

# Management tools overview

Web GUI and CLI tools

**Lenovo**

## HS350X V3 management tools overview

- **GUI**

- The HS350X V3 uses the Aspeed AST2600 BMC as a baseboard system manager. The AST2600 provides IPMI and hardware monitoring, and it uses the AMI MegaRAC SP-X as its web GUI.

- **CLI**

- The HS350X V3 does not support XClarity Essentials OneCLI and instead uses the PMU CLI.

# BMC web GUI

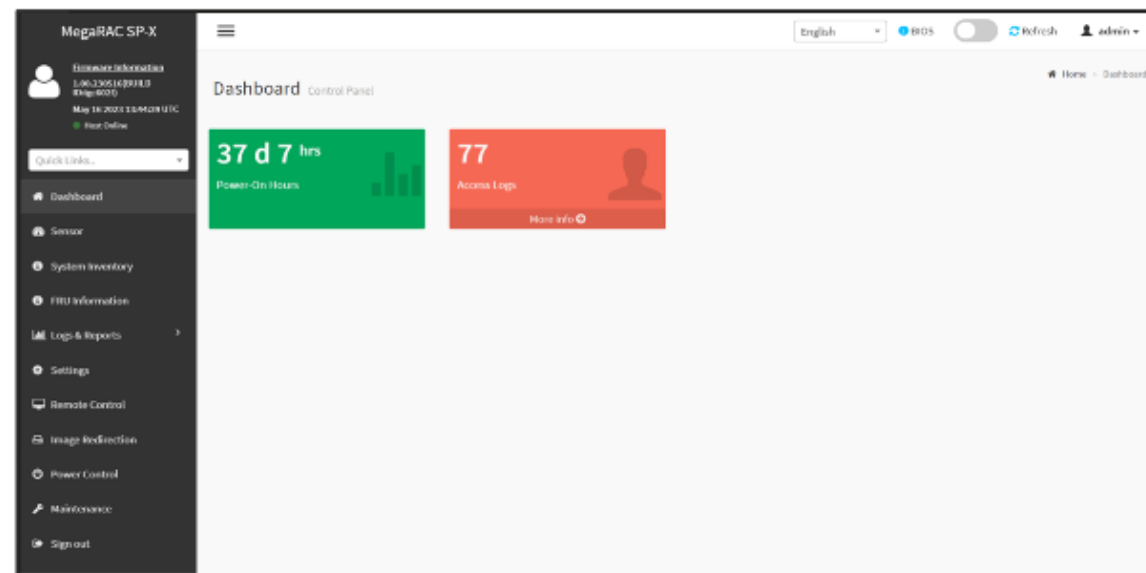
How to access and use the HS350X V3 BMC GUI

Lenovo

# BMC web GUI functions overview

The HS350X V3 BMC web GUI functions include:

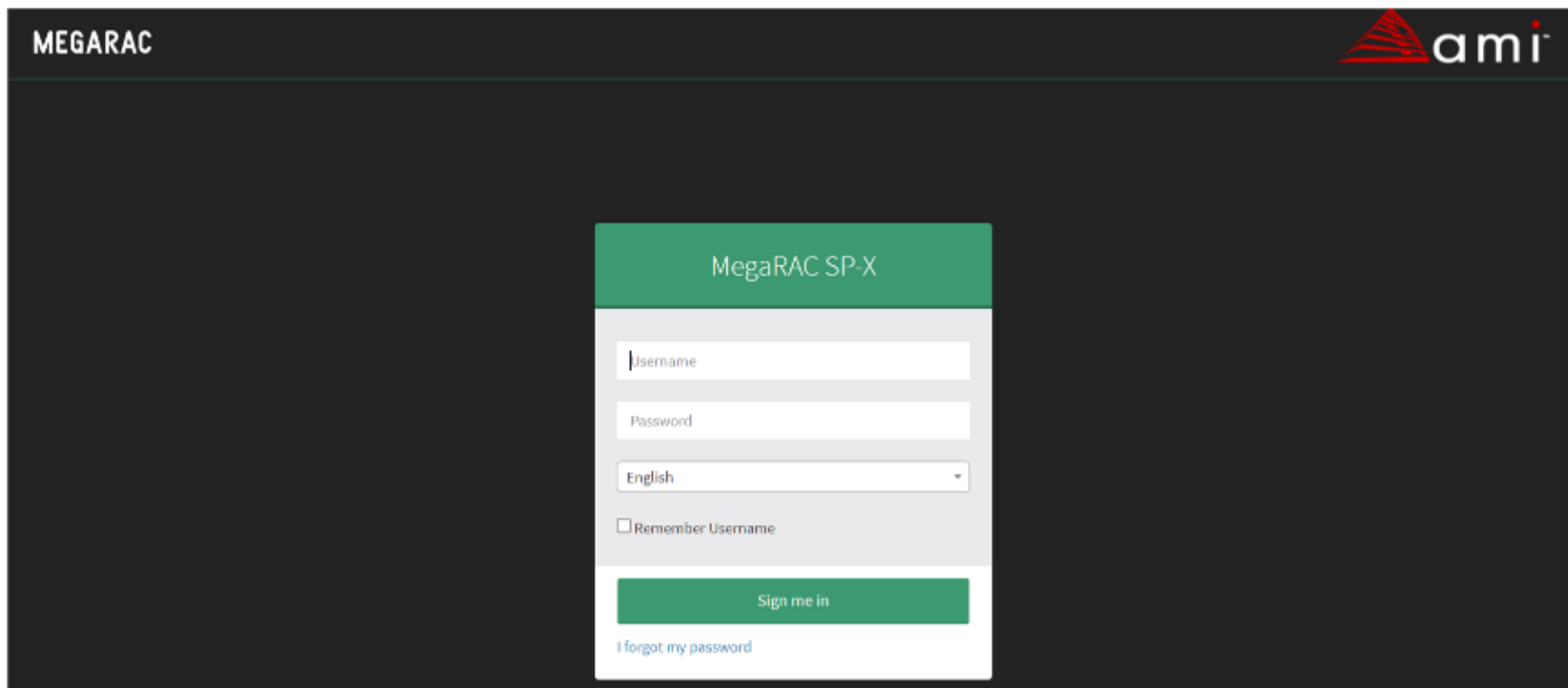
- System inventory information
- System health monitoring
- Firmware updates
- BMC configuration
- Remote control
- Watchdog and alert capabilities
- System event log collection
- User account management
- System power control



**Note:** Features on Demand (FoD) keys do not need to be installed to support remote control or any other features.

## Access to the HS350X V3 web GUI

The HS350X V3 BMC GUI has no default IP address. By default, the BMC searches the DHCP server on the network to get an assigned IP address. Users can go to the BIOS setup utility to manually set up the BMC network setting. Click [HERE](#) to see a screenshot. The default BMC GUI username and password are admin / admin.



MEGARAC

ami

MegaRAC SP-X

Username

Password

English

☐ Remember Username

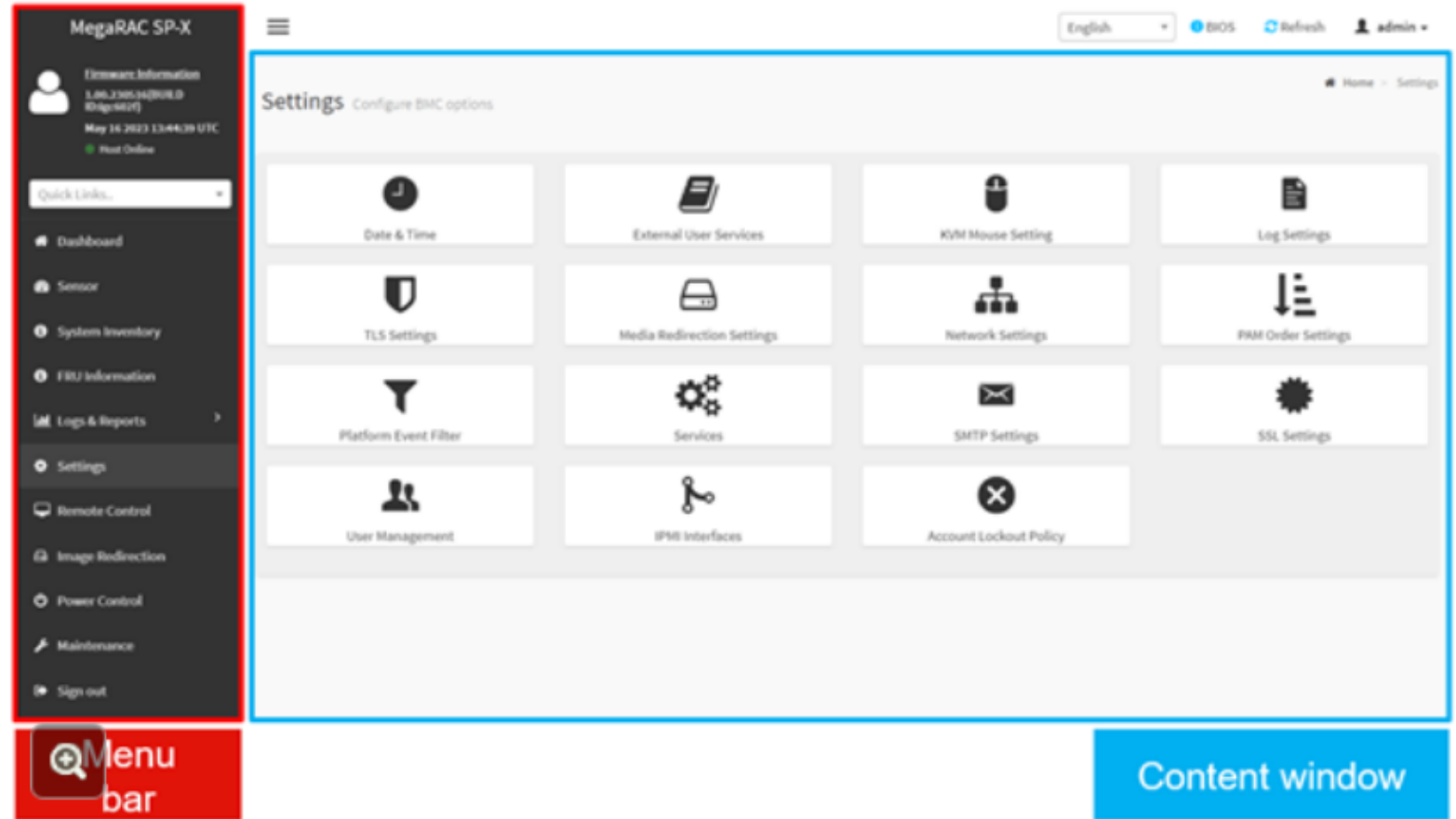
Sign me in

[I forgot my password](#)

# BMC GUI interface – overview

The BMC GUI is divided into two sections: the left menu bar and the content window.

The menu bar sets out the actions users can perform, and the content window displays the corresponding information.

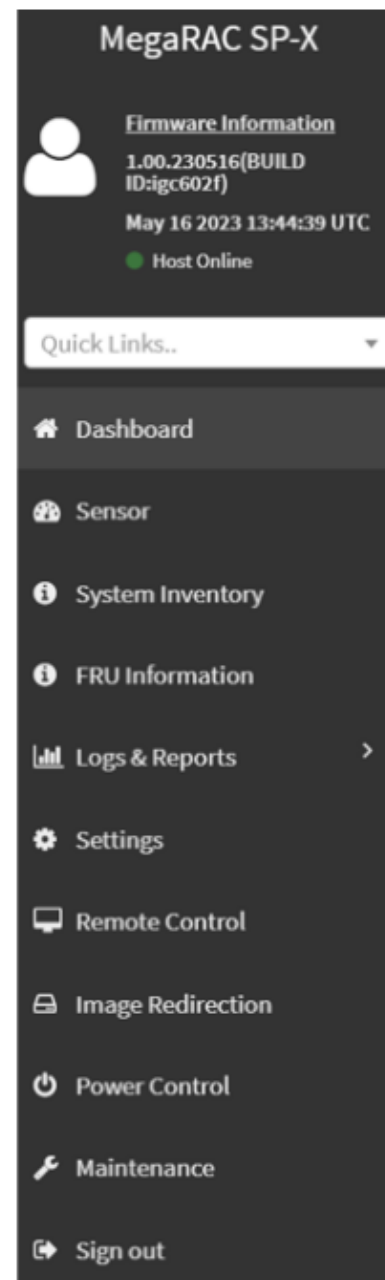


# Menu bar

The following items are listed in the BMC GUI menu bar:

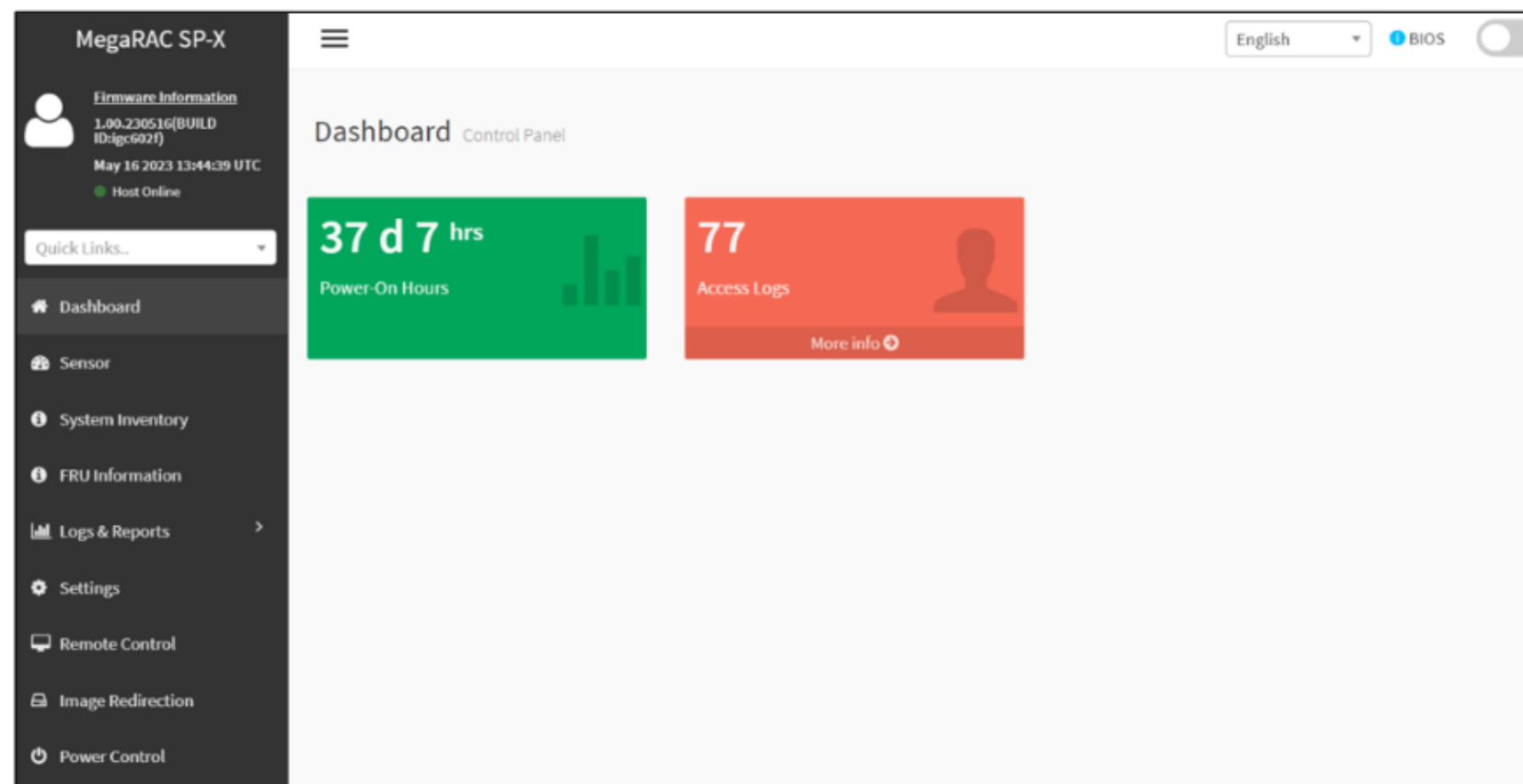
- **Firmware Information:** Displays the latest firmware version and the current date and time
- **Host Online:** Displays the power control status – to change the power control status, click the **Host Online** link
- **Dashboard:** Displays system power-on hours and access log information
- **Sensor:** Displays system sensor status
- **FRU information:** Lists the hardware used in the system
- **Logs & Reports:** Provides logs and reports about the device, including:
  - The IPMI Event Log
  - The System Log
  - The Audit Log
- **Settings:** Allows users to access various configuration settings, such as system firewall, networking settings, and SSL settings
- **Remote Control:** Enables users to launch the H5Viewer or JViewer, and to activate SOL
- **Image Redirection:** Supports the configuration of images into the BMC for redirection
- **Power Control:** Allows users to view and control device power settings
- **Maintenance:** Provides available maintenance tasks for the device
- **Sign out:** Logs users out of the BMC GUI

**Note:** Features on Demand (FoD) keys do not need to be installed to support remote control or any other features.



# Dashboard

Dashboard is the BMC GUI homepage. It shows the system power on time and includes an Access Logs (audit log) button.





# Sensor

The Sensor page displays the state of all the sensors in the system. This includes CPU sensors, drive sensors, PSU sensors, and fan sensors.

**MegaRAC SP-X**

Timestamp Information  
1.00.230516(BUILD 0349621)  
May 16 2023 13:44:39 UTC  
Host Online

Quick Links...

- Dashboard
- Sensor
- System Inventory
- FRU Information
- Logs & Reports
- Settings
- Remote Control
- Image Redirection
- Power Control
- Maintenance
- Sign out

**Sensor Reading** Live reading of all sensors

**Critical Sensors (0)**

All threshold sensors are normal

**Discrete Sensor States (65)**

| Sensor Name      | State                                 |
|------------------|---------------------------------------|
| ACPI_State       | S0/G0 Working                         |
| BMC_Time_Jump    |                                       |
| CPU_A0           |                                       |
| CPU_A1           |                                       |
| CPU_B0           |                                       |
| CPU_B1           |                                       |
| CPU_C0           |                                       |
| CPU_C1           |                                       |
| Drive_Presence   |                                       |
| NVME1_Status     | Drive Presence                        |
| PS0_Fan_Status   | No state defined                      |
| PS0_Status       | Presence Detected                     |
| PS1_Fan_Status   | No state defined                      |
| PS1_Status       | Presence Detected                     |
| PS_Redundant     | Fully Redundant (Redundancy Regained) |
| Power_Button     | No state defined                      |
| RestartInitiated | No state defined                      |
| SYS_FAN0_Present | Device Inserted / Device Present      |
| SYS_FAN1_Present | Device Inserted / Device Present      |
| SYS_FAN2_Present | Device Inserted / Device Present      |
| SYS_FAN3_Present | Device Inserted / Device Present      |
| SYS_FAN4_Present | Device Inserted / Device Present      |
| SYS_FAN5_Present | Device Inserted / Device Present      |

# System Inventory

The System Inventory page shows system hardware inventory information and detailed information about active DIMMs, PCIe slots, CPUs, and other components.

The screenshot displays the BMC web GUI for a MegaRAC SP-X system. The left sidebar contains navigation links: Dashboard, Sensor, System Inventory (selected), FRU Information, Logs & Reports, Settings, Remote Control, Image Redirection, Power Control, Maintenance, and Sign out. The top header shows the system name, BIOS status, a refresh button, and the user 'admin'. The main content area is titled 'System Inventory' and features a tabbed interface with categories: System, Processor, Memory Controller (selected), BaseBoard, Power, Thermal, PCIe Device, PCIe Function, and Storage. The 'Memory Controller Info' table lists 14 DIMMs, all of which are Hynix DDR5 modules with a capacity of 32768 MiB and an operating speed of 4400 MHz. The table columns are Id, Name, Capacity MiB, Manufacturer, Serial Number, Part Number, State, OperatingSpeed Mhz, Memory Type, and AllowedSpeeds MHz. A pagination bar at the bottom indicates 14 items with page 1 selected.

| Id     | Name   | Capacity MiB | Manufacturer | Serial Number      | Part Number     | State   | OperatingSpeed Mhz | Memory Type | AllowedSpeeds MHz |
|--------|--------|--------------|--------------|--------------------|-----------------|---------|--------------------|-------------|-------------------|
| DIMM14 | DIMM14 | 32768        | Hynix        | 80AD0122199630995D | HMCG88AEBRA115N | Enabled | 4400               | DDR5        | 4800              |
| DIMM6  | DIMM6  | 32768        | Hynix        | 80AD01221996309955 | HMCG88AEBRA115N | Enabled | 4400               | DDR5        | 4800              |
| DIMM0  | DIMM0  | 32768        | Hynix        | 80AD01221996309C43 | HMCG88AEBRA115N | Enabled | 4400               | DDR5        | 4800              |
| DIMM15 | DIMM15 | 32768        | Hynix        | 80AD0122199630994C | HMCG88AEBRA115N | Enabled | 4400               | DDR5        | 4800              |
| DIMM1  | DIMM1  | 32768        | Hynix        | 80AD0122199630994A | HMCG88AEBRA115N | Enabled | 4400               | DDR5        | 4800              |
| DIMM11 | DIMM11 | 32768        | Hynix        | 80AD01221996309C3E | HMCG88AEBRA115N | Enabled | 4400               | DDR5        | 4800              |
| DIMM2  | DIMM2  | 32768        | Hynix        | 80AD0122199630992C | HMCG88AEBRA115N | Enabled | 4400               | DDR5        | 4800              |
| DIMM12 | DIMM12 | 32768        | Hynix        | 80AD01221996309C2D | HMCG88AEBRA115N | Enabled | 4400               | DDR5        | 4800              |
| DIMM13 | DIMM13 | 32768        | Hynix        | 80AD01221996309956 | HMCG88AEBRA115N | Enabled | 4400               | DDR5        | 4800              |
| DIMM3  | DIMM3  | 32768        | Hynix        | 80AD01221996309849 | HMCG88AEBRA115N | Enabled | 4400               | DDR5        | 4800              |

# FRU Information

The FRU Information page shows system name and serial number information. The HS350X V3 serial number is displayed in the **Product Information** section. The serial numbers in the **Chassis Information** and **Board Information** areas are not related to system entitlement checks.

The screenshot shows the BMC web GUI for a MegaRAC SP-X system. The left sidebar contains navigation links: Dashboard, Sensor, System Inventory, FRU Information (selected), Logs & Reports, Settings, Remote Control, Image Redirection, Power Control, and Maintenance. The main content area is titled 'FRU Field Replaceable Units' and includes a search bar for 'Available FRU Devices'. Below this, there are three sections: Chassis Information, Board Information, and Product Information. The Product Information section contains the Product Serial Number, which is highlighted with a red box and a red arrow pointing to it from a callout box.

| Chassis Information                     |  |
|---|--|
| Chassis Information Area Format Version | 1  |
| Chassis Type                            | Rack Mount Chassis                       |
| Chassis Part Number                     | 000000000001                             |
| Chassis Serial Number                   | 0123456789012345678901234567890123456789 |
| Chassis                                 |  |

| Board Information                     |                          |
|---------------------------------------|--------------------------|
| Board Information Area Format Version | 1                        |
| Language                              | 0                        |
| Manufacture Date Time                 | Thu Jan 26 11:02:00 2023 |
| Board Manufacturer                    | Lenovo                   |
| Board Product Name                    | System Board             |
| Board Serial Number                   | 8SSB27B32175L1HF2CX000V  |
| Board Part Number                     | SB27B32175               |
| FRU File ID                           | 0.3                      |
| Board Extra                           |                          |

| Product Information                     |                       |
|---|-----------------------|
| Product Information Area Format Version | 1                     |
| Language                                | 0                     |
| Product Manufacturer                    | Lenovo                |
| Product Name                            | ThinkSystem HS350X V3 |
| Product Part Number                     | 000000000000001       |
| Product Version                         | FFFFFFFF              |
| Product Serial Number                   | [Redacted]            |
| Asset Tag                               |                       |
| FRU File ID                             | 0.3                   |

Only use this serial number for entitlement checks.

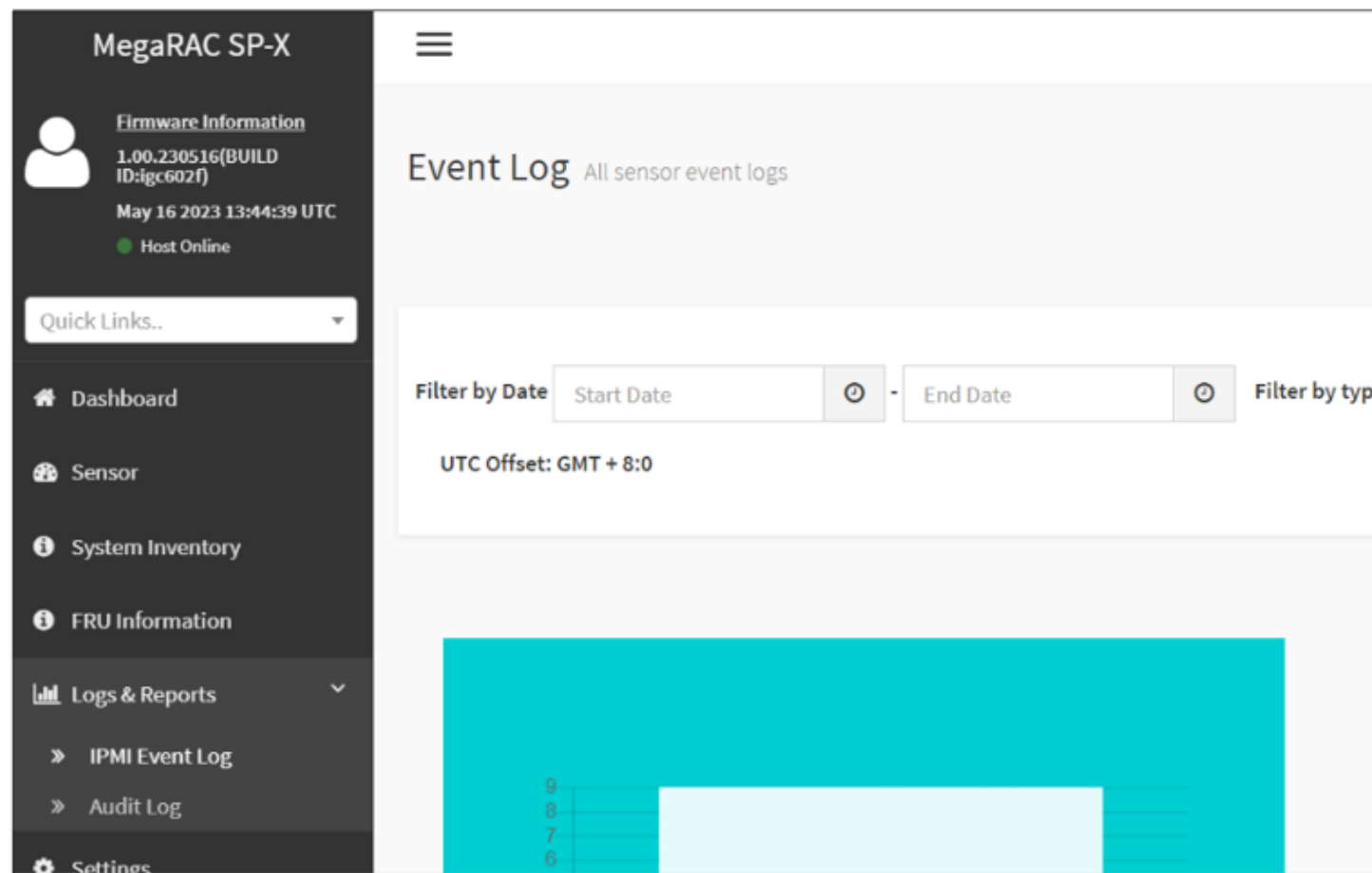
# Logs & Reports

The Logs & Reports page has two sections:

IPMI Event Log

Audit Log

Click the items to see more information.



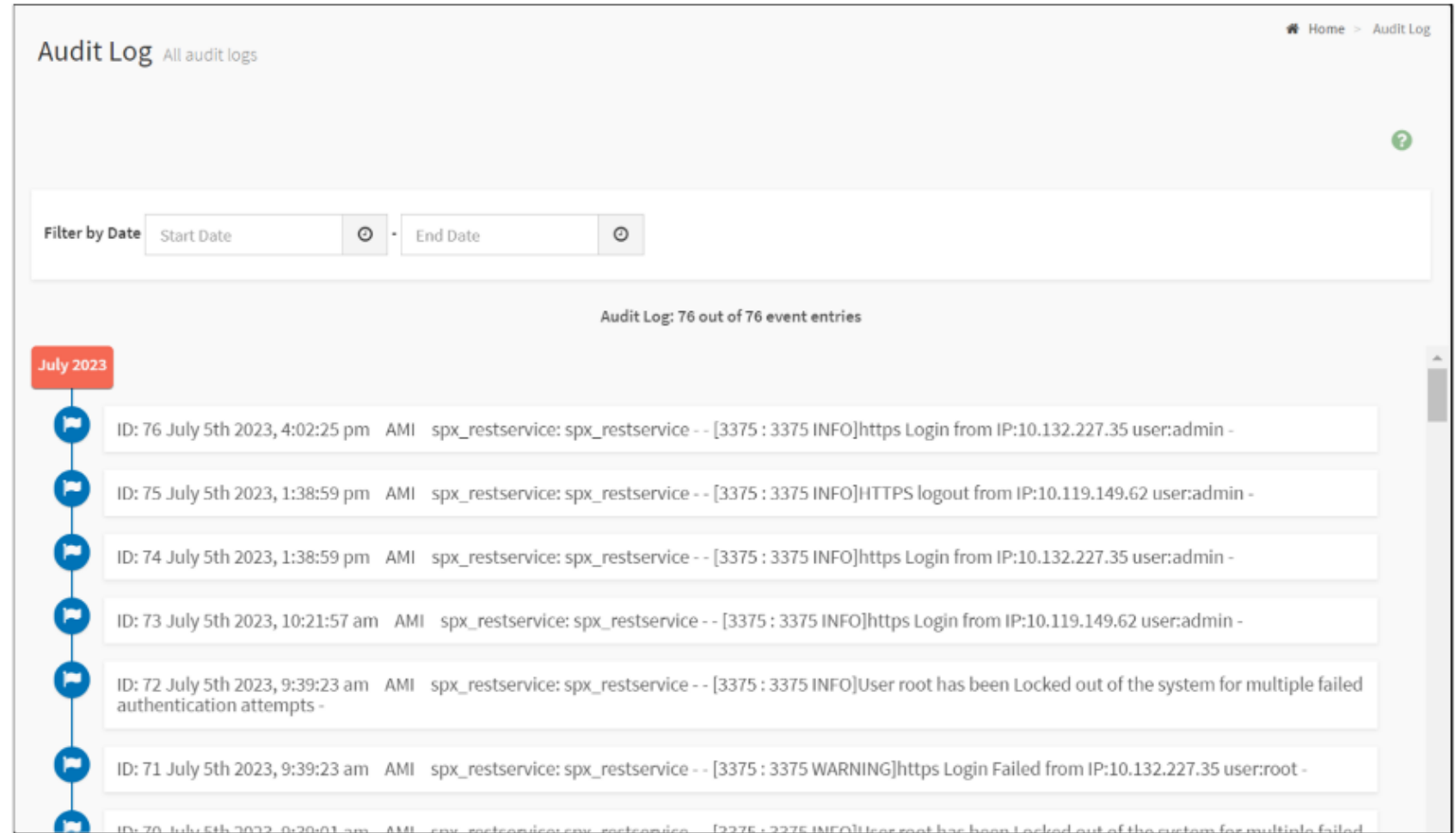
# Logs & Reports

The Logs & Reports page has two sections:

IPMI Event Log

Audit Log

Click the items to see more information.



Audit Log All audit logs

Filter by Date Start Date End Date

Audit Log: 76 out of 76 event entries

July 2023

- ID: 76 July 5th 2023, 4:02:25 pm AMI spx\_restservice: spx\_restservice -- [3375 : 3375 INFO]https Login from IP:10.132.227.35 user:admin -
- ID: 75 July 5th 2023, 1:38:59 pm AMI spx\_restservice: spx\_restservice -- [3375 : 3375 INFO]HTTPS logout from IP:10.119.149.62 user:admin -
- ID: 74 July 5th 2023, 1:38:59 pm AMI spx\_restservice: spx\_restservice -- [3375 : 3375 INFO]https Login from IP:10.132.227.35 user:admin -
- ID: 73 July 5th 2023, 10:21:57 am AMI spx\_restservice: spx\_restservice -- [3375 : 3375 INFO]https Login from IP:10.119.149.62 user:admin -
- ID: 72 July 5th 2023, 9:39:23 am AMI spx\_restservice: spx\_restservice -- [3375 : 3375 INFO]User root has been Locked out of the system for multiple failed authentication attempts -
- ID: 71 July 5th 2023, 9:39:23 am AMI spx\_restservice: spx\_restservice -- [3375 : 3375 WARNING]https Login Failed from IP:10.132.227.35 user:root -
- ID: 70 July 5th 2023, 9:39:23 am AMI spx\_restservice: spx\_restservice -- [3375 : 3375 INFO]User root has been Locked out of the system for multiple failed authentication attempts -

The Audit Log page displays all the device's audit events.

# Settings

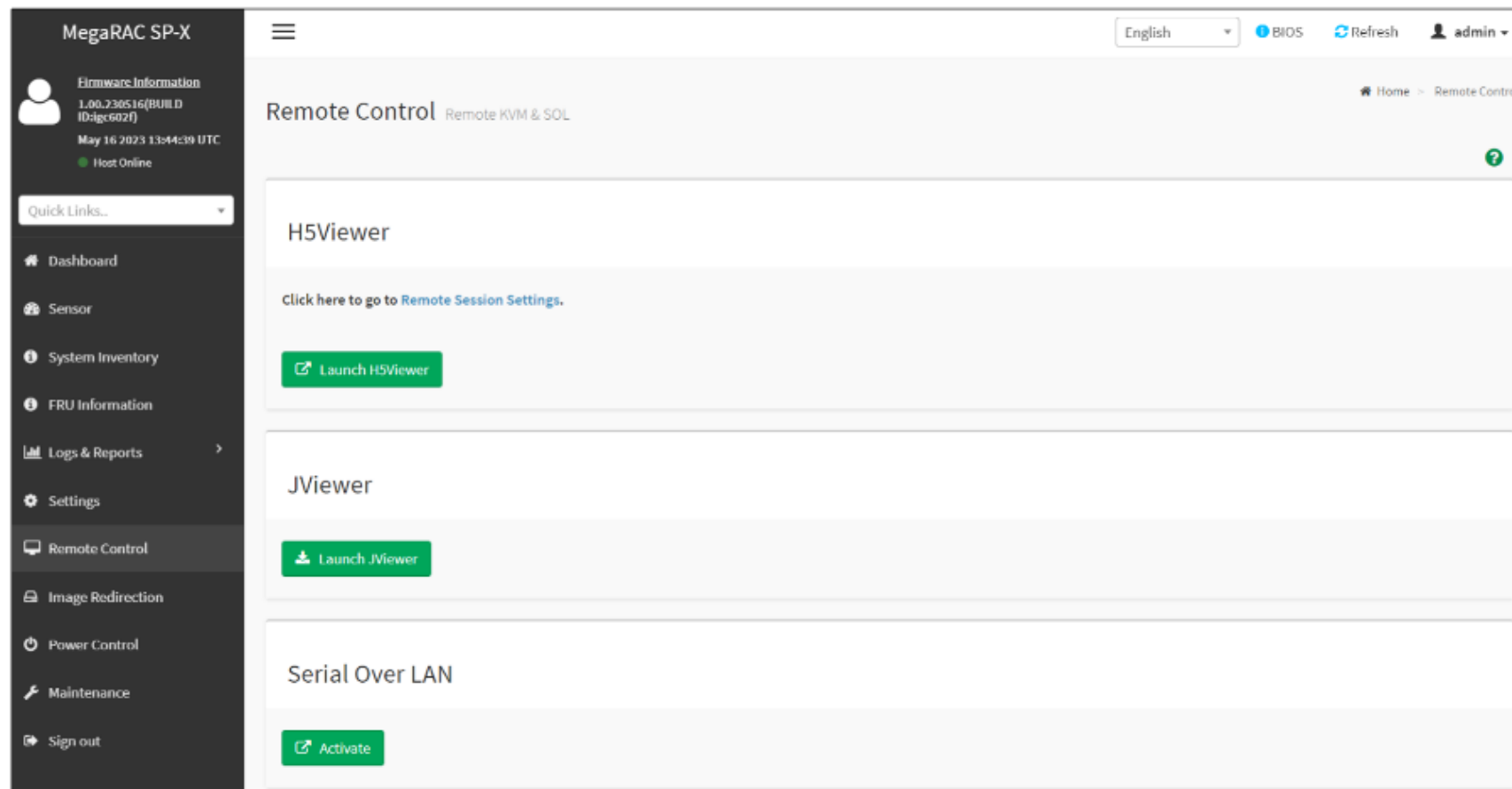
On the Settings page, users can access various configuration settings. Refer to the HS350X V3 BMC user guide on [support.lenovo.com](https://support.lenovo.com) for details of each setting option.

The screenshot displays the BMC web GUI interface. On the left is a dark sidebar with the title 'MegaRAC SP-X'. It contains a user profile section with 'Firmware Information' (version 1.00.230516, ID:lgc602f, timestamp May 16 2023 13:44:39 UTC, and status Host Online), a 'Quick Links...' dropdown, and a list of navigation items: Dashboard, Sensor, System Inventory, FRU Information, Logs & Reports, Settings (highlighted), Remote Control, Image Redirection, and Power Control. The main content area has a top bar with a hamburger menu, a language dropdown set to 'English', and links for 'BIOS', 'Refresh', and the user 'admin'. Below this is a breadcrumb 'Home > Settings'. The 'Settings' section is titled 'Configure BMC options' and features a grid of 12 settings tiles: Date & Time, External User Services, KVM Mouse Setting, Log Settings, TLS Settings, Media Redirection Settings, Network Settings, PAM Order Settings, Platform Event Filter, Services, SMTP Settings, and SSL Settings. The bottom row of the grid contains User Management, IPMI Interfaces, and Account Lockout Policy.

# Remote Control

On the Remote Control page, users can choose between three remote control options:

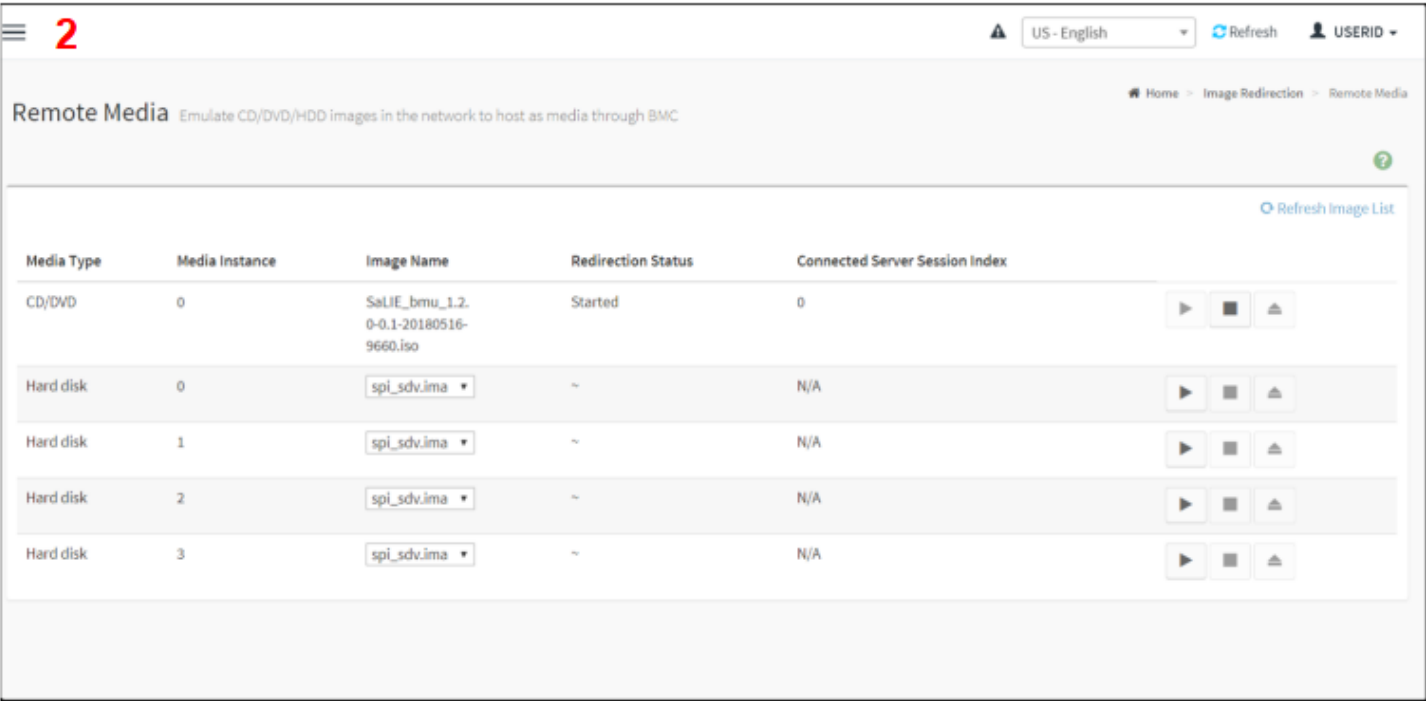
- H5Viewer
- JViewer
- Serial Over LAN



# Image Redirection

The Image Redirection page is used to configure images into the BMC for redirection. This can be done by mounting the images from the remote system.

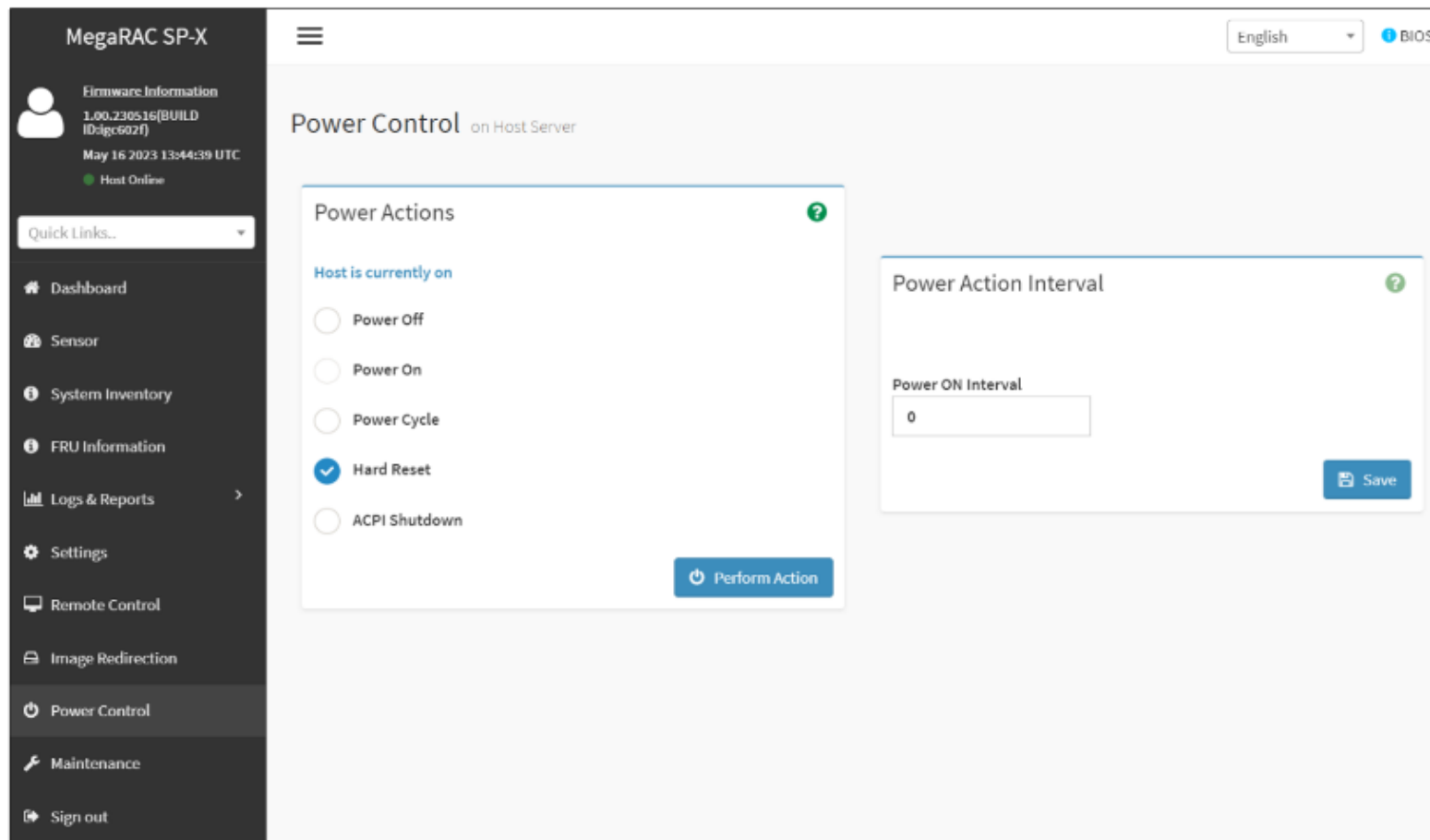
**Note:** To acquire source media, select **VMedia Instance Settings** from the **Settings** → **Media Redirection** menu. Click [HERE](#) to see more information.





# Power Control

The Power Control page shows the various system power action options.

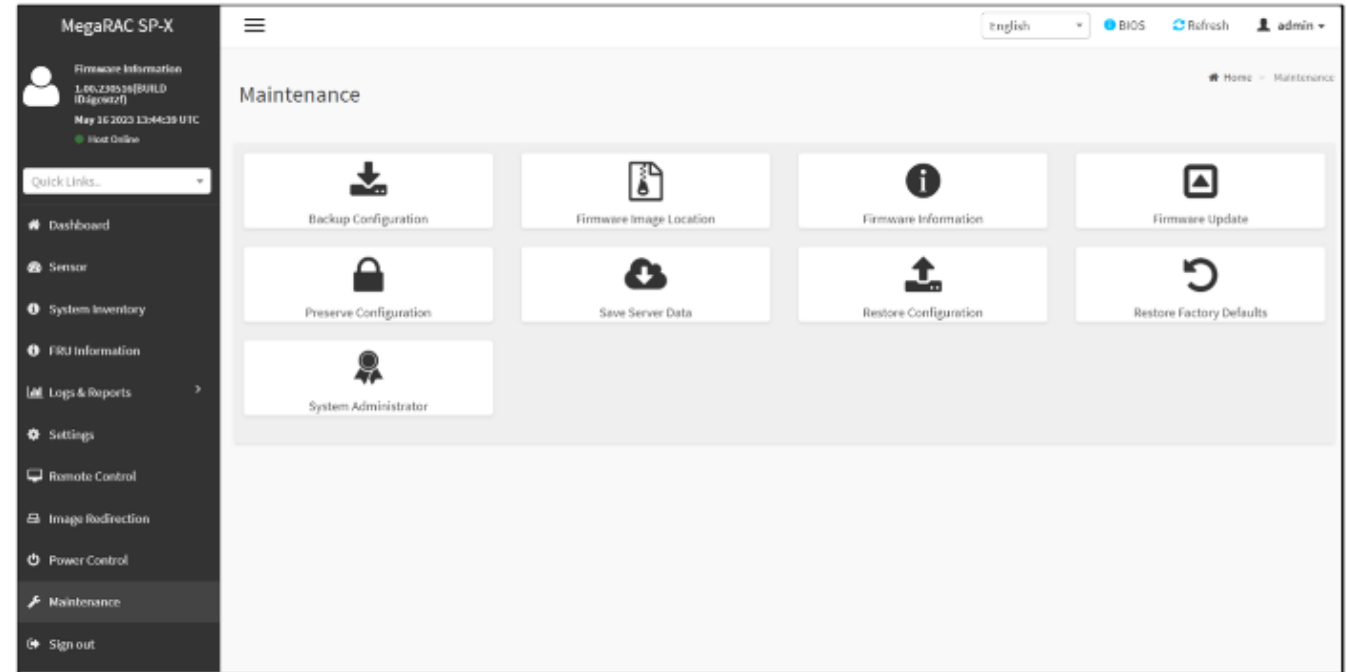


# Maintenance

The Maintenance page allows users to perform device maintenance tasks such as backing up or restoring BMC configuration, updating firmware, and collecting service data for problem escalation.

Click the following links to see maintenance action screenshots:

- [Backup / Restore Configuration](#)
- [Firmware Update](#)
- [Save Server Data](#)



# Embedded BIOS

The BMC GUI supports the embedded BIOS feature. Click **BIOS** in the top right corner of the screen to open the BIOS screen. This button only works when the system is powered on. After changing BIOS settings in the GUI, you will need to restart the system for the changes to take effect.

The screenshot illustrates the process of accessing the BIOS through the BMC web GUI. The top navigation bar includes a hamburger menu, a language dropdown set to 'English', a 'BIOS' button (highlighted with a red box and a red arrow), a 'Refresh' button, and a user profile for 'admin'. The left sidebar displays 'MegaRAC SP-X' and 'Firmware Information' (9.06.231009, BUILD ID: igc602a, Oct 9 2023 14:09:41 UTC, Host Offline). The main content area shows the 'Maintenance' page with a breadcrumb 'Home > Maintenance'. A red arrow points from the 'BIOS' button to the 'Main' section of the 'AMI Remote Bios Setup' interface. This interface includes a 'Timeout' of 120, 'Logout', 'Language' (en-US), and 'Access Level' (Admin) options. The left sidebar of the BIOS setup lists 'Main', 'Advanced', 'Security', 'Boot', 'Exit', 'Firmware Update', and 'Server Mgmt'. The 'Main' section displays 'BIOS Information' with the following details:

| Field               | Value                 |
|---------------------|-----------------------|
| BIOS Vendor         | American Megatrends   |
| Core Version        | 5.29                  |
| Compliancy          | UEFI 2.8; PI 1.7      |
| Product Name        | Thinksystem HR350X V3 |
| Project Version     | es1s02e-0.15.0 x64    |
| Build Date and Time | 01/16/2023 23:55:07   |

Below the table, there are three lines of text: 'Access Level: Administrator', '\*complex conditions are highlighted in yellow color', and '\*Interactive controls are highlighted in green color'. A final line states: '\*If any control has both complex and interactive flag set then it will be highlighted in yellow color'. The footer indicates 'Copyright © 2022 AMI'.

# Reference

For more information about the BMC GUI, refer to the simulator on the course landing page, or the user guide on [support.lenovo.com](https://support.lenovo.com).

