



IPMI Configuration Guide

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1. Introduction of Megarac SP

Megarac SP allows remote access of computers with BMC (Baseboard Management Controllers) and IPMI (Intelligence Platform Management Interface). System administrators may easily monitor system health or manage computer events of remote computers via the web based Megarac SP GUI using standard Internet browsers.

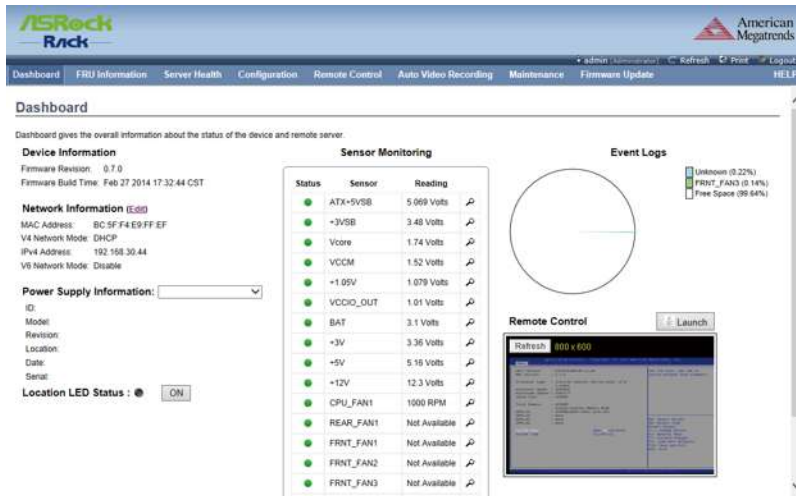
2. Megarac SP GUI Overview

2.1 Login page

The image shows the login form and browser settings section. The login form has fields for Username (admin) and Password (*****), a Forgot Password link, and a Login button. Below the form is a Language dropdown menu set to English. Under the heading 'Required Browser Settings', there are four items: 1. Allow popups from this site (checked), 2. Allow file download from this site (How to...), 3. Enable javascript for this site (checked), and 4. Enable cookies for this site (checked). At the bottom, a note states: 'It is recommended not to use Refresh, Back and Forward options of the browser.'

The default username and password are both “admin”. It is recommended to change the username and password after your first login.

2.2 Dashboard



The dashboard displays overall information about the status of the device.

Device Information

Displays the Firmware Revision and Firmware Build Time (Date and Time).

Network Information

Shows network settings for the device. Click on the link Edit to view the Network Settings Page.

Remote Control

Start remote redirection of the host by launching the console from this page. Clicking on the 'Launch' button of the 'Remote Control' will cause the jviewer.jsp file to be downloaded. Once the file is downloaded and launched, a Java redirection window will be displayed.

Remote Console Preview Box

It will show the console preview of the remote server by using a java application. Click on the 'Refresh' button to reload the console preview.

Sensor Monitoring

It lists all available sensors on the device, with information such as status,

name, reading, and status icon, as well as a link to that sensor's page.

There are 3 possible states for a Sensor:

- Green dot denotes a Normal state.
- Yellow exclamation mark denotes a Warning state.
- Red x denotes a Critical state.

The magnifying glass allows access to the Sensor details page for that sensor.

Event Logs

A graphical representation of all events incurred by the various sensors and %occupied/available space in logs. If you click on the color-coded rectangle in the Legend for the chart, you can view a list of those specific events only.

2.3 Field Replaceable Unit (FRU)

The screenshot shows the ASRock Rack American Megatrends BIOS/UEFI interface. The top navigation bar includes links for Dashboard, FRU Information, Server Health, Configuration, Remote Control, Auto Video Recording, Maintenance, Firmware Update, and HELP. The main title is 'Field Replaceable Unit(FRU)'. Below the title, a message states: 'This page gives detailed information for the various FRU devices present in this system.' The page is divided into three sections: Basic Information, Chassis Information, and Board Information. In the Basic Information section, the 'FRU Device ID' is set to '0' in a dropdown menu, and the 'FRU Device Name' is 'BMC_FRU'. The Chassis Information section lists: Chassis Information Area Format Version (0), Chassis Type, Chassis Part Number, Chassis Serial Number, and Chassis Extra. The Board Information section lists: Board Information Area Format Version (1), Language (0), Manufacture Date Time (Fri Jul 27 15:31:00 2012), Board Manufacturer (ASRock), Board Product Name, Board Serial Number, Board Part Number, and FRU File ID.

Basic Information:	
FRU Device ID	0
FRU Device Name	BMC_FRU
Chassis Information:	
Chassis Information Area Format Version	0
Chassis Type	
Chassis Part Number	
Chassis Serial Number	
Chassis Extra	
Board Information:	
Board Information Area Format Version	1
Language	0
Manufacture Date Time	Fri Jul 27 15:31:00 2012
Board Manufacturer	ASRock
Board Product Name	
Board Serial Number	
Board Part Number	
FRU File ID	

This page displays the BMC FRU file information. On selecting a particular FRU Device ID its corresponding FRU information will be displayed.

Basic Information

It displays the FRU device ID and device name for the selected FRU device ID.

Chassis Information

It displays the following Chassis information fields.

- Area Format Version
- Chassis Type
- Chassis Part Number
- Chassis Serial Number
- Chassis Extra

Board Information

It displays the following Board information fields.

- Area Format Version
- Language
- Manufacture Date Time
- Board Manufacturer

-
- Board Product Name
 - Board Serial Number
 - Board Part Number
 - FRU File ID
 - Board Extra

Product Information

It displays the following Product information fields.

- Area Format Version
- Language
- Manufacturer Name
- Product Name
- Product Part Number
- Product Version
- Product Serial Number
- Asset Tag
- FRU File ID
- Product Extra

2.4 Server Health

2.4.1 Sensor Readings

ASRock Rack American Megatrends

Dashboard | FRU Information | **Server Health** | Configuration | Remote Control | Auto Video Recording | Maintenance | Firmware Update | [admin](#) | [Logout](#) | [Refresh](#) | [Print](#) | [Help](#)

Sensor Readings

All sensor related information will be displayed here. Double click on a record to toggle (ON / OFF) the live widget for that particular sensor. Sensor Count: 18 sensors

Sensor Name	Status	Current Reading
ATX+5VSB	Normal	5.069 Volts
+3VSB	Normal	3.5 Volts
Vcore	Normal	1.74 Volts
VCCM	Normal	1.52 Volts
+1.05V	Normal	1.069 Volts
VCCIO_OUT	Normal	1.01 Volts
BAT	Normal	3.1 Volts
+3V	Normal	3.36 Volts
+5V	Normal	5.16 Volts
+12V	Normal	12.3 Volts
CPU_FAN1	Normal	1000 RPM
REAR_FAN1	Normal	Not Available
FRNT_FAN1	Normal	Not Available
FRNT_FAN2	Normal	Not Available
MB Temperature	Normal	40 °C
TRI Temperature	Normal	0 °C
CPU Temperature	Normal	38 °C

ATX+5VSB: 5.069 Volts

NORMAL

Thresholds for this sensor

Lower Non-Recoverable (LNR):	4.048 Volts	Upper Non-Recoverable (UNR):	6.029 Volts
Lower Critical (LC):	4.299 Volts	Upper Critical (UC):	5.759 Volts
Lower Non-Critical (LNC):	4.5 Volts	Upper Non-Critical (UNC):	5.49 Volts

LIVE WIDGET: ☒ ON | [Off](#)

Graphical View of this sensor's events

LNR	(0)
LC	(0)
UNC	(0)
UNR	(0)
UC	(0)
UNC	(0)
Other	(0)
Discrete	(0)

A list of sensor readings will be displayed here. Click on a record to show more information about that particular sensor, including thresholds and a graphical representation of all associated events. Double click on a record to toggle (ON / OFF) the live widget for that particular sensor. You can filter the list to view particular sensors only using the drop-down listbox.

NOTE: N/A represents Not Applicable.

Live Widget

Turn On or Off the live widget for this sensor. This widget gives a dynamic representation of the readings for the sensor.

View this Event Log

Click this button to go the event log page for the viewed sensor.

2.4.2 Event Log

ASRock Rack

American Megatrends

Dashboard FRU Information Server Health Configuration Remote Control Auto Video Recording Maintenance Firmware Update HELP

Event Log

Events generated by the system will be logged here. Double-click on a record to see description.

All Events filter by: All Sensors

BMC Timezone Client Timezone UTC Offset: (GMT+10)

Event Log: 13 event entries, 1 page(s)

Event ID	Time Stamp	Sensor Name	Sensor Type	Description
13	03/03/2014 11:44:15	Unknown	System Event	System Reconfigured OEM System Boot Event Undetermined System Hardware Failure Entry Added to Auxiliary Log PEF Action - Asserted
12	03/03/2014 11:44:15	Unknown	System Event	System Reconfigured OEM System Boot Event Undetermined System Hardware Failure Entry Added to Auxiliary Log PEF Action - Asserted
11	03/03/2014 03:44:49	Unknown	System Event	System Reconfigured OEM System Boot Event Undetermined System Hardware Failure Entry Added to Auxiliary Log PEF Action - Asserted
10	03/03/2014 03:44:49	Unknown	System Event	System Reconfigured OEM System Boot Event Undetermined System Hardware Failure Entry Added to Auxiliary Log PEF Action - Asserted
9	02/27/2014 18:22:21	FRNT_FAN3	Fan	Lower Non-Critical - Going Low - Asserted
8	02/27/2014 18:22:18	FRNT_FAN3	Fan	Lower Non-Critical - Going Low - Deasserted
7	02/27/2014 18:21:04	FRNT_FAN3	Fan	Lower Non-Critical - Going Low - Asserted
6	02/27/2014 18:20:59	FRNT_FAN3	Fan	Lower Non-Critical - Going Low - Deasserted
5	02/27/2014 18:20:56	FRNT_FAN3	Fan	Lower Non-Critical - Going Low - Asserted
4	02/27/2014 18:20:09	Unknown	System Event	System Reconfigured OEM System Boot Event Undetermined System Hardware Failure Entry Added to Auxiliary Log PEF Action - Asserted
				System Reconfigured OEM System Boot Event Undetermined

Clear All Event Logs

This page displays the list of events incurred by different sensors on this device. Double click on a record to see the details of that entry. You can also sort the list of entries by clicking on any of the column headers. You can use the sensor type or sensor name filter options to view those specific events logged in the device.

BMC Timezone

Check this option to display the event log entries logged with the BMC Timezone value.

Client Timezone

Check this option to display the event log entries logged with the Client (user's) Timezone value.

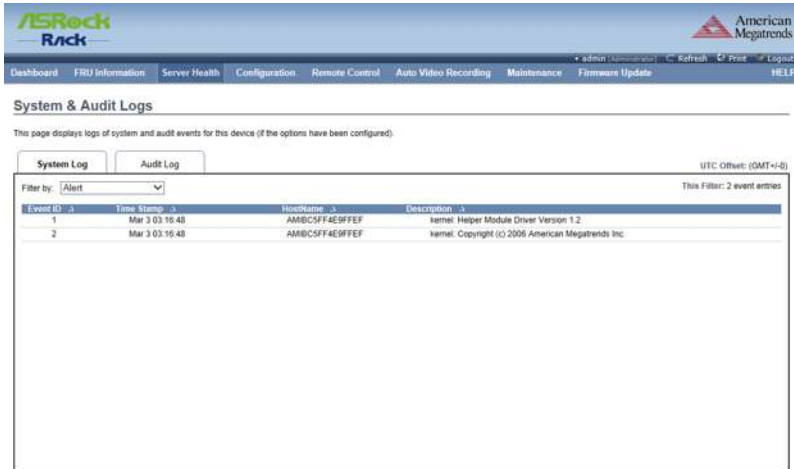
UTC Offset

Displays the current UTC Offset value based on which event Time Stamps will be updated. Navigational arrows can be used to selectively access different pages of the Event Log.

Clear All Event Logs

Clear All Event Logs option will delete all existing records for all sensors.

2.4.3 System and Audit Log



The screenshot shows the 'System & Audit Logs' page in the ASRock Rack American Megatrends BIOS/UEFI. The page has a navigation bar with links: Dashboard, FRU Information, Server Health, Configuration, Remote Control, Auto Video Recording, Maintenance, Firmware Update, and HELP. The 'System & Audit Logs' section is active. Below the navigation bar, there is a sub-header 'System & Audit Logs' and a note: 'This page displays logs of system and audit events for this device (if the options have been configured)'. There are two tabs: 'System Log' and 'Audit Log'. The 'System Log' tab is selected. A filter dropdown is set to 'Alert'. The table shows 2 event entries. The first entry is 'kernel: Helper Module Driver Version 1.2' and the second is 'kernel: Copyright (c) 2006 American Megatrends Inc.'.

Event ID	Time Stamp	HostName	Description
1	Mar 3 03:16:48	AMBC5FF4E9FEEF	kernel: Helper Module Driver Version 1.2
2	Mar 3 03:16:48	AMBC5FF4E9FEEF	kernel: Copyright (c) 2006 American Megatrends Inc.

If configured, these logs will display all the system and audit events that occurred on this device.

NOTE: Logs have to be configured under 'Configuration -> System and Audit Log' in order to display entries.

System Log

Click the System Log tab to view all system events. Entries can be filtered based on their classification levels.

Audit Log

Click the Audit Log tab to view all audit events for this device.

2.5 Configuration

2.5.1 Active Directory Settings

Active Directory Settings

The Active Directory is currently disabled. To enable Active Directory and configure its settings, click on 'Advanced Settings' button.

The list below shows the current list of configured Role Groups. If you would like to delete or modify a role group, select the name in the list and press Delete Role Group or Modify Role Group. To add a new Role Group, select an unconfigured slot and press Add Role Group.

Role Group ID	Group Name	Group Domain	Group Privilege
1	~	~	~
2	~	~	~
3	~	~	~
4	~	~	~
5	~	~	~

Number of configured Role groups: 0

Add Role Group Modify Role Group Delete Role Group

The displayed table shows current configured Role Groups and the available slots. You can modify, add or delete role groups from here. Group domain can be the AD domain or a trusted domain. Group Name should correspond to the name of an actual AD group. To view the page, you must be at least a User. To modify or add a group, you must be an Administrator.

NOTE: Free slots are denoted by “~” in all columns for the slot.

Advanced Settings

Click this option to configure the Active Directory Settings. Options are Enable Active Directory Authentication, User Domain name, Time Out and up to three Domain Controller Server Addresses.

Add Role Group

Select a free slot and click 'Add Role Group' to add a new role group to the device. Alternatively, double click on a free slot to add a role group.

Modify Role Group

Select a configured slot and click 'Modify Role Group' to modify that role group. Alternatively, double click on the configured slot.

Delete Role Group

Select the desired role group to be deleted and click 'Delete Role Group'.

2.5.2 DNS Server Settings

ASRock Rack American Megatrends

Dashboard FRU Information Server Health Configuration Remote Control Auto Video Recording Maintenance Firmware Update HELP

DNS Server Settings

Manage DNS settings of the device.

Host Configuration

Host Settings: **Automatic**

Host Name: AMBCSF14E9FFEE

Register BMC

bond0

☒ Register BMC

☒ Direct Dynamic DNS ☐ DHCP Client FQDN

Domain Name Configuration

Domain Settings: **bond0_v4**

Domain Name:

Domain Name Server Configuration

DNS Server Settings: **bond0**

IP Priority: ☒ IPv4 ☐ IPv6

DNS Server1: 168.95.1.1

DNS Server2: 168.95.152.1

DNS Server3:

Save Reset

This page is used to configure the Host name and Domain Name Server configuration of the device.

Host configuration

Host Settings

Choose either Automatic or Manual settings.

Host Name

It displays the hostname of the device if Auto is selected. If the Host setting is chosen as Manual, then specify the hostname of the device.

Register BMC

Choose the BMC's network port to register with the DNS settings. Check the option 'Register BMC' to register with the DNS settings. Choose the option 'Direct Dynamic DNS' to register with direct dynamic DNS or choose 'DHCP Client FQDN' to register through a DHCP server.

Domain Name Configuration

Domain Settings

It lists the options for the domain interface as Manual, v4 or v6 for multi LAN channels.

Domain Name

It displays the domain name of the device if Auto is selected. If the Domain setting is chosen as Manual, then specify the domain name of the device.

Domain Name Server Configuration

DNS Server Settings

It lists the options for the DNS interface, Manual and available LAN interfaces.

IP Priority

If the IP Priority is IPv4, it will have 2 IPv4 DNS servers and 1 IPv6 DNS server. If the IP Priority is IPv6, it will have 2 IPv6 DNS servers and 1 IPv4 DNS server.

NOTE: This is not applicable for Manual configuration.

DNS Server 1, 2 & 3

Specify the DNS (Domain Name System) server address to be configured for the BMC.

- An IPv4 Address is made of 4 numbers separated by dots as in "xxx.xxx.xxx.xxx".
- Each number ranges from 0 to 255.
- The first number must not be 0.

DNS Server Address will support the following:

- IPv4 Address format.
- IPv6 Address format.

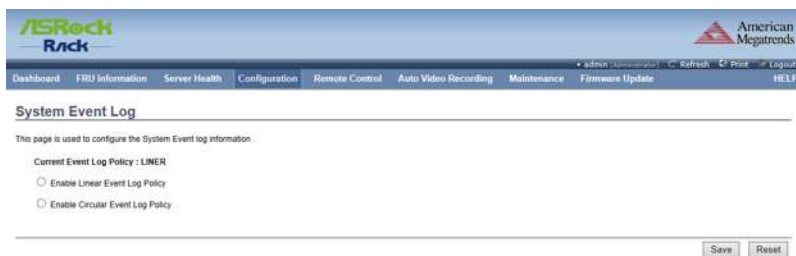
Save

Click 'Save' to save any changes made. You will be logged out of current UI session and will need to log back in.

Reset

Reset the modified changes.

2.5.3 System Event Log



This page is used to configure the System Event log information.

Current Event Log Policy

It will display the configured Event Log Policy.

Linear Event Log Policy

Check this option to enable the Linear System Event Log Policy for the Event Log.

Circular Event Log Policy

Check this option to enable the Circular System Event Log Policy for the Event Log.

Save

Click 'Save' to save the configured settings.

Reset

Click 'Reset' to reset the modified changes.

2.5.4 Images Redirection



The displayed table shows configured images on BMC. You can add or replace the images from here to the remote media. Only one image can be configured for each image type. To configure the image, You need to enable Remote Media support using 'Advanced Settings'. To add or replace an image, you must have Administrator Privileges.

NOTE: Free slots are denoted by "~".

Start/Stop Redirection

Select a configured slot and click 'Start Redirection' to start the remote media redirection. It is a toggle button, if the image is successfully redirected, then click the 'Stop Redirection' button to stop the remote media redirection.

Add Image

Select a free slot and click 'Add Image' to configure a new image to the device. Alternatively, double click on a free slot to add an image.

Replace Image

Select a configured slot and click 'Replace Image' to replace the existing image. Alternatively, double click on the configured slot.

Delete Image

Select the desired image to be deleted and click 'Delete Image'.

NOTE: Redirection needs to be stopped to replace or delete the image.

2.5.5 LDAP/E-Directory Settings

LDAP/E-Directory Settings

LDAP/E-Directory is currently disabled. To enable LDAP/E-Directory and configure its settings, click on 'Advanced Settings' button.

The list below shows the current list of configured Role Groups. If you would like to delete or modify a role group, select the name in the list and press Delete Role Group or Modify Role Group. To add a new Role Group, select an unconfigured list and press Add Role Group.

Role Group ID →	Group Name →	Group Search Base →	Group Privilege →
1	~	~	~
2	~	~	~
3	~	~	~
4	~	~	~
5	~	~	~

Number of configured Role groups: 0

Add Role Group Modify Role Group Delete Role Group

The displayed table shows the configured Role Groups and available slots. You can modify or add/delete role groups from here. The Group Search Base can be any path from where a Group is located to the Base DN. The Group Name should correspond to the name of an actual LDAP/E-Directory group. To view the page, the user must at least be a User. To modify or add a group, the user must be an Administrator.

NOTE: Free slots are denoted by “~” in all columns for the slot.

Advanced Settings

Click this option to configure LDAP/E-Directory Advanced Settings. Options are Enable LDAP/E-Directory Authentication, IP Address, Port, Bind DN, Password and Search base.

Add Role Group

Select a free slot and click 'Add Role Group' to add a new role group to the device. Alternatively, double click on a free slot to add a role group.

Modify Role Group

Select a configured slot and click 'Modify Role Group' to modify that role group. Alternatively, double click on the configured slot.

Delete Role Group

Select the desired role group to be deleted and click 'Delete Role Group'.

2.5.6 Mouse Mode Settings

The screenshot shows the ASRock Rack American Megatrends BIOS interface. The top navigation bar includes links for Dashboard, FRU Information, Server Health, Configuration, Remote Control, Auto Video Recording, Maintenance, Firmware Update, and HELP. The 'Configuration' tab is selected. The main heading is 'Mouse Mode Settings'. Below it, a note states: 'Redirection console mouse mode settings can be modified here.' The current setting is 'Current Mouse Mode : ABSOLUTE'. There are four radio button options: 'Set Mode to Relative (Recommended when server OS is Linux)', 'Set Mode to Absolute (Recommended when server OS is Windows)', 'Set Mode to Other Mode (Recommended for SLES-11 OS installation)', and 'Set Mode to Other Mode (Recommended for SLES-11 OS installation)'. At the bottom right, there are 'Save' and 'Reset' buttons.

The Redirection Console handles mouse emulation from the local window to the remote screen using either of the two methods. Only 'Administrator' has the right to configure these options.

- Relative Mouse mode
- Absolute Mouse mode
- Other Mouse mode

Relative Mouse mode

The Relative mode sends the calculated relative mouse position displacement to the server. To select this mode select the "Set mode to Relative" option.

Absolute Mouse mode

The absolute position of the local mouse is sent to the server. To select this mode select the "Set mode to Absolute" option.

Other Mouse mode

Select Other Mode to have the calculated displacement from the local mouse in the centre position, sent to the server. Use this mode for SLES 11 Linux OS installation.

Save

Click 'Save' to save any changes made.

Reset

Click 'Reset' to reset the modified changes.

2.5.7 Network Settings

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Dashboard FRU Information Server Health Configuration Remote Control Auto Video Recording Maintenance Firmware Update HELP

Network Settings

Manage network settings of the device:

LAN Interface:

LAN Settings: ☒ Enable

MAC Address:

IPv4 Configuration

Obtain an IP address automatically: ☒ Use DHCP

IPv4 Address:

Subnet Mask:

Default Gateway:

IPv6 Configuration

IPv6 Settings: ☐ Enable

Obtain an IP address automatically: ☒ Use DHCP

IPv6 Address:

Subnet Prefix length:

Default Gateway:

VLAN Configuration

VLAN Settings: ☐ Enable

This page is used to configure the network settings for available LAN channels.

LAN Interface

Select the LAN interface to be configured.

LAN Settings

Check this option to enable LAN support for the selected interface.

MAC Address

This field displays the MAC address of the selected interface (read only).

IPv4 Configuration

It lists the IPv4 configuration settings.

Obtain an IP address automatically

Enable 'Use DHCP' to dynamically configure the IPv4 address using Dynamic Host Configuration Protocol (DHCP).

IPv4 Address, Subnet Mask, Default Gateway

If DHCP is disabled, specify a static IPv4 address, Subnet Mask and

Default Gateway to be configured for the selected interface.

- An IP Address consists of 4 sets of numbers separated by dots as in "xxx.xxx.xxx.xxx".
- Each set ranges from 0 to 255.
- The first Number must not be 0.

IPv6 Configuration

It lists the IPv6 configuration settings.

IPv6 Settings

Check this option to enable IPv6 support for the selected interface.

Obtain an IP address automatically

Enable 'Use DHCP' to dynamically configure the IPv4 address using Dynamic Host Configuration Protocol (DHCP).

IPv6 Address

Specify a static IPv6 address to be configured for the selected interface.

Subnet Prefix length

Specify the subnet prefix length for the IPv6 settings.

- Value ranges from 0 to 128.

Default Gateway

Specify the v6 default gateway for IPv6 settings.

VLAN Configuration

It lists the VLAN configuration settings.

VLAN Settings

Check this option to enable VLAN support for the selected interface.

VLAN ID

Specify the Identification for VLAN configurations.

- Value ranges from 2 to 4094.

NOTE: VLAN ID cannot be changed without resetting the VLAN configuration. VLAN ID 0, 1, 4095 are reserved VLAN ID's.

VLAN Priority

Specify the priority for VLAN configurations.

- Value ranges from 1 to 7.

NOTE: 7 is the highest priority for VLAN.

Save

Click 'Save' to save any changes made. You will be prompted to log out of the current UI session and log back in at the new IP address.

Reset

Click 'Reset' to reset the modified changes.

2.5.8 Network Bonding Configuration

ASRock Rack American Megatrends

Dashboard FRU Information Server Health **Configuration** Remote Control Auto Video Recording Maintenance Firmware Update HELP

Network Bonding Configuration

The following options are to configure networking bonding for the device

Network Bonding ☒ Enable

Default Interfaces

Auto Configuration ☒ Enable

Save Reset

This page is used to configure the network bonding configuration for network interfaces.

NOTE: A minimum of 2 network interfaces are required to enable Network bonding for the device.

Network Bonding

Check this option to enable network bonding for network interfaces.

NOTE: If VLAN is enabled for slave interfaces, then Bonding cannot be enabled. VLAN can be disabled under Configuration -> Network -> VLAN.

Default Interfaces

Choose any one of the bonding interfaces for configuring active slave(s).

Auto Configuration

Enable this option to configure the interfaces in service configuration automatically.

NOTE: If Auto configuration is disabled, then interfaces in services can be configured via IPMI command. If Auto configuration is enabled, then all the services will be restarted automatically.

Save

Click "Save" to save the current changes.

NOTE: Disabling bonding will disable the Bonding-VLAN configuration.

Reset

Click “Reset” to reset the modified changes.

2.5.9 Network Link Configuration

The screenshot shows the ASRock Rack American Megatrends web interface. The top navigation bar includes links for Dashboard, FRU Information, Server Health, Configuration, Remote Control, Auto Video Recording, Maintenance, Firmware Update, and HELP. The main title is "Network Link Configuration". Below the title, it says "Manage network link settings of the device:". The configuration options are: LAN Interface (a dropdown menu showing "eth0"), Auto Negotiation (radio buttons for "ON" and "OFF", with "ON" selected), Link Speed (a dropdown menu showing "100 Mbps"), and Duplex Mode (a dropdown menu showing "Full Duplex"). At the bottom right, there are "Save" and "Reset" buttons.

This page is used to configure the network link configuration for available network interfaces.

LAN Interface

Select the required network interface from the list to which the Link speed and duplex mode is to be configured.

Auto Negotiation

This option is enabled to allow the device to perform automatic configuration to achieve the best possible mode of operation (speed and duplex) over a link.

Link Speed

Link speed will list all the supported capabilities of the network interface. It can be 10/100/1000 Mbps.

Duplex Mode

Select any one of the following Duplex Modes.

- Half Duplex
- Full Duplex

Save

Click 'Save' to save the settings.

Reset

Click 'Reset' to reset the modified changes.

2.5.10 NTP Settings

ASRock Rack American Megatrends

Dashboard FRU Information Server Health Configuration Remote Control Auto Video Recording Maintenance Firmware Update HELP

NTP Settings

Here you can either configure the NTP server or view and modify the device's Date & Time settings.

Date: Month: March Day: 3 Year: 2018

Time: (hh:mm:ss) Hour: 11 Min: 52 Sec: 49

UTC Timezone: (GMT+/-0) Hour(s)

NTP Server: pool.ntp.org

☒ Automatically synchronize Date & Time with NTP Server

Refresh Save Reset

This page displays the device's current Date & Time Settings. It can be used to configure either Date & Time or NTP (Network Time Protocol) server settings for the device.

Date

Specify the current Date for the device.

Time

Specify the current Time for the device.

NOTE: As a year 2038 problem exists, the acceptable date range is from 01-01-2005 to 01-18-2038.

NTP Server

Specify the NTP Server for the device. Check the 'Automatically synchronize' option to configure the NTP Server. The NTP Server will support the following:

- IP Address (Both IPv4 and IPv6 format).
- FQDN (Fully qualified domain name) format.

UTC Offset

UTC Offset list contains the UTC offset values for the NTP server, which can be used to display the exact local time.

NOTE: Use the correct UTC offset after adjusting for DST.

Automatically synchronize

Check this option to automatically synchronize Date and Time with the NTP Server.

Refresh

Click 'Refresh' to reload the current date & time settings.

Save

Click 'Save' to save any changes made.

Reset

Click 'Reset' to reset the modified changes.

2.5.11 PAM Ordering



This page is used to configure the PAM order for user authentication into the BMC.

PAM Module

It shows the list of available PAM modules supported in BMC.

Move Up

Click on the required PAM module, it will be selected. Click on the 'Move Up' option to move the selected PAM module one step before the existing PAM module.

Move Down

Click on the required PAM module, it will be selected. Click on the 'Move Down' option to move the selected PAM module one step after the existing PAM module.

Save

Click 'Save' to save any changes made.

NOTE: Whenever the configuration is modified, the web server will be restarted automatically. The logged session will be logged out.

Reset

Click 'Reset' to reset the modified changes.

2.5.12 PEF Management

ASRock Rack American Megatrends

Dashboard FRU Information Server Health Configuration Remote Control Auto Video Recording Maintenance Firmware Update HELP

PEF Management

Use this page to configure Event Filter, Alert Policy and LAN Destination. To delete or modify a entry, select it in the list and press "Delete" or "Modify". To add a new entry, select an unconfigured slot and press "Add".

Event Filter Alert Policy LAN Destination

Configured Event Filter count: 13

PEF ID	Filter Configuration	Event Filter Action	Event Severity	Sensor Name
1	~	~	~	~
2	~	~	~	~
3	Enabled	[Alert]	Unspecified	Any
4	Enabled	[Alert]	Unspecified	Any
5	Enabled	[Alert]	Unspecified	Any
6	Enabled	[Alert]	Unspecified	Any
7	Enabled	[Alert]	Unspecified	Any
8	Enabled	[Alert]	Unspecified	Any
9	Enabled	[Alert]	Unspecified	Any
10	Enabled	[Alert]	Unspecified	Any
11	Enabled	[Alert]	Unspecified	Any
12	Enabled	[Alert]	Unspecified	Any
13	Enabled	[Alert]	Unspecified	Any
14	Enabled	[Alert]	Unspecified	Any
15	Enabled	[Alert]	Unspecified	Any
16	~	~	~	~

Add Modify Delete

This page is used to configure the Event Filter, Alert Policy and LAN Destination. To view the page, the user must at least be an Operator. To modify or add a PEF, the user must be an Administrator.

NOTE: Free slots are denoted by '~' in all columns for the slot. For more information, refer the Platform Event Filtering (PEF) section in IPMI Specification.

Event Filter

Click the Event Filter tab to show configured Event filters and available slots. You can modify or add new event filter entries here. A maximum of 40 slots are available and include the default of 15 event filter configurations.

Alert Policy

Click the Alert policy tab to show configured Alert policies and available slots. You can modify or add new alert policy entries here. A maximum of 60 slots are available.

LAN Destination

Click the LAN Destination tab to show configured LAN destinations and available slots. You can modify or add new LAN destination entries here. A maximum of 15 slots are available.

Send Test Alert

Select a configured slot in the LAN Destination tab and click 'Send Test Alert' to send a sample alert to the configured destination.

NOTE: Test alerts can be sent only with SMTP configurations set to enabled. SMTP support can be enabled under Configuration->SMTP.

Add

Select a free slot and click 'Add' to add a new entry to the device. Alternatively, double click on a free slot.

Modify

Select a configured slot and click 'Modify' to modify that entry. Alternatively, double click on the configured slot.

Delete

Select the desired configured slot to be deleted and click 'Delete'.

2.5.13 RADIUS Settings

RADIUS Settings

Check the box below to enable RADIUS authentication and enter the required information to access the RADIUS server. Press the Save button to save your changes.

RADIUS Authentication: ☐ Enable

Port: 1812

Time Out: 3 seconds

Server Address:

Secret:

Save Reset

To enable/disable RADIUS, check or uncheck the “RADIUS Authentication” Enable checkbox respectively.

NOTE: Generic FreeRADIUS alone is supported.

RADIUS Authentication

Check the option ‘Enable’ to enable RADIUS authentication.

Port

Specify the RADIUS Port.

- The default Port is 1812.
- Port value ranges from 1 to 65535.

Time Out

Specify the Time out value.

- The default Time out value is 3 seconds.
- Time out value ranges from 3 to 300.

Server Address

Enter the ‘IP address’ of the RADIUS server

- An IP Address is made of 4 numbers separated by dots as in “xxx.xxx.xxx.xxx”.
- Each Number ranges from 0 to 255.
- The first Number must not be 0.

The server address will support the following:

- IPv4 Address format.
- IPv6 Address format.

Secret

Enter the 'Authentication Secret' for RADIUS server

- Secret must be at least 4 characters long.
- Space is not allowed.

NOTE: This field will not allow more than 31 characters.

Save

Click 'Save' to save the settings.

Reset

Click 'Reset' to reset the modified changes.

2.5.14 Configure Remote Session

ASRock Rack American Megatrends

Dashboard FRU Information Server Health Configuration Remote Control Auto Video Recording Maintenance Firmware Update HELP

Configure Remote Session

This page is used to configure virtual media configuration settings for the next redirection session.

Virtual Media Attach Mode Auto Attach

Save Reset

This page is used to configure virtual media configuration settings for the next redirection session.

Virtual Media Attach Mode

Two types of VM attach modes are available:

- Attach - Immediately attaches Virtual Media to the server upon bootup.
- Auto Attach - Attaches Virtual Media to the server only when a virtual media session is started.

Save

Click 'Save' to save the current changes.

NOTE: It will automatically close the existing remote redirection either KVM or Virtual media sessions, if any.

Reset

Click 'Reset' to reset the modified changes.

2.5.15 Services



admin Administrator C Refresh P Post L Logout

Dashboard FRU Information Server Health Configuration Remote Control Auto Video Recording Maintenance Firmware Update HELP

Services

Below is a list of services running on the BMC. It shows current status and other basic information about the services. Select a slot and press "Modify" button to modify the services configuration.

Number of Services: 7

#	Service Name	Current State	Interfaces	Nonsecure Port	Secure Port	Timeout	Maximum Sessions	Active Sessions
1	web	Active	bond0	80	443	1800	20	5
2	lvm	Active	bond0	7578	7582	N/A	2	0
3	cd-media	Active	bond0	5120	5124	N/A	1	0
4	fs-media	Active	bond0	5122	5126	N/A	1	0
5	hd-media	Active	bond0	5123	5127	N/A	1	0
6	ssh	Active	N/A	N/A	22	600	N/A	N/A
7	telnet	Active	N/A	23	N/A	600	N/A	N/A

Modify

This page is used to display the basic information about services running in the BMC. To modify a service, the user must be an Administrator.

Modify

Select a slot and click 'Modify' to modify the configuration of the service. Alternatively, double click on the slot.

NOTE: Whenever the configuration is modified, the service will be restarted automatically. Users have to close the existing opened session for the service if needed.

2.5.16 SMTP Settings

ASRock Rack American Megatrends

Dashboard FRU Information Server Health Configuration Remote Control Auto Video Recording Maintenance Firmware Update HELP

SMTP Settings

Manage SMTP settings of the device.

LAN Channel Number: 1

Sender Address:

Machine Name:

Primary SMTP Server

SMTP Support: ☒ Enable

Server Address:

☐ SMTP Server requires Authentication

User Name:

Password:

Secondary SMTP Server

SMTP Support: ☒ Enable

Server Address:

☐ SMTP Server requires Authentication

User Name:

Password:

This page is used to configure the SMTP settings.

LAN Channel Number

Select the LAN channel to which the SMTP information needs to be configured.

Sender Address

Enter the 'Sender Address' valid on the SMTP Server.

Machine Name

Enter the 'Machine Name' of the SMTP Server.

- Machine Name is a string of maximum 15 alpha-numeric characters.
- Space, special characters are not allowed.

Primary SMTP Server

It lists the Primary SMTP Server configuration.

SMTP Support

Check this option to enable SMTP support for the BMC.

Server Address

Enter the 'IP address' of the SMTP Server. It is a mandatory field.

- An IP Address is made of 4 numbers separated by dots as in "xxx.xxx.xxx.xxx".
- Each Number ranges from 0 to 255.
- The first Number must not be 0.

The server address will support the following:

- IPv4 Address format.
- IPv6 Address format.

SMTP Server requires Authentication

Check the option 'Enable' to enable SMTP Authentication.

Note: SMTP Server Authentication Types supported are:

- CRAM-MD5
- LOGIN
- PLAIN

If the SMTP server does not support any one of the above authentication types, the user will get an error message stating, "Authentication type is not supported by SMTP Server"

Username

Enter the username to access SMTP Accounts.

- The User Name can be 4 to 64 alpha-numeric characters.
- It must start with an alphabet.
- Special characters ',' (comma), ':' (colon), ';' (semicolon), ' ' (space) and '\' (backslash) are not allowed.

Password

Enter the password for the SMTP User Account.

- Passwords must be at least 4 characters long.
- Space is not allowed.

NOTE: This field will not allow more than 64 characters.

Secondary SMTP Server

It lists the Secondary SMTP Server configuration. It is an optional field. If the Primary SMTP server is not working, then it tries the Secondary SMTP Server configuration.

Save

Click 'Save' to save the new SMTP server configuration.

Reset

Click 'Reset' to reset the modified changes.

2.5.17 SSL Certificate Configuration

ASRock Rack American Megatrends

Dashboard FRU Information Server Health **Configuration** Remote Control Auto Video Recording Maintenance Firmware Update HELP

SSL Certificate Configuration

This page is used to configure SSL certificate into the BMC. Using this, the device can be accessed in a secured mode. Upload SSL option is used to upload the certificate and private key file into the BMC. Generate SSL option is used to generate the SSL certificate based on configuration details. View SSL option is used to view the uploaded SSL certificate in readable format.

Upload SSL Generate SSL View SSL

Current Certificate	Thu Jan. 1 00:00:00 1970
New Certificate	浏览
Current Privacy Key	Thu Jan. 1 00:00:00 1970
New Privacy Key	浏览

Upload

This page is used to upload a new SSL certificate and privacy key.

NOTE: Please check the current BMC time in NTP under the Configuration menu while uploading the SSL certificate.

Current Certificate

The current certificate, uploaded date/time information will be displayed (read only).

New Certificate

Browse and navigate the certificate file.

- The certificate file should be of pem type

Current Privacy Key

The current privacy key, uploaded date/time information will be displayed (read only).

New Privacy Key

Browse and navigate the privacy key file.

- The privacy key file should be of pem type

Upload

Click 'upload' to upload the SSL certificate and privacy key into the BMC.

NOTE: Upon successful upload, HTTPs service will be restarted to use the newly uploaded SSL certificate.

2.5.18 System and Audit Log Settings

ASRock Rack American Megatrends

Dashboard FRU Information Server Health Configuration Remote Control Auto Video Recording Maintenance Firmware Update HELP

System and Audit Log Settings

Enable and configure logging of system events below. Or you can enable/disable logging of audit events. Press the Save button to save your changes.

System Log	☒ Enable
Log Type	☒ Local Log ☐ Remote Log
File Size (in bytes)	50000
Rotate Count	0
Server Address	
Audit Log	☒ Enable

Save Reset

This page is used to configure the System and Audit log settings.

System Log

Check the option 'Enable' to enable system logs.

Log Type

Select the Log type for system logs, whether it should be preserved in a local file or on a remote server. Local file resides at `/var/log/`.

File Size

If Local log is selected, specify the size of the file in bytes.

- Size ranges from 3 to 65535.

Rotate Count

When logged information exceeds the specified file size, the old log information automatically gets moved to backup files based on the rotate count value. If the rotate count is zero, the old log information gets cleared permanently each time.

- Value ranges from 0 to 255.

Server Address

Specify the remote server address to log system events. The server address will support the following:

- IP Address (Both IPv4 and IPv6 format).
- FQDN (Fully qualified domain name) format.

Audit Log

Check the option 'Enable' to enable audit log.

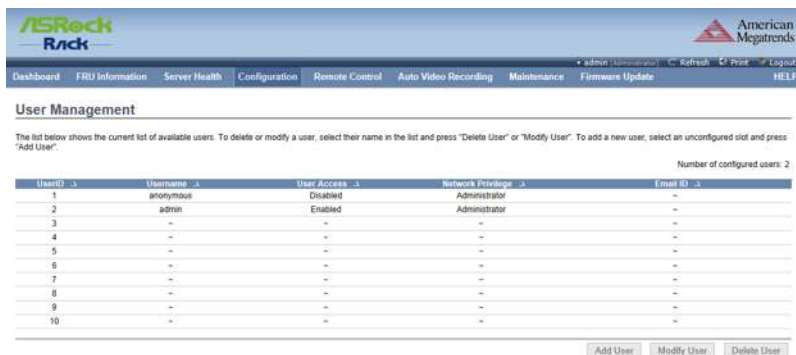
Save

Click 'Save' to save the configured settings.

Reset

Click 'Reset' to reset to the previously saved values.

2.5.19 User Management



User Management

The list below shows the current list of available users. To delete or modify a user, select their name in the list and press "Delete User" or "Modify User". To add a new user, select an unconfigured slot and press "Add User".

Number of configured users: 2

UserID	Username	User Access	Network Privilege	Email ID
1	anonymous	Disabled	Administrator	~
2	admin	Enabled	Administrator	~
3	~	~	~	~
4	~	~	~	~
5	~	~	~	~
6	~	~	~	~
7	~	~	~	~
8	~	~	~	~
9	~	~	~	~
10	~	~	~	~

The displayed table shows any configured Users and available slots. You can modify or add new users from here. A maximum of 10 slots are available, including the default admin and anonymous. It is advised that the anonymous user's privilege and password should be modified as a security measure. To view the page, you must have Operator privileges. To modify or add a user, You must have Administrator privileges.

NOTE: Free slots are denoted by "~" in all columns for the slot.

Add User

Select a free slot and click 'Add User' to add a new user to the device. Alternatively, double click on a free slot to add a user.

Modify User

Select a configured slot and click 'Modify User' to modify that user. Alternatively, double click on the configured slot.

Delete User

Select the desired user to be deleted and click 'Delete User'.

2.5.20 Virtual Media Devices

The screenshot shows the 'Virtual Media Devices' configuration page in the ASRock Rack American Megatrends BIOS. The page has a blue header with the ASRock Rack logo on the left and the American Megatrends logo on the right. Below the header is a navigation bar with links: Dashboard, FRU Information, Server Health, Configuration (selected), Remote Control, Auto Video Recording, Maintenance, Firmware Update, and HELP. The main content area is titled 'Virtual Media Devices' and contains a sub-header 'The following option will allow to configure virtual media devices.' Below this, there are four configuration options: 'Floppy devices' with a dropdown menu set to '1', 'CD/DVD devices' with a dropdown menu set to '1', 'Harddisk devices' with a dropdown menu set to '1', and 'SD Media Support' with a checked checkbox and the label 'Enable'. At the bottom right of the page are 'Save' and 'Reset' buttons.

Use this page to configure Virtual Media device settings.

Floppy devices

Select the number of floppy devices that support Virtual Media redirection.

CD/DVD devices

Select the number of CD/DVD devices that support Virtual Media redirection.

Hard disk devices

Select the number of hard disk devices that support Virtual Media redirection.

SD Media Support

Check this option to enable SD Media support in BMC.

Save

Click 'Save' to save the configured settings.

Reset

Click 'Reset' to reset the previously-saved values.

2.6 Remote Control

2.6.1 Console Redirection



Launch the remote console redirection window from this page. To launch it, you must have Administrator privileges.

NOTE: A compatible JRE must be installed in the system prior to the launch of the JNLP file.

Java Console

Click 'Java Console' which will cause the `jviewer.jnlp` file to be downloaded. Once the file is downloaded and launched, a Java redirection window will be displayed.

2.6.2 Power Control and Status



This page helps you to view or perform any host power cycle operations.

Reset Server

Select this option to reboot the system without powering off (warm boot).

Power Off Server - Immediate

Select this option to immediately power off the server.

Power Off Server - Orderly Shutdown

Select this option to initiate operating system shutdown prior to the shutdown.

Power On Server

Select this option to power on the server.

Power Cycle Server

Select this option to first power off, and then reboot the system (cold boot).

Perform Action

Click 'Perform Action' to perform the selected option.

2.6.3 Java SOL



Launch the Java SOL, you must have Administrator privileges.

NOTE: A compatible JRE must be installed in the system prior to the launch of the JNLP file.

2.7 Auto Video Recording

2.7.1 Triggers Configuration



Dashboard | FRU Information | Server Health | Configuration | Remote Control | Auto Video Recording | Maintenance | Firmware Update | admin (administrator) | Refresh | Print | Logout | HELP

Triggers Configuration

This page allows the user to configure which events will trigger the auto video recording function of the KVM server.

☐ Temperature/Voltage Critical Events	☐ Temperature/Voltage Non Critical Events
☐ Temperature/Voltage Non Recoverable Events	☐ Fan state changed Events
☐ Watchdog Timer Events	☐ Chassis Power on Event
☐ Chassis Power off Event	☐ Chassis Reset Event
☐ Particular Date and Time Event	☐ LPC Reset Event

Date:

March

3

2014

Time: (HH:mm:ss)

12

00

32

Save

Reset

Configure which events on the page will trigger the auto-video recording option to start.

NOTE: Maximum of 2 video files can be recorded in BMC.

Event List

You can check/uncheck a box to add/remove that trigger for your system.

Save

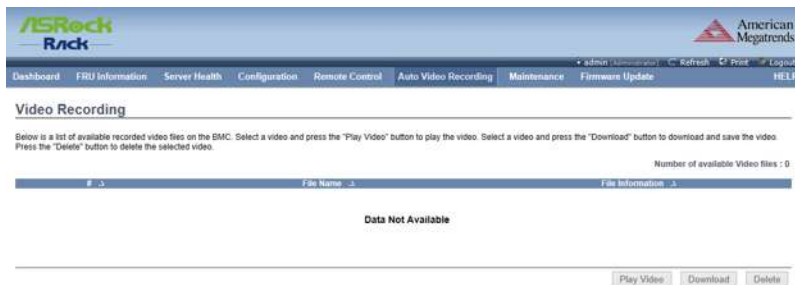
Click 'Save' to save any changes made.

NOTE: KVM service should be enabled (under 'Configuration -> Services') to perform auto-video recording.

Reset

Click 'Reset' to reset the modified changes.

2.7.2 Video Recording



This page displays the list of available recorded video files on the BMC. The various fields of Recorded Video are given below:

: The serial number.

File Name : The video filename.

File Information : Day, date and time of video upload.

NOTE: A maximum of 2 video files can be recorded in BMC.

Play Video

Select a video and click the Play Video button to play the video file in the Java Application.

Download

Select a video and click the Download button to download and save the video file in the client machine. The video will be downloaded in (.avi) format.

Delete

Click the Delete button to delete the selected video file.

2.8 Maintenance

2.8.1 Preserve Configuration

#	Preserve Configuration Item	Preserve Status
1	SDR	☐
2	FRU	☐
3	SEL	☐
4	IPMI	☐
5	Network	☐
6	NTP	☐
7	SNMP	☐
8	SSH	☐
9	KVM	☐
10	Authentication	☐

Number of Preserved Items: 0

Check All Uncheck All Save Reset

Check which configurations need to be preserved, while Restore Factory Defaults is done.

Configuration list

You can either check/uncheck a check box to preserve/overwrite the configurations for your system.

Check All

Click this button to check the whole configuration list.

Uncheck All

Click this button to uncheck the whole configuration list.

Save

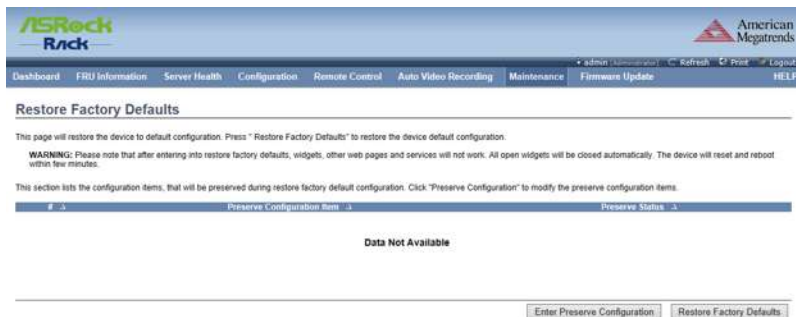
Click 'Save' to save any changes made.

NOTE: This configuration is used by the Restore Factory Defaults process.

Reset

Click 'Reset' to reset the modified changes.

2.8.2 Restore Factory Defaults



This page helps to restore the factory defaults of the device. Please note that after entering restore factory widgets, other web pages and services will not work. All open widgets will be closed automatically. The device will reset and reboot within a few minutes.

Preserve Configuration

Click this to redirect to Preserve configuration page, which is used to preserve the particular configurations not to be overwritten by the default configuration.

Restore Factory Defaults

Click this to restore the firmware with default configurations.

2.8.3 System Administrator

The screenshot shows the 'System Administrator' configuration page of the iSRock Rack. The page has a blue header with the iSRock Rack logo on the left and the American Megatrends logo on the right. Below the header is a navigation bar with links: Dashboard, FRU Information, Server Health, Configuration, Remote Control, Auto Video Recording, Maintenance, Firmware Update, and HELP. The main content area is titled 'System Administrator' and contains a sub-header: 'This page allows the user to enable/disable access and change the password for the System Administrator account.' Below this, there are four form fields: 'Username' (with a text input containing 'sysadmin'), 'User Access' (with a checked 'Enable' checkbox and an unchecked 'Change Password' checkbox), 'Password' (with a text input), and 'Confirm Password' (with a text input). At the bottom right of the form are 'Save' and 'Reset' buttons.

This page is used to configure the System Administrator configurations.

Username

Username of the System Administrator is displayed (read only).

User Access

Check this option to enable user access for the system administrator.

Change Password

To change the user's password, check the 'Change Password' option. This will enable the password fields.

Password, Confirm Password

Enter and confirm the new password here.

- Passwords must be at least 8 characters long.
- Space is not allowed.

NOTE: This field will not allow more than 64 characters.

Save

Click 'Save' to save the new configuration for the system administrator.

Reset

Click 'Reset' to reset the modified changes.

2.9 Firmware Update

2.9.1 Firmware Update

ASRock Rack

American Megatrends

Dashboard FRU Information Server Health Configuration Remote Control Auto Video Recording Maintenance **Firmware Update** HELP

Firmware Update

Upgrade firmware of the device. Press "Enter Update Mode" to put the device in update mode.

The protocol information to be used for firmware image transfer during this update is as follows. To configure, choose 'Image Transfer Protocol' under Configuration menu.
Protocol Type : HTTP/HTTPS

WARNING: Please note that after entering update mode widgets, other web pages and services will not work. All open widgets will be closed automatically. If upgrade process is cancelled in the middle of the wizard, the device will reset.

☐ Preserve all Configuration. This will preserve all the configuration settings during the firmware update - irrespective of the individual items marked as preserve/overwrite in the table below. All configuration items below will be preserved by default during a restore factory default operation. Click "Enter Preserve Configuration" to modify the Preserve status settings.

#	Preserve Configuration Item	Preserve Status
1	SDR	Overwrite
2	FRU	Overwrite
3	SEL	Overwrite
4	IPMB	Overwrite
5	Network	Overwrite
6	NTP	Overwrite
7	SNMP	Overwrite
8	SSH	Overwrite
9	KVM	Overwrite
10	Authentication	Overwrite

Enter Preserve Configuration Enter Update Mode

This wizard takes you through the process of firmware upgrades. A reset of the box will automatically follow whether the upgrade is completed or cancelled. An option to Preserve configuration will be presented. Enable the option, if you wish to preserve configured settings through the upgrade.

Enter Preserve Configuration

Click this to redirect to the Preserve configuration page, which is used to preserve the particular configurations not to be overwritten by the default configuration.

Enter Update Mode

Click 'Enter Update Mode' to upgrade the current device firmware.

2.9.2 Image Transfer Protocol

The screenshot shows the ASRock Rack American Megatrends BIOS/UEFI setup utility. The top navigation bar includes links for Dashboard, FRU Information, Server Health, Configuration, Remote Control, Auto Video Recording, Maintenance, Firmware Update, and HELP. The main title is "Image Transfer Protocol". Below the title, a note states: "The following option will allow to configure firmware image protocol information." The configuration fields are: Protocol Type (a dropdown menu currently showing "HTTP/HTTPS"), Server Address (a text input field), Source Path (a text input field), and Retry Count (a text input field with a "0" icon). At the bottom right, there are "Save" and "Reset" buttons.

This page is used to configure the firmware image protocol information.

Protocol Type

Protocol type to transfer the firmware image into the BMC.

Server Address

The Server IP address of the firmware image is stored.

- An IP Address is made of 4 numbers separated by dots as in "xxx.xxx.xxx.xxx".
- Each number ranges from 0 to 255.
- The first number must not be 0.

Source Path

Full Source path with filename of where the firmware image is stored.

Retry Count

Number of time(s) to be retried when transfer failure occurs. Retry count ranges from 0 to 255.

Save

Click 'Save' to save the configured settings.

Reset

Click 'Reset' to reset the modified changes.