

EVIDEN

Quick Start Guide

86 A1 45FT rev 02 September 2024

The following copyright notice protects this book under Copyright laws which prohibit such actions as, but not limited to, copying, distributing, modifying, and making derivative works.

Copyright ©Eviden SAS

2024 Printed in France

Trademarks and Acknowledgements

We acknowledge the rights of the proprietors of the trademarks mentioned in this manual.

All brand names and software and hardware product names are subject to trademark and/or patent protection.

Quoting of brand and product names is for information purposes only and does not represent trademark and/or patent misuse.

Hardware

September 2024

Eviden
30 bis rue du Nid de Pie
49000 Angers
FRANCE

The information in this document is subject to change without notice. Eviden will not be liable for errors contained herein, or for incidental or consequential damages in connection with the use of this material.

Table of Contents

| | |
|------------------------|---|
| Preface | 3 |
| Intended Readers | 3 |
| Introduction | 4 |
| Chapter 1. | Discovering the server 5 |
| 1.1.1 | USB key (part of the delivery) 5 |
| 1.1.2 | Support Online (SOL) resources for BullSequana SA (Eviden support website)..... 5 |
| 1.2 | Server identification 6 |
| 1.2.1 | Asset Tag XAN serial number 6 |
| 1.2.2 | LAN interface (M)..... 7 |
| 1.2.3 | Board Serial Number (BMC password) 7 |
| Chapter 2. | Starting the server..... 8 |
| 2.1 | Server BMC setup 8 |
| 2.1.1 | BIOS Access – Static IP configuration..... 8 |
| 2.1.2 | Powering the system..... 9 |
| 2.2 | Connect and setup the BMC 10 |
| 2.2.1 | How to access BIOS menu from the BMC 11 |
| 2.3 | Check HW inventory and components status..... 12 |
| 2.3.1 | Hardware Inventory from the BMC GUI..... 12 |
| 2.3.2 | Hardware Inventory from BIOS menu..... 12 |
| Chapter 3. | Deploying the system 17 |
| 3.1 | Preparing OS deployment..... 17 |
| 3.1.1 | Server Power on 17 |
| 3.1.2 | Operating System installation options 17 |
| Chapter 4. | Platform management tools..... 20 |

Preface

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

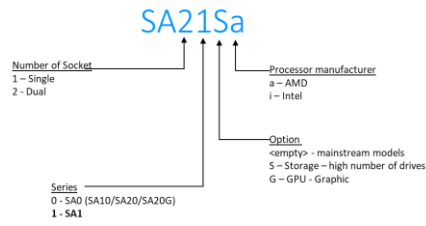
See The Bull support web site for the most up-to-date product information, documentation, , firmware updates, software fixes and service offers:
[BullSequana SA servers — Bull On-line Support Portal](#)

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

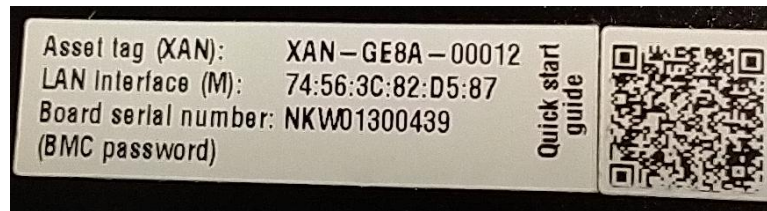
We have grouped on the label holder all the necessary information that you must keep

- 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).

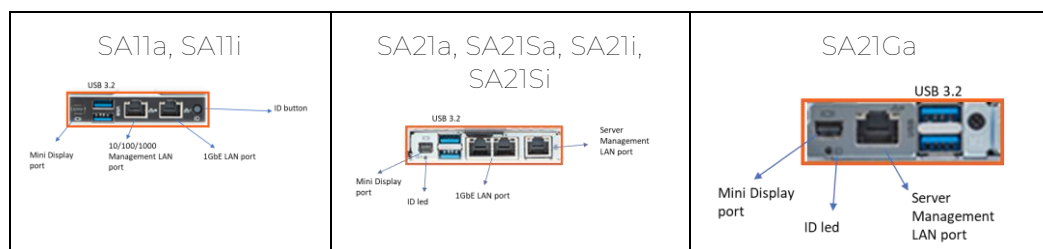
2.1.1 BIOS Access – Static IP configuration

If you use DHCP go to [2.1.1.2 Start the server](#).

2.1.1.1 Connect monitor & keyboard.

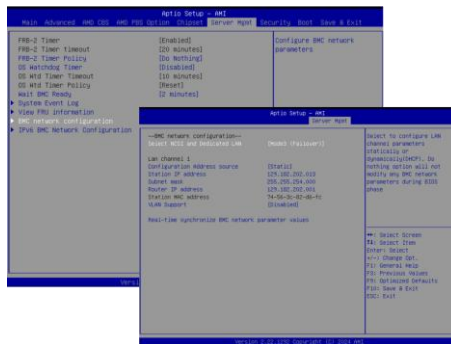
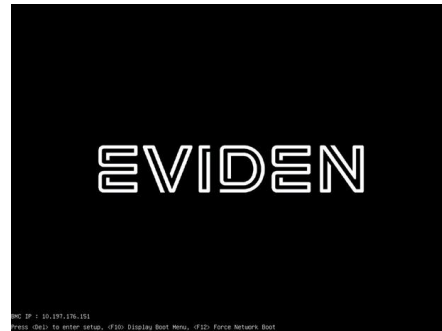
Before starting the server, you need to connect a display via the Mini Display port (Mini display port to VGA adapter is included) and a keyboard.

The connectors are located on the back of the server.



2.1.1.2 Start the server.

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



In the BIOS menu select:
Server Mgmt
BMC network configuration

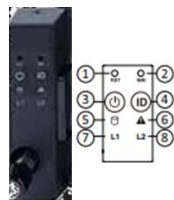
Then enter Your IP address, Subnet, Router,... then select Save & Exit

2.1.2 Powering the system

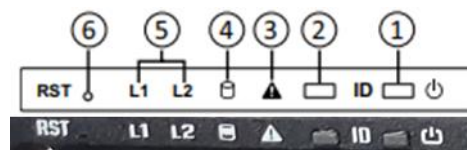
The server is started by pressing power button 1 on the front panel.

Front Panel

SA11a, SA21Sa, SA21Ga, SA11i, SA21Si



SA21a, SA21i



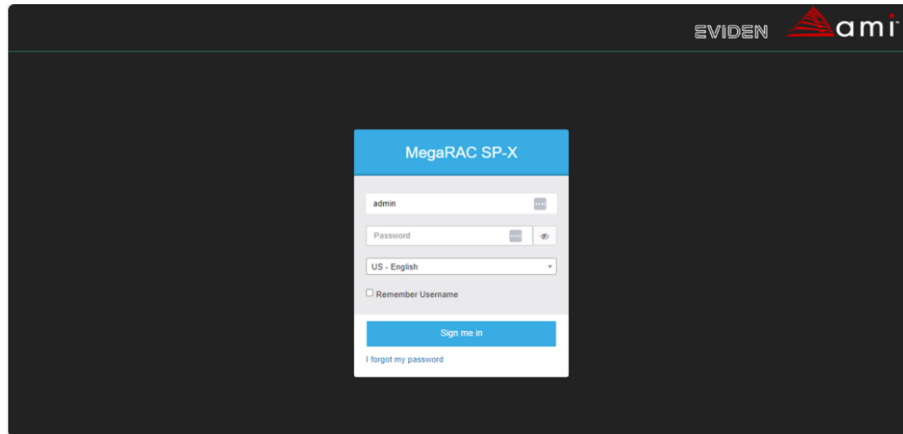
In the User Guide located on the USB stick ("documentation" directory), you will find in the section "Front Panel LEDs and Button" the meaning of the different LEDs.

2.2 Connect and setup the BMC

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

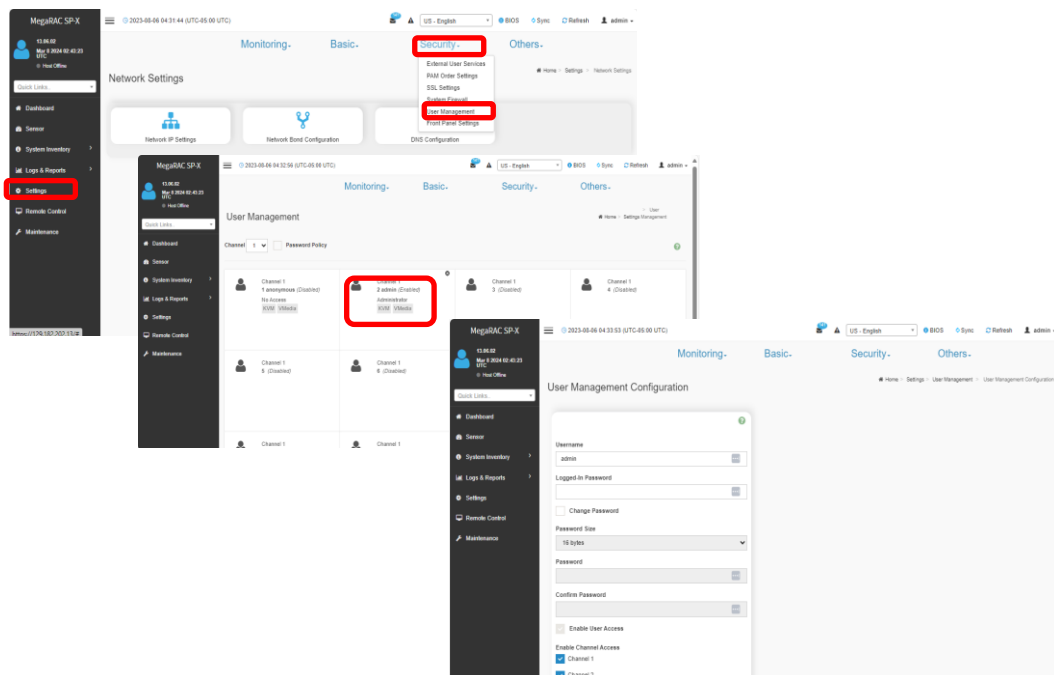
The password is located on the label holder (cf [Board Serial Number](#))

For example



Then change the default password,

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



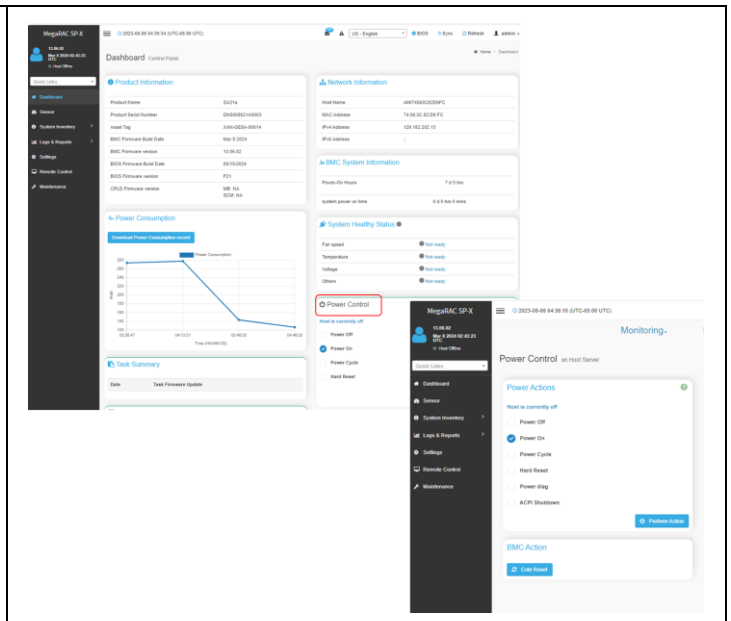
2.2.1

How to access BIOS menu from the BMC

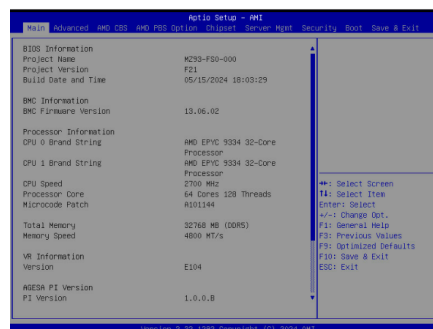
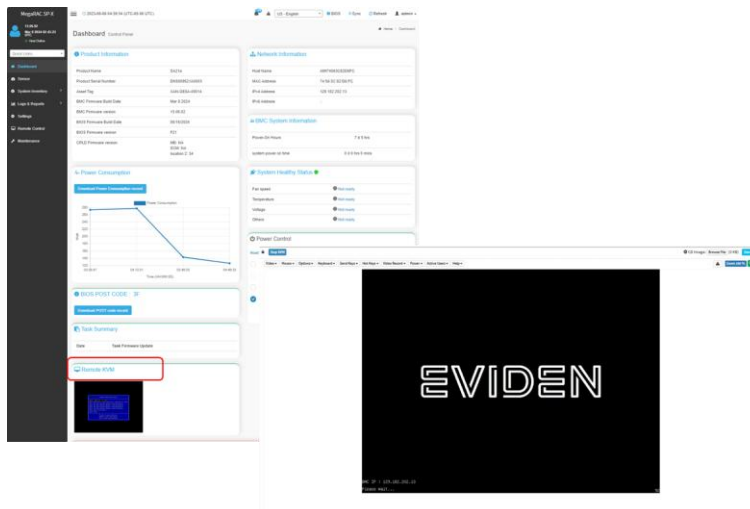
To access the BIOS, you must restart your server. Follow these steps:

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 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

| Type | Name | Manufacturer | Vendor ID | Device ID | Link Width | Link Speed |
|---------------------------|---------------------------------|-------------------------|-----------|-----------|------------|------------|
| Ethernet controller | I350 Gigabit Network Connection | Intel Corporation | 0x8086 | 0x1521 | x1 | Gen2 |
| Ethernet controller | I350 Gigabit Network Connection | Intel Corporation | 0x8086 | 0x1521 | x1 | Gen2 |
| PCI bridge | AST1150 PCI-to-PCI Bridge | ASPEED Technology, Inc. | 0x1A03 | 0x1150 | x1 | Gen1 |
| VGA compatible controller | ASPEED Graphics Family | ASPEED Technology, Inc. | 0x1A03 | 0x2000 | x1 | Gen1 |

| Type | Slot Number | Name | Manufacturer | Vendor ID | Device ID | Link Width | Link Speed |
|---------------------|--------------------|-------------------------------------|----------------|-----------|-----------|------------|------------|
| RAID bus controller | SLOT3 0000 01.00.0 | MegaRAID 12GSAS/PCIe Secure SAS3Box | Broadcom / LSI | 0x1000 | 0x10E6 | x8 | Gen4 |

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 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

```

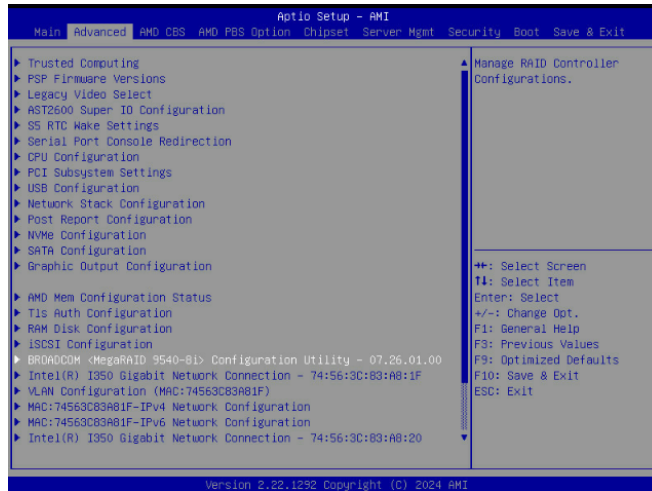
Main Advanced AMD CBS AMD PBS Option Chipset Server Mgmt Security Boot Save & Exit
BIOS Information
Project Name          M259-F50-000
Project Version       F21
Build Date and Time   05/15/2024 18:03:29
BMC Information
BMC Firmware Version 13.06.02
Processor Information
CPU 0 Brand String    AMD EPYC 9334 32-Core Processor
CPU 1 Brand String    AMD EPYC 9334 32-Core Processor
CPU Speed             2700 MHz
Processor Core        64 Cores 128 Threads
Microcode Patch       R101144
Total Memory          32768 MB (DDR5)
Memory Speed          4800 MT/s
VR Information
Version               E104
AGEESA PI Version
PI Version            1.0.0.8
**+: Select Screen
F4: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F3: Previous Values
F9: Optimized Defaults
F10: Save & Exit
ESC: Exit
Version 2.22.1292 Copyright (C) 2024 AMI

```

2.3.2.1

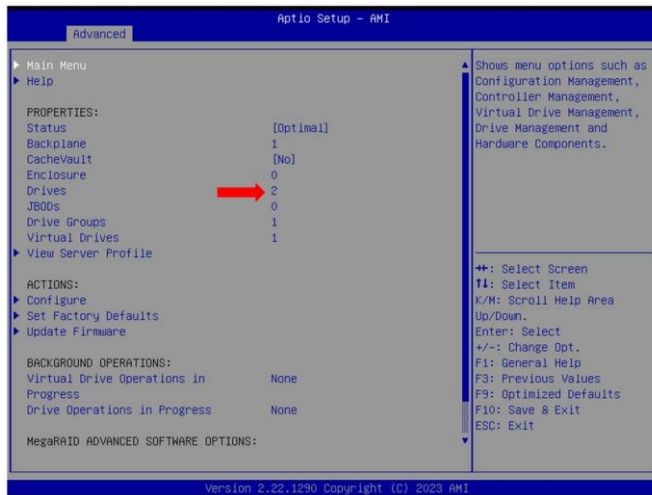
RAID components

Navigate to Advanced => BROADCOM MegaRAID model > Configuration Utility

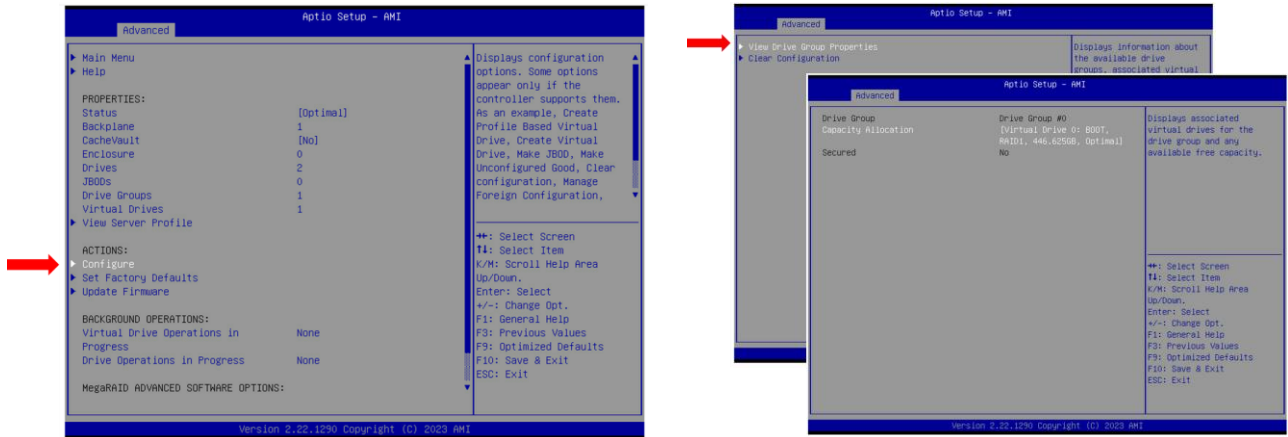


Look in PROPERTIES and verify that:

- 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:



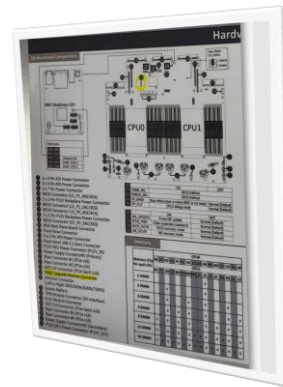
2.3.2.2 VROC components

As an option, you can connect a VROC key. Two types of VROC key

- Standard VROC key for RAID0/1/10
- Premium VROC key for RAID0/1/5/10

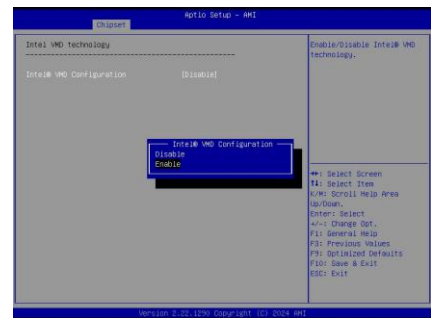
The key must be installed as indicated in the diagram below, which is located on the server's cover.

*



Check that Intel MD configuration is enable :

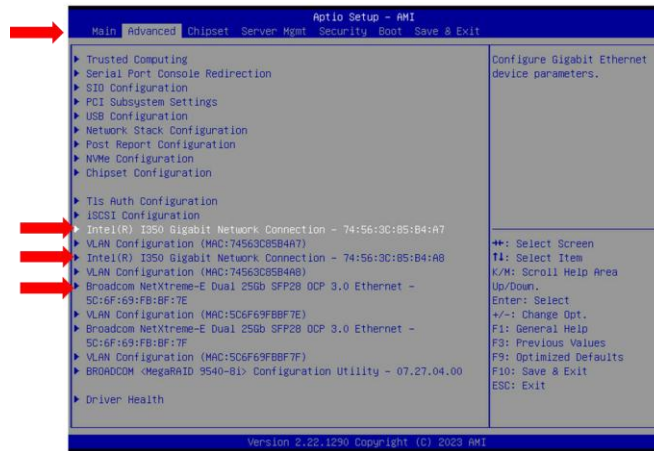
From the BIOS menu, go to :
 Chipset and select "I/O Configuration"
 Select "Intel VMD technology"
 Set "Intel VMD Configuration" to "enable":



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>)

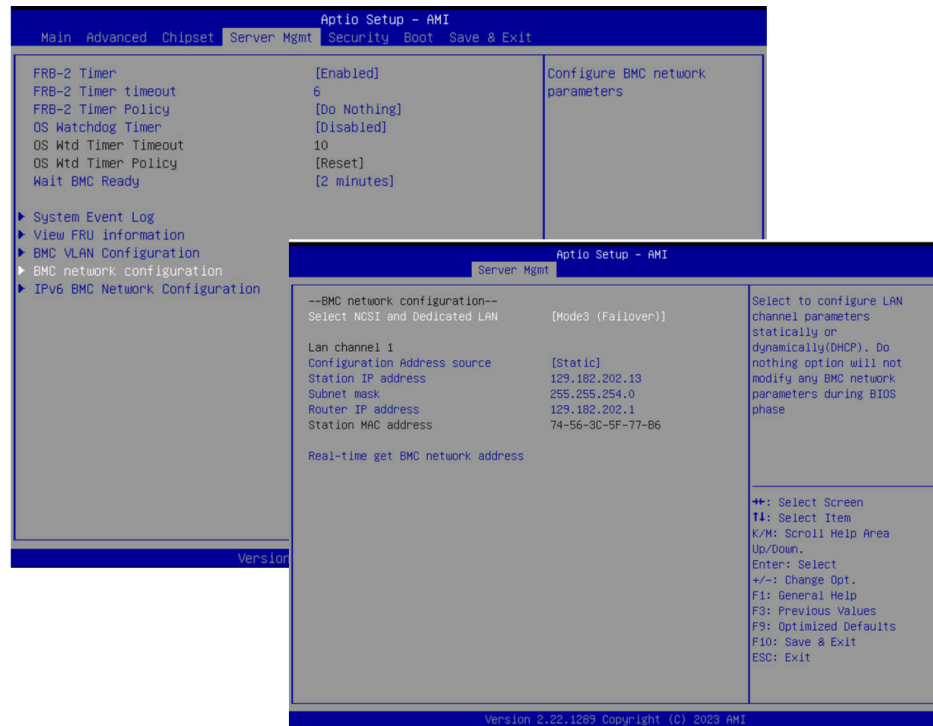
2.3.2.3 Network

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



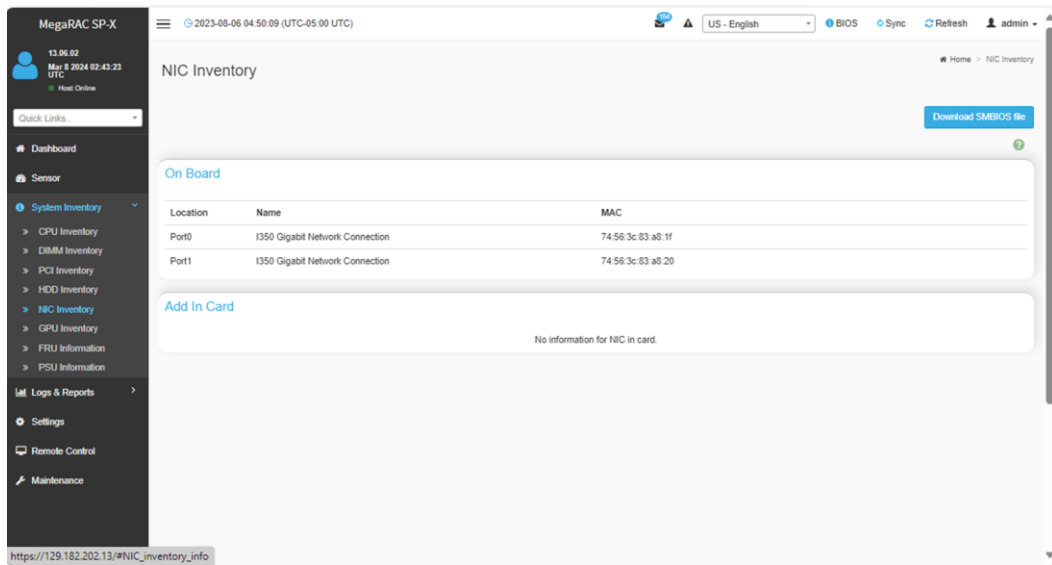
2.3.2.4 BMC network

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



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

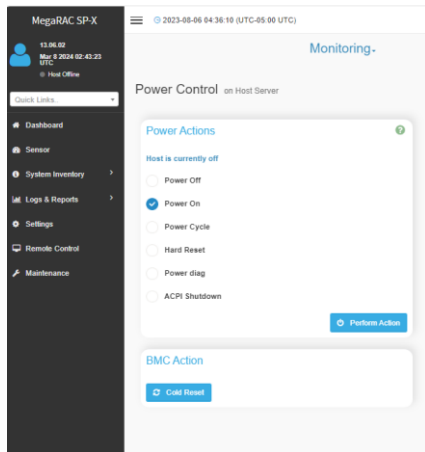


Chapter 3. Deploying the system

3.1 Preparing OS deployment

3.1.1 Server Power on

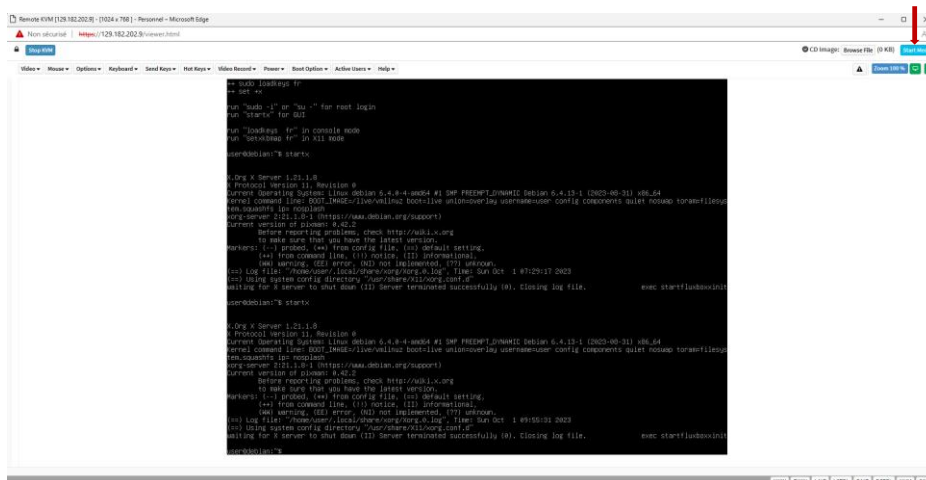
Check the status of your host, if off please Power On



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

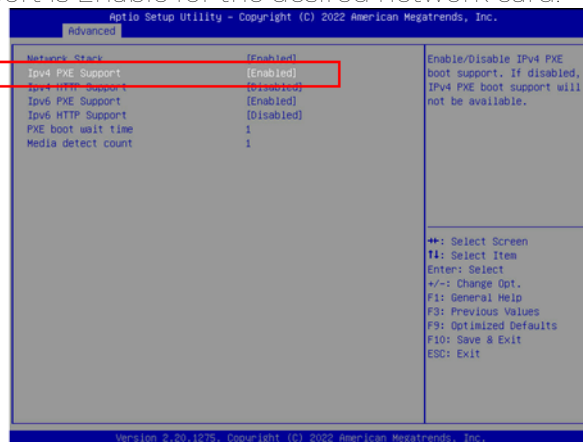
By using a Pre-boot eXecution Environment (PXE)

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.



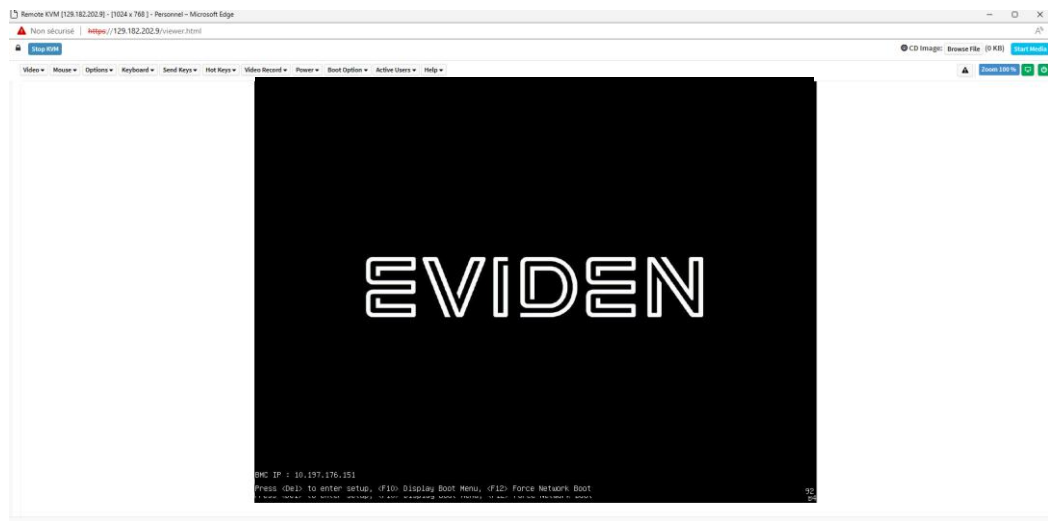
Verify that PXE support is Enable for the desired network card:



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

The GSM software suite is an optional and free tool designed for the centralized management of multiple BullSequana SA servers. It can be downloaded from the SOL website. This suite comprises three main components:

1. GSM Server: A browser-based GUI software program that provides easy-to-use remote monitoring and management capabilities for multiple BullSequana SA servers. It interfaces with the BMC of each server node.
2. GSM Agent: This software program is installed locally on BullSequana SA server node, tasked with retrieving supplementary node information such as CPU, memory, hard disk drive, PCI components, etc., directly from the operating system (OS). Subsequently, this data is available from GSM agent Web UI, and it can be pulled by GSM Server
3. GSM CLI: A command-line interface program that facilitates global remote monitoring and management of multiple BullSequana SA servers. It operates via the BMC of each server node.

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.