EVIDEN

BullSequana EXD & AI100D

Customer Service Guide

86 A1 56FT 02 - November 2024

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Hardware

November 2024

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Table of Contents

Preface

This guide explains how to replace the Customer Replaceable Units (CRUs) of 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.**
See the *Multilingual Safety Notices Guide* for translated versions of the safety notices.

Intended Readers

This guide is intended for use by instructed or skilled personnel in charge of server and cabinet maintenance.

Chapter 1. Servicing a Power Supply Unit (PSU)

Important	**ATTENTION: Please read carefully the safety instructions before you perform the procedures described in this manual.** **See the *Multilingual Safety Notices Guide* for translated versions of the safety notices.**

CAUTION C004
Static electricity can damage the server and other electronic devices. To avoid damage, keep static-sensitive devices in their static-protective packages until you are ready to install them.
To reduce the possibility of damage from electrostatic discharge, observe the following precautions:
Limit your movement. Movement can cause static electricity to build up around you.
Wear an electrostatic-discharge wrist strap.
Wear electrostatic-discharge gloves.
Handle the device carefully, holding it by its edges or its frame.
Do not solder joints, pins, or exposed circuitry.
Do not leave the device where others can handle and damage it.
While the device is still in its static-protective package, touch it to an unpainted metal surface on the outside of the server for at least 2 seconds. This drains static electricity from the package and from your body.
Remove the device from its package and install it directly into the server without setting down the device. If it is necessary to set down the device, put it back into its static-protective package. Do not place the device on the server cover or on a metal surface.
Take additional care when you handle devices during cold weather. Heating reduces indoor humidity and increases static electricity.

See	Description Guide to locate the PSUs.

1.1. Removing a Power Supply Unit (PSU)

Important	**If redundancy rules are followed, a PSU is hot-pluggable. It can be replaced when the OS is running without causing any interruption in production.**

Required tools

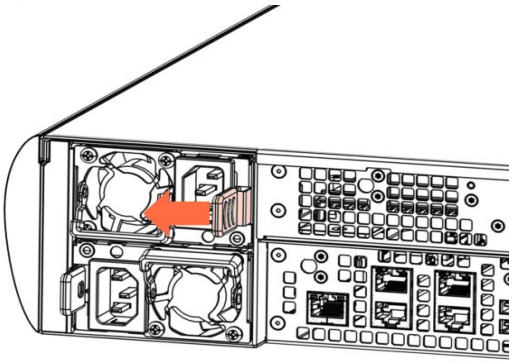
None

Procedure

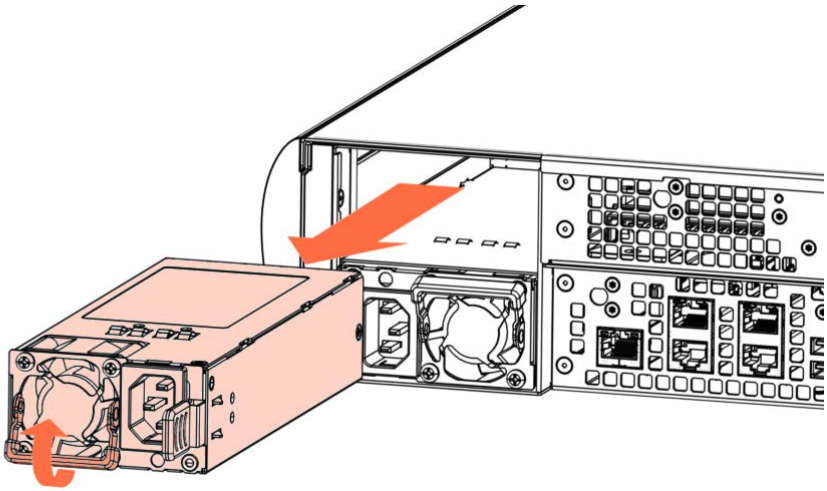
1. **Unpack the new component on a clean ESD-protected work surface**
2. **Disconnect the power supply cable**
3. **Remove the PSU**

    1. Push and hold the latch towards the left.

    Rear view

    2. Take hold of the handle and remove the PSU.

1.2. Installing a Power Supply Unit (PSU)

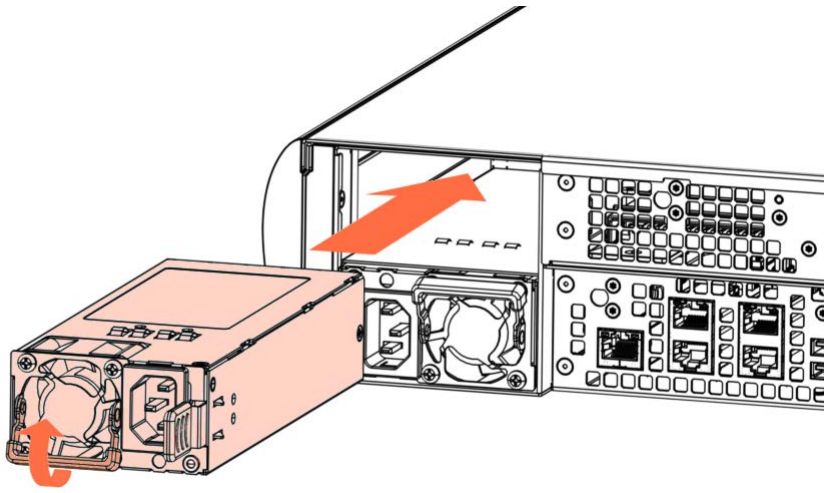
Important	**If redundancy rules are followed, a PSU is hot-pluggable. It can be replaced when the OS is running without causing any interruption in production.**

Required tools

None

Procedure

1. **Take hold of the new component**
2. **Install the PSU**
    1. Check the PSU position.
    2. Insert the PSU using the handle, until it locks into position.



3. **Reconnect the power supply cable**

Chapter 2. Servicing a M.2 NVMe disk

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Do not leave the device where others can handle and damage it.
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Remove the device from its package and install it directly into the server without setting down the device. If it is necessary to set down the device, put it back into its static-protective package. Do not place the device on the server cover or on a metal surface.
Take additional care when you handle devices during cold weather. Heating reduces indoor humidity and increases static electricity.

See	Description Guide to locate the disk.

2.1. Removing a M.2 NVMe disk

Required tools

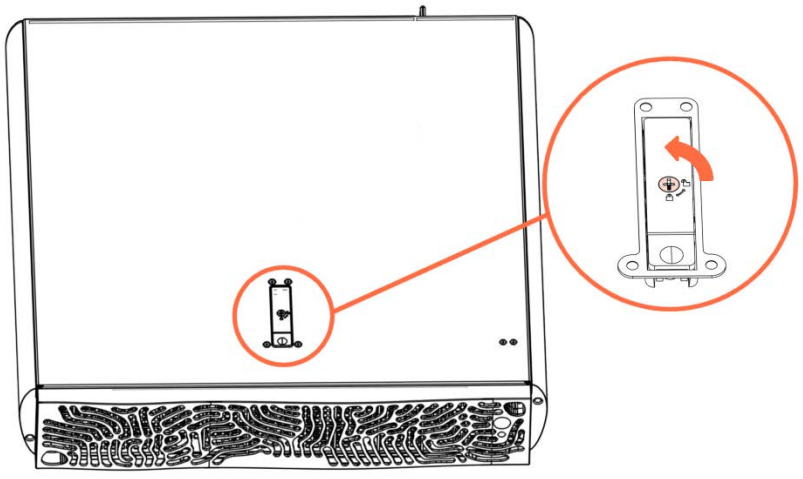
Cross-headed screwdriver

PH0 cross-headed screwdriver

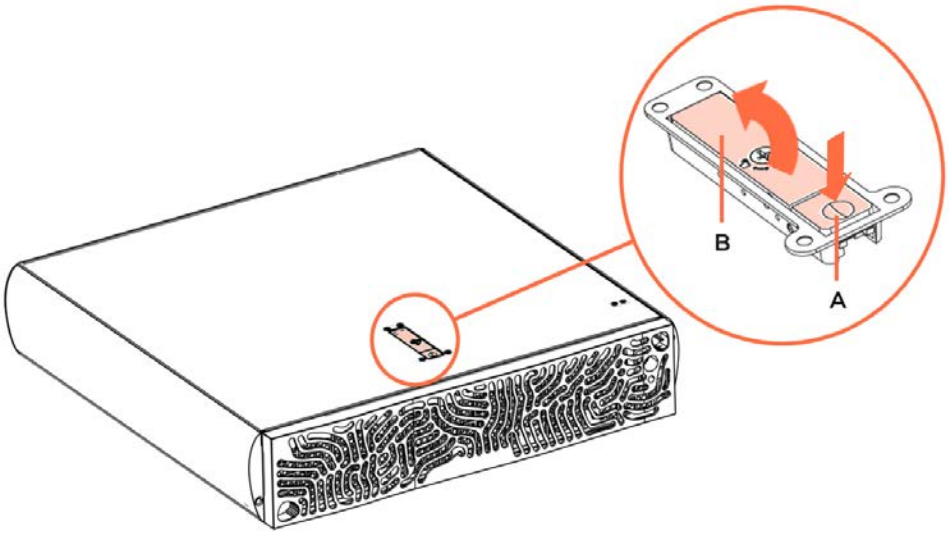
Procedure

1. **Unpack the new component on a clean ESD-protected work surface**
2. **Power off the server**
3. **Disconnect all the cables from the server**
    1. Check all the cables are correctly labeled.
    2. Disconnect all the power cables.
    3. Disconnect all the network cables.
    4. Check all the LEDs are off.
4. **Remove the top cover**
    1. Loosen the captive screw to unlock the cover latch.

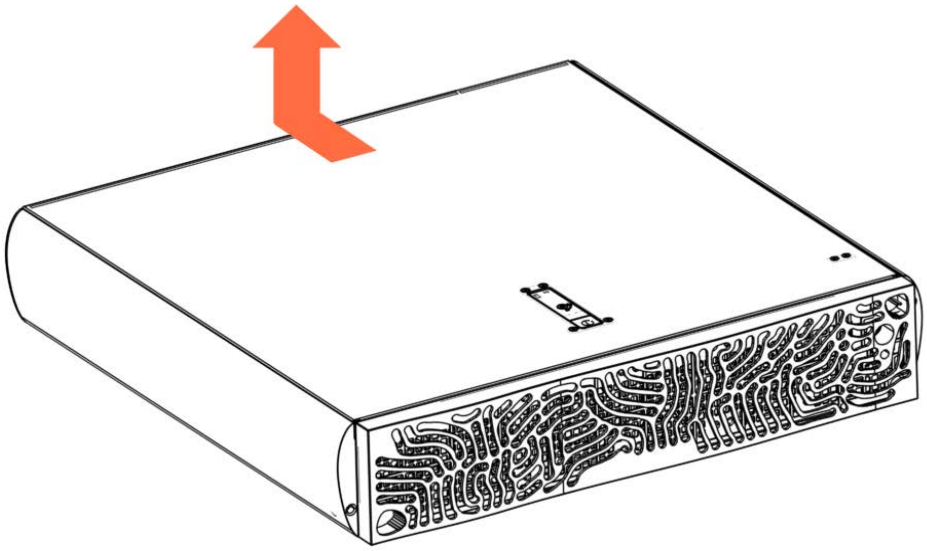
Top view



2. Push the button (A) to release the latch. The upper part (B) rises up.



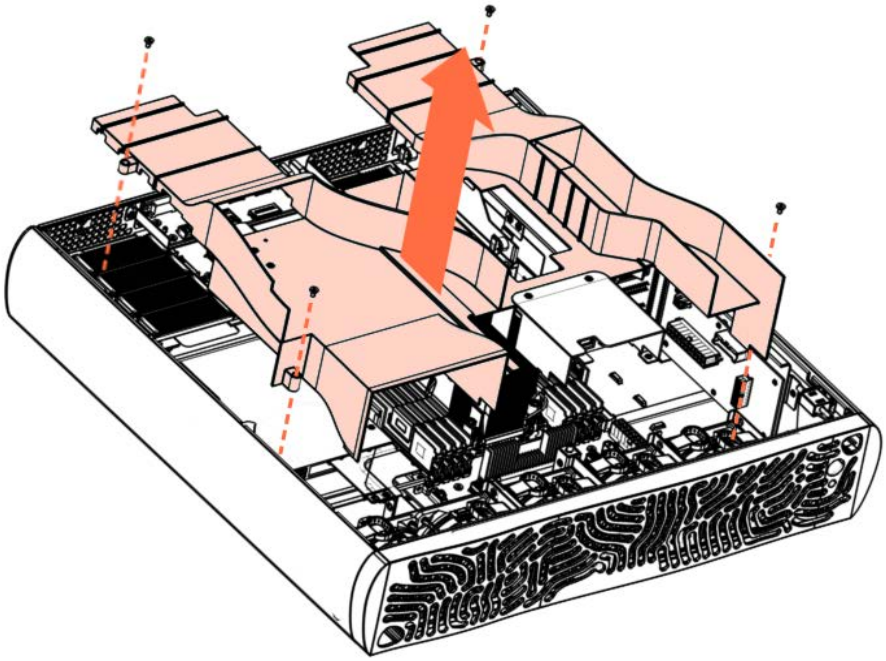
3. Slide the cover back slightly and lift it up.



5. Remove the air duct

1. Remove the screws to unlock the air duct.
2. Remove the air duct.

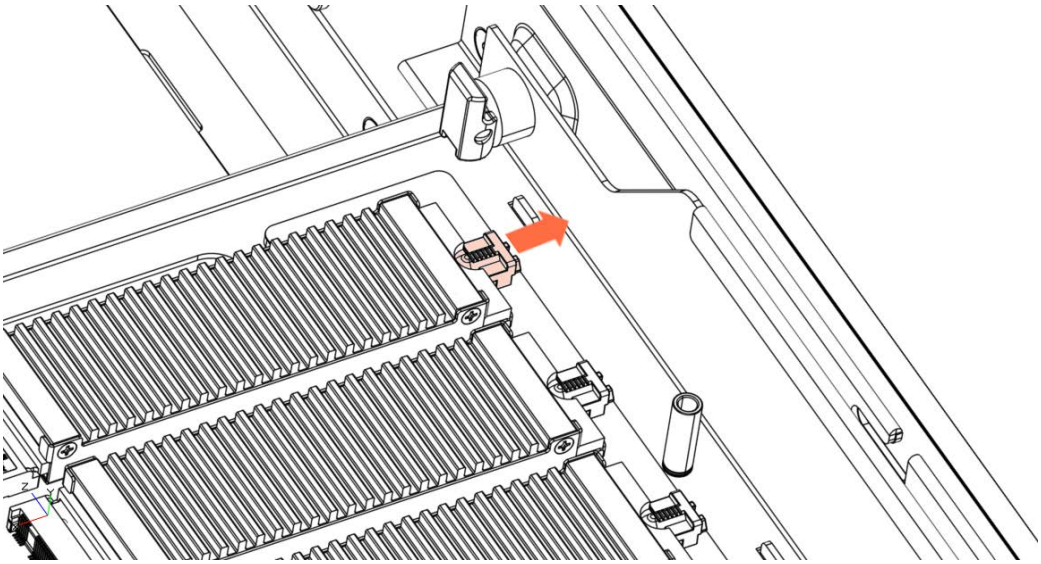
Front view



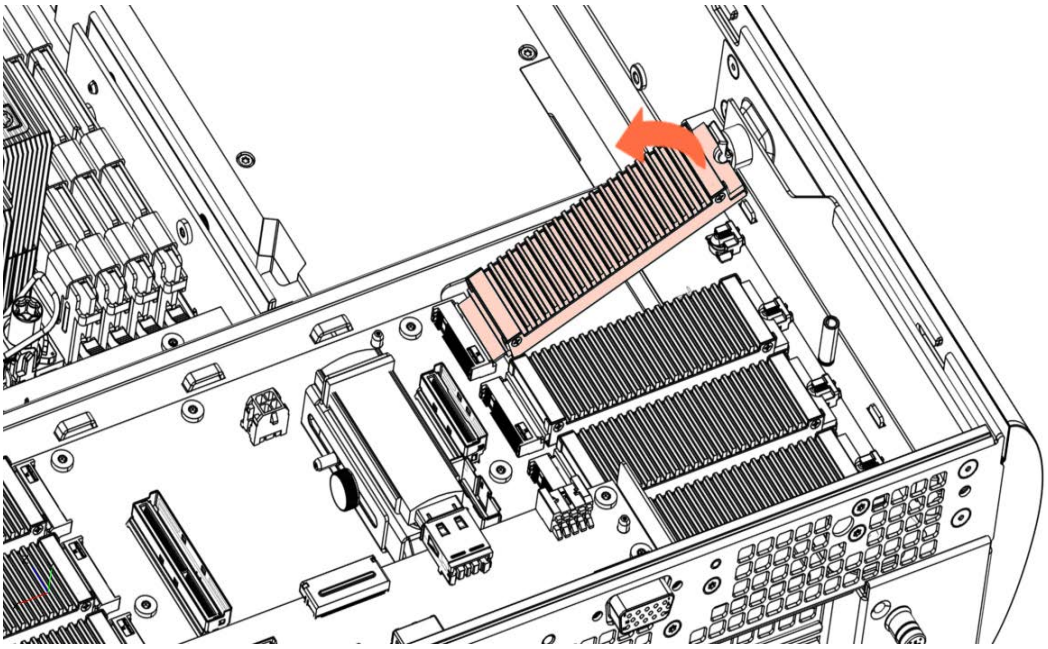
6. Remove the disk assembly

1. Push the latch to unlock the disk assembly.

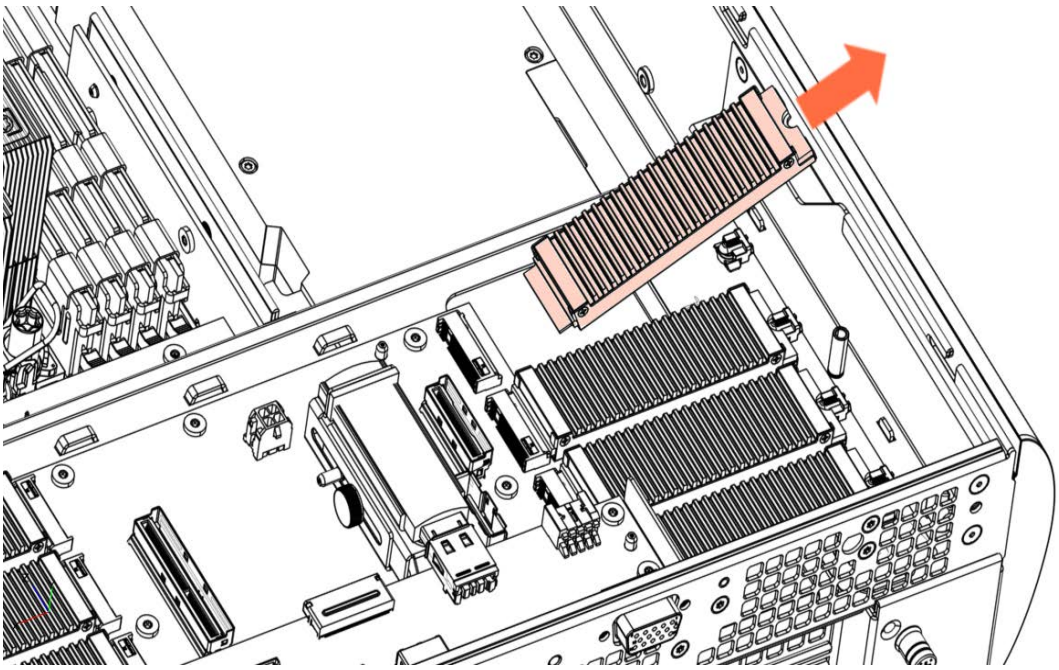
Rear view



2. Lift the disk assembly up to about 20 degrees above the horizontal.

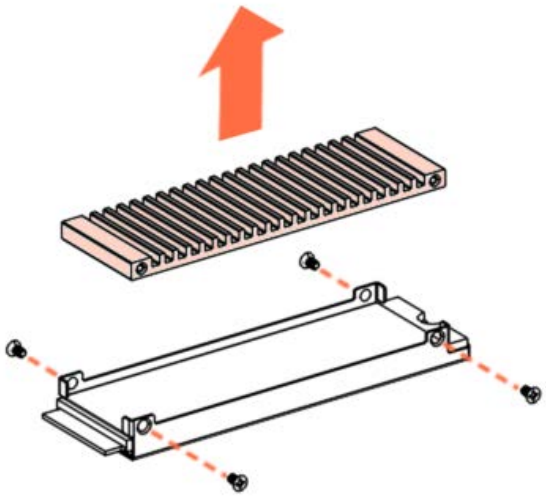


3. Remove the disk assembly.

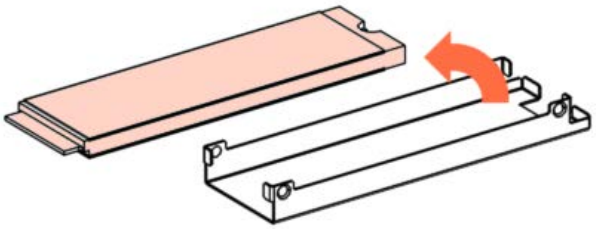


7. Remove the M.2 NVMe disk

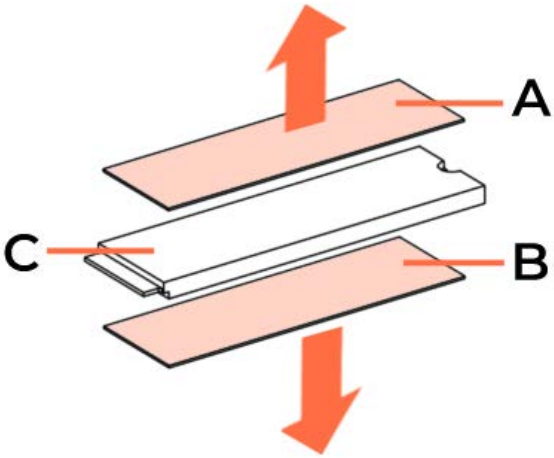
1. Remove the screws and lift the heatsink cover up.



2. Remove the M.2 NVMe disk assembly.



3. Remove the thermal pads (A, B) and then remove the M.2 NVMe disk (C).



2.2. Installing a M.2 NVMe disk

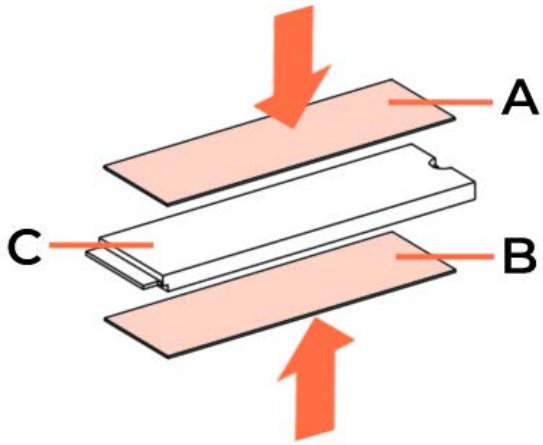
Required tools

Cross-headed screwdriver

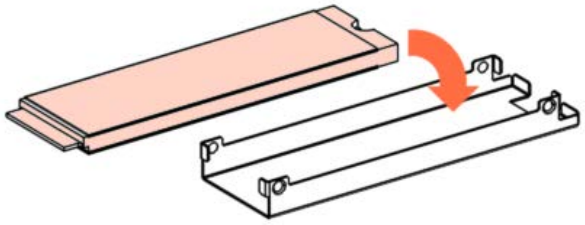
PH0 cross-headed screwdriver

Procedure

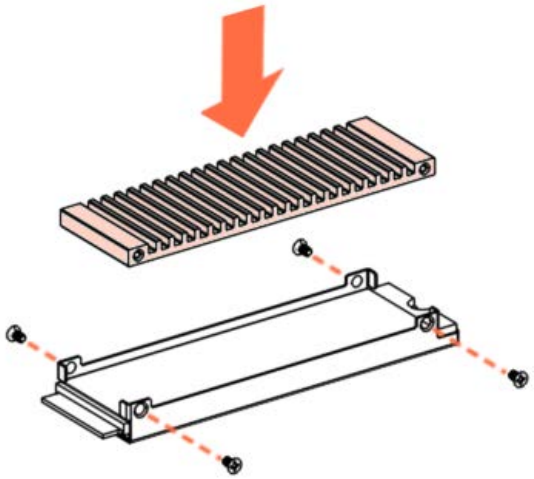
1. **Take hold of the new component**
2. **Install the M.2 NVMe disk**
    1. Install new thermal pads (A, B) on each side of the M.2 NVMe disk (C).



    2. Insert the M.2 NVMe disk assembly into the heat sink base.

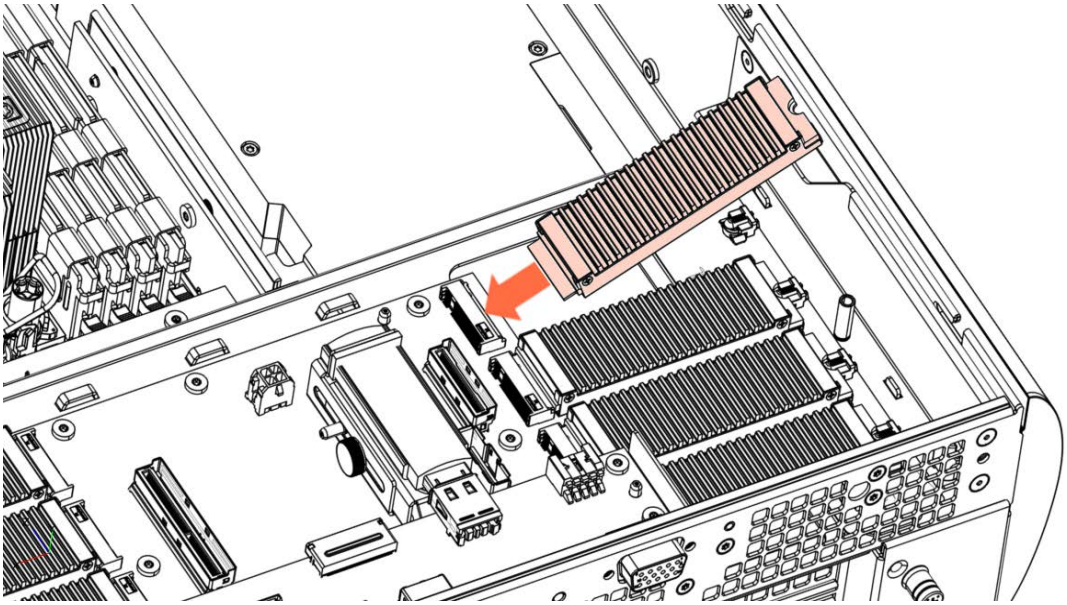


3. Install the heatsink cover and screw the whole set in place.

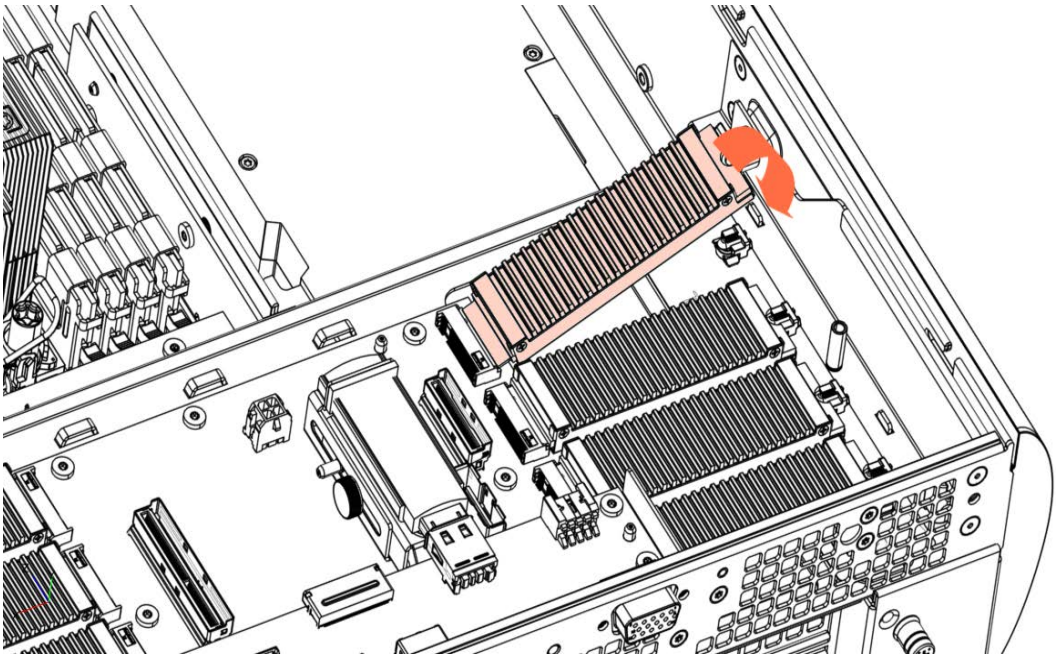


3. Install the disk assembly

1. Insert the disk at an angle of around 20° to the horizontal.



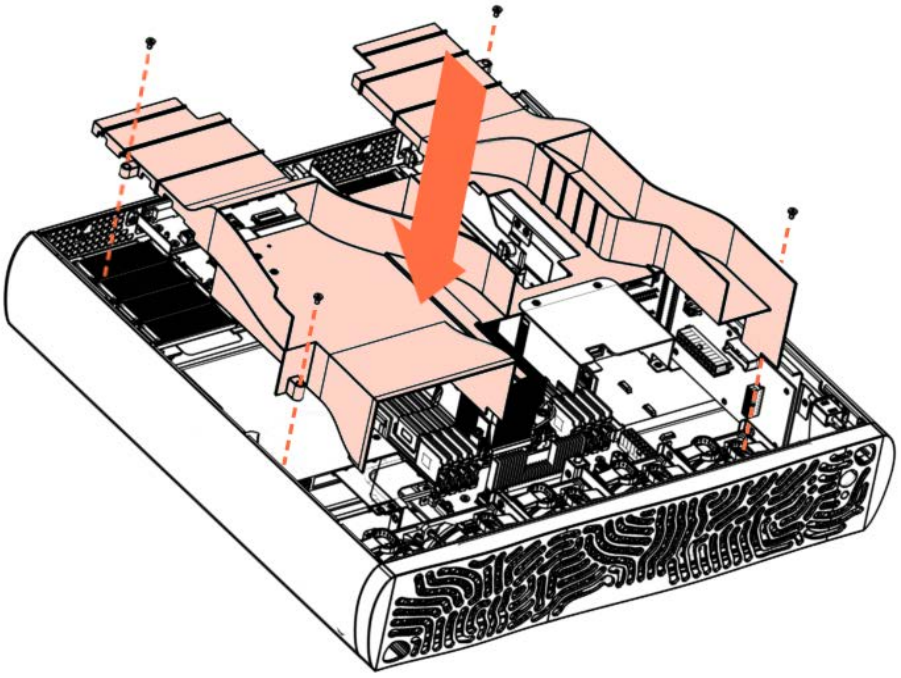
2. Lower the disk down.



4. Install the air duct

1. Install the air duct.

Front view

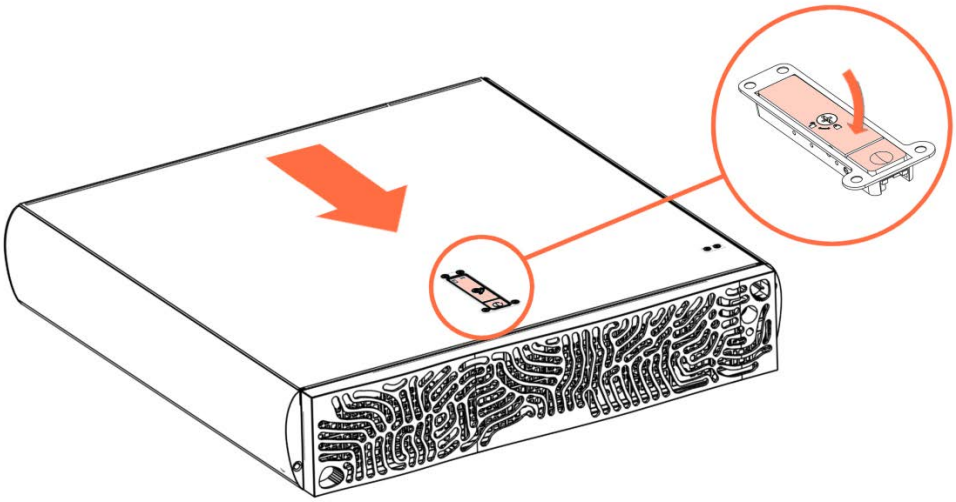


2. Tighten the screws to lock the air duct into place.

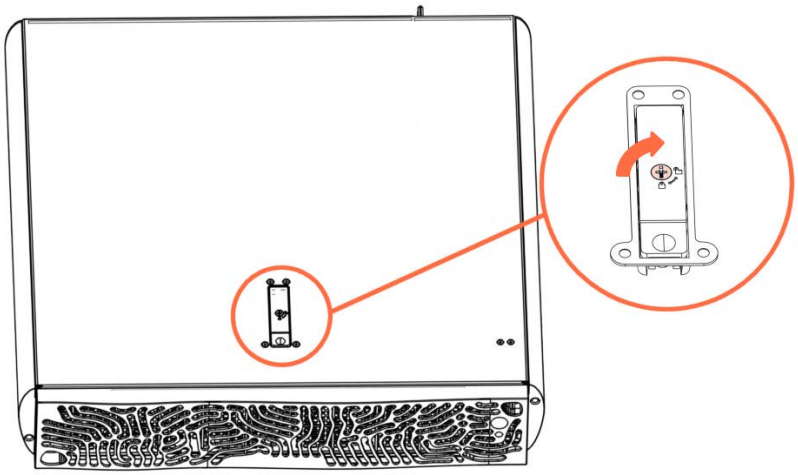
5. Install the top cover

1. Position the cover on the server and slide it forward until it is in place.
2. Lower the upper part of the cover latch.

Top view



3. Tighten the captive screw to lock the cover latch.



6. Connect all the cables to the server

7. Power on the server

Chapter 3. Servicing a fan

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Wear electrostatic-discharge gloves.
Handle the device carefully, holding it by its edges or its frame.
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Do not leave the device where others can handle and damage it.
While the device is still in its static-protective package, touch it to an unpainted metal surface on the outside of the server for at least 2 seconds. This drains static electricity from the package and from your body.
Remove the device from its package and install it directly into the server without setting down the device. If it is necessary to set down the device, put it back into its static-protective package. Do not place the device on the server cover or on a metal surface.
Take additional care when you handle devices during cold weather. Heating reduces indoor humidity and increases static electricity.

See Description Guide to locate the fan.

3.1. Removing a fan

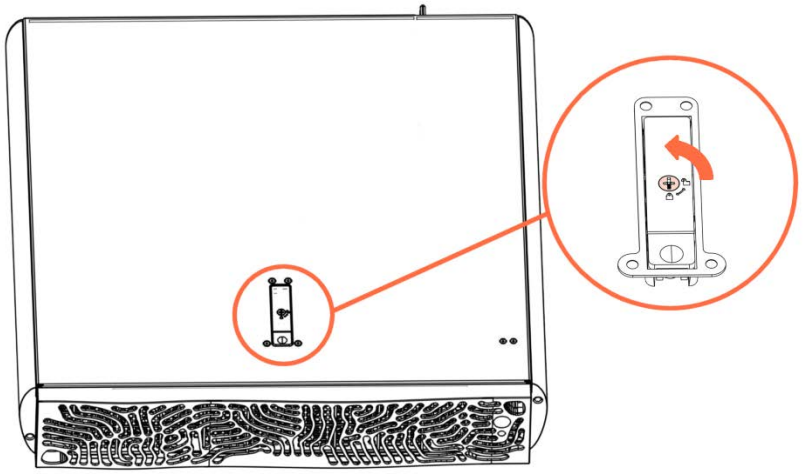
Required tools

Cross-headed screwdriver

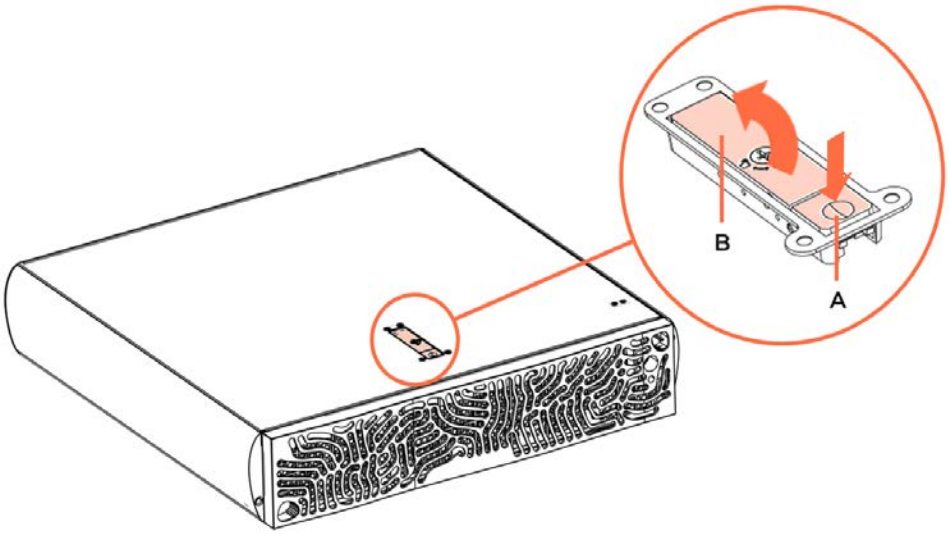
Procedure

1. **Unpack the new component on a clean ESD-protected work surface**
2. **Power off the server**
3. **Disconnect all the cables from the server**
    1. Check all the cables are correctly labeled.
    2. Disconnect all the power cables.
    3. Disconnect all the network cables.
    4. Check all the LEDs are off.
4. **Remove the top cover**
    1. Loosen the captive screw to unlock the cover latch.

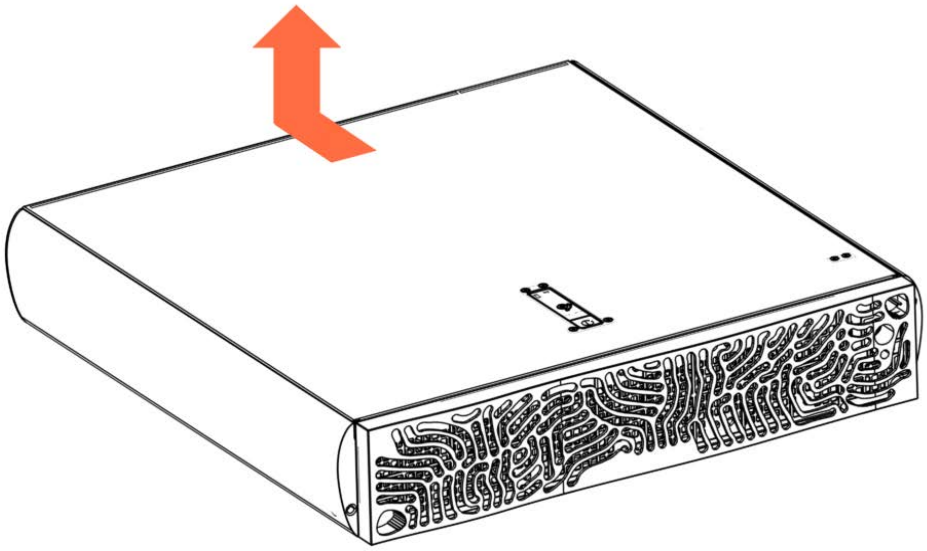
Top view



2. Push the button (A) to release the latch. The upper part (B) rises up.



3. Slide the cover back slightly and lift it up.



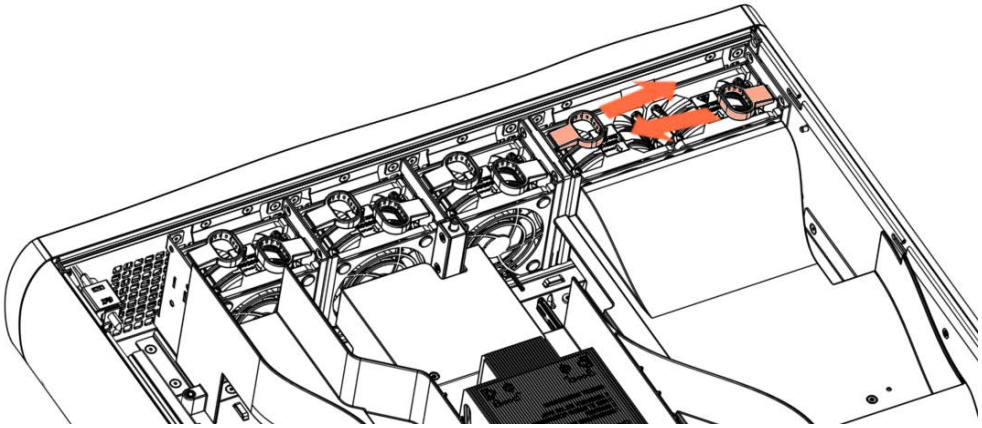
5. Remove the fan

Double fan

Note	Both fans are removed at the same time.

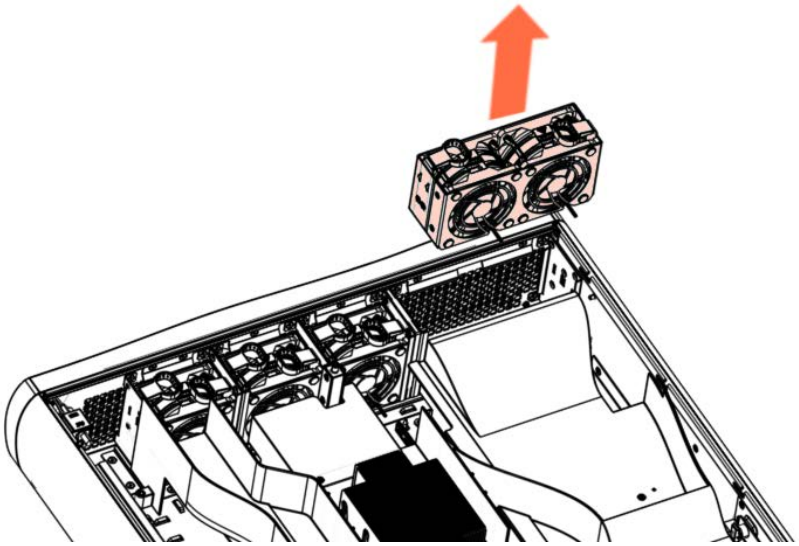
1. Disconnect the cables of both fans.
2. Hold the handles and pull inward to release the fan latches.

Top view



3. Pull the fans up.

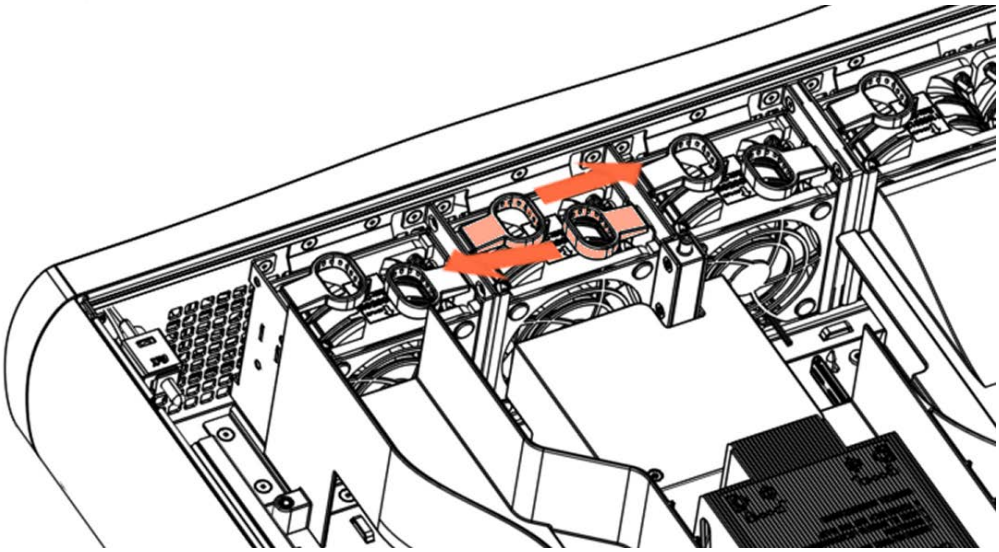
Top view



Single fan

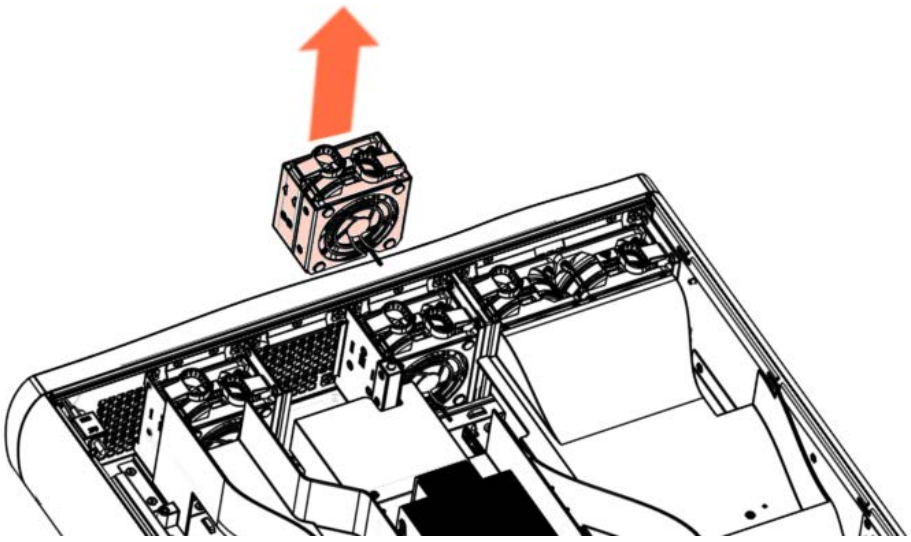
1. Disconnect the cable of the fan.
2. Hold the handles and pull inward to release the fan latches.

Top view



3. Pull the fan up.

Top view



3.2. Installing a fan

Required tools

Cross-headed screwdriver

Procedure

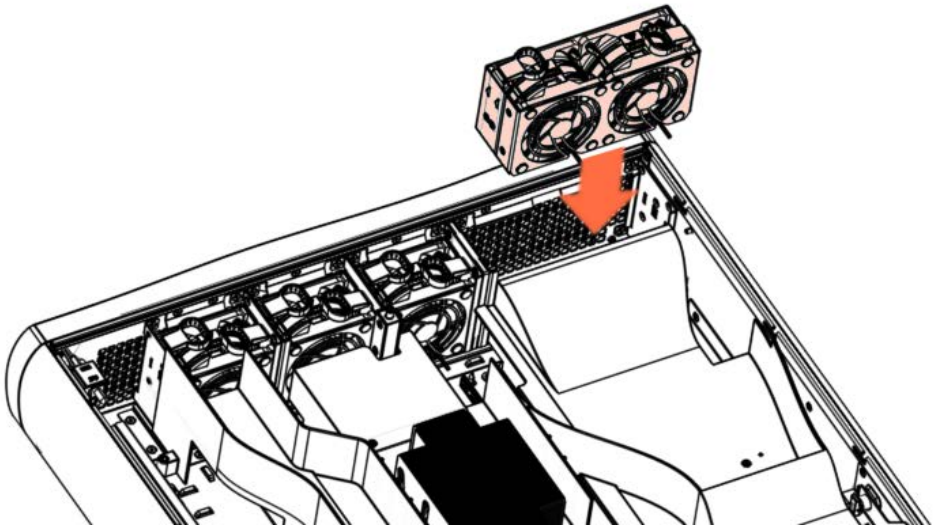
1. **Take hold of the new component**
2. **Install the fan**

Double fan

Note Both fans are installed at the same time.

1. Lower the double fan locking the latches into position.

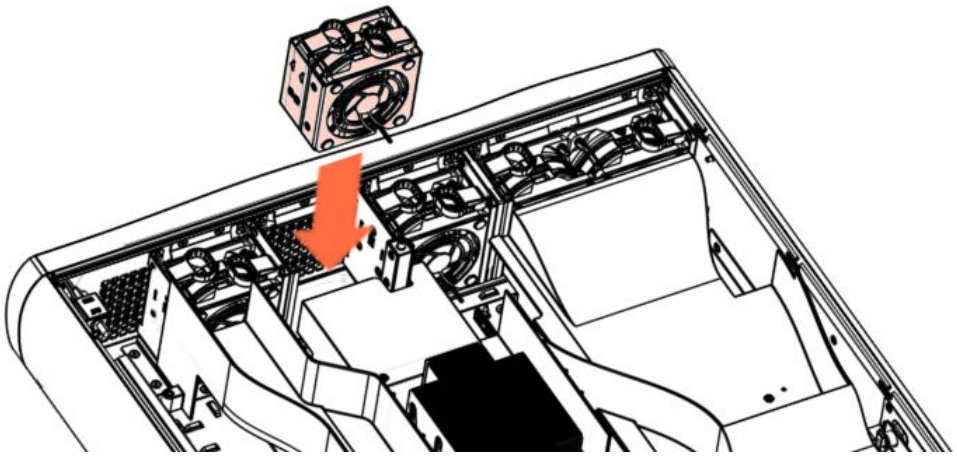
Top view



2. Connect the cables of both fans.

Single fan

1. Lower the fan locking the latches into position.

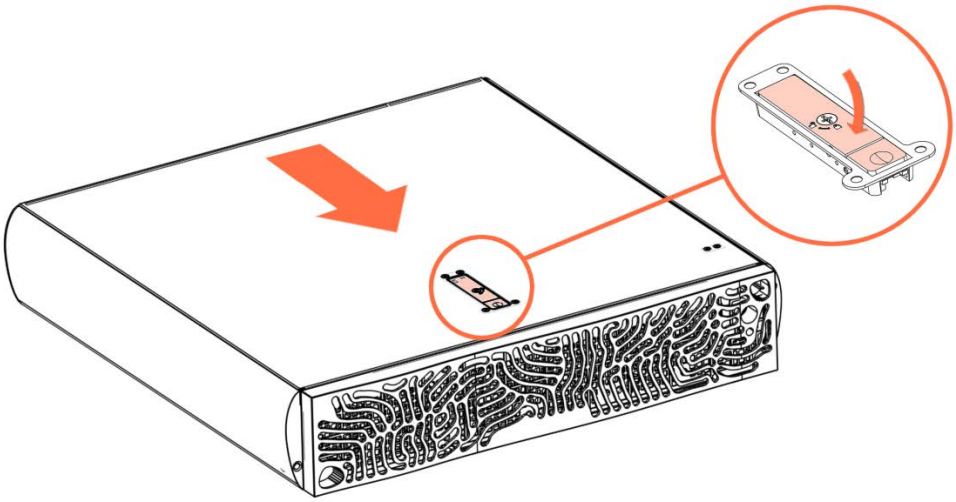


2. Connect the cable of the fan.

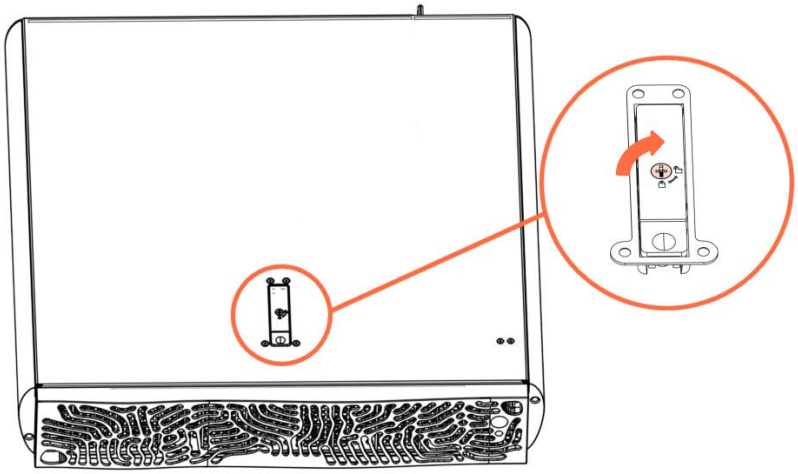
3. Install the top cover

1. Position the cover on the server and slide it forward until it is in place.
2. Lower the upper part of the cover latch.

Top view



3. Tighten the captive screw to lock the cover latch.



4. **Connect all the cables to the server**
5. **Power on the server**

Chapter 4. Servicing the bezel filter

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Take additional care when you handle devices during cold weather. Heating reduces indoor humidity and increases static electricity.

4.1. General recommendations

Replacement

Clean or replace air filters every 90 days.

Cleaning

- Vacuum clean to remove accumulated dust and dirt.
- Use compressed air blower and point nozzle in opposite direction of operating air flow.
- Wash away collected dirt using a standard hose nozzle and plain cold water.
- Dip the filter in a solution of warm water and mild detergent, rinse in clear water and let stand until completely dry.

4.2. Removing the bezel filter

Required tools

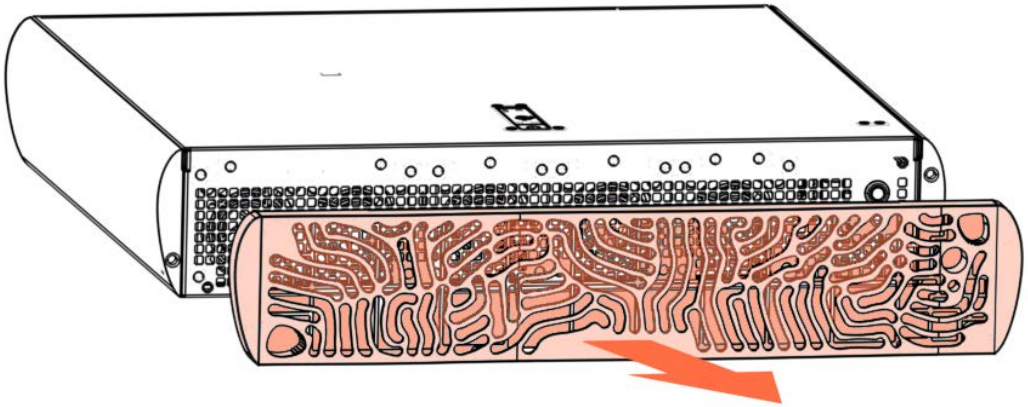
T10 Torx screwdriver

Procedure

1. **Unpack the new component on a clean ESD-protected work surface**
2. **Remove the bezel**

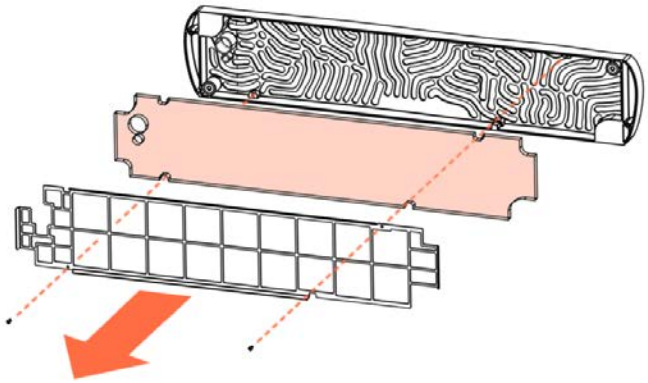
   Remove the bezel by disengaging the magnets that hold it in place.

Front view



3. **Remove the filter**

   1. Lay the bezel flat on the front.
   2. Remove the screws and disassemble the filter assembly.
   3. Remove the foam from the assembly.



4.3. Installing the bezel filter

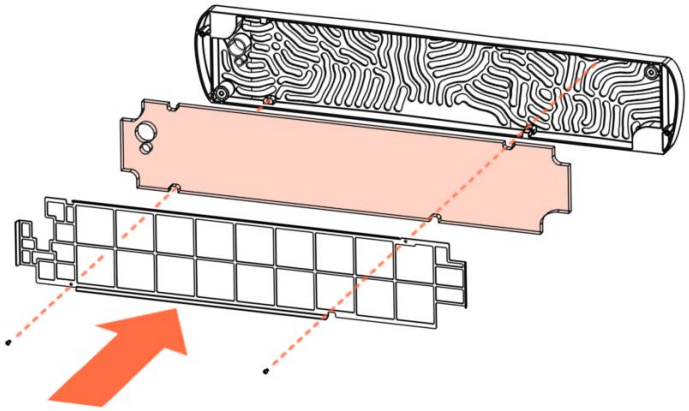
Required tools

T10 Torx screwdriver

Procedure

1. **Install the filter**

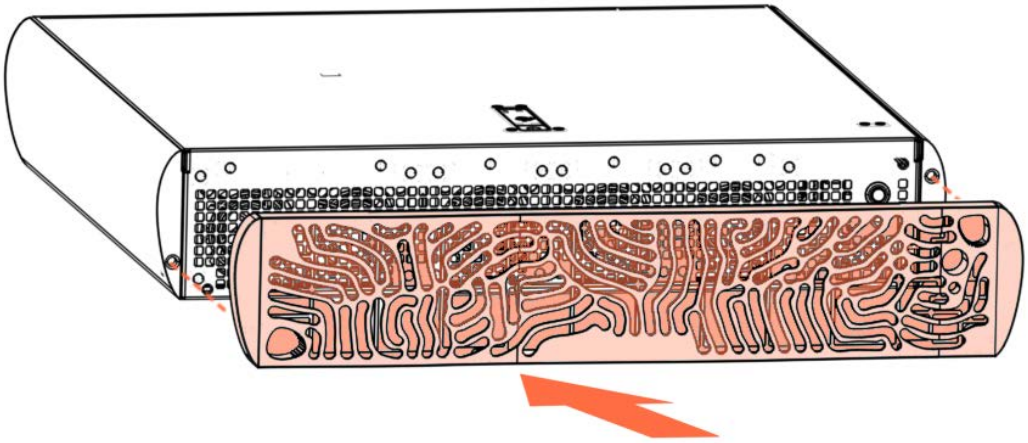
   1. Place the filter in place between the bezel and filter bracket.
   2. Tighten the screws.



2. **Install the bezel**

   Attach the bezel using the magnets.

Front view



Chapter 5. Servicing the intrusion detection switch

Important	**ATTENTION: Please read carefully the safety instructions before you perform the procedures described in this manual.** **See the *Multilingual Safety Notices Guide* for translated versions of the safety notices.**

CAUTION C004
Static electricity can damage the server and other electronic devices. To avoid damage, keep static-sensitive devices in their static-protective packages until you are ready to install them.
To reduce the possibility of damage from electrostatic discharge, observe the following precautions:
Limit your movement. Movement can cause static electricity to build up around you.
Wear an electrostatic-discharge wrist strap.
Wear electrostatic-discharge gloves.
Handle the device carefully, holding it by its edges or its frame.
Do not solder joints, pins, or exposed circuitry.
Do not leave the device where others can handle and damage it.
While the device is still in its static-protective package, touch it to an unpainted metal surface on the outside of the server for at least 2 seconds. This drains static electricity from the package and from your body.
Remove the device from its package and install it directly into the server without setting down the device. If it is necessary to set down the device, put it back into its static-protective package. Do not place the device on the server cover or on a metal surface.
Take additional care when you handle devices during cold weather. Heating reduces indoor humidity and increases static electricity.

See Description Guide to locate the intrusion sensor.

5.1. Removing the intrusion detection switch

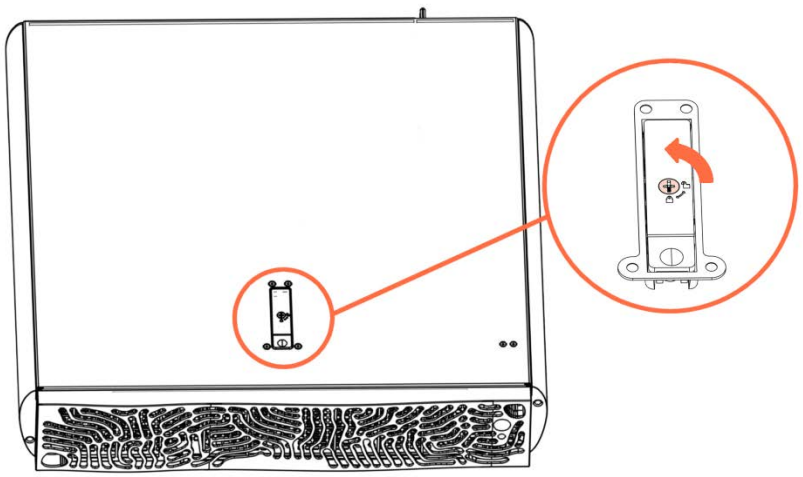
Required tools

Cross-headed screwdriver

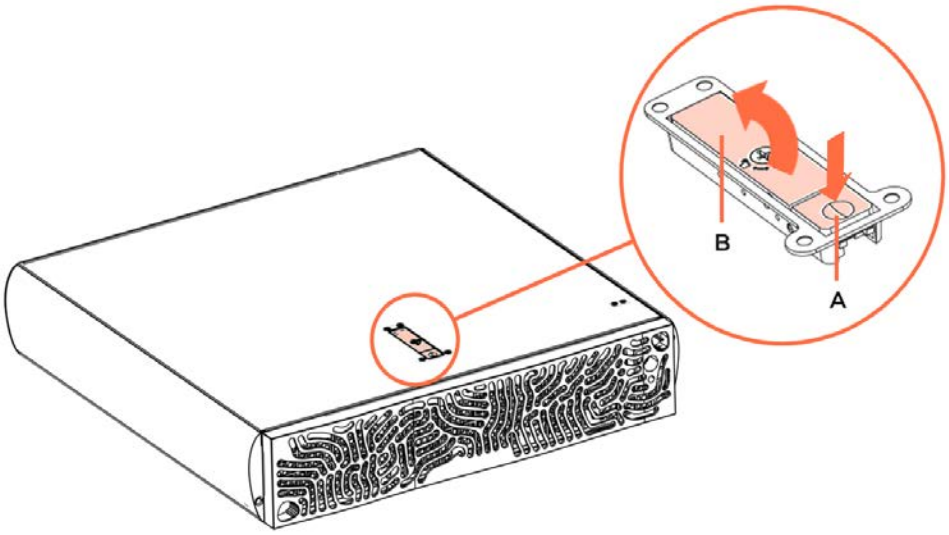
Procedure

1. **Unpack the new component on a clean ESD-protected work surface**
2. **Power off the server**
3. **Disconnect all the cables from the server**
    1. Check all the cables are correctly labeled.
    2. Disconnect all the power cables.
    3. Disconnect all the network cables.
    4. Check all the LEDs are off.
4. **Remove the top cover**
    1. Loosen the captive screw to unlock the cover latch.

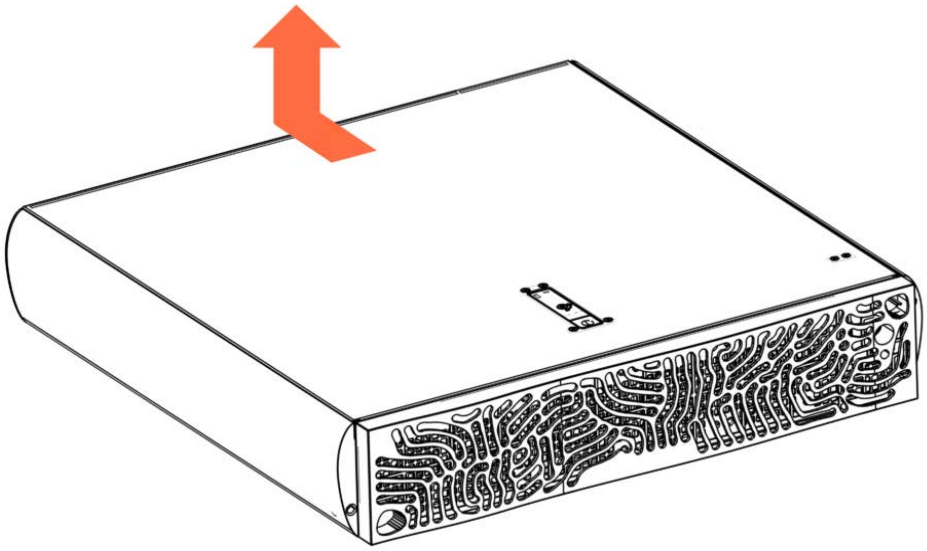
Top view



2. Push the button (A) to release the latch. The upper part (B) rises up.



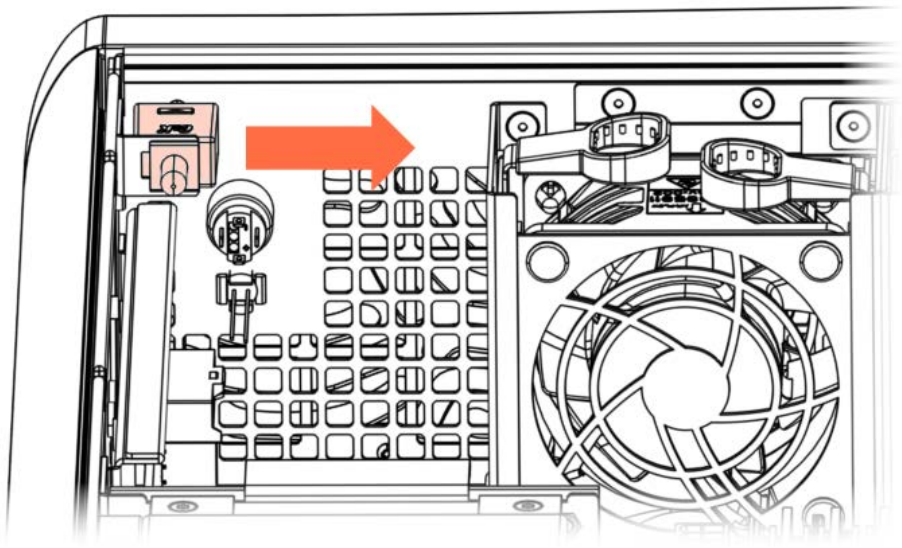
3. Slide the cover back slightly and lift it up.



5. Remove the intrusion detection switch

1. Disconnect the sensor cable from the motherboard.
2. Unclip the sensor from its bracket.

Front view



5.2. Installing the intrusion detection switch

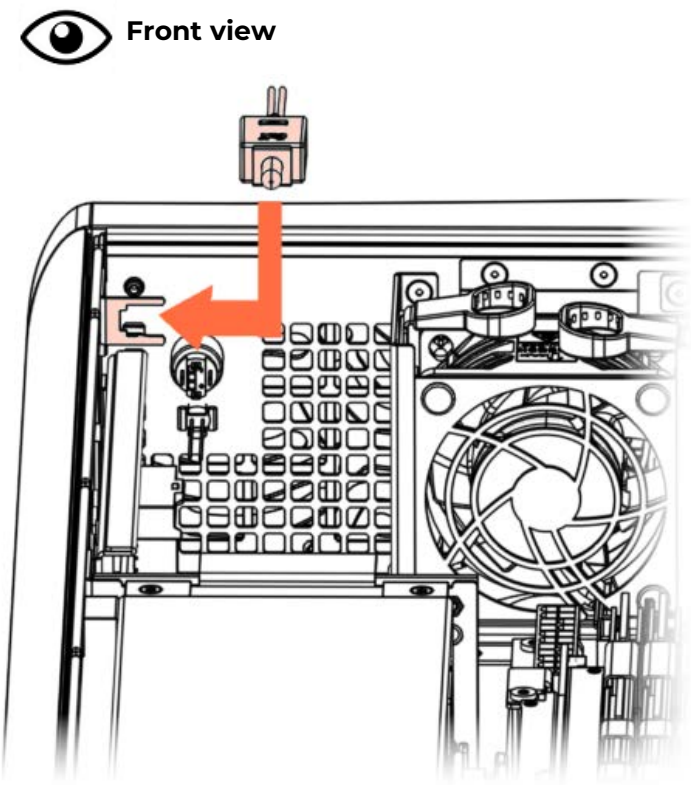
Required tools

Cross-headed screwdriver

Procedure

1. **Take hold of the new component**

    1. Clip the sensor onto its bracket.

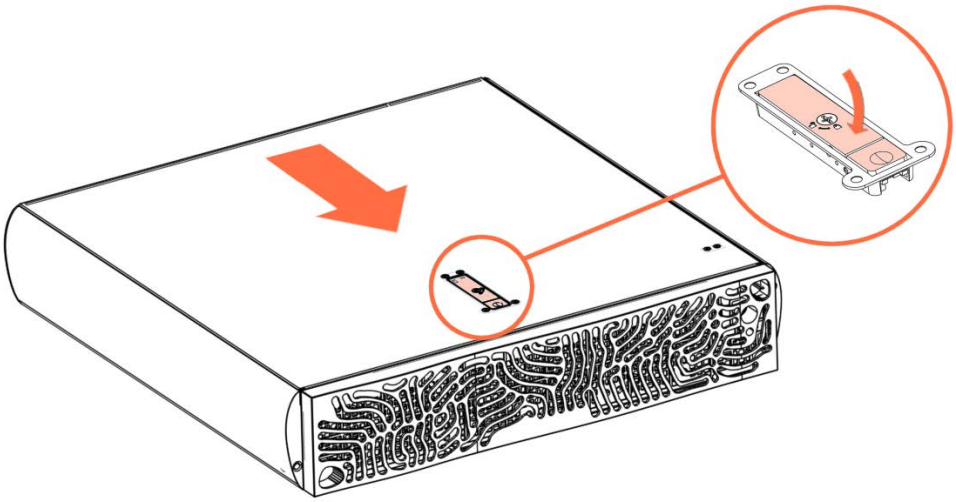


    2. Connect the sensor cable to the motherboard.

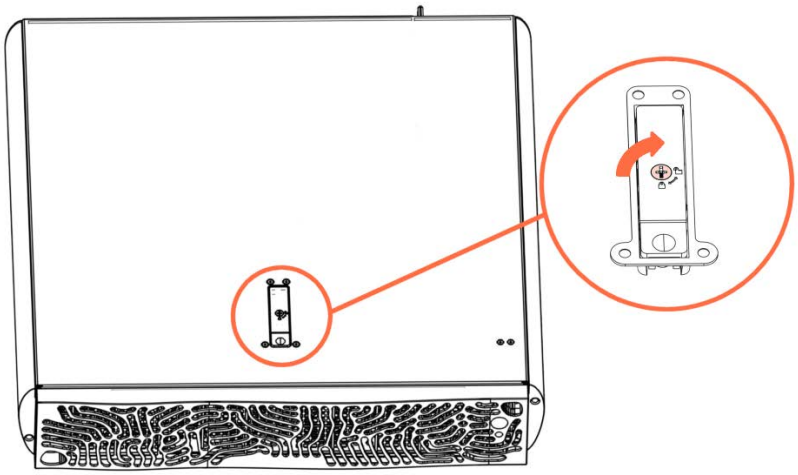
2. Install the top cover

1. Position the cover on the server and slide it forward until it is in place.
2. Lower the upper part of the cover latch.

Top view



3. Tighten the captive screw to lock the cover latch.



3. Connect all the cables to the server

4. Power on the server

Chapter 6. Firmware maintenance tasks

6.1. Rebooting the Baseboard Management Controller (BMC)

See SHC Reference Guide for more information.

Prerequisites

- A laptop is connected to the server via the LAN
- 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 Only users with Administrator privilege have access to this feature.

1. Connect to the Server Hardware Console (SHC).
2. From the **Control** tab, click **Reboot BMC**. The **Reboot BMC** page opens.
3. Click the **Reboot BMC** button and confirm.

Note When the BMC is rebooted the browser loses contact with the BMC for several minutes. The 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.

6.2. Resetting BMC settings to default values

Important **It is strongly recommended to shut down the system before resetting the setting values.**

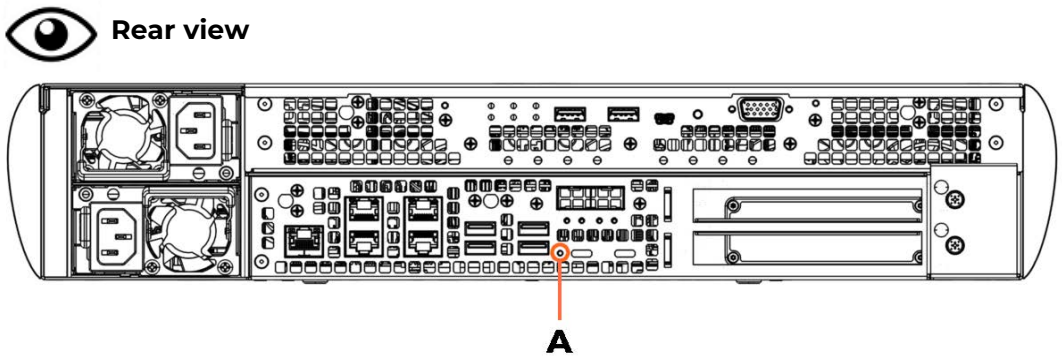
Resetting the BMC to default values results in:

- All BMC settings will be deleted including: BMC account data, changed passwords, policies, LDAP configurations, network static addresses and time and date.
- All BMC logs will be removed
- Currently active sessions on all network interfaces will be disconnected
- The BMC login will be set to the default login, as shown below.

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

6.2.1. Resetting with the factory reset button

1. Locate the factory reset button (A).



2. Push in the button using a pointed object for more than ten seconds and release. The settings are reset and the BMC reboots.
3. Set up remote access to the BMC.

See Getting Started Guide for more information.

4. Use the default login to log on to the SHC.

6.2.2. Resetting with the Server Hardware Console (SHC)

See SHC Reference Guide for more information.

Prerequisites

- A laptop is connected to the server via the LAN
- 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 Only users with SupportUser privilege have access to this feature.

1. Connect to the Server Hardware Console (SHC).
2. From the **Control** tab, click **Reset to default**. The **Reset to default** page opens.
3. Select **Reset BMC settings**.
4. Click **Reset**.
5. Carefully read the caution points displayed in the pop-up window.

   If required, it is possible to select the option **Continue without shutting down the system** to maintain the server on.

Important **Resetting without shutting down the system might cause an unrecoverable error.**

6. Click **Reset BMC settings**.
7. Use the default login to connect to the SHC after the reset of the BMC settings and the BMC reboot.

6.3. Resetting the BIOS settings to default values

Important **It is strongly recommended to shut down the system before resetting the setting values.**

See SHC Reference Guide for more information.

All manual settings will be deleted after resetting the BIOS settings to default values.

Prerequisites

- A laptop is connected to the server via the LAN
- 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 Only users with SupportUser privilege have access to this feature.

1. Connect to the Server Hardware Console (SHC).
2. From the **Control** tab, click **Reset to default**. The **Reset to default** page opens.
3. Select **Reset BMC settings**.
4. Click **Reset**.
5. Carefully read the caution points displayed in the pop-up window.

   If required, it is possible to select the option **Continue without shutting down the system** to maintain the server on.

Important **Resetting without shutting down the system might cause an unrecoverable error.**

6. Click **Reset BIOS settings**.

6.4. Recovering the BMC firmware

This sections details the operations to recover the BMC main image.

Prerequisites

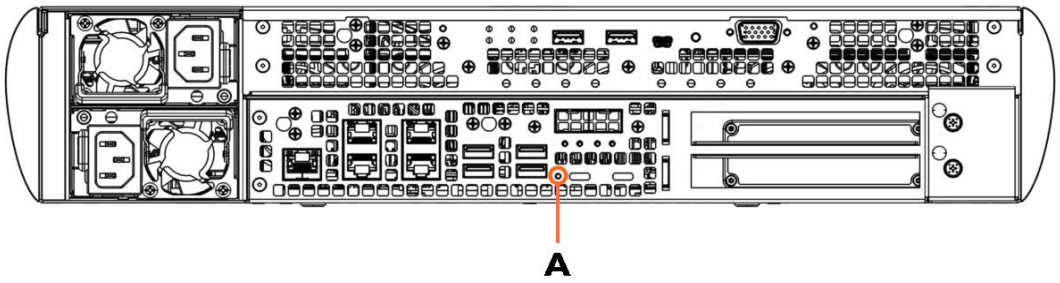
- A laptop is connected to the server via the LAN
- An IP address is available for the server
- Chrome or Firefox web browsers are recommended
- Setting the language of the web browser to English is recommended
- The server must be powered off

Procedure

1. **Boot the BMC on the recovery image**

   1. Locate BMC firmware recovery button (A).

      Rear view

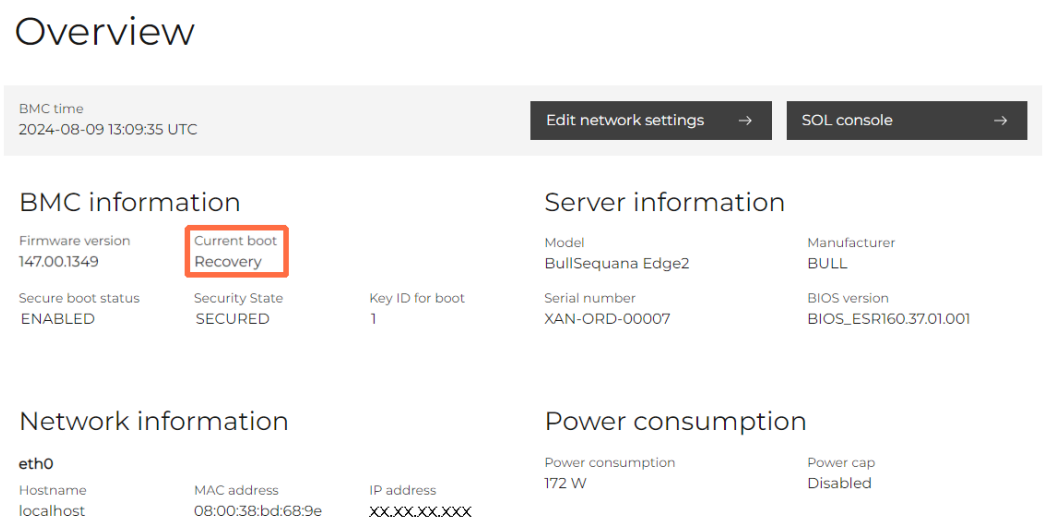
   2. Push the button in using a pointed objet and release.

2. **Connect to the SHC when it is reachable**

Note	BIOS and FPGA firmwares cannot be updated in recovery mode.

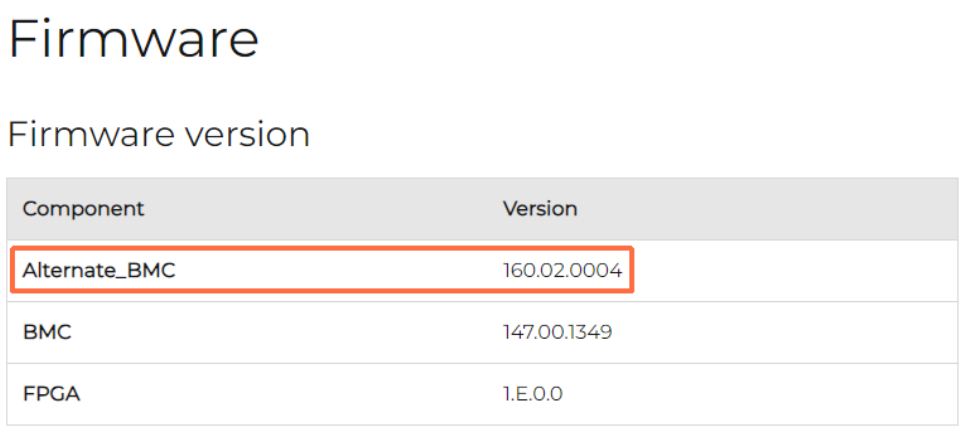
3. Update the main BMC firmware

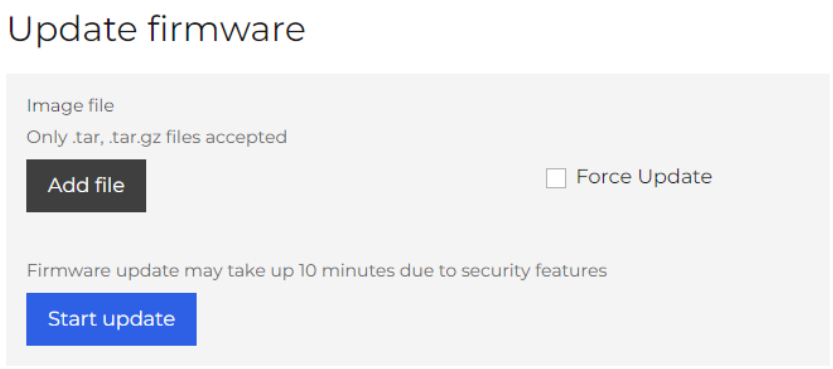
1. From the **Overview page**, check the **Current boot** is Recovery.



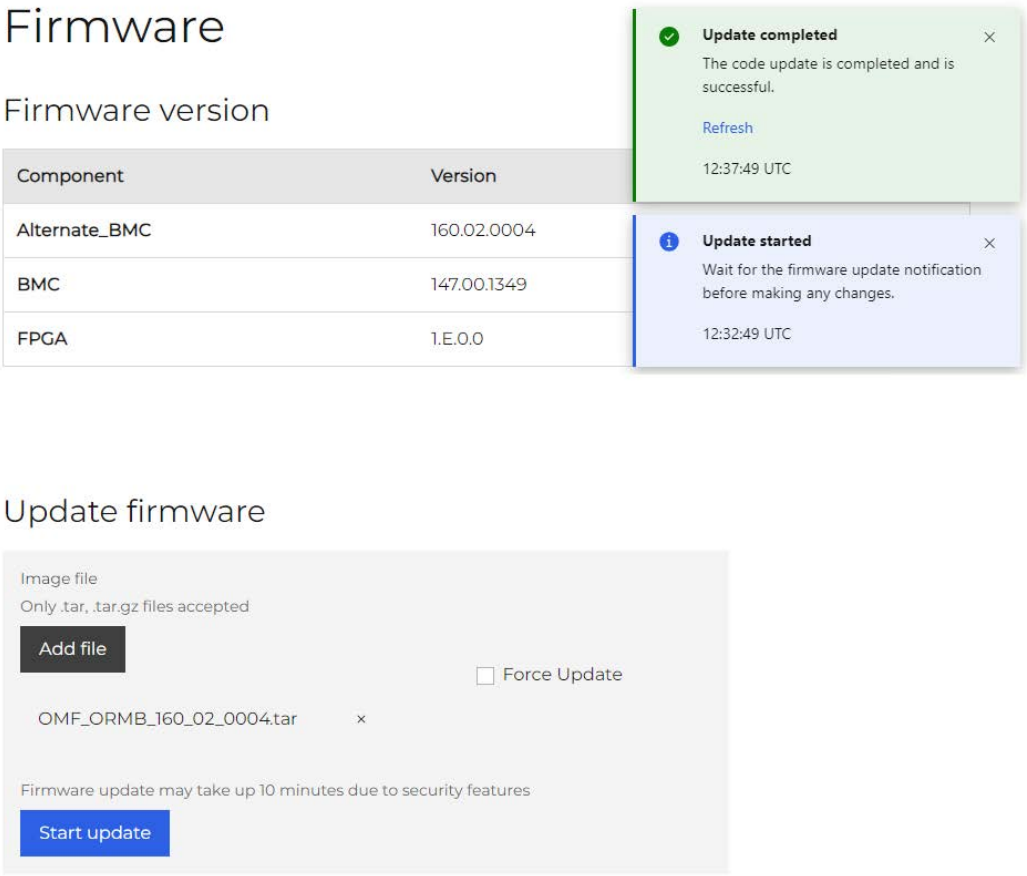
2. From the **Configuration** tab, click **Firmware**. The **Firmware** page opens.

   A new Alternate_BMC line appears in the firmware version section.





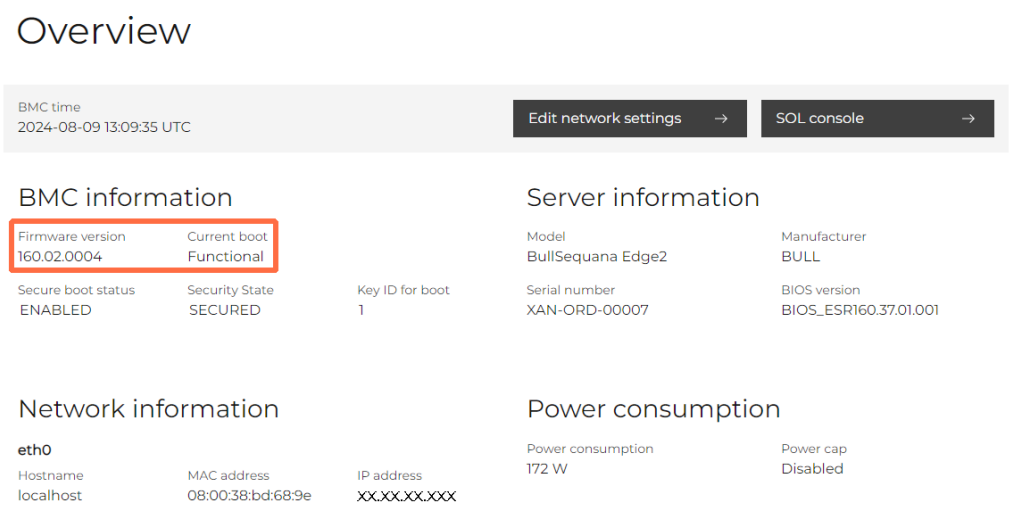
3. Click **Add file** to select the BMC firmware file.
4. Click **Start update**.
5. Wait for the update to be completed.



Note The update may take 15 minutes or longer to complete.

4. Boot on the main BMC

1. Unplug and plug the power cable to perform an AC Off / AC On cycle of the server and to boot on the main BMC.
2. Wait for the BMC to be reachable.
3. From the **Overview page**, check the **Current boot** status and the Firmware version.



5. Stop the SHC