EVIDEN

Quick Start Guide

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Hardware

October 2024

Eviden
30 bis rue du Nid de Pie
49000 Angers
FRANCE

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Preface

In this guide you will find the first steps to perform before you can use your new BullSequana SA server.

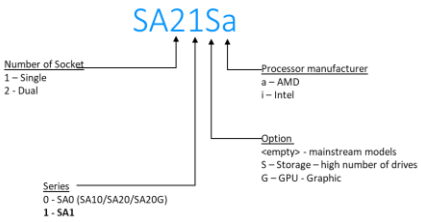
See The Bull support web site for the most up-to-date product information, documentation, , firmware updates, software fixes and service offers: BullSequana SA servers — Bull On-line Support Portal

Intended Readers

This guide is intended for customer technical expert or EVIDEN Maintenance team.

Introduction

The BullSequana SA1 range comprises 7 models optimized for SAS, SATA and NVMe storage, categorized into 2 families based on the CPU manufacturer (AMD or Intel).



	AMD				Intel		
Model	SA11a	SA21a	SA21Sa	SA21Ga	SA11i	SA21i	SA21Si
Serial number	XAN-GE5A-xxxxx	XAN-GE8A-xxxxx	XAN-GE7A-xxxxx	XAN-GE6A-xxxxx	XAN-GE5I-xxxxx	XAN-GE8I-xxxxx	XAN-GE7I-xxxxx
							

Chapter 1. Discovering the server

Your system has been factory-built and tested arriving with a BIOS and firmware ready to go.

1.1.1 USB key (part of the delivery)

A USB key is delivered with documentation, firmware and BIOS version.

1.1.2 Support Online (SOL) resources for BullSequana SA (Eviden support website)

Product documentation and downloads are available from Eviden website:

https://support.bull.com/ols/product/platforms/bullion/bullsequana-sa-servers/

More contents are available to the customer with support contract (login access is requested on this webserver).

If you don't have an account, you can sign up at : https://support.bull.com/ols/join_form

1.2 Server identification

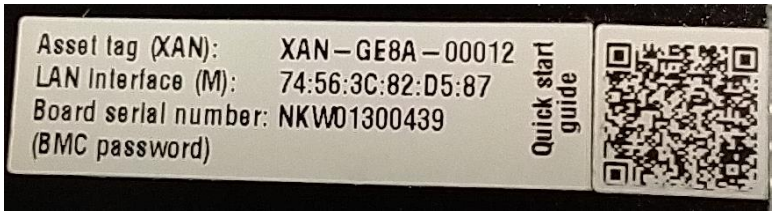
We have grouped on the label holder all the necessary information that you must keep

- Asset tag (XAN)
- LAN Interface (BMC)
- Board Serial Number (BMC password)
- QR code to access this document.

You will also find a QR code to directly access this document.

Models	Label Holder
SA11a, SA11i, SA21Ga	
SA21Sa, SA21Si	
SA21a, SA21i	

Example of label:



1.2.1 Asset Tag XAN serial number

The XAN serial number is a unique number that identifies your server at Eviden, located on top of the server chassis. or on the front label holder.

You will be asked for this number each time you query support Eviden.

1.2.2 LAN interface (M)

The BMC MAC address is written on the label holder. The M Management port can also be found directly on the network card, or on the G-SC module (SA21i, SA21SI) but this requires opening the server.

1.2.3 Board Serial Number (BMC password)

This number is the motherboard serial number. It's used as the default password to log in to the BMC.

It can be found on the label holder or on the right-side chassis.

Chapter 2. Starting the server

2.1 Server BMC setup

By default, network is configured in DHCP.mode.

Two cases for IP configurations:

1. your network is providing DHCP service: contact your network administrator.

   See &LAN interface (M) on the label holder for the BMC MAC address.

2. you are using a static IP configuration in this case; you must configure this IP address in the BIOS as specified in the following section (2.1.1.1).

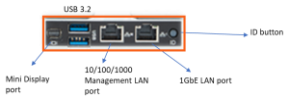
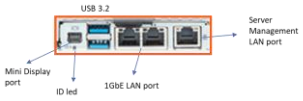
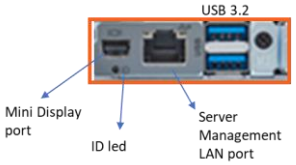
2.1.1 BIOS Access – Static IP configuration

If you use DHCP go to *2.1.1.2 Start the server*.

2.1.1.1 Connect monitor & keyboard.

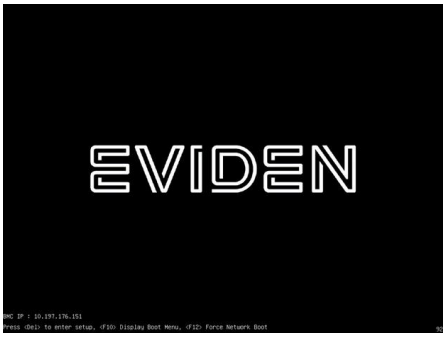
Before starting the server, you need to connect a display via the Mini Display port (Mini display port to VGA adapter is included) and a keyboard.

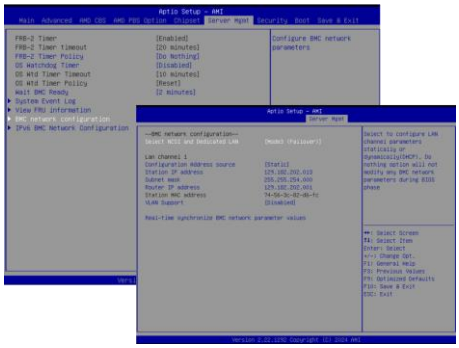
The connectors are located on the back of the server.

SA11a, SA11i	SA21a, SA21Sa, SA21i, SA21Si	SA21Ga
		

2.1.1.2 Start the server.

When you see this screen press the <Del> key to enter BIOS.





In the BIOS menu select:

Server Mgmt

BMC network configuration

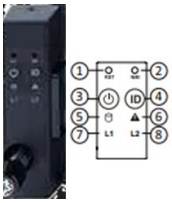
Then enter Your IP address, Subnet, Router,... then select Save & Exit

2.1.2 Powering the system

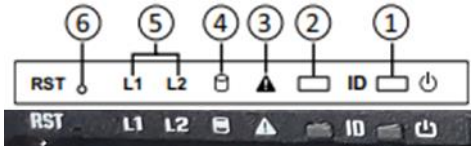
The server is started by pressing power button ① on the front panel.

Front Panel

SA11a, SA21Sa, SA21Ga, SA11i, SA21Si



SA21a, SA21i



In the User Guide located on the USB stick ("documentation" directory), you will find in the section "Front Panel LEDs and Button" the meaning of the different LEDs.

2.2 Connect and setup the BMC

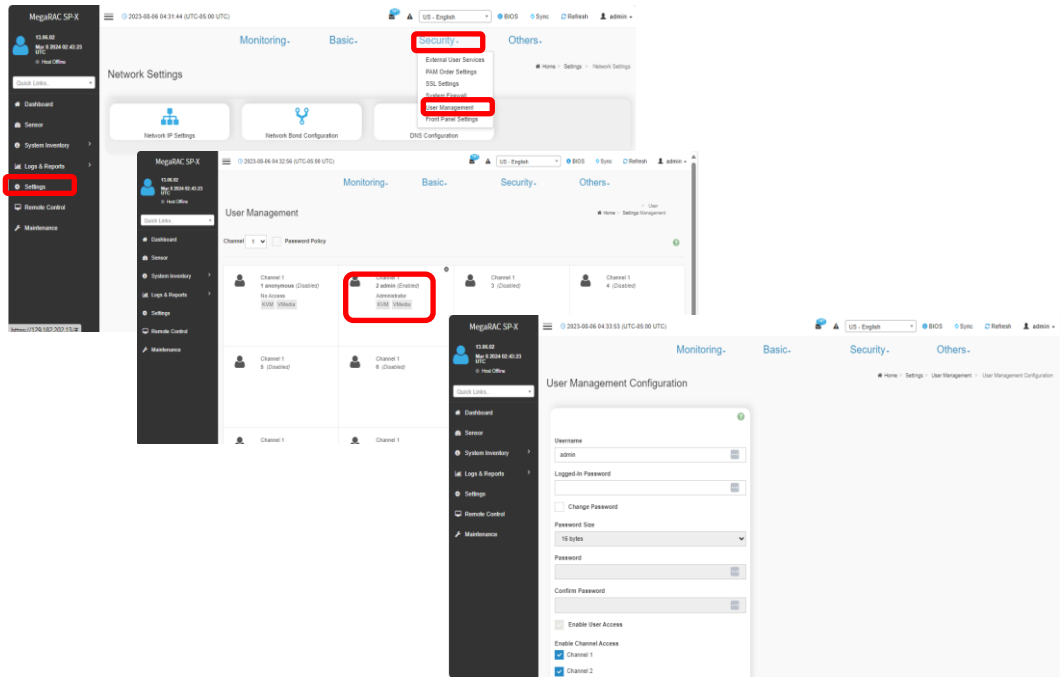
For the first BMC login, open a browser and go to: *https://IP_Adress_of_the-server* then open a session using default user “admin”

The password is located on the label holder (cf *Board Serial Number*)

For example

Then change the default password,

Go to menu “Settings”, “User Management”, select “admin” account, change, and save the new “admin” user password.

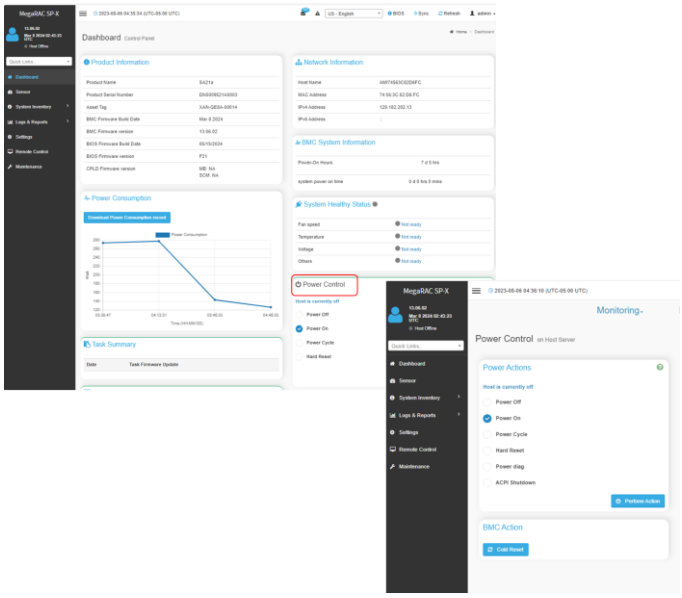


2.2.1 How to access BIOS menu from the BMC

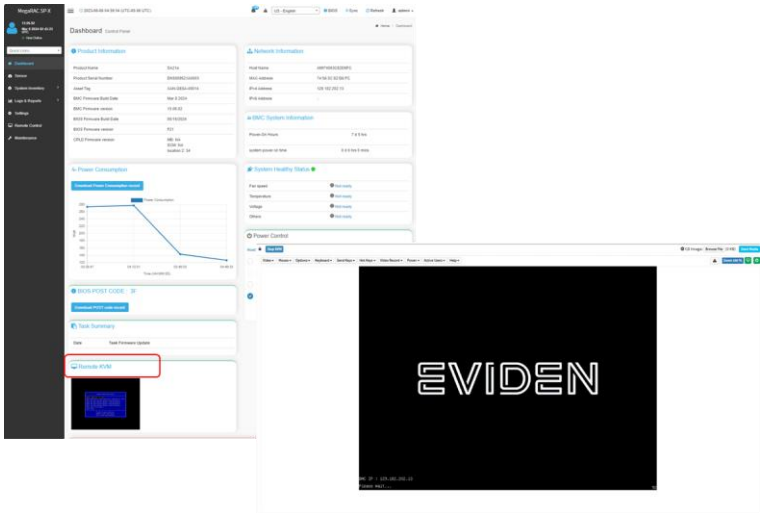
To access the BIOS, you must restart your server. Follow these steps:

1. Navigate to the BMC dashboard.
2. Select the "Power Control" menu.
3. In the subsequent screen, choose "Power Cycle."
4. Click on "Perform Action."

This will restart your server



While the server is rebooting, navigate to the BMC dashboard and select the "Remote KVM" menu. Then, launch the "H5Viewer" to open a remote window on your server. When you see the screen, press the <Del> key to enter the BIOS



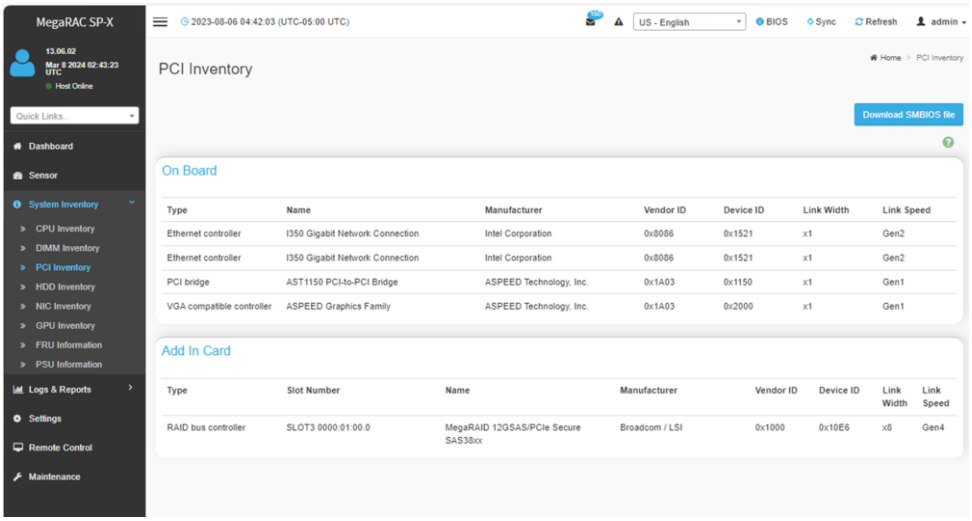
2.3 Check HW inventory and components status

In most cases, servers are configured with boot drives in RAID1, although this may vary depending on your order specifications.

Other drives connected to the MegaRAID adapter are configured in JBOD (Just a Bunch Of Disks) mode. Administrator shall finalize MegaRAID configuration on-site.

2.3.1 Hardware Inventory from the BMC GUI.

Connect to the BMC using the username "admin" and verify the presence of the PCI RAID card by following these steps: System Inventory => PCI Inventory = Add In Card

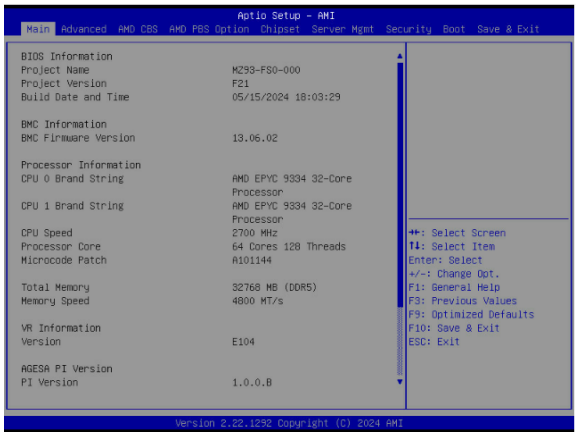


Drives behind the MegaRaid PCI card are not directly visible here. Use the BIOS Setup (see next section).

2.3.2 Hardware Inventory from BIOS menu.

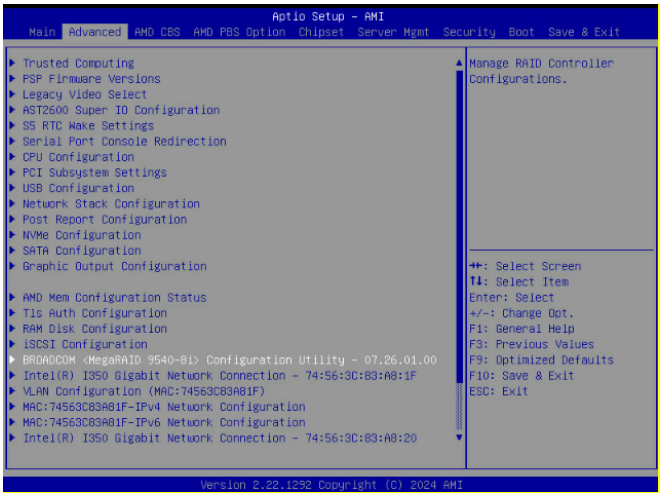
During the server Power On, select <Del> to enter in the BIOS menu *see how to access BIOS menu from the BMC*.

At the home page you have main information on your server



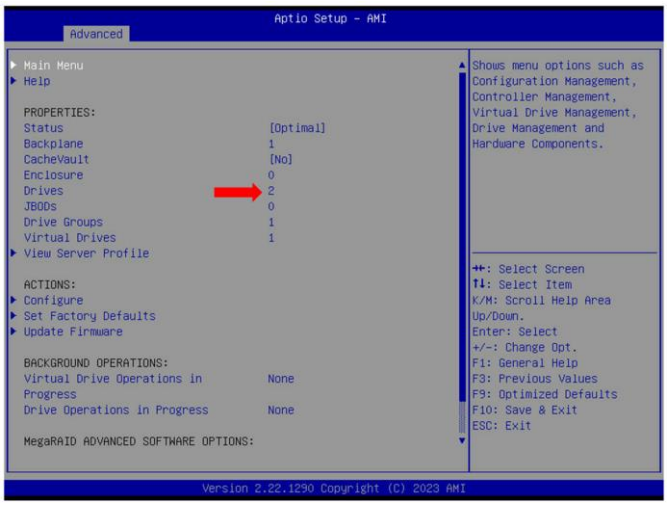
2.3.2.1 RAID components

Navigate to Advanced => BROADCOM MegaRAID model > Configuration Utility

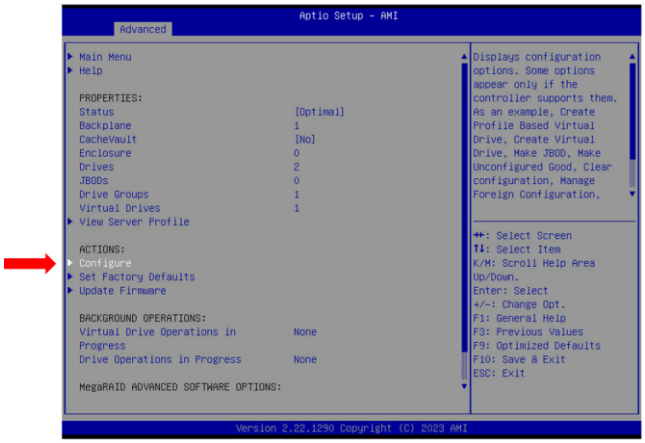


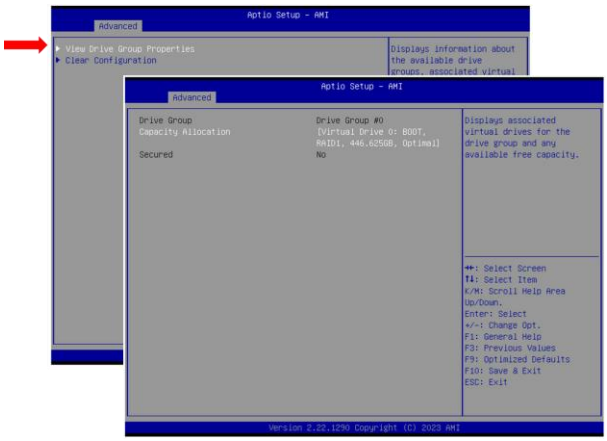
Look in PROPERTIES and verify that:

- Drives to see the available disks behind the PCI card
- Drive Groups to see the number of configured Raid Group
- Virtual Drives to see the number of volumes configured and available.



In ACTIONS, you're able to verify the RAID types, Status and capacity:





2.3.2.2 VROC components (Only on Intel CPU Models)

Intel's Virtual RAID on CPU (VROC) is an integrated feature in Intel processors. It allows these processors to create and manage a RAID configuration for connected disks. The BullSequana SA11i, SA21i SA21Si series supports the VROC feature with NVMe drives.

There are two VROC modes available for the BullSequana SA1 series:

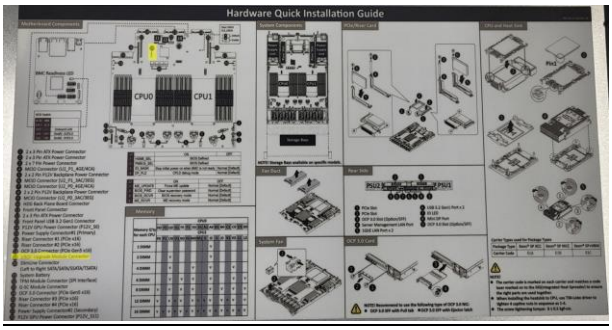
Standard Mode: Supports RAID 0, RAID 1, and RAID 1/0 configurations.

Premium Mode: Supports RAID 0, RAID 1, RAID 1/0, and RAID 5 configurations

Enabling the VROC feature:

A hardware key is required and must be plugged into the motherboard.

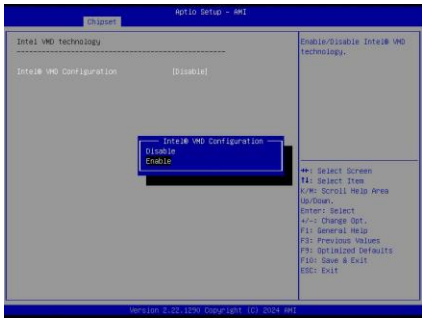
The key must be installed as indicated in the diagram below, which is located on the server's cover.



The Virtual Management Device (VMD) must be enabled in the BIOS. The VMD is a CPU-integrated device responsible for managing NVMe drives with the VROC feature.

Check that Intel VMD configuration is enable :

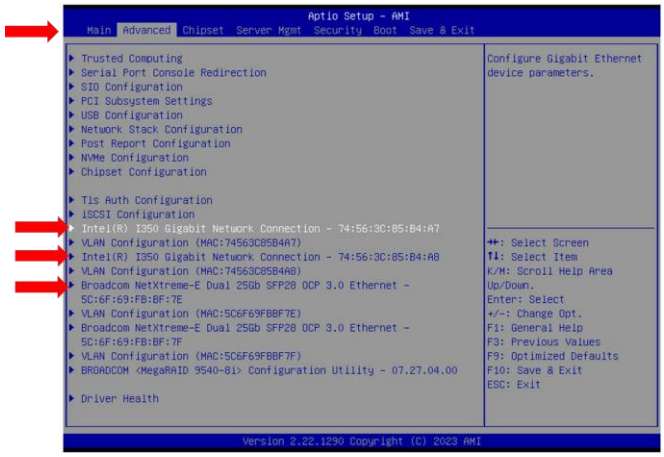
From the BIOS menu, go to :
Chipset and select IIO Configuration"
Select "Intel VMD technology"
Set "Intel VMD Configuration" to "enable":



More detail is available on Intel web site under Support "Resources for Intel® Virtual RAID on CPU (Intel® VROC)" (https://www.intel.com/content/www/us/en/support/articles/000024550/memory-and-storage/datacenter-storage-solutions.html)

2.3.2.3 Network

From the "Advanced" menu, you can find 4 dedicated submenus for each Network adapter:

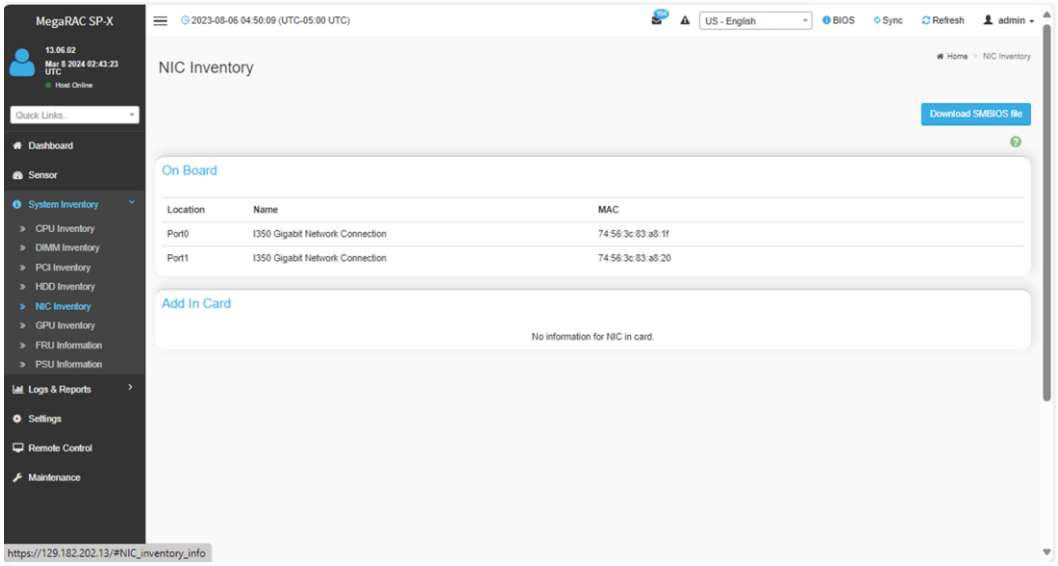


2.3.2.4 BMC network

Navigate to Server Mgmt => BMC network configuration. This interface can be used to specify static IP configuration.

2.3.2.5 On Board ethernet MAC addresses

From the BMC home screen select NIC Inventory tab to view MAC address of the on board/port

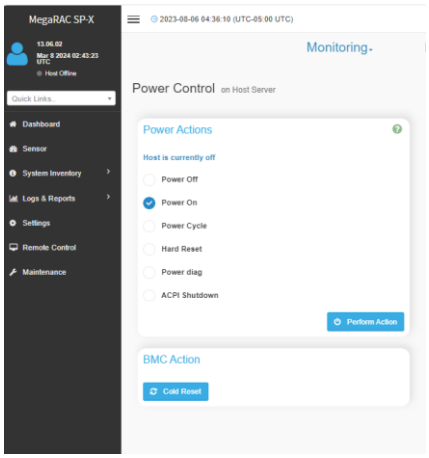


Chapter 3. Deploying the system

3.1 Preparing OS deployment

3.1.1 Server Power on

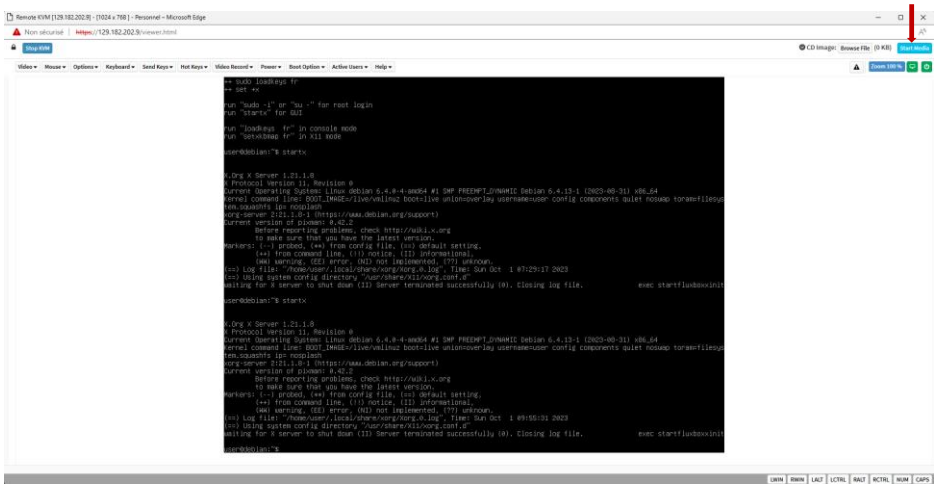
Check the status of your host, if off please Power On



3.1.2 Operating System installation options

3.1.2.1 By using a Virtual Media

From the remote windows select an image to load then click Start Media to install your operating system

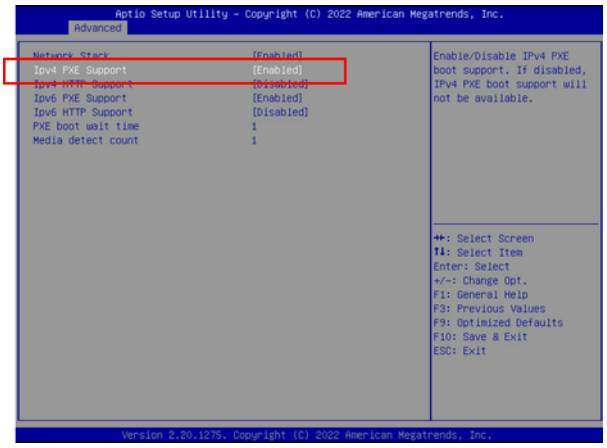


3.1.2.2 By using a Pre-boot eXecution Environment (PXE)

Change the BIOS boot list to enable PXE booting. Then, restart the server and connect to the BMC using the admin account. Navigate to the "Remote KVM" submenu and open a remote window.

You can also restart the server and during the boot session press the< F12> key to force Network boot.

Verify that PXE support is Enable for the desired network card:



3.1.2.3 By using a bootable USB drive

Plug a bootable USB flash drive into any of the USB ports of the server. You may need to adjust the BIOS boot list to enable booting from the USB drive. Afterward, restart the server and connect to the BMC using the admin account. Then, navigate to the "Remote KVM" submenu and open a remote window.

Chapter 4. Platform management tools

With OneBSM, servers can be viewed individually or grouped by server type, and the interface adapts dynamically based on the type of server being monitored.

The Dashboard provides a comprehensive overview of all connected servers, displaying key information such as:

- Health status
- Alert logs
- Power consumption distribution
- Total power consumption history
- A list of scheduled tasks along with their completion OneBSM console is a graphical management and monitoring system for all BullSequana SA server models detected on the local network.

OneBSM can be download on SOL:
(https://support.bull.com/ols/product/platforms/bullion/onebsm-1/onebsm)

We recommend downloading from the Broadcom website the web-based application LSI Storage Authority (LSA) that enables you to monitor, maintain, troubleshoot, and configure the Broadcom MegaRAID card.