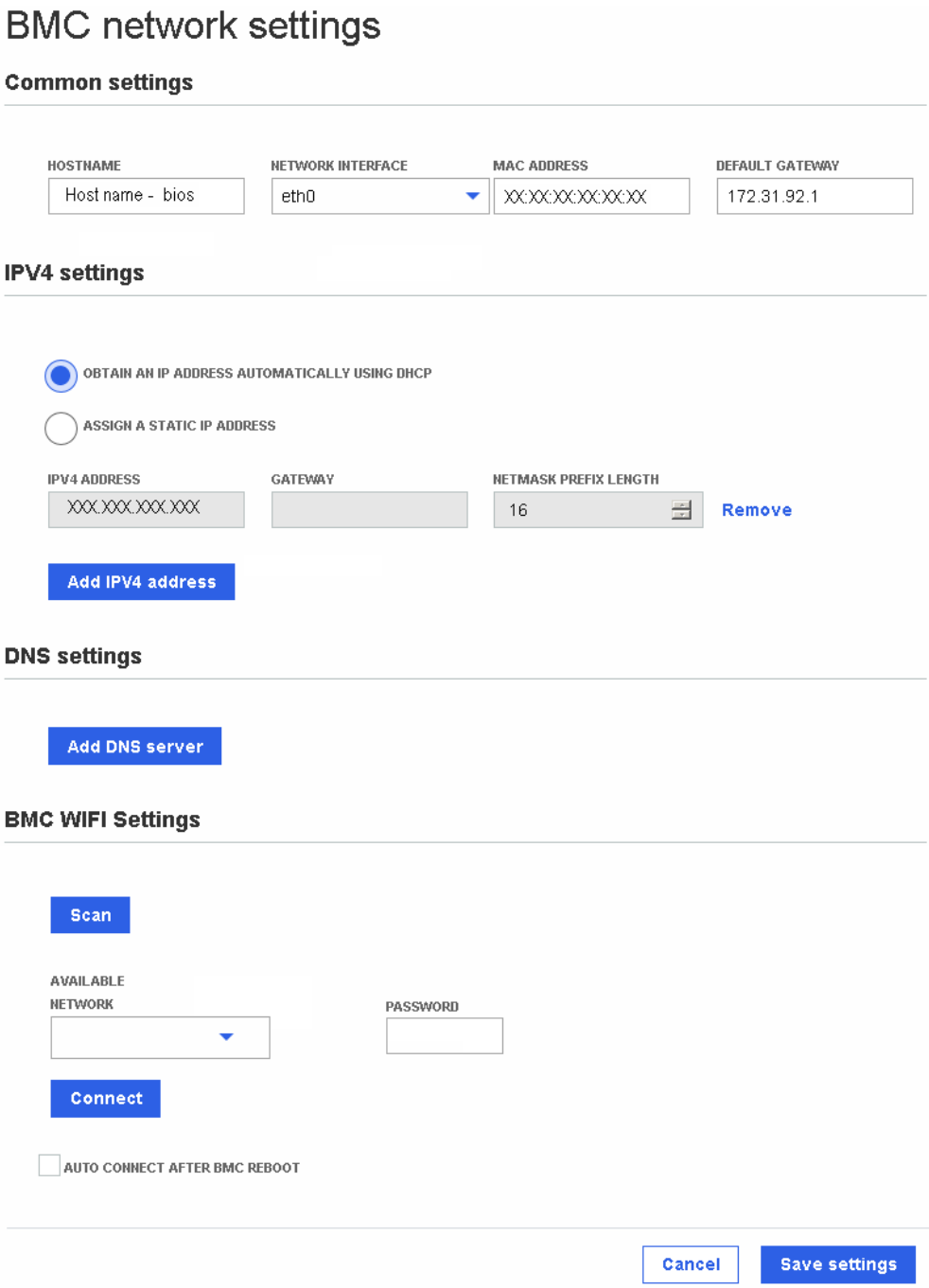
The laptop is connected to the BullSequana Edge BMC port

The server BMC has an IP address allocated

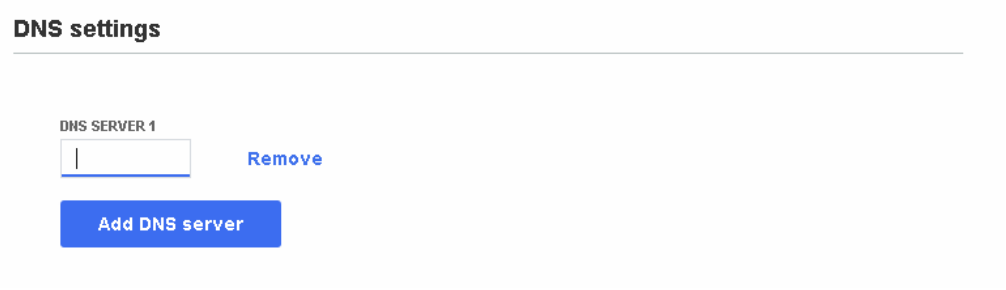
The laptop computer is connected to the LAN

Procedure

1. From the **Server configuration** tab, click **Network settings**. The **Network Settings** page opens.



2. In the **DNS settings** section, click **Remove** to remove the existing DNS server



3. Enter the DNS server to be used.
4. Click **Add DNS server**.
5. Click **Save settings**.

4.1.5. Configuring WIFI settings

Prerequisites

A laptop computer with the Chrome or Firefox browser installed

The laptop is connected to the BullSequana Edge BMC port

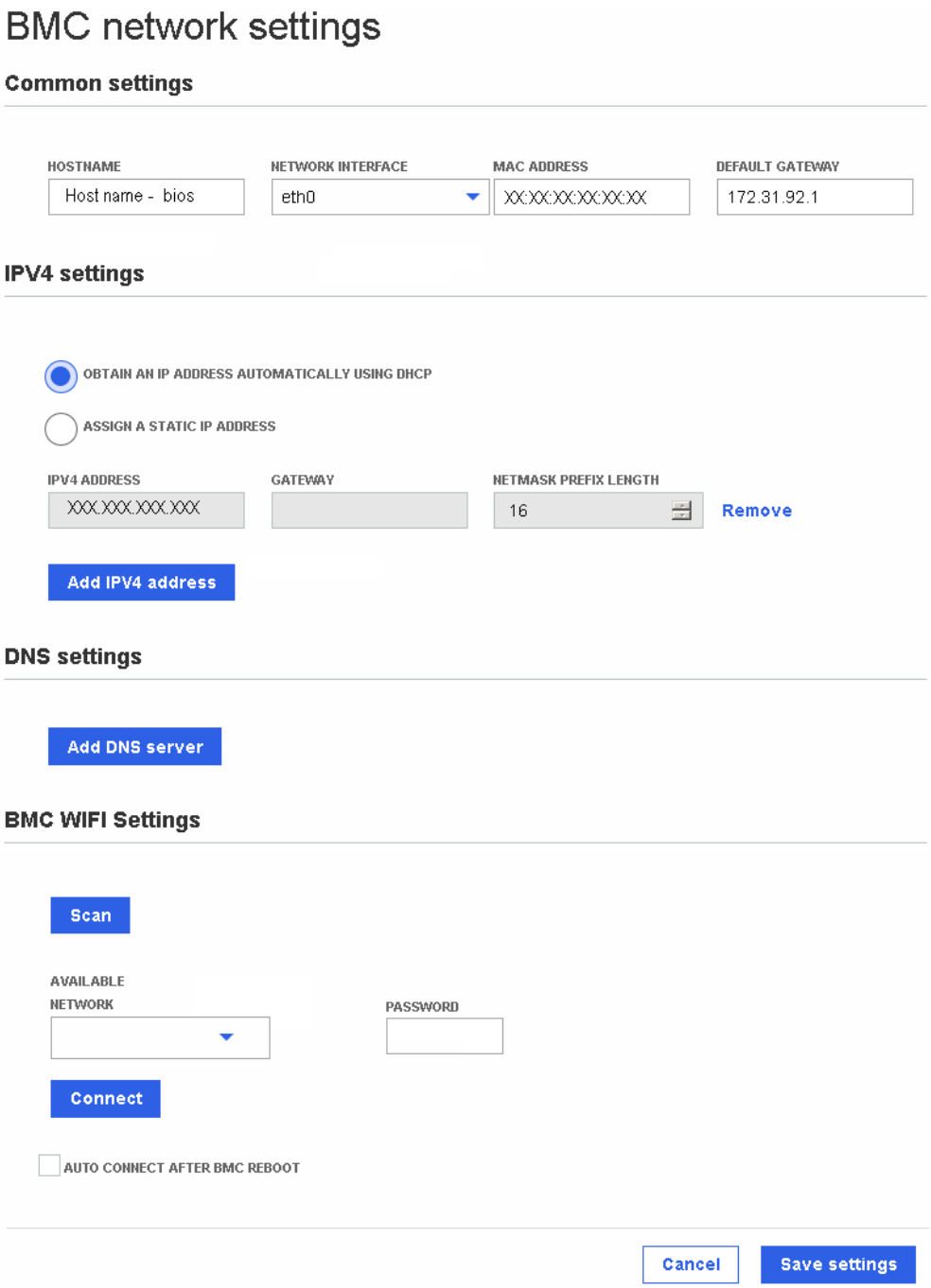
The server BMC has an IP address allocated

The laptop computer is connected to the WIFI LAN

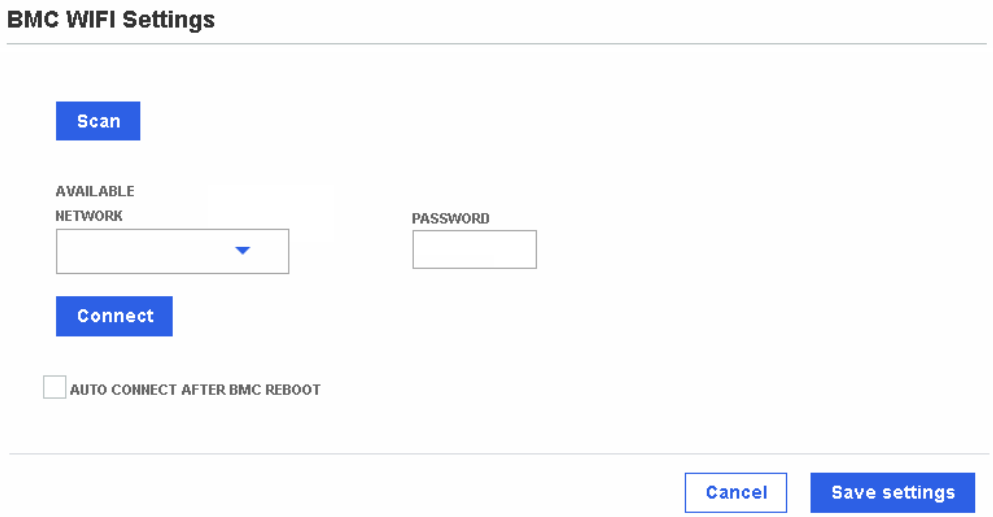
The WiFi network and password must be known

Procedure

1. From the **Server configuration** tab, click **Network settings**. The **Network Settings** page opens.



2. In the **BMC WIFI Settings** section, click **Scan**.



3. Select the network required from the list of available networks.
4. Enter the password.
5. Click **Connect.**
6. Check the Auto Connect box to reconnect after a BMC reboot.

4.2. Managing firmware versions

Important **The BMC firmware must be updated before the BIOS and CPLD firmware.**

The BullSequana Edge SHC can be used to change firmware boot priorities and to update BMC, BIOS and CPLD firmware files.

4.2.1. Checking firmware versions

Prerequisites

A laptop computer with the Chrome or Firefox browser installed

A laptop is connected to the BullSequana Edge BMC port

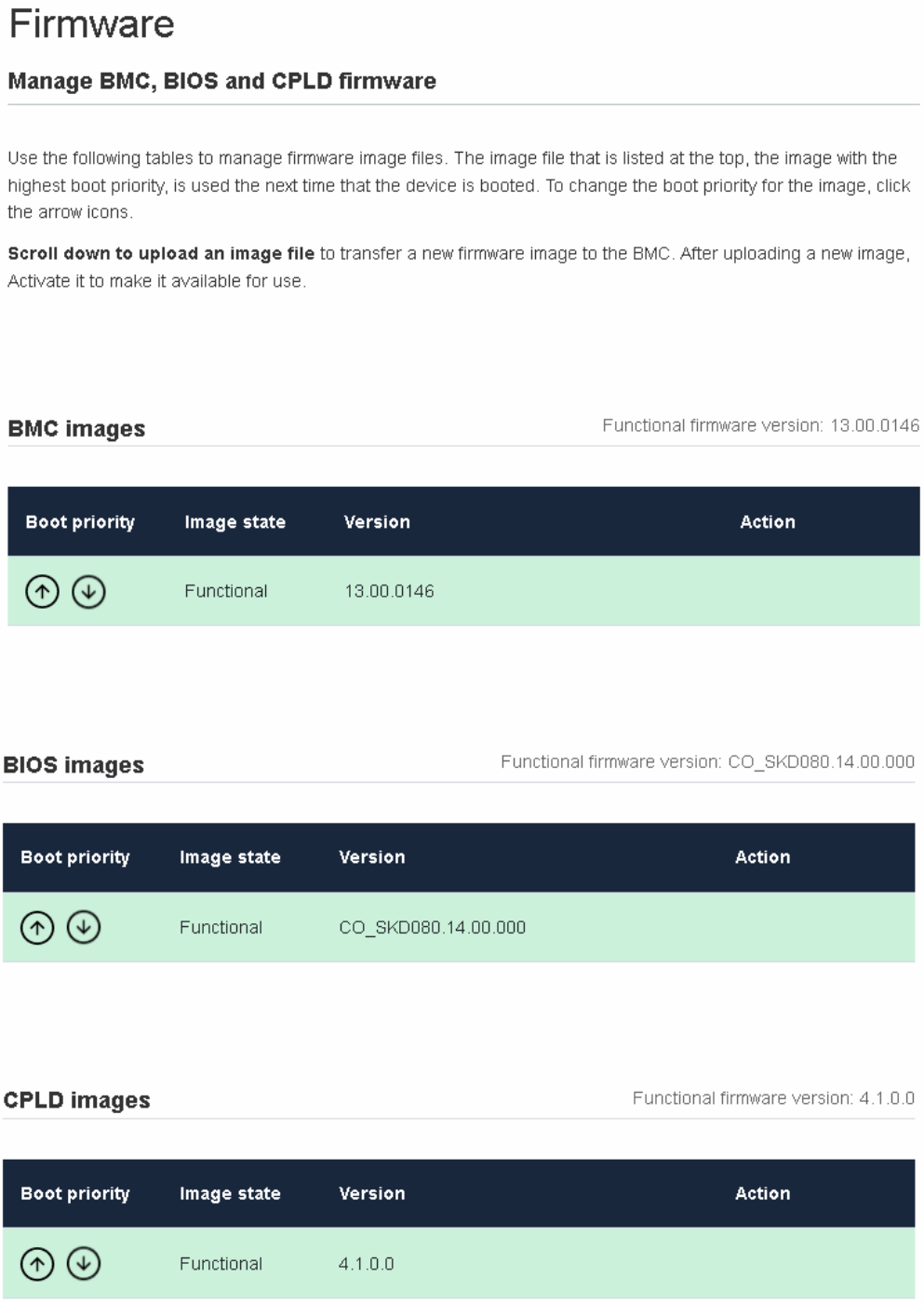
The server BMC has an IP address allocated

The BullSequana Edge server is in the powered on state

Procedure

1. Connect to the Server Hardware Console (SHC).

2. From the **Server configuration** tab, click **Firmware**. The **Firmware** page opens.



3. Check the BMC, BIOS and CPLD functional image versions listed.

4.2.2. Updating BMC firmware

Prerequisites

A laptop computer with the Chrome or Firefox browser installed

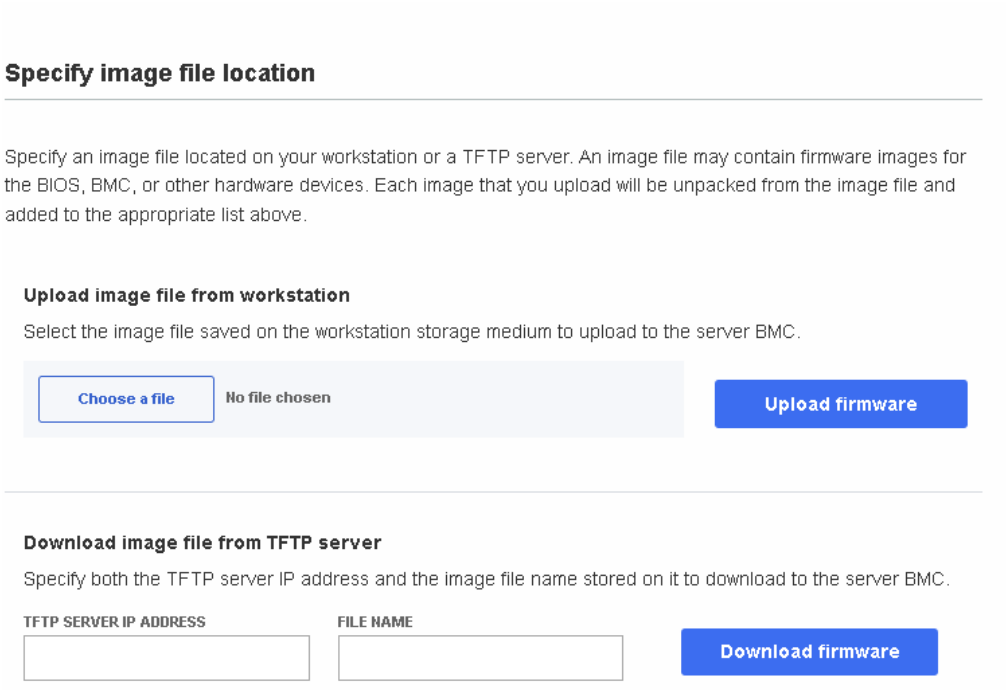
A laptop is connected to the BullSequana Edge BMC port

The server BMC has an IP address allocated

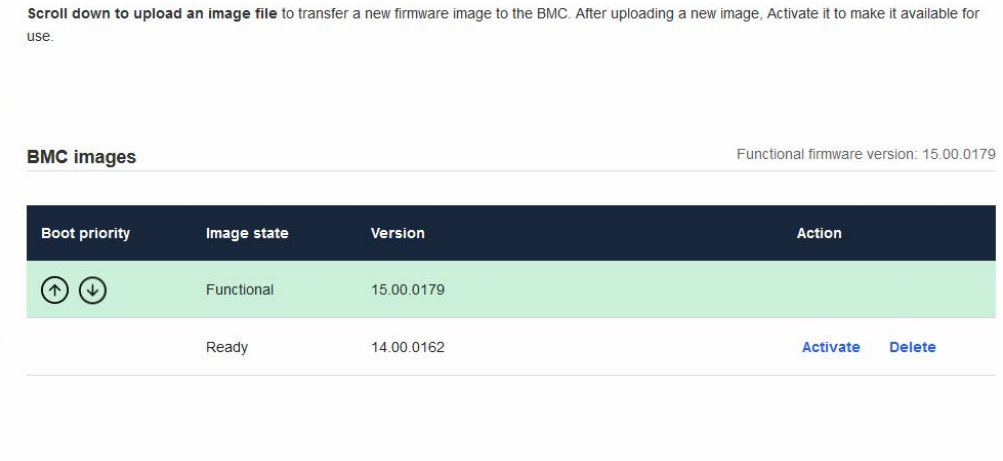
The BullSequana Edge server is in the standby power mode

Procedure

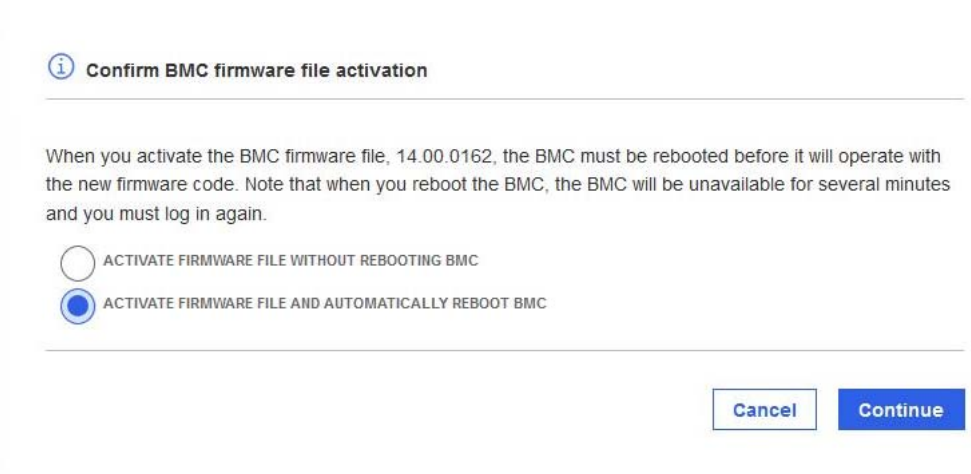
1. Connect to the Server Hardware Console (SHC).
2. From the **Server configuration** tab, click **Firmware**. The **Firmware** page opens.
3. Specify the new BMC image file location.
   a. Either click **Upload firmware** to upload an image file from a workstation.
   b. Or click **Download firmware** to download an image file from a TFTP server.



4. Click **Activate** for the new BMC image.



5. Confirm the activation with a BMC reboot. Click **Continue**.



Notes
- When the BMC is rebooted the browser loses contact with the BMC for several minutes. The normal log in procedure must be performed when the BMC is back online. If the log in button is not available, close the browser, reopen it and enter the BMC IP address.
- Earlier firmware versions disappear from the BMC image list once a new version has been activated.

4.2.3. Updating BIOS and CPLD firmware

Important **Check that the latest BMC firmware version is installed. If not, the BMC firmware must be updated before the BIOS and CPLD firmware.**

Prerequisites

A laptop computer with the Chrome or Firefox browser installed

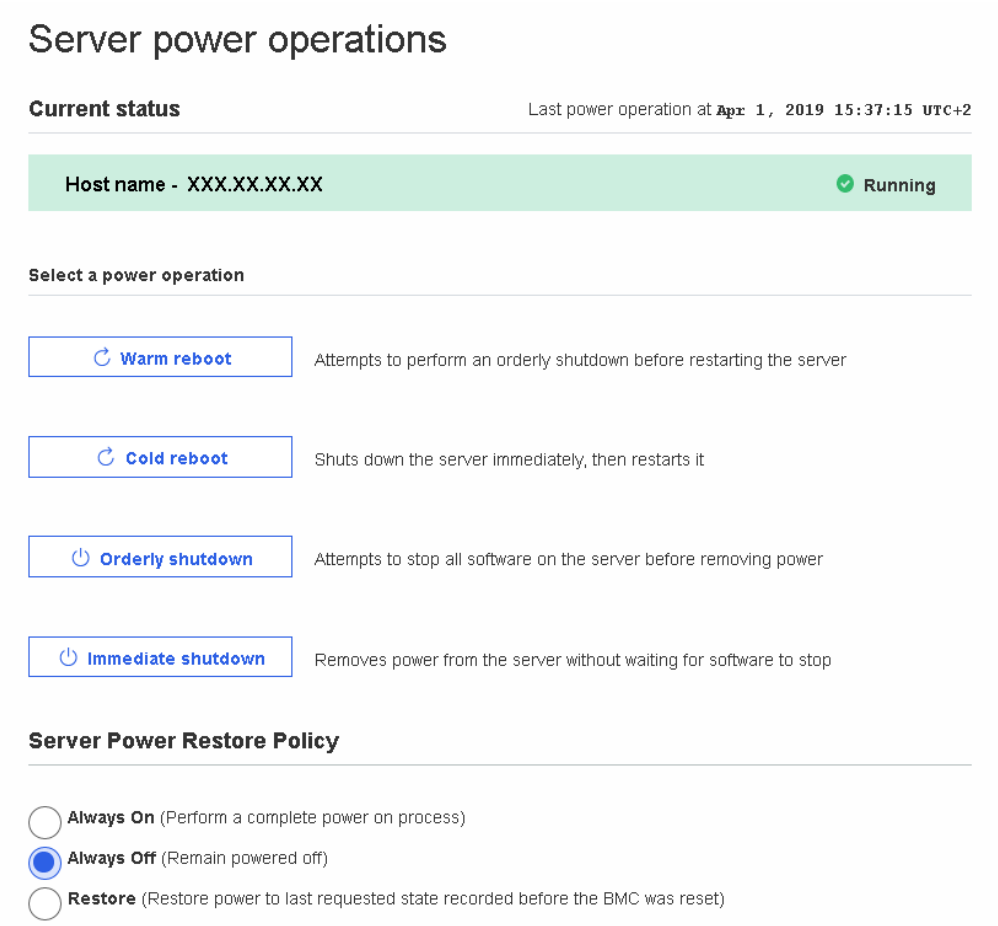
A laptop is connected to the BullSequana Edge BMC port

The server BMC has an IP address allocated

The BullSequana Edge server is in the powered on state

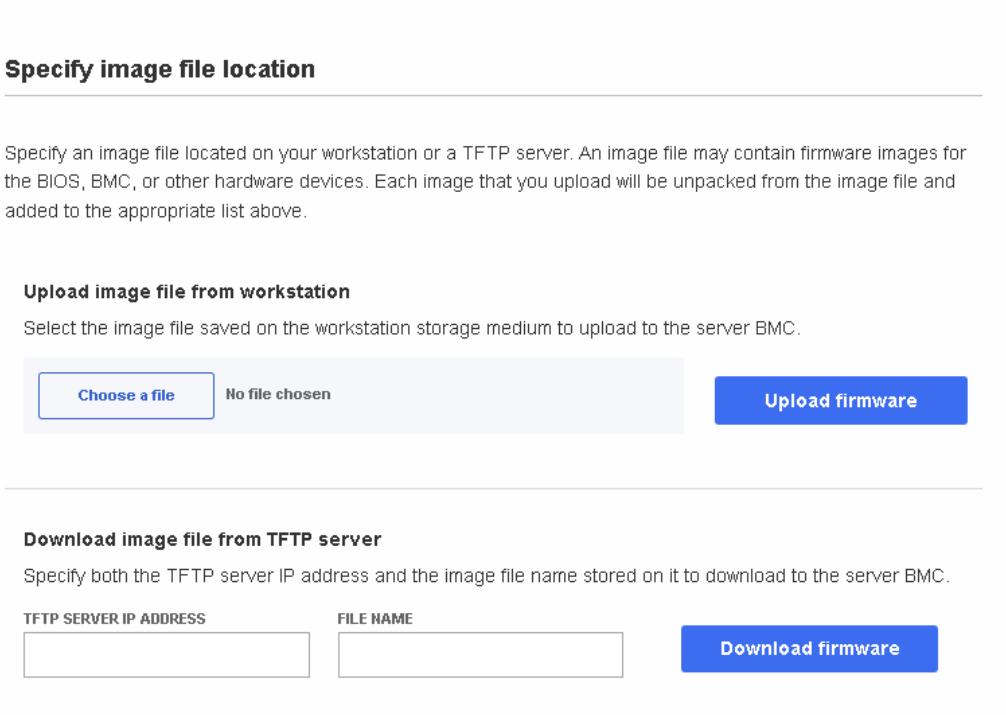
Procedure

1. Connect to the Server Hardware Console (SHC).
2. From the **Server control** tab, click **Server power operations**. The **Server power operations** page opens.

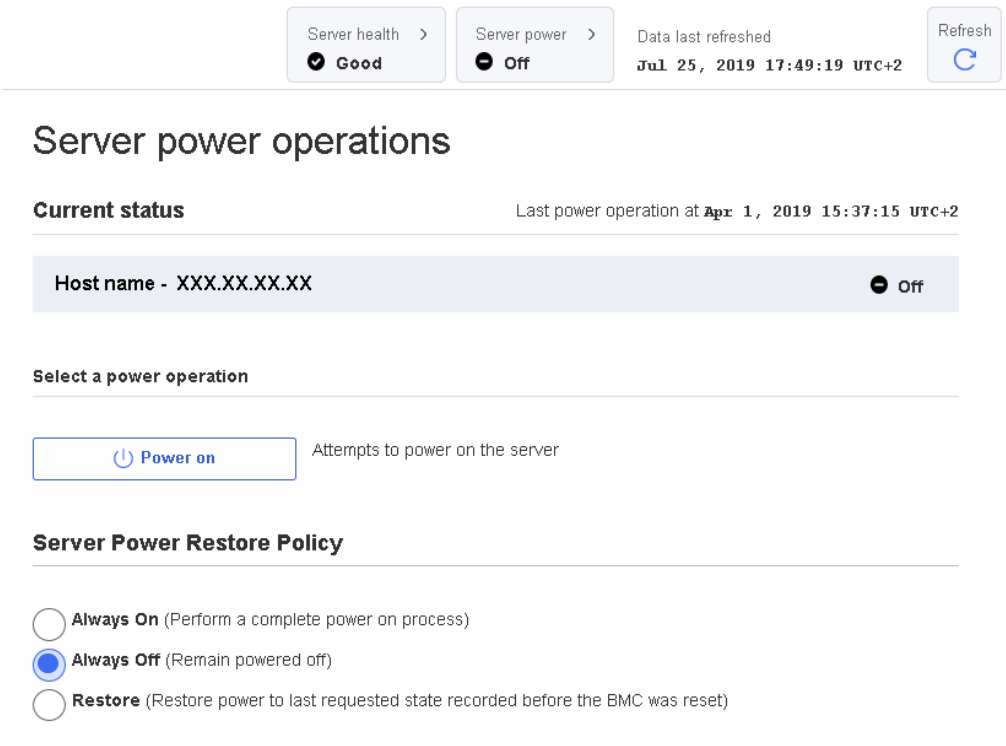


3. Click **Orderly shutdown.**
4. From the **Server configuration** tab, click **Firmware**. The **Firmware** page opens.

5. Specify the new firmware file location.
   a. Either click **Upload firmware** to upload an image file from a workstation.
   b. Or click **Download firmware** to download an image file from a TFTP server.



6. From the **Server control** tab, click **Server power operations**. The **Server power operations** page opens.



7. Click **Power on**.
8. The new firmware is now active.

4.3. Configuring date and time settings

Prerequisites

A laptop computer with the Chrome or Firefox browser installed

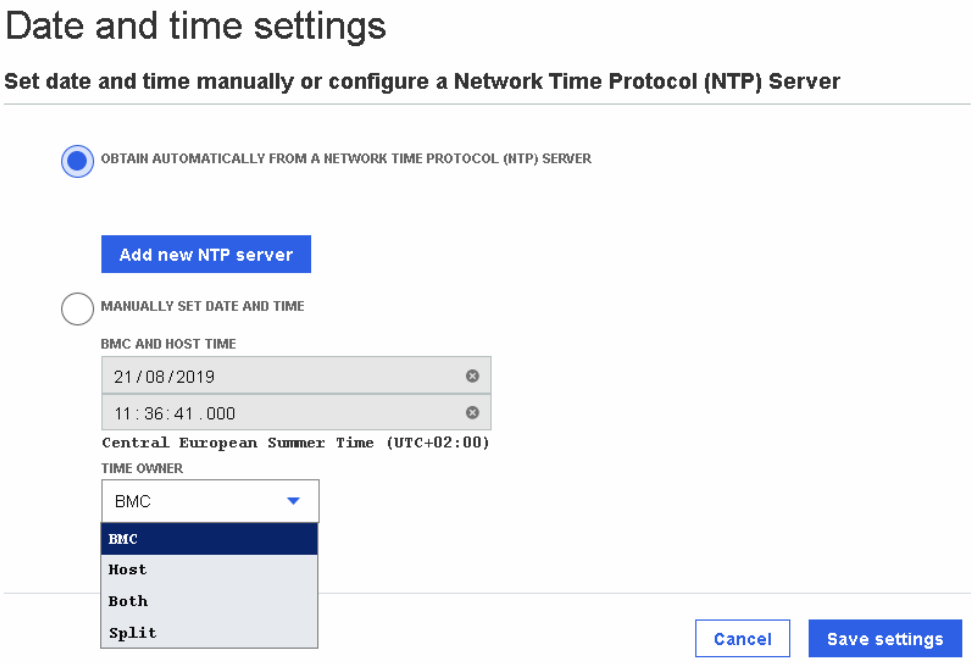
The laptop is connected to the BullSequana Edge BMC port

The server BMC has an IP address allocated

The laptop computer is connected to the LAN

Procedure

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



2. Use the options to set the data and time either automatically via a NTP server or manually.
3. Select the time owner according to the system requirements.

Time owner	Description
BMC	Configure the date and time for the BMC
Host	Configure the date and time for the host
Both	Configure the date and time for both the BMC and the host
Split	Configure the BMC date and time settings separately from the host

4. Click **Save settings.**

Chapter 5. Managing users

5.1. Viewing user details

Prerequisites

A laptop computer with the Chrome or Firefox browser installed

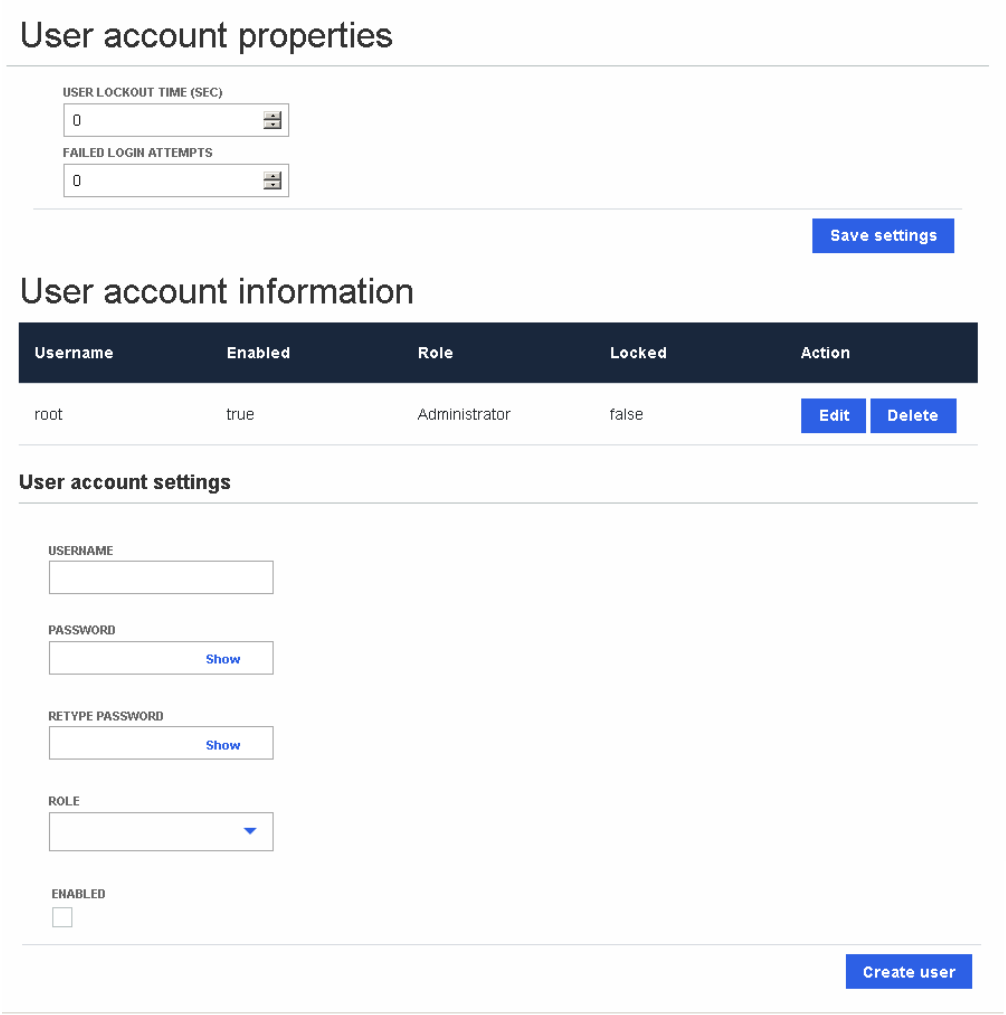
The laptop is connected to the BullSequana Edge BMC port

The server BMC has an IP address allocated

The laptop computer is connected to the LAN

Procedure

1. From the **Users** tab, click **Manage user accounts**. The **User account** page opens.



2. Select a user to view account settings.

5.2. Creating a new user account

Prerequisites

A laptop computer with the Chrome or Firefox browser installed

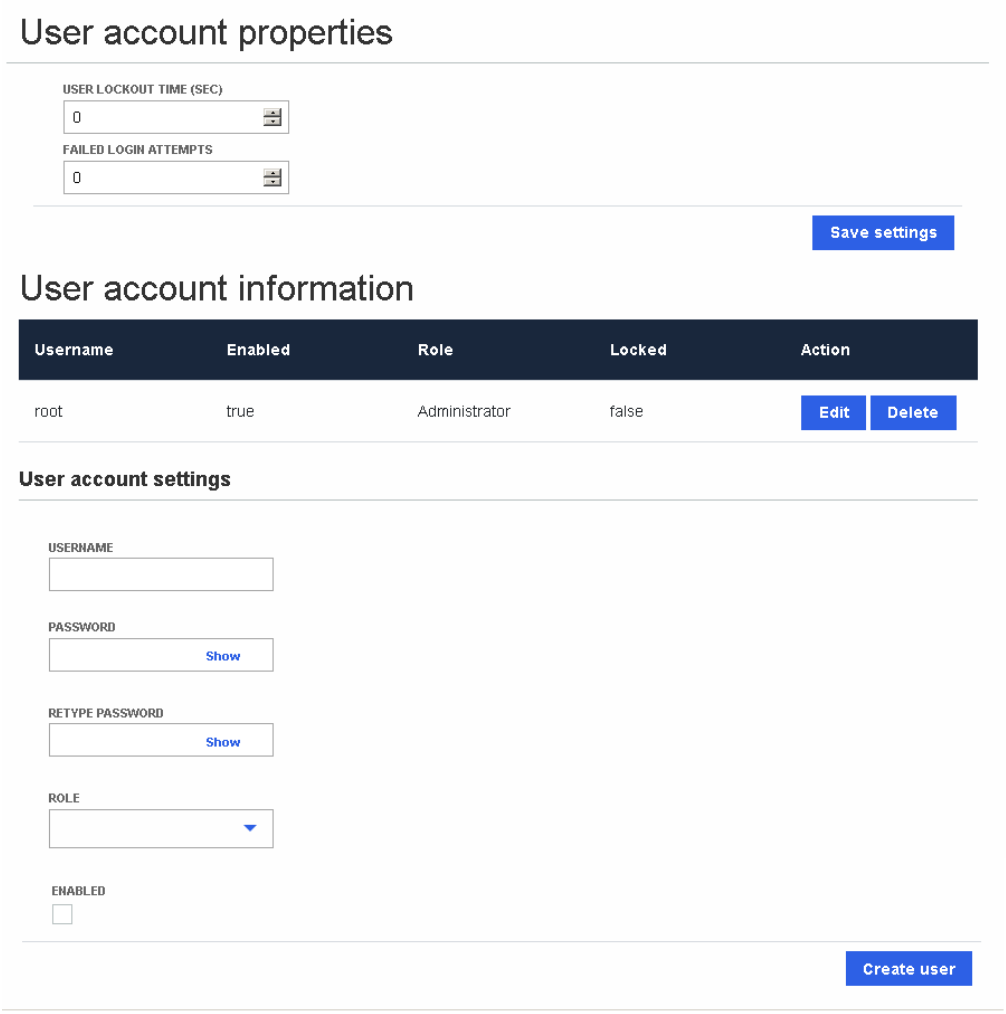
The laptop is connected to the BullSequana Edge BMC port

The server BMC has an IP address allocated

The laptop computer is connected to the LAN

Procedure

1. From the **Users** tab, click **Manage user accounts**. The **User account information** page opens.



User account properties	
User Lockout Time (Sec)	Period before the user is locked out. The minimum setting is 30 seconds
Failed Login Attempts	The number of failed login attempts allowed. The maximum possible is 10

2. Add the User name and the password.

Note The password must be at least eight characters long and be a mixture of upper case letters and lower case letters. The password must be different from the user name and not be the word 'password'.

3. Click **Create User**.
4. Enter the username, password and role for the new user account.
5. Click **ENABLED**.
6. Click **Save**.

5.3. Editing a user account

Prerequisites

A laptop computer with the Chrome or Firefox browser installed

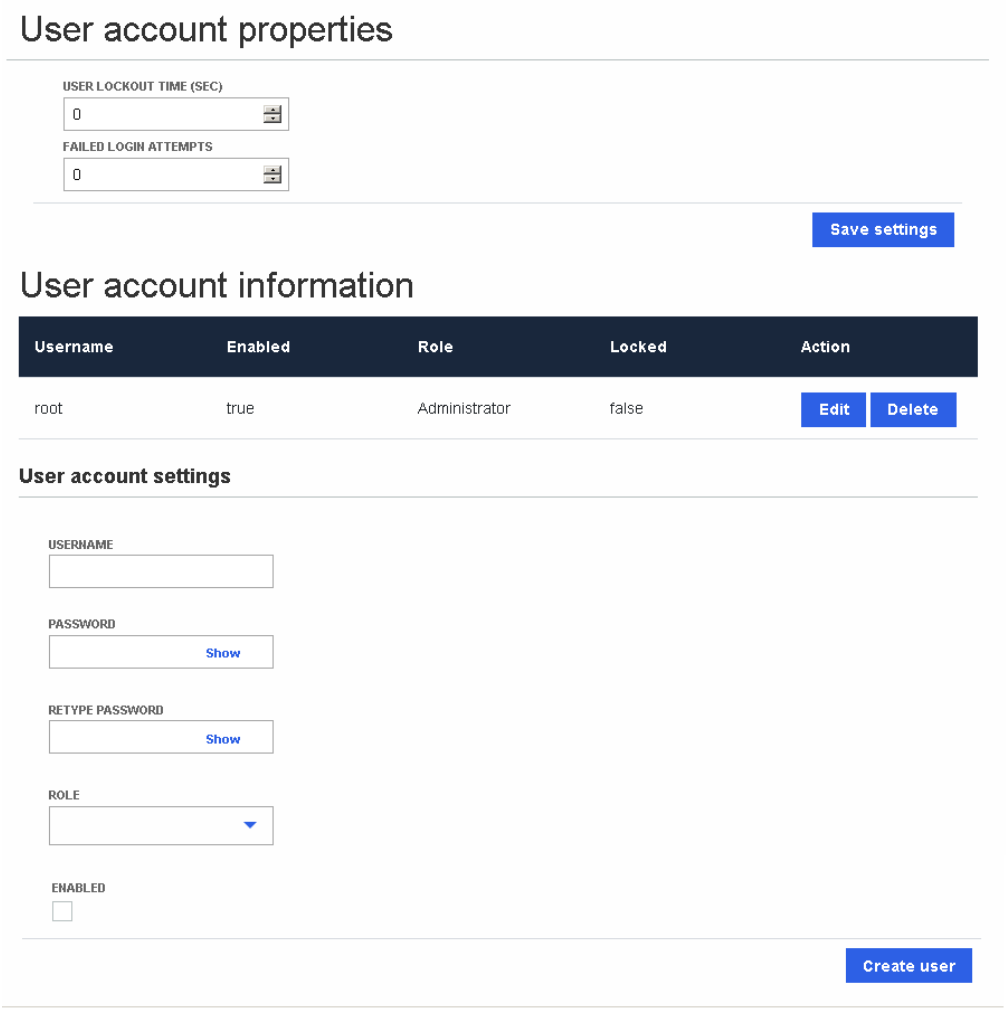
The laptop is connected to the BullSequana Edge BMC port

The server BMC has an IP address allocated

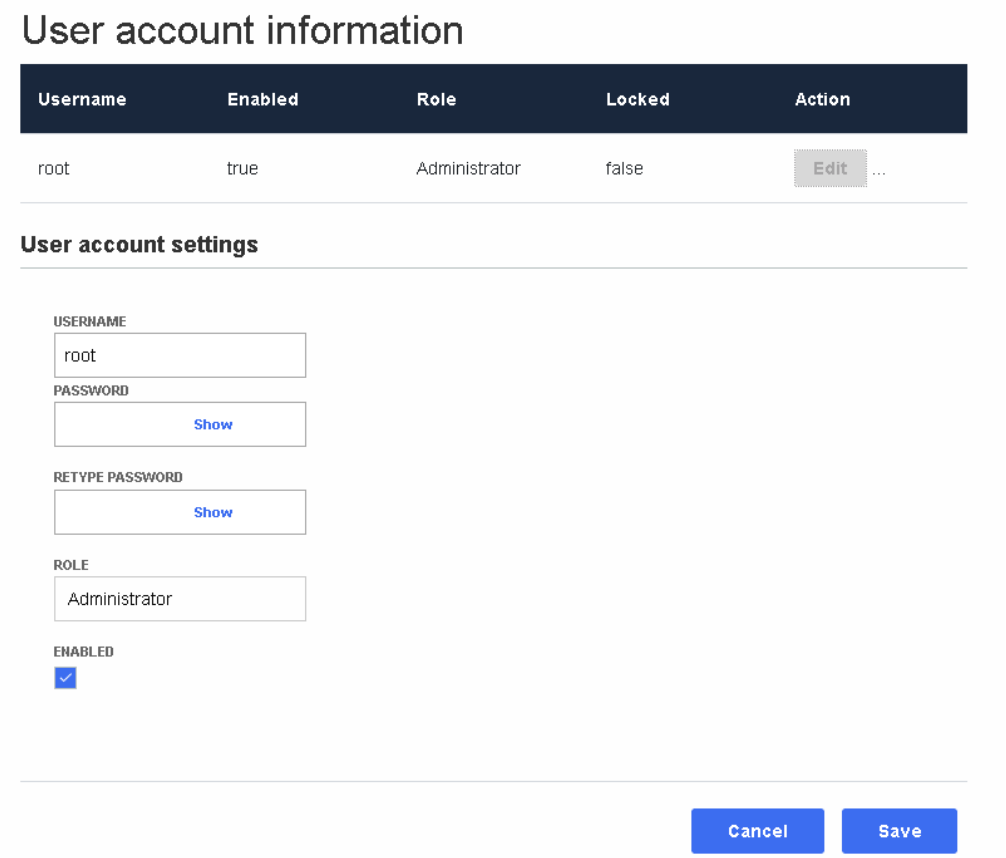
The laptop computer is connected to the LAN

Procedure

1. From the **Users** tab, click **Manage user accounts**. The **User account information** page opens.



2. Click **Edit** to edit existing account settings.



3. Make the changes required. Click **Save**.

5.4. Deleting a user account

Prerequisites

A laptop computer with the Chrome or Firefox browser installed

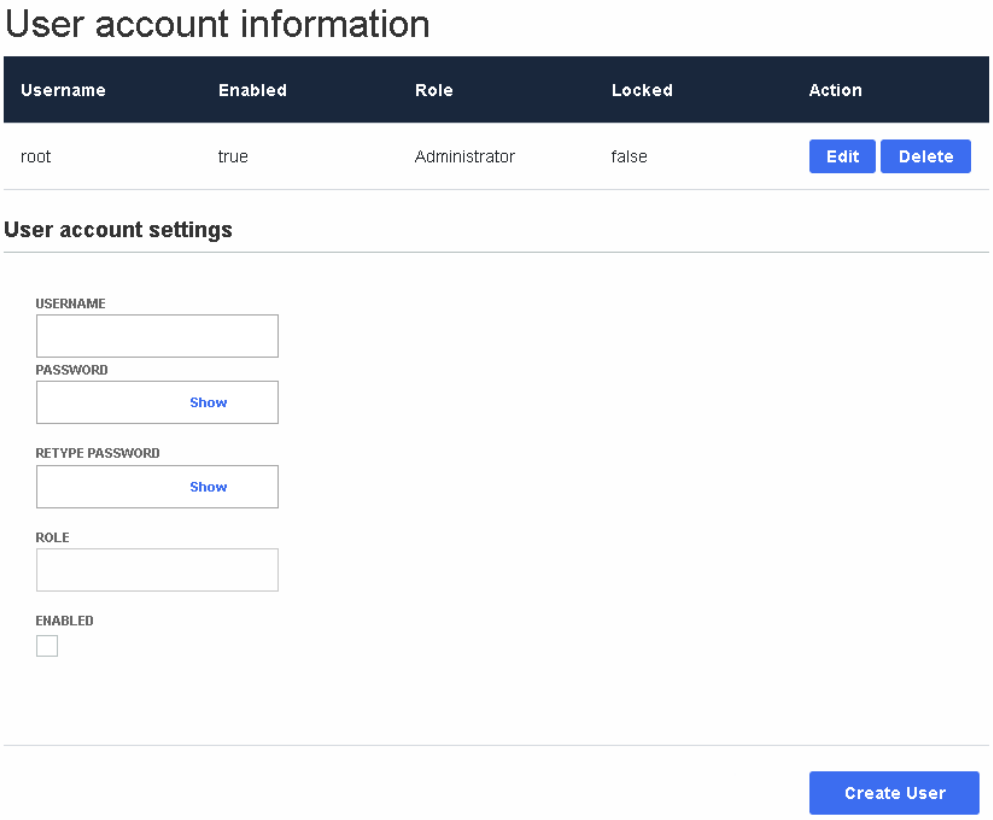
The laptop is connected to the BullSequana Edge BMC port

The server BMC has an IP address allocated

The laptop computer is connected to the LAN

Procedure

1. From the **Users** tab, click **Manage user accounts**. The **User account information** page opens.



2. Select the user account to be deleted. Click **Delete**.
3. Click **Save**.

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