



## **Server Management utility**

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V1.0.2

**Revision History**

No.	Document	Product	Date	Description
3	1.0.2	2.2.13	04-30-2019	1. Support cli interface 2. Update group management 3. Improve virtual media function
2	1.0.1	2.0.5	08-28-2018	Update some pictures and function descriptions
1	1.0.0	2.0.1	07-07-2018	Initial draft

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## 1. Introduction

ASRock Rack server management is a software program that communicates to ASRock Rack servers over Ethernet; meanwhile, administrators can monitor system status and control these servers from remote computers. The program is mainly based on the services provided by BMC (Baseboard Management Controllers) with IPMI (Intelligence Platform Management Interface), web services and DMTF's Redfish API.

### Terminology

Abbreviation	Definition
BMC	Baseboard Management Controller
BIOS	Basic Input Output System
SMBIOS	System Management BIOS
IPMI	Intelligence Platform Management Interface
FRU	Filed Replaceable Unit
KVM	Keyboard, Video and Mouse
DMTF	Distributed Management Task Force
API	Application Programming Interface
ME	Intel Management Engine
PEF	Platform Event Filter

POST	Power On Self-Test
SEL	System Event Log
SNMP	Simple Network Management Protocol

## 2. Features Summary

Key	Description
Login	Grouped server by assigning IP range
System inventory	Display device detailed information
IPMI Event log	View and download system event log
Remote control	KVM, reboot, load default settings
Power control	Perform system power on/off/cycle
BIOS settings	Edit BIOS settings through BMC interface
SMBIOS data	View SMBIOS data through BMC interface
BIOS/BMC update	Upgrade firmware on multiple servers
Virtual media	Attach local media to remote server

**Note:**

*All screenshots in this document are provided for illustrative purpose only, and may be different from the actual product.*

### 3. Installation

ASRock Rack server management can be run on Windows and Linux operating systems.

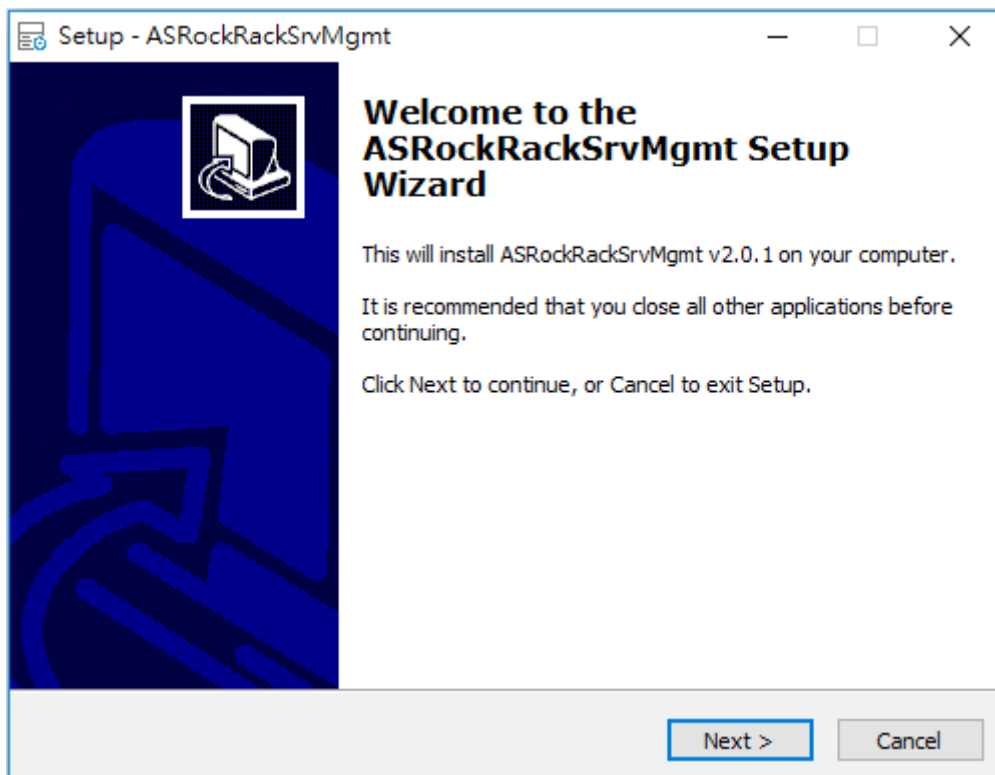
#### 3.1. Windows

Download AsrSrvMgmtSetup(vx.x.x).zip from the ASRock Rack official web site, unzip and run the application, and follow the instructions to complete the setup process. Then you also need to download and install the required Microsoft Visual C++ 2010 Redistributable Package for program to run. After that you can start ASRockSrvMgmt from Windows start menu. Below are some installation screenshots for your references.

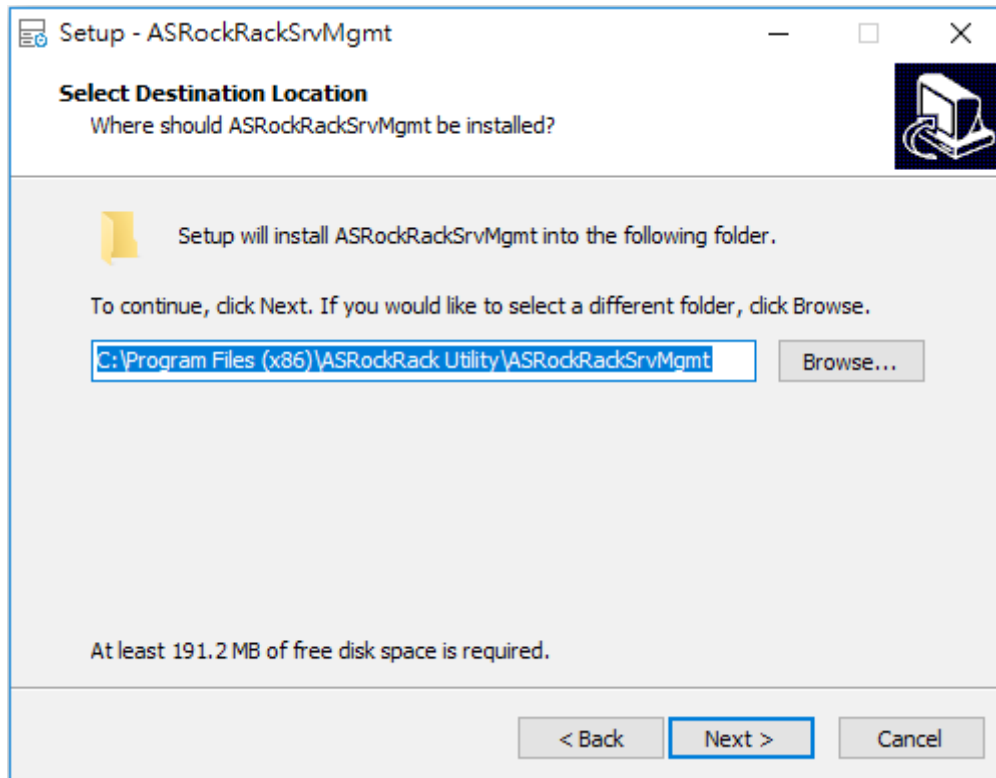
**Note:**

Microsoft Visual C++ 2010 Redistributable Package can be downloaded from this link:  
<https://www.microsoft.com/en-us/download/details.aspx?id=14632>

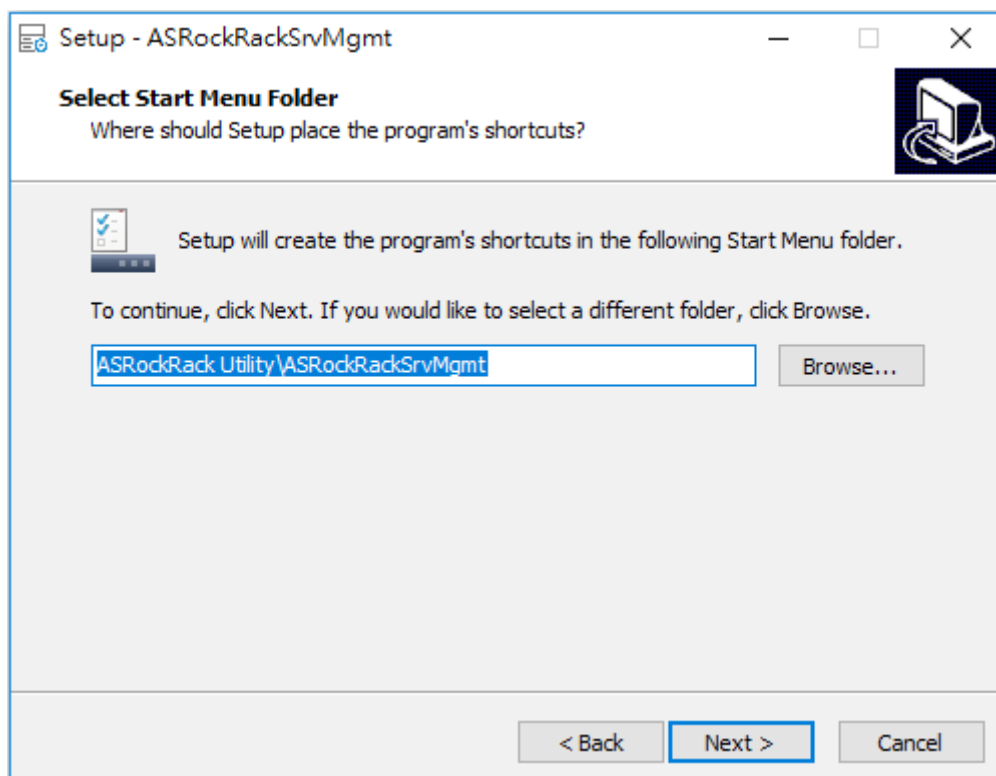
1. Start setup



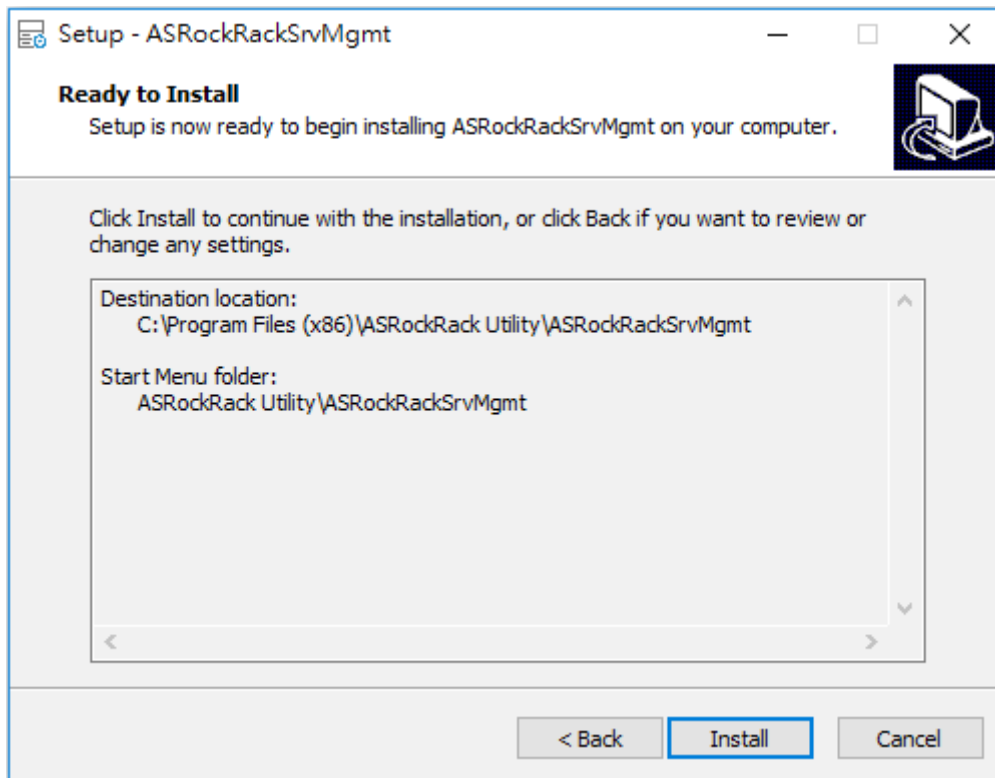
## 2. Select destination location



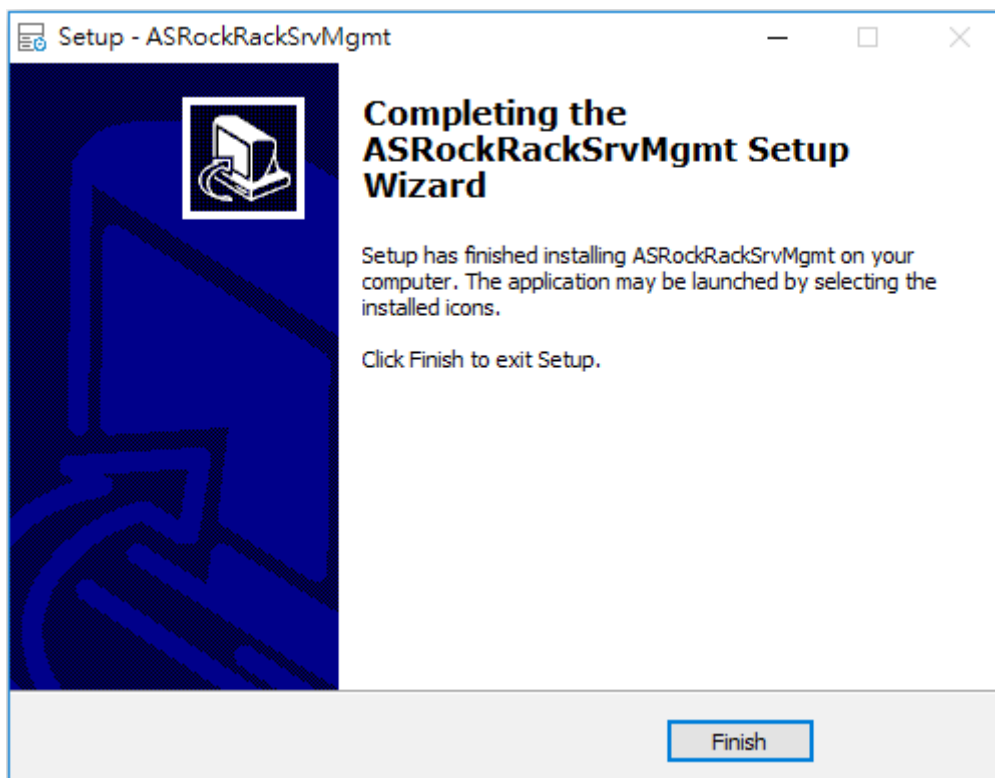
## 3. Select start menu folder



## 4. Ready to install



## 5. Finish





### 3.2. Linux

Download asrrmngnttool\_vx.x.x.zip from the ASRock Rack official web site, unzip the file into the installation folder. Execute below commands from the installation folder to start the program with GUI interface, check CLI section for the command line options.

- `$sudo ./asrrmngnttool`

**Note:**

1. *You need to run above commands with root privileges.*

### 3.3. System Requirement

Client machine with 8GB RAM or above.

Supported browsers: Chrome, IE11 and above, Firefox.

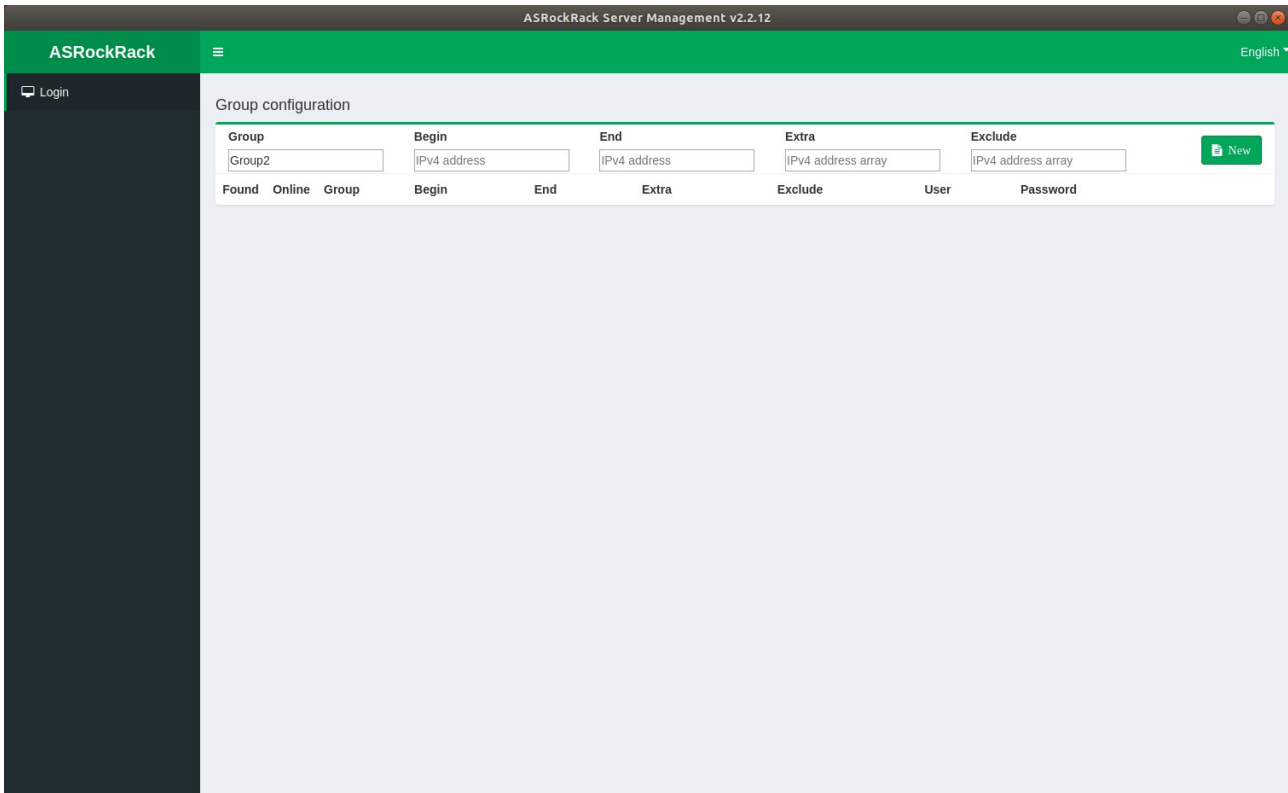
**Note:**

*For HTML5 KVM, it is advisable to use Chrome or IE as your default browser, since Firefox has its own memory limitations.*

## 4. Management Interface

When you launch the program for the first time, it looks like the following screenshot. You can find the version number the program title and program screen is separated into two parts: function menu is on the left-hand side and the main operational area is on the right-hand side.

 - Click on this button to minimize the function menu.



**Begin:** Set begin IP address of the range.

**End:** Set end IP address of the range.

**Add group:** Click on to add group entry.

## 4.1. Login

To login servers, input the IP range under group configuration and click on Add group button, and then the group entry will be added into the list with default Group# name, you may change the group name by editing the Group column and click on the save button. If you want to redefine the IP range you can delete the entry by clicking on the delete button. After adding the group entry, you can click on the scan button to identify our servers within the IP range, the found column will display the number of server found when the detection is done. Before trying to login, you need to provide username and password, note that all servers within a group must be using the same username and password, the default username and password are both “admin”.

ASRockRack Server Management v2.2.12

ASRockRack English

Login

Group configuration

Group	Begin	End	Extra	Exclude					
Group2	192.168.36.90	192.168.36.130	IPv4 address array	IPv4 address array	New				
Found	Online	Group	Begin	End	Extra	Exclude	User	Password	
2	0	test1	192.168.0.90	192.168.0.130	None	None	admin	****	Login Refresh Delete
3	0	Group1	192.168.36.90	192.168.36.130	None	None	admin	****	Login Refresh Delete

**Note:**

1. IP range overlap between groups is not supported, error message will popup when you try to add IP overlapped group.
2. It is recommended to change the username and password after first login, you can apply the change with the “User Management” function.

After clicking on the login button, program will try to login on the found servers, the online column will update to report the number of servers that were successfully login. You may click on the drop down button to get the list of online servers' information that including IP address, Model name, BMC firmware version, BIOS firmware version and Login username, as shown below.

The screenshot displays the ASRock Rack Server Management v2.2.12 interface. The top navigation bar includes the ASRockRack logo, a menu icon, and the language setting (English). The left sidebar contains various system management options such as Login, Dashboard, System Inventory, FRU Information, IPMI Event Log, BMC Update, BIOS Update, BIOS Settings, SMBIOS Data, Remote Control, Power Control, Virtual Media, Platform Event Filter, User Management, and SMTP Settings.

The main content area is titled "Group configuration" and features a form for creating or editing groups. The form includes fields for Group (Group3), Begin (192.168.0.90), End (192.168.0.120), Extra (IPv4 address array), and Exclude (IPv4 address array). A "New" button is visible on the right.

Below the form is a table listing found servers:

Found	Online	Group	Begin	End	Extra	Exclude	User	Password	
3	0	Group1	192.168.36.70	192.168.36.130	None	None	admin	*****	Login Refresh Delete
1	1	Group2	192.168.0.90	192.168.0.120	None	None	admin	*****	Login Refresh Delete

Below the table is a detailed view for the server at 192.168.0.110:

Server Address	Model	BMC	BIOS	Login user
192.168.0.110	S4P2143	1.00.00	L1.03	admin

**Begin:** Set begin IP address of the range.


**End:** Set end IP address of the range.


**Add group:** Click on to add group entry.

 - Click on to save the group name if changed the default value.

 - Scan the IP range to identify ASRock Rack servers.

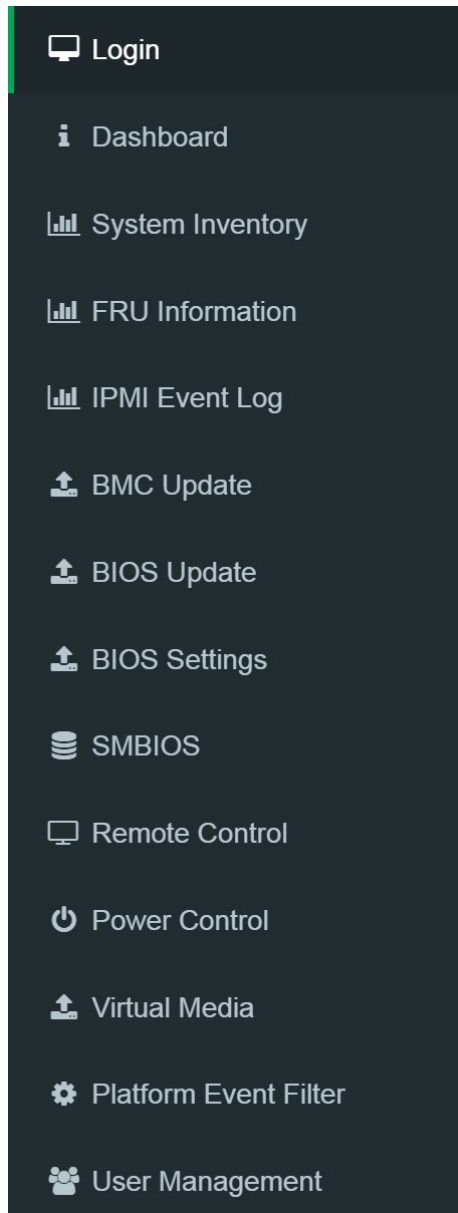
 - Delete the group entry.

 - Click on to display detailed information.

 - Login servers using the provided username and password for authentication.

## 4.2. Function Menu

A list of functions will be shown on the left hand side of the program screen after login. When you click on the function menu, the right-hand side operational area will display the content accordingly. Usually you can change to another function at any time, exception is BMC/BIOS firmware update. During the update, BMC cannot perform any other functions.



### 4.3. Dashboard

Dashboard provides some basic information such as firmware version, network configuration and sensors status. You can retrieve information from one server at a time, and switch to another server by selecting the IP address from the drop-down list.

The screenshot shows the ASRockRack Server Management v2.0.5 dashboard. The main content area is titled "Basic Information" and displays data for server IP 192.168.36.92. It is divided into three sections:

- Firmware Information:**

BMC Firmware Version	0.09.00
BIOS Firmware Version	L0.16
ME Firmware Version	4.0.4.57
Microcode Version	0200004d
CPLD Version	N/A
- Sensor Monitoring:**

Status	Sensor Name	Reading
●	↳ 3VSB	3.36 V
●	↳ 5VSB	5.01 V
●	↳ CPU1_VCORE	1.77 V
●	↳ PVCCSA	0.87 V
●	↳ VCCM_AB	1.19 V
●	↳ VCCM_CD	1.19 V
●	↳ VCCIO	1 V
●	↳ VNN	0.86 V
●	↳ +1V05	1.05 V
●	↳ +1.8V	1.77 V
●	↳ BAT	3.14 V
●	↳ +3V	3.26 V
●	↳ +5V	4.98 V
●	↳ +12V	12 V
●	↳ MR Temp	41.84°C
- Network Information #1:**

MAC Address	D0:50:99:E2:8B:1C
V4 Network Mode	DHCP
IPv4 Address	192.168.36.92

On the right side, there are controls for UID (On, Blink, Off) and an "Event Logs(10)" section with a donut chart showing "Existing Event" (red) and "Free Space" (green).

**Drop down list:** Select server from this IP list.

- Click on to refresh information.

### Firmware Information

The Firmware Information displays the following information.

**BMC Firmware Version:** Displays the BMC firmware version of the device.

**BIOS Firmware Version:** Displays the BIOS firmware version of the device.

**ME Firmware Version:** Displays the ME (or PSP) firmware version of the device.

**Microcode Version:** Displays the microcode version of the device.

**CPLD Version:** Displays the version of CPLD of the device.

**Note:**

BIOS version, ME (or PSP) version and Microcode version will be refreshed when the system POST; please restart the system if you see nothing on screen.

### Network Information

The Network Information of the device with the following fields is shown here.

**MAC Address:** Read-only field shows the MAC address of the device.

**V4 Network Mode:** The v4 network mode of the device can be either static or DHCP.

**IPv4 Address:** The IPv4 address of the device.

**V6 Network Mode:** The v6 network mode of the device can be either static or DHCP.

**IPv6 Address:** The IPv6 address of the device.

## Sensor Monitoring

Here lists all the available sensors on the device with the following information.

**Status:** This column displays the state of the device.

● - Normal state

● - Critical State

● - Not Available

**Sensor Name:** Displays the name of the sensor.

**Reading:** *Displays the value of sensor readings.*

## UID

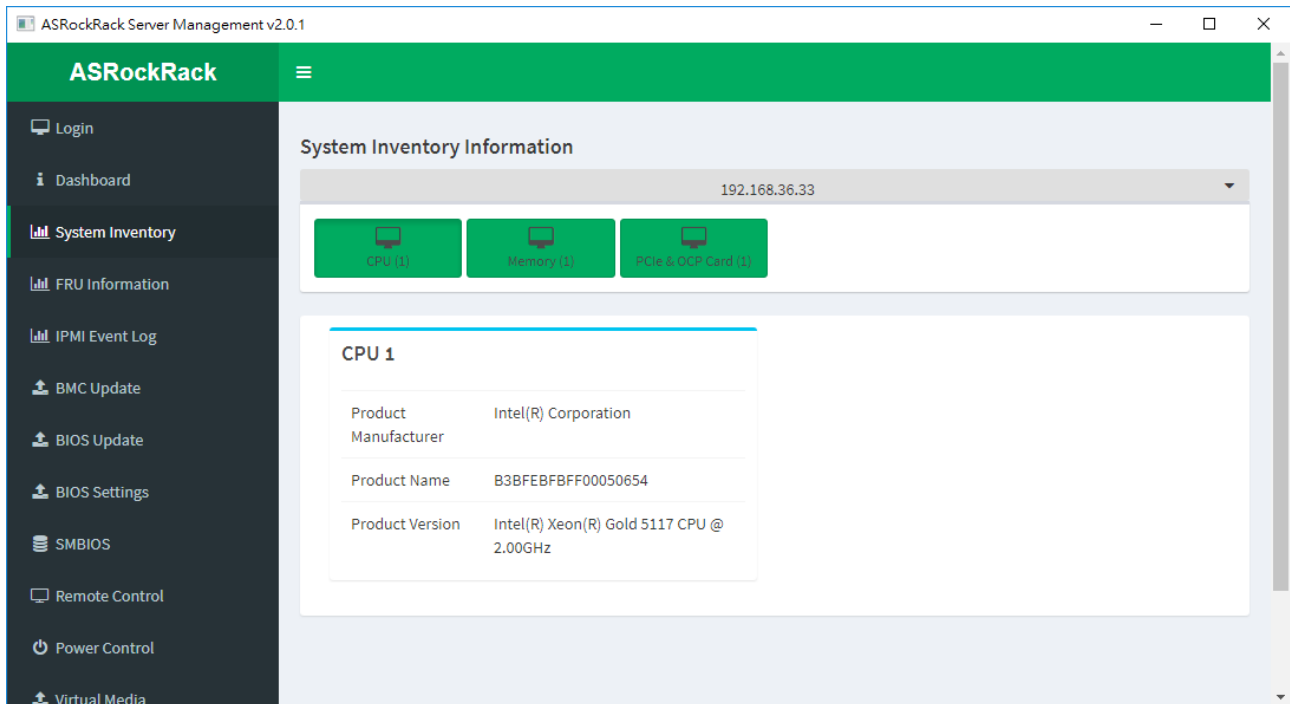
Here displays the UID status and it also supports the UID control function. The user can click the circle icon to change the UID status.

## Event Logs

Here displays a graphical representation of all events and occupied/available space in logs.

## 4.4. System Inventory

This function list all the devices detected by the firmware, such as CPU, memory, storage device, and PCIE device. Select the server from the drop-down list and the detected devices will be updated. Details information will be displayed when you click on a group item.



The screenshot displays the ASRockRack Server Management v2.0.1 web interface. The left sidebar contains navigation options: Login, Dashboard, System Inventory (highlighted), FRU Information, IPMI Event Log, BMC Update, BIOS Update, BIOS Settings, SMBIOS, Remote Control, Power Control, and Virtual Media. The main content area is titled "System Inventory Information" and shows a server selection dropdown set to "192.168.36.33". Below this, there are three green buttons representing device groups: "CPU (1)", "Memory (1)", and "PCIe & OCP Card (1)". The "CPU 1" group is expanded, showing a table of details:

CPU 1	
Product Manufacturer	Intel(R) Corporation
Product Name	B3BFEBFBFF00050654
Product Version	Intel(R) Xeon(R) Gold 5117 CPU @ 2.00GHz

**Note:**

1. The information will be refreshed when the system POST, please restart the system if you see nothing on screen.
2. The information on this page may differ by platforms.



## 4.5. FRU Information

This displays the FRU (Field Replaceable Unit) storage information. Structure definition can be found in the Platform Management FRU Information Storage Definition specification; usually it includes chassis, board and product information.

The screenshot shows the ASRock Rack Server Management v2.0.1 interface. The main content area is titled "FRU Information" and displays the IP address 192.168.36.33. Below this, there is a section for "Available FRU Devices" with a dropdown menu for "FRU Device ID" set to 0 and a text field for "FRU Device Name" containing "SEEPROM".

Below the FRU devices section, there are three panels of information:

- 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	Thu Feb 9 10:59:00 2017
Board Manufacturer	ASRockRack
Board Product Name	
- Product Information:**

Product Information Area Format Version	1
Language	0
Product Manufacturer	
Product Name	
Product Part Number	
Product Version	
Product Serial Number	

**FRU Device ID:** Select the FRU ID from the list.

**FRU Device Name:** Display the FRU device name.

## 4.6. IPMI Event Log

This function displays the event logs recorded on the server, select a server from the IP drop-down list. The event log data will update shortly. You can use the sensor name or record type filter options to view those specific events, or you can click on the column header to sort the list of entries by Event ID, Time Stamp or Sensor Name.

Event ID	Time Stamp	Sensor Name	Sensor Type	Record Type	Description
115	12/10/2018, 12:06:16	Power_Off	Power Unit	System Event Records	State Asserted
114	12/10/2018, 11:54:37	FAN6	Fan	System Event Records	Lower Non-critical - going low
113	12/10/2018, 11:54:37	FAN4	Fan	System Event Records	Lower Non-critical - going low

**Select Sensor Name:** Filter events with one of the sensors.

**Select Record Type:** Filter events with one of the record types.

**BMC Timezone:** Displays the events with BMC UTC Offset timestamp.

**Client Timezone:** Displays the events with Client UTC Offset timestamp.

**UTC Offset:** Displays the current UTC Offset value based on which event time stamps will be updated.

**Clear Event Logs:** To delete all the event logs.

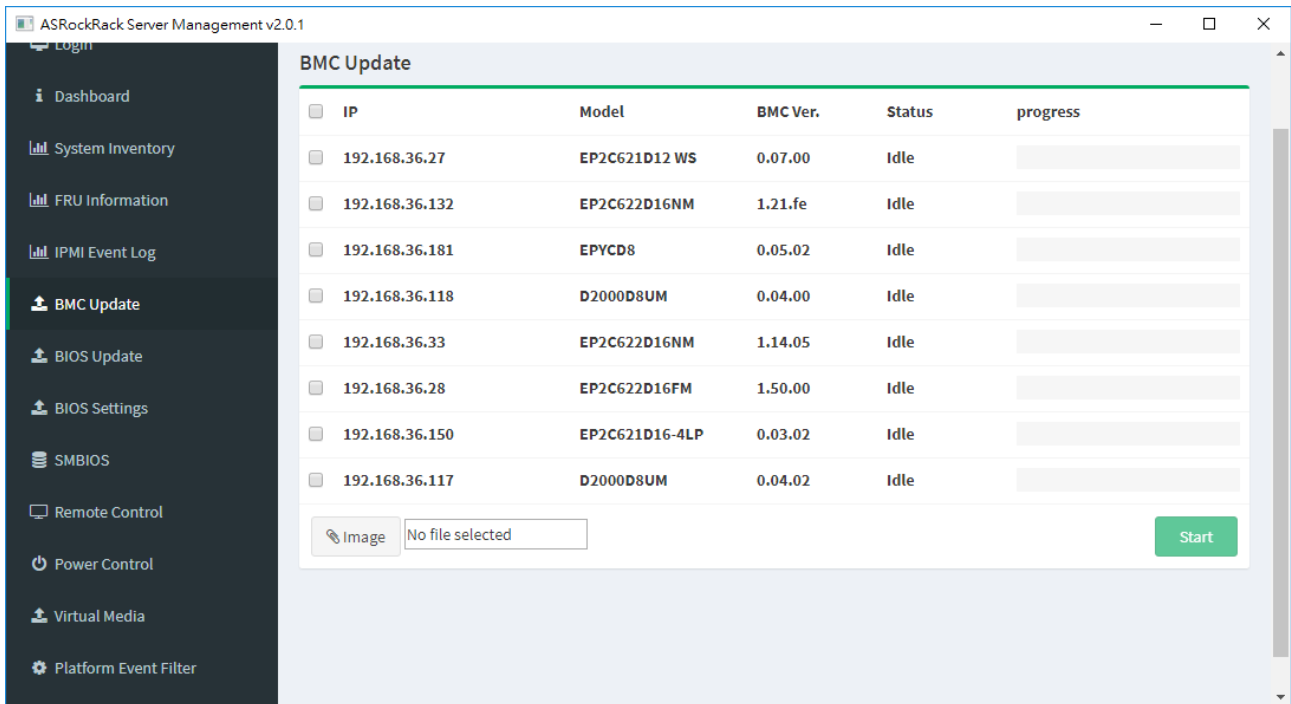
**Download Event Logs:** To download all the existing event log records.

**Clear All Event Logs:** Delete all the event logs on the selected servers.

**Download All Event Logs:** Download all the existing event log records from the selected servers.

## 4.7. BMC Update

This function can update BMC firmware for multiple servers. Click on the image button and select firmware file in the open file dialog, or input the file path and name in the edit box, and then check the IP checkbox of the model entry and click on start button to start. The status column will display “Upgrading” and the progress bar will report the percentage of work that has been completed.



**IP column:** Check the IP of the server to update BMC firmware.

**Model:** Display the model name of the server.

**BMC Ver.:** Display the current BMC firmware version.

**Status:** Display the BMC update status.

**Progress:** Display the BMC update progress.

**Image:** Select BMC firmware image file.

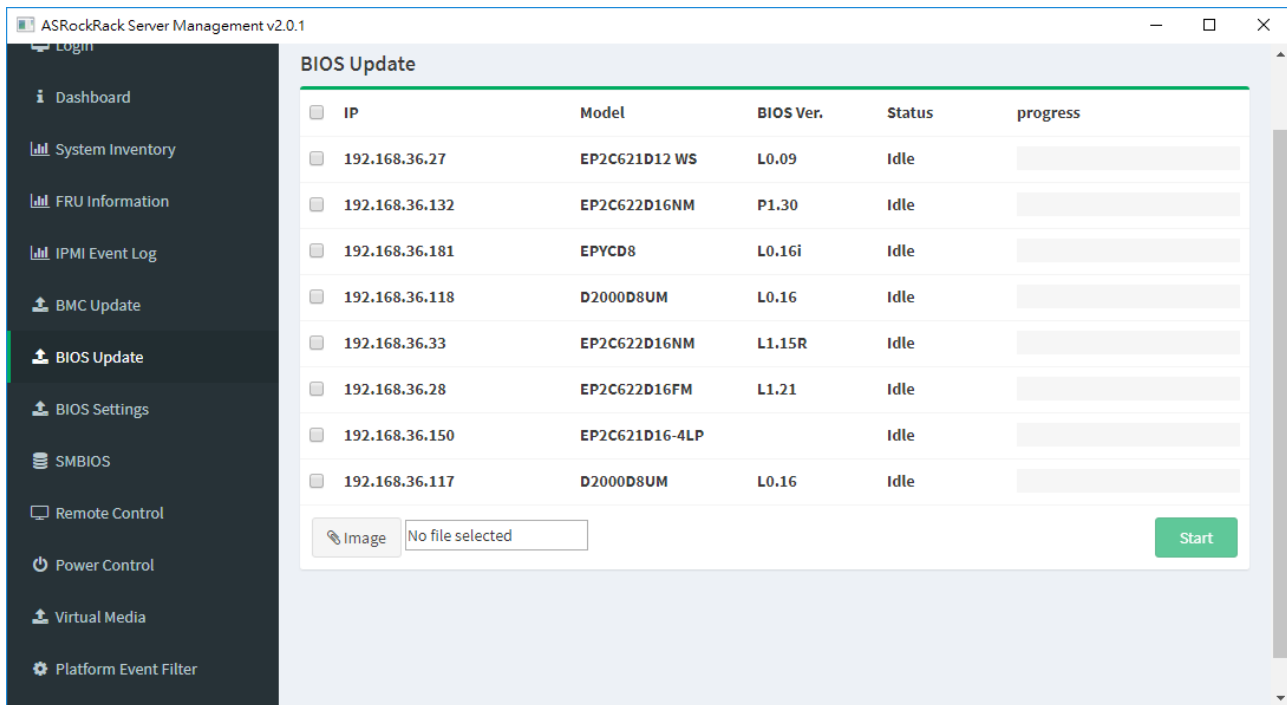
**Start:** Click on to start.

**Note:**

*BMC firmware cannot perform any other task during the update, and after the update BMC will reboot itself. You have to wait until the status become to “Idle” before switching it to other function.*

## 4.8. BIOS Update

This function can update BIOS firmware for multiple servers. Click on the image button and select firmware file in the open file dialog, or input the file path and name in the edit box, and then check the IP checkbox of the model entry and click on start button to start. The status column will display “Upgrading” and the progress bar will report the percentage of work that has been completed.



**IP column:** Check the IP of the server to update BIOS firmware.

**Model:** Display the model name of the server.

**BMC Ver.:** Display the current BIOS firmware version.

**Status:** Display the BIOS update status.

**Progress:** Display the BIOS update progress.

**Image:** Select BIOS firmware image file.

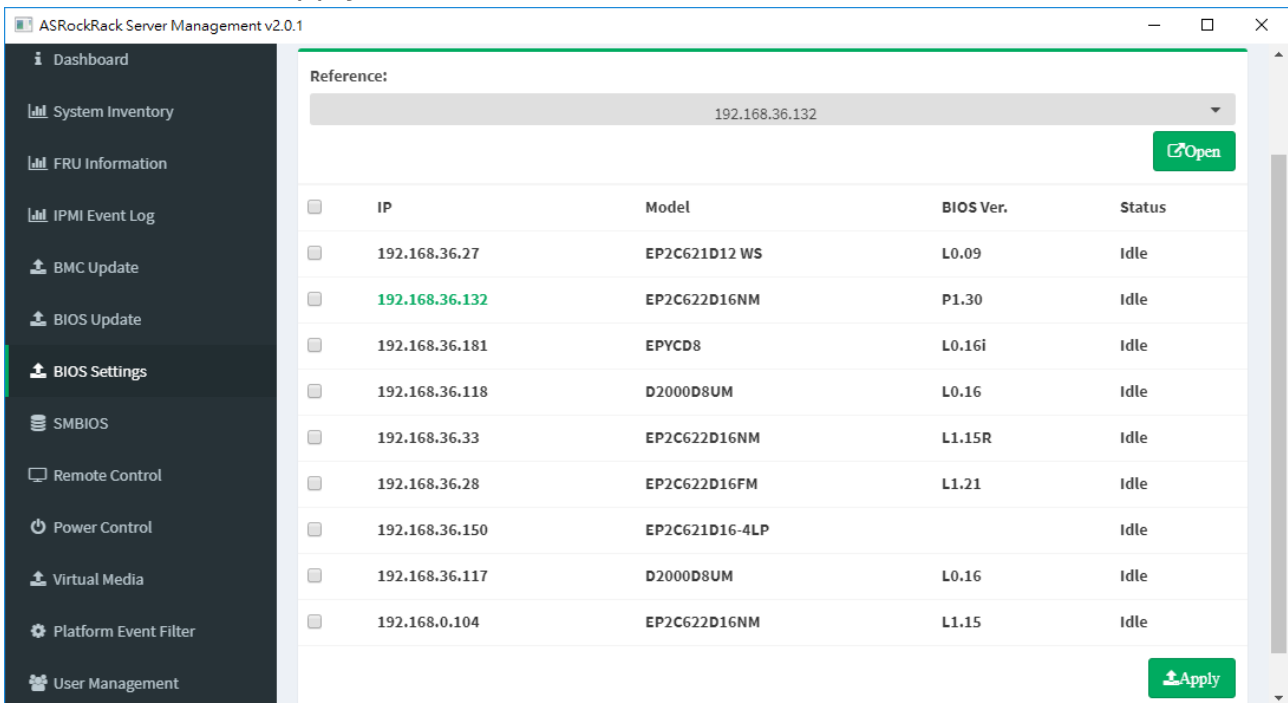
**Start:** Click on to start.

**Note:**

*BIOS related functions will not be available during the update, and after the update BIOS will reboot itself. You have to wait until the status become to “Idle” before switching it to other function.*

## 4.9. BIOS Settings

This function provides an interface to view or change the BIOS settings. The settings will be synchronized during the system POST, so that you can access the BIOS settings remotely without rebooting the system for entering the BIOS setup interface; however, you have to reboot the system for the changed settings to take effect. You can do that with the power control function after modifying the settings. And you can make the same modifications to multiple servers with the Apply button.



The screenshot shows the ASRock Rack Server Management v2.0.1 interface. The left sidebar contains the following menu items: Dashboard, System Inventory, FRU Information, IPMI Event Log, BMC Update, BIOS Update, BIOS Settings (highlighted), SMBIOS, Remote Control, Power Control, Virtual Media, Platform Event Filter, and User Management. The main content area is titled 'Reference:' and features a dropdown menu with the IP address '192.168.36.132' selected. Below the dropdown is a table with the following columns: IP, Model, BIOS Ver., and Status. The table contains 10 rows of server data. At the bottom right of the table area is a green 'Apply' button.

IP	Model	BIOS Ver.	Status
192.168.36.27	EP2C621D12 WS	L0.09	Idle
192.168.36.132	EP2C622D16NM	P1.30	Idle
192.168.36.181	EPYCD8	L0.16i	Idle
192.168.36.118	D2000D8UM	L0.16	Idle
192.168.36.33	EP2C622D16NM	L1.15R	Idle
192.168.36.28	EP2C622D16FM	L1.21	Idle
192.168.36.150	EP2C621D16-4LP		Idle
192.168.36.117	D2000D8UM	L0.16	Idle
192.168.0.104	EP2C622D16NM	L1.15	Idle

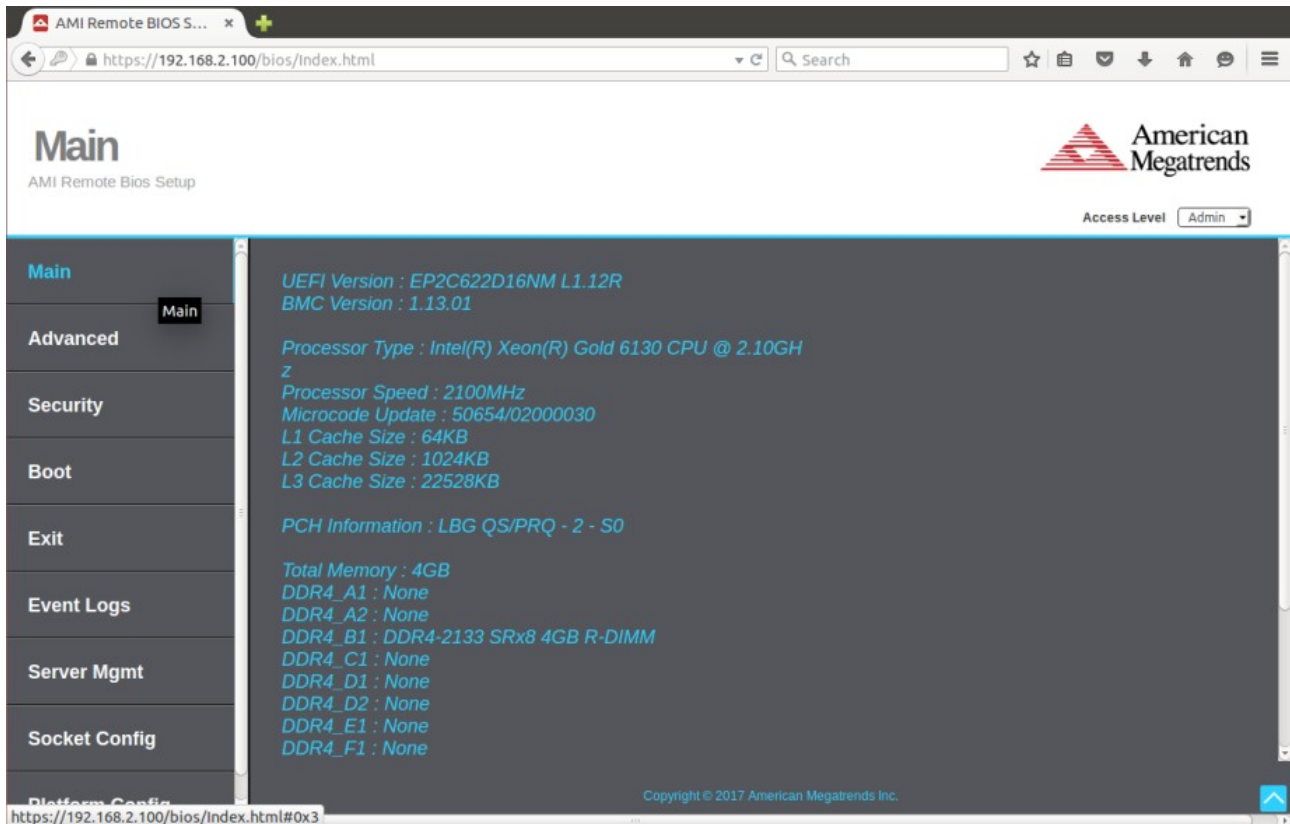
**Reference:** Select a reference server to edit BIOS settings, then you may apply the changes to others.

**Open:** Click on to open the BIOS setup interface.

**Apply:** Apply the BIOS settings from the reference server to others.

### 4.9.1. BIOS Settings Interface

This function displays BIOS settings. You can navigate through each page to check or change the setup items and save the changes on the Exit page. The modified setup items will be take effect after system reboot. You may do that with the power control function.



**Note:**

Default username and password to login the function is "Administrator" and "superuser".

## 4.10. SMBIOS

This function provides system management BIOS data retrieved from BIOS. System must be powered on for this function to work.

The screenshot shows the ASRR (Asrock Rack Server Management) interface. At the top, there is a green header with 'ASRR' and a menu icon. Below the header, the main content area is titled 'SMBIOS'. A navigation sidebar on the left contains various system information categories, with '[BIOS Information] (Type 0)' selected. The main display area shows the BIOS information for Type 0, with a table of fields and values. The IP address '192.168.2.100' is visible at the top right of the main content area.

[BIOS Information] (Type 0)	
Type	0x00
Length	0x18
Handle	0x00
BIOS Vendor	American Megatrends Inc.
BIOS Vension	L1.15A
Start Address Segment	0xF000
Release Date	04/11/2018
ROM Size	0xFF (16384KB)
BIOS Characteristics	0x00000001378B9880
Characteristics Ext1	0x03
Bit0 ACPI supported	1
Bit1 USB Legacy is supported	1
Bit2 AGP is supported	0
Bit3 I2O boot is supported	0

## 4.11. Remote Control

You can use HTML5 KVM or Java KVM interface to control the server remotely.

The screenshot displays the ASRock Rack Server Management v2.0.1 interface. The sidebar on the left contains the following navigation items: Login, Dashboard, System Inventory, FRU Information, IPMI Event Log, BMC Update, BIOS Update, BIOS Settings, SMBIOS, Remote Control (highlighted), Power Control, Virtual Media, and Platform Event Filter. The main content area is titled 'Remote Control' and is divided into two sections: 'KVM' and 'BMC control'.

The 'KVM' section includes a 'Server List' dropdown menu with the selected value '192.168.36.33-Group1'. Below the dropdown are two green buttons: 'Launch HTML5 KVM' and 'Launch JAVA KVM'.

The 'BMC control' section features a table with the following columns: IP, Model, BMC Ver., and Status. The table contains the following data:

IP	Model	BMC Ver.	Status
192.168.36.27	EP2C621D12 WS	0.07.00	Idle
192.168.36.132	EP2C622D16NM	1.21.fe	Idle
192.168.36.181	EPYCD8	0.05.02	Idle
192.168.36.118	D2000D8UM	0.04.00	Idle
192.168.36.33	EP2C622D16NM	1.14.05	Idle

Below the table are two green buttons: 'Reset' and 'Load default'.

**Server:** Select the server from the IP list.

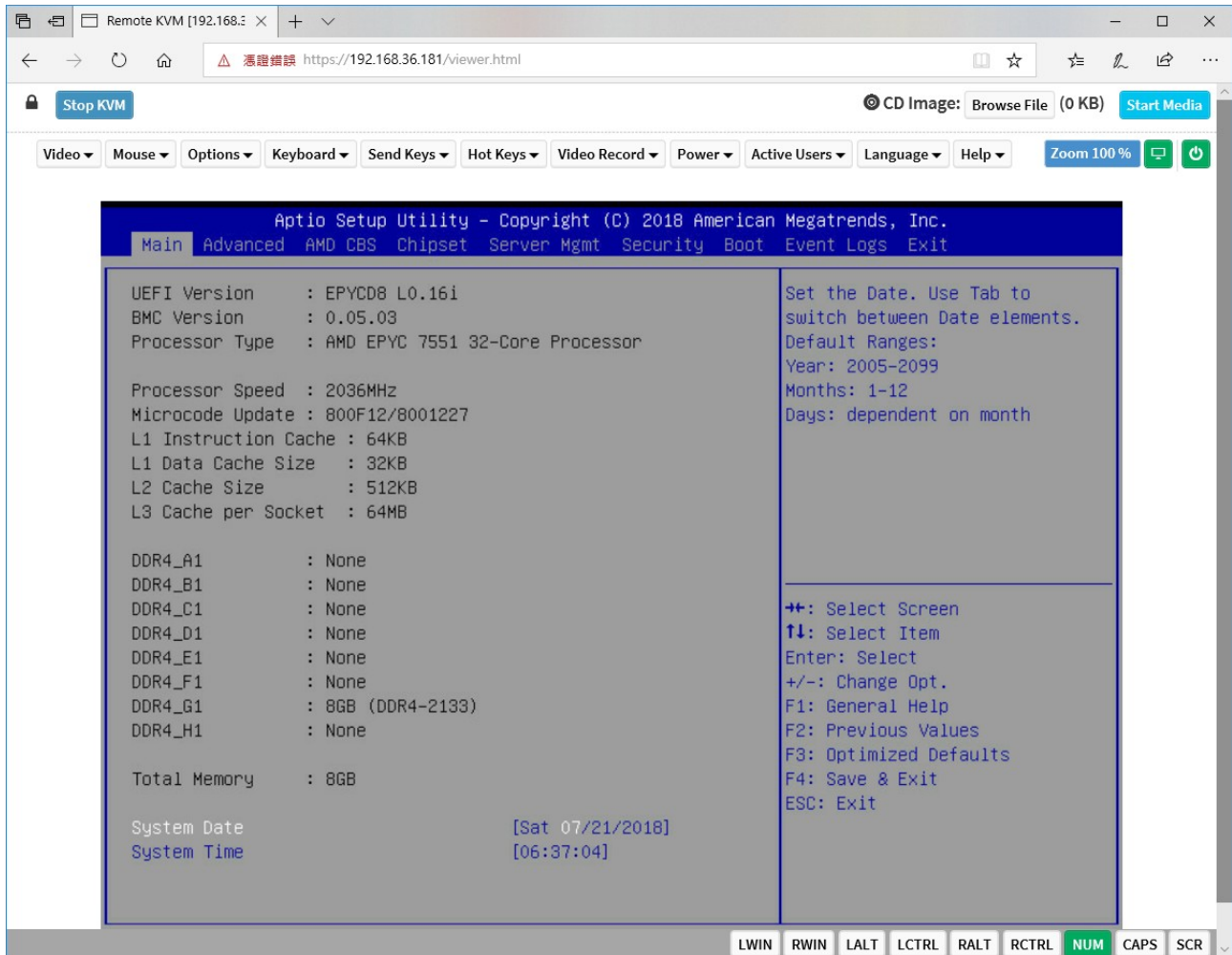
**Launch HTML5 KVM:** Click on to start HTML5 KVM function.

**Launch JAVA KVM:** Click on to start JAVA KVM function.



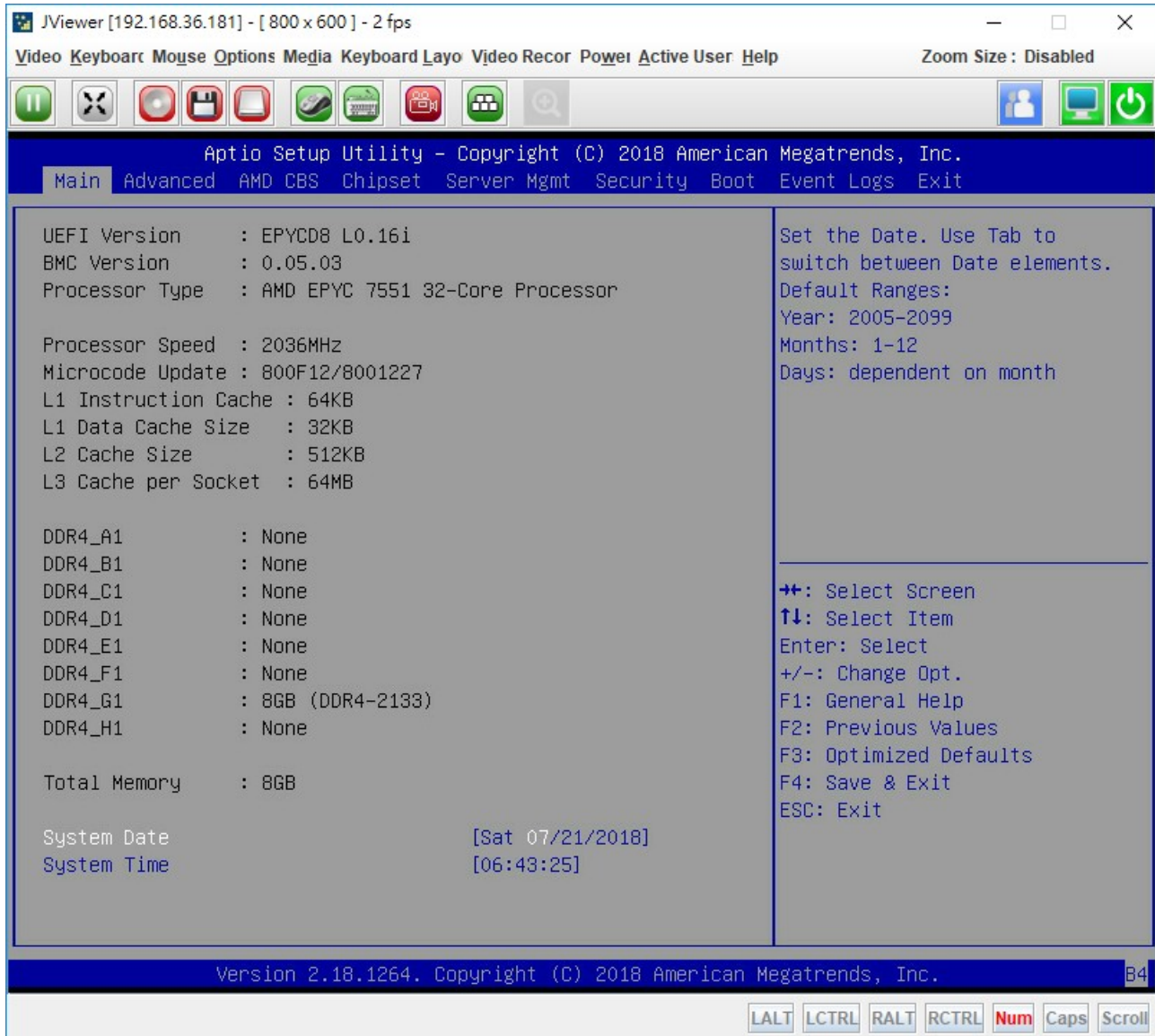
### 4.11.1. HTML5 KVM

Launching HTML5 KVM will invoke the default browser on the client system.



## 4.11.2. JAVA KVM

This function will download jviewer.jnlp file from server. You need to install Java web start program to launch it successfully.

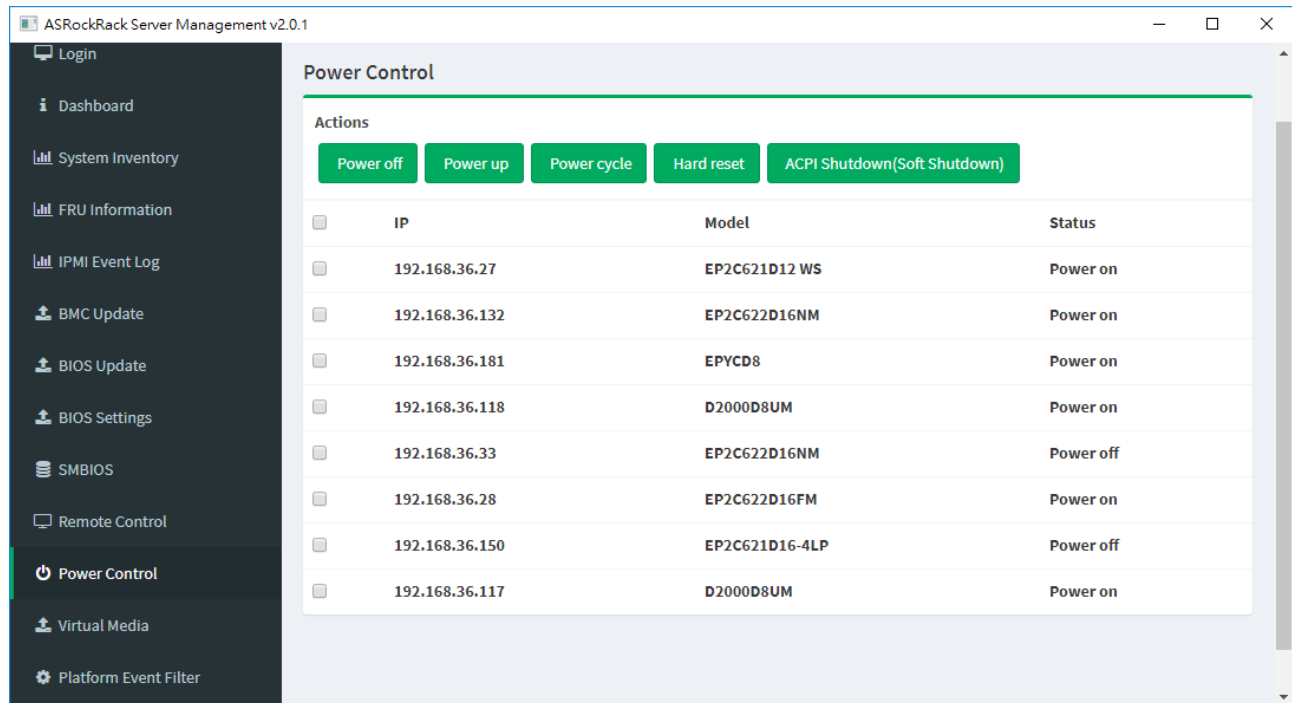


**Note:**

You may download Java runtime from this link: <https://java.com/en/download/>

## 4.12. Power Control

This function reports power status of all login servers and also can perform power action on them. Select the server by checking the checkbox from the server list, and then click on the action button. It may take a while to update the power status.



The screenshot shows the ASRock Rack Server Management v2.0.1 interface. The sidebar on the left contains the following menu items: Login, Dashboard, System Inventory, FRU Information, IPMI Event Log, BMC Update, BIOS Update, BIOS Settings, SMBIOS, Remote Control, Power Control (highlighted), Virtual Media, and Platform Event Filter. The main content area is titled "Power Control" and features a row of action buttons: Power off, Power up, Power cycle, Hard reset, and ACPI Shutdown(Soft Shutdown). Below the buttons is a table with the following columns: IP, Model, and Status.

IP	Model	Status
192.168.36.27	EP2C621D12 WS	Power on
192.168.36.132	EP2C622D16NM	Power on
192.168.36.181	EPYCD8	Power on
192.168.36.118	D2000D8UM	Power on
192.168.36.33	EP2C622D16NM	Power off
192.168.36.28	EP2C622D16FM	Power on
192.168.36.150	EP2C621D16-4LP	Power off
192.168.36.117	D2000D8UM	Power on

**Power off:** To immediately power off the server.

**Power up:** To power on the server.

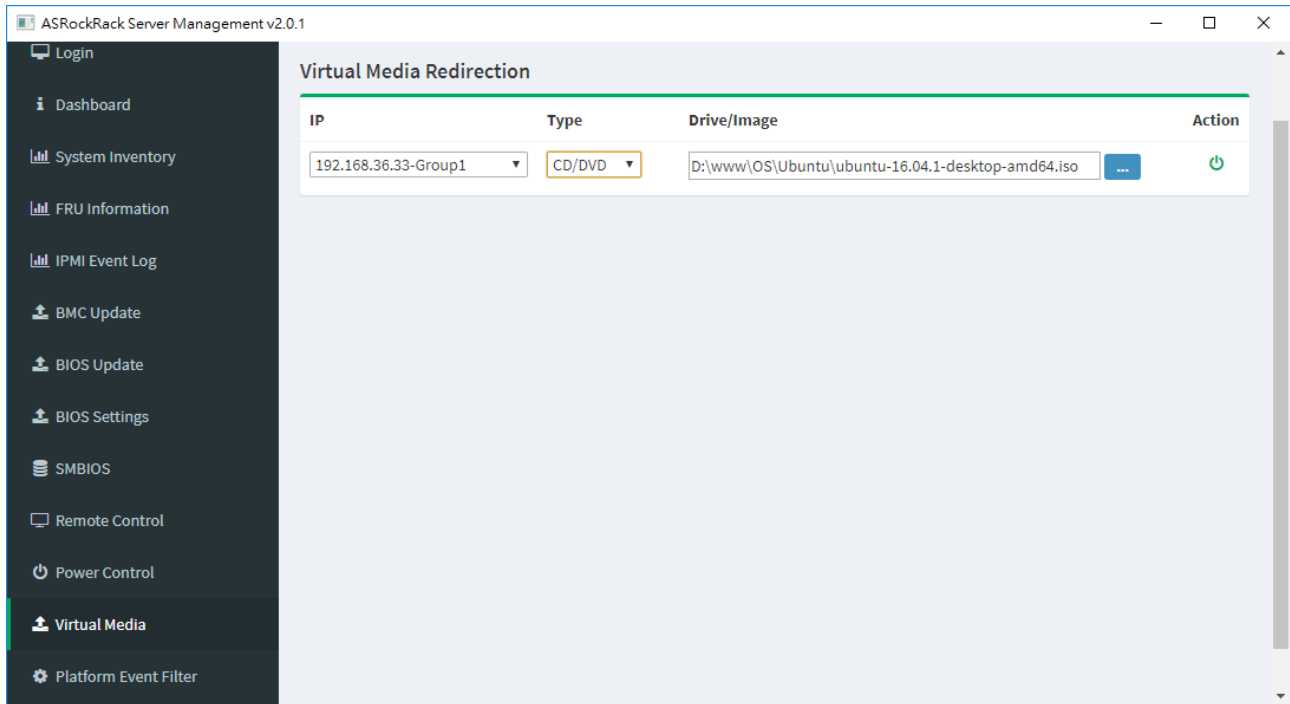
**Power cycle:** To first power off, and then reboot the server (cold boot).

**Hard reset:** To reboot the server without powering off (warm boot).

**ACPI Shutdown(Soft Shutdown):** To initiate operating system shutdown prior to the shutdown (actual behavior may depend on OS settings).

## 4.13. Virtual Media

This function let you attach local USB device to the remote server. Select server from the IP column, then select type and drive or image file, and then click on the action button to start the function.



**IP column:** Select the server from the IP list.

**Type:** Select the media type.

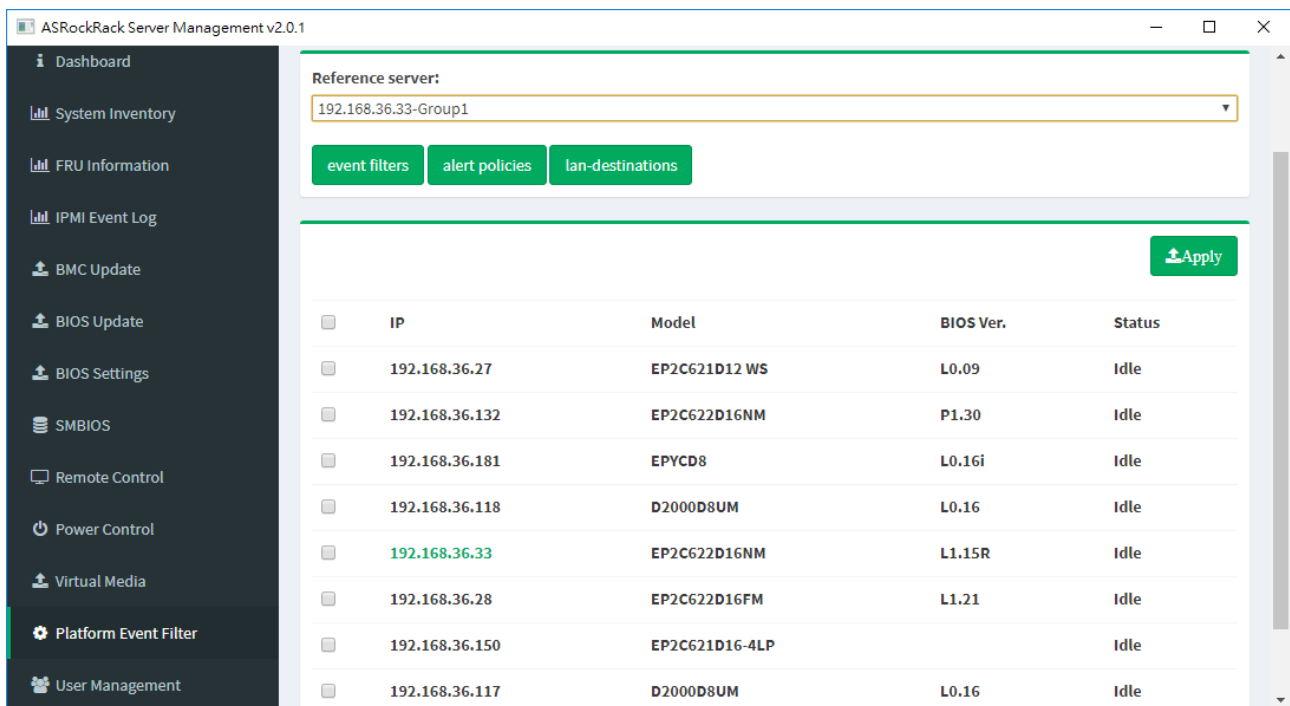
**Drive/Image:** Select hard drive or image file.

**Action:** Start or stop the function.

## 4.14. Platform Event Filter

Platform Event Filter (PEF) provides a mechanism for configuring the BMC to take selected actions on event messages that it receives or has internally generated. These actions include operations such as system power-off, system reset, as well as triggering the generation of an alert. Select a reference server and edit the settings with it, and then you can apply the settings to other servers.

You can configure the platform event filter to alert the administrator when an event occurred in the server. The receiver can be another server that listens to a group of servers, or can be a group of email addresses.



ASRockRack Server Management v2.0.1

Reference server: 192.168.36.33-Group1

event filters alert policies lan-destinations

Apply

<input type="checkbox"/>	IP	Model	BIOS Ver.	Status
<input type="checkbox"/>	192.168.36.27	EP2C621D12 WS	L0.09	Idle
<input type="checkbox"/>	192.168.36.132	EP2C622D16NM	P1.30	Idle
<input type="checkbox"/>	192.168.36.181	EPYCD8	L0.16i	Idle
<input type="checkbox"/>	192.168.36.118	D2000D8UM	L0.16	Idle
<input type="checkbox"/>	192.168.36.33	EP2C622D16NM	L1.15R	Idle
<input type="checkbox"/>	192.168.36.28	EP2C622D16FM	L1.21	Idle
<input type="checkbox"/>	192.168.36.150	EP2C621D16-4LP		Idle
<input type="checkbox"/>	192.168.36.117	D2000D8UM	L0.16	Idle

**Reference server:** Select a server and edit the settings, and then you may apply them to others.

### 4.14.1. Event Filters

This page is used to configure Event filters. You can modify or add new event filter entry from here. By default, 15 event filter entries are configured among the 40 available slots. Click on the edit button to start the filter configuration.

The screenshot shows the ASRockRack Server Management v2.0.1 interface. The main content area is titled "Platform Event Filter / event-filters" and shows the server IP "Server:192.168.36.33" with a "Back" button. Below this is a table of event filters:

ID	Status	Enabled	Description	Edit
1	Configured	●	when All Sensors switches to any severity run Alert (1) & none	<a href="#">Edit</a>
2	Configured	●	when All Sensors switches to any severity run Alert (2) & none	<a href="#">Edit</a>
3	Configured	●	when All Sensors switches to any severity run Alert (3) & none	<a href="#">Edit</a>
4	Configured	●	when All Sensors switches to any severity run Alert (4) & none	<a href="#">Edit</a>
5	Configured	●	when All Sensors switches to any severity run Alert (5) & none	<a href="#">Edit</a>
6	Configured	●	when All Sensors switches to any severity run Alert (6) & none	<a href="#">Edit</a>
7	Configured	●	when All Sensors switches to any severity run Alert (7) & none	<a href="#">Edit</a>
8	Configured	●	when All Sensors switches to any severity run Alert (8) & none	<a href="#">Edit</a>
9	Configured	●	when All Sensors switches to any severity run Alert (9) & none	<a href="#">Edit</a>
10	Configured	●	when All Sensors switches to any severity run Alert (10) & none	<a href="#">Edit</a>

**Event Filter Configuration:** Configure the event filter for the selected slot.

The screenshot displays the 'ASRockRack Server Management v2.0.1' application window. On the left is a dark sidebar with navigation options: Dashboard, System Inventory, FRU Information, IPMI Event Log, BMC Update, BIOS Update, BIOS Settings, SMBIOS, Remote Control, Power Control, Virtual Media, Platform Event Filter, and User Management. The main content area shows the 'Entry 1' configuration form. At the top right of the form is a 'Back' button. Below the form, there is an 'Edit' button and a vertical list of edit icons. The form fields are as follows:

- Enable this filter:**
- Event severity to trigger:** Any severity
- Power Action:** None
- Alert Policy Group Number:** 1
- Raw Data:**
- Generator ID 1:** 255
- Generator ID 2:** 255

**Enable this filter:** Check the box to enable the PEF settings.

**Event Severity to trigger:** Select any one of the Event severity from the list.

**Power Action:** Select any one of the power action either Power down, Power reset or Power cycle from the drop-down list

**Alert Policy Group Number:** Select any one of the alert policy group number from the drop-down list.

**Raw Data:** Check the box to fill the Generator ID with raw data.

**Generator ID 1:** Enter the raw generator ID1 data value.

**Generator ID 2:** Enter the raw generator ID2 data value.

**Generator Type:** Choose the event generator as slave address - if event is generated from IPMB.

**Slave Address/Software ID:** Specify corresponding I2C slave address or system software ID.

**Channel Number:** Choose the particular channel number through which the event message is received over. Choose "0" if the event message is received via the system interface, primary IPMB, or internally generated by the BMC.

**IPMB Device LUN:** Choose the corresponding IPMB device LUN if event is generated by IPMB.

**Sensor type:** Select the type of sensor that will trigger the event filter action.

**Sensor name:** Choose the particular sensor from the sensor list.

**Event Options:** Choose event option to be either all events or sensor specific events.

**Event Trigger:** Enter the raw event/reading type value.

**Event Data 1 AND Mask:** Indicate wildcarded or compared bits.

**Event Data 1 Compare 2:** Indicate whether each bit position's comparison is an exact comparison or not.

**Event Data 2 AND Mask:** Similar to Event Data 1 AND Mask.

**Event Data 2 Compare 1 & Event Data 2 Compare 2:** Similar to Event Data 1 Compare 1 and Event Data 1 Compare 2 respectively.

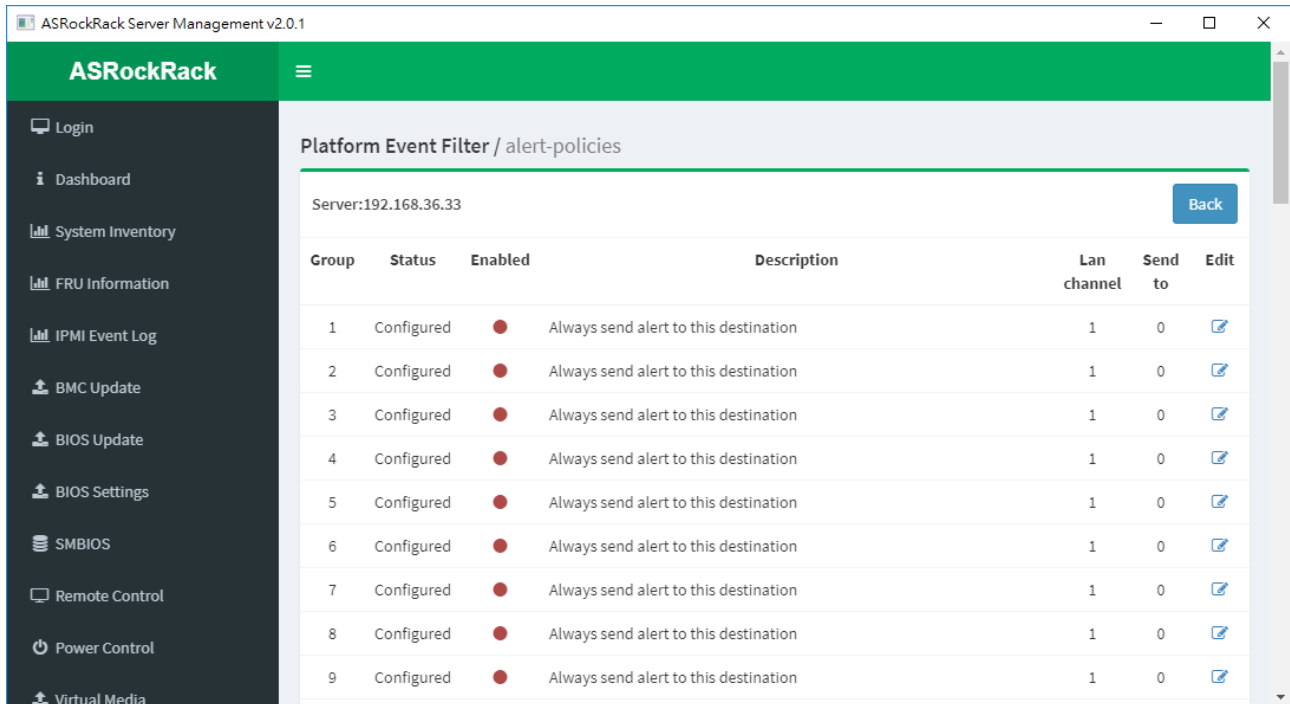
**Event Data 3 AND Mask:** Similar to Event Data 1 AND Mask.

**Event Data 3 Compare 1 & Event Data 3 Compare 2:** Similar to Event Data 1 Compare 1 and Event Data 1 Compare 2 respectively.



## 4.14.2. Alert Policies

This page is used to configure the Alert Policy for the PEF configuration. You can add, delete or modify an entry in this page. Click on the edit button to open the configuration page.



ASRockRack Server Management v2.0.1

ASRockRack

Platform Event Filter / alert-policies

Server:192.168.36.33 [Back](#)

Group	Status	Enabled	Description	Lan channel	Send to	Edit
1	Configured	●	Always send alert to this destination	1	0	<a href="#">Edit</a>
2	Configured	●	Always send alert to this destination	1	0	<a href="#">Edit</a>
3	Configured	●	Always send alert to this destination	1	0	<a href="#">Edit</a>
4	Configured	●	Always send alert to this destination	1	0	<a href="#">Edit</a>
5	Configured	●	Always send alert to this destination	1	0	<a href="#">Edit</a>
6	Configured	●	Always send alert to this destination	1	0	<a href="#">Edit</a>
7	Configured	●	Always send alert to this destination	1	0	<a href="#">Edit</a>
8	Configured	●	Always send alert to this destination	1	0	<a href="#">Edit</a>
9	Configured	●	Always send alert to this destination	1	0	<a href="#">Edit</a>

## Alert Policies: Configure the alert policies for the selected slot.

ASRockRack Server Management v2.0.1

Dashboard

- System Inventory
- FRU Information
- IPMI Event Log
- BMC Update
- BIOS Update
- BIOS Settings
- SMBIOS
- Remote Control
- Power Control
- Virtual Media
- Platform Event Filter
- User Management

**Policy 1**

Policy Group Number: 1

Enable this alert

Policy Action: Always send alert to this destination

LAN Channel: 1

Destination Selector:

Event Specific Alert String

Alert String Key:

Lan channel	Send to	Edit
1	0	<a href="#">Edit</a>
1	0	<a href="#">Edit</a>
1	0	<a href="#">Edit</a>
1	0	<a href="#">Edit</a>
1	0	<a href="#">Edit</a>
1	0	<a href="#">Edit</a>
1	0	<a href="#">Edit</a>
1	0	<a href="#">Edit</a>
1	0	<a href="#">Edit</a>
1	0	<a href="#">Edit</a>

**Policy Group Number:** Displays the Policy number of the configuration.

**Enable this alert:** Check the box to enable the policy settings.

**Policy Action:** Choose any one of the Policy set values from the list.

**LAN Channel:** Choose a particular channel from the available channel list.

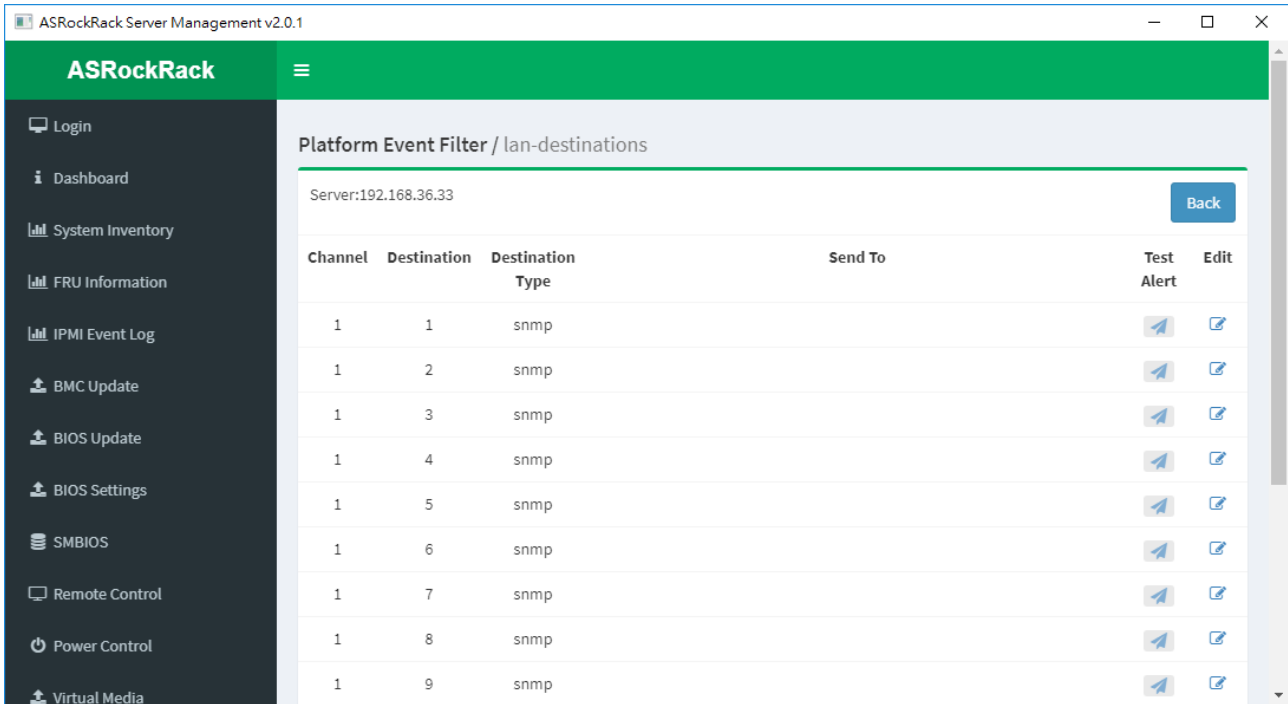
**Destination Selector:** Choose a particular destination from the configured destination list.

**Event Specific Alert String:** Check the box to specify event-specific Alert String.

**Alert String Key:** Specify which string is to be sent for this Alert Policy entry.

### 4.14.3. LAN Destination

This page is used to configure the LAN destination of PEF configuration. Click on the edit button to open the configuration page.





















ASRockRack Server Management v2.0.1

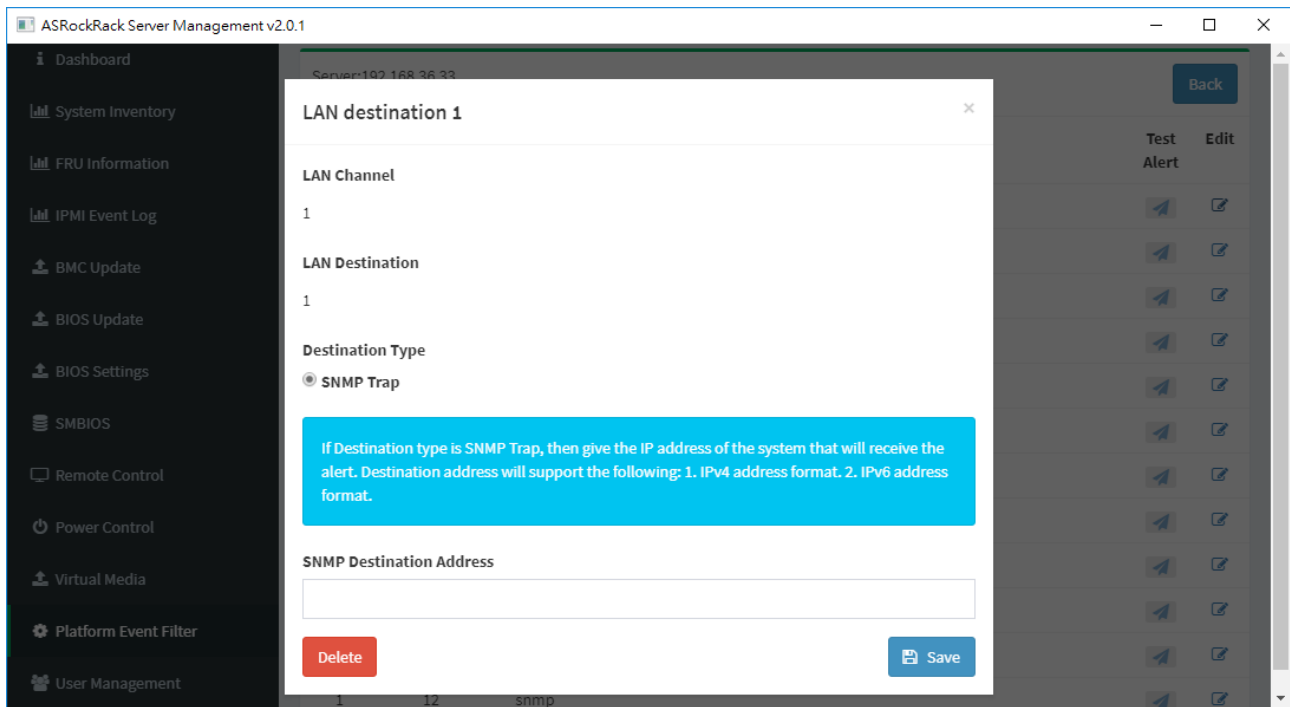
ASRockRack

Platform Event Filter / lan-destinations

Server:192.168.36.33 [Back](#)

Channel	Destination	Destination Type	Send To	Test Alert	Edit
1	1	snmp			
1	2	snmp			
1	3	snmp			
1	4	snmp			
1	5	snmp			
1	6	snmp			
1	7	snmp			
1	8	snmp			
1	9	snmp			

**LAN Destination Configuration:** Configure the LAN destination for the selected slot.



**LAN Channel:** Displays LAN Channel Number for the selected slot (read only).

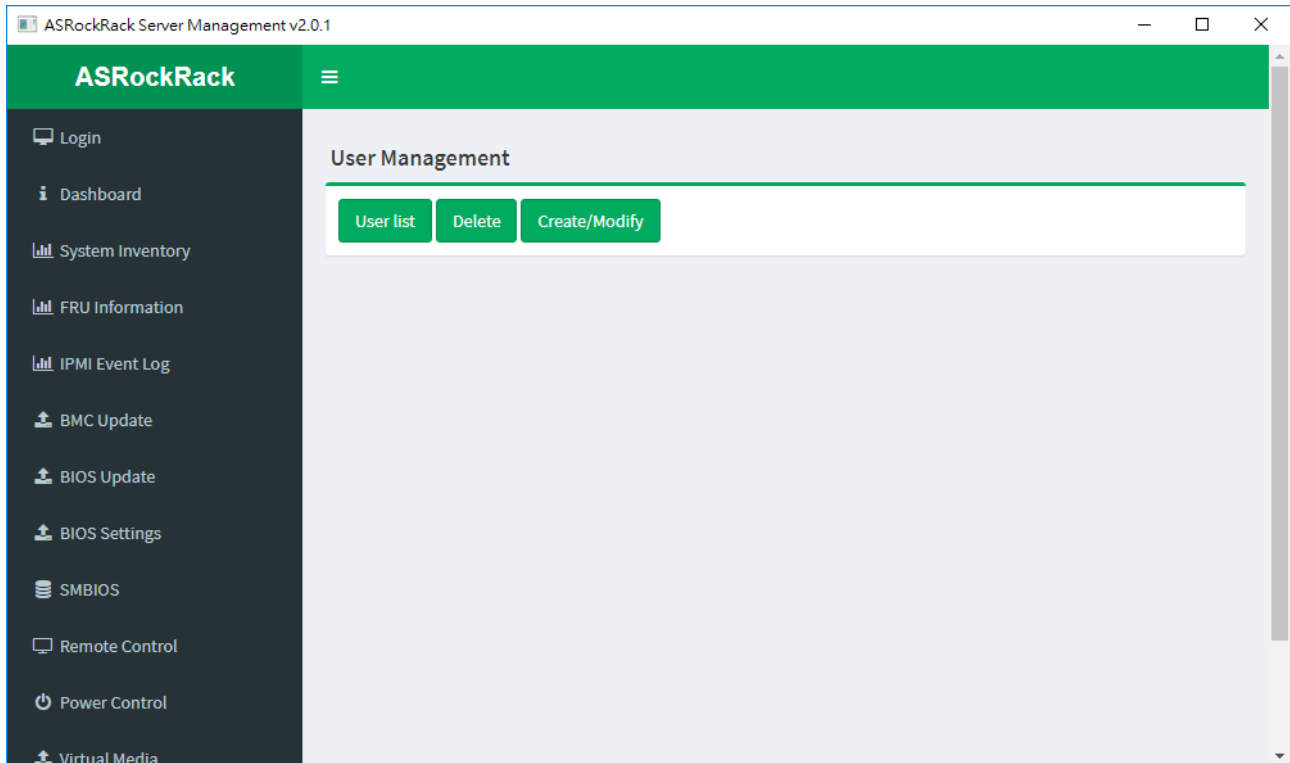
**LAN Destination:** Displays ID for setting Destination Selector of Alert Policy (read only).

**SNMP Destination Address:** Destination type can be either an SNMP Trap or an E-mail alert. For E-mail alerts, the four fields - SNMP Destination Address, BMC User Name, Email subject and Email message needs to be filled. For SNMP Trap, only the SNMP Destination Address has to be filled.

**BMC User Name:** If Destination type is Email Alert, then choose the user to whom the email alert has to be sent.

## 4.15. User Management

This function displays the current list of user accounts on the server. You can add a new user and modify or delete the existing users.



**User list:** Click on to get current user list.

**Delete:** Enter delete user account interface.

**Create/Modify:** Enter create or modify user account interface.

### 4.15.1. User List

This page displays the current user account information.

ID	Name	Status	Privilege	Capabilities	E-mail
1	anonymous	Disabled	Administrator	KVM VMedia	
2	admin	Active	Administrator	KVM VMedia	
3		Disabled			
4		Disabled			
5		Disabled			
6		Disabled			
7		Disabled			
8		Disabled			
9		Disabled			
10		Disabled			

**ID:** Sequence number of the user.

**Name:** User account name.

**Status:** User account status.

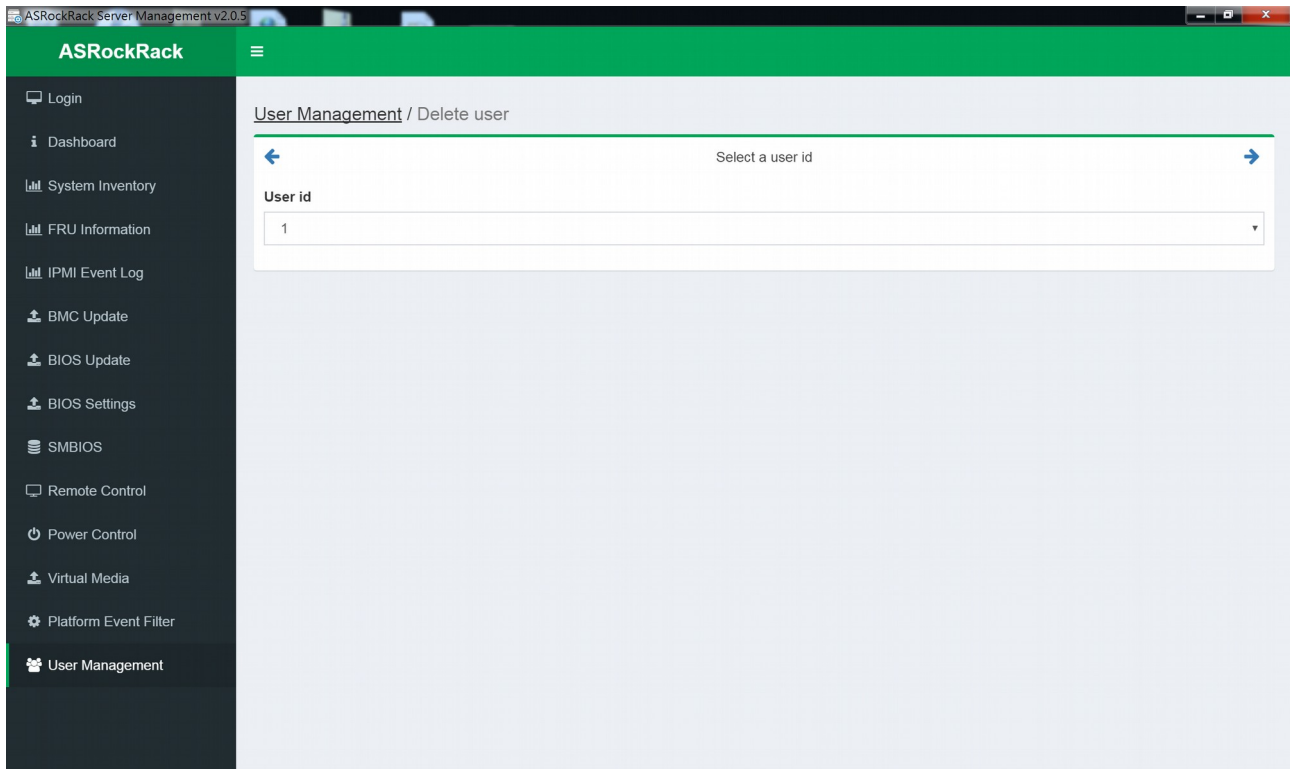
**Privilege:** User account privilege level.

**Capabilities:** Specific function access right.

**E-mail:** E-mail setting of the user account.

## 4.15.2. Delete

This function can delete existing users and create or modify user account.



**User id:** Select a user id to delete.

➔ - Go to next page.

➔ - Go to previous page.

To delete the user account on servers, select the user ID, and you can send the delete command to selected servers.

The screenshot shows the ASRockRack Server Management v2.0.5 interface. The sidebar on the left contains the following navigation items: Login, Dashboard, System Inventory, FRU Information, IPMI Event Log, BMC Update, BIOS Update, BIOS Settings, SMBIOS, Remote Control, Power Control, Virtual Media, Platform Event Filter, and User Management. The main content area is titled 'User Management / Delete user / Deploy' and features a table of server information. The table has columns for IP, Model, BMC Ver., and Status. A 'Deploy to all servers' button and an 'Update' button are located at the top right of the table.

IP	Model	BMC Ver.	Status
192.168.36.114	X7P-MB	0.09.02	Idle
192.168.36.92	D2100D4I	0.09.00	Idle
192.168.36.182	EP2C621D8-16R	0.03.00	Idle
192.168.36.99	EP2C621D16GM Series	1.00.00	Idle
192.168.36.40	EP2C622D16NM	1.14.15	Idle
192.168.36.150	X299 WS/IPMI	1.01.00	Idle
192.168.36.63	EPYCD8	0.05.02	Idle
192.168.36.158	EPYCD8	0.07.00	Idle
192.168.36.155	EP2C621D16-4LP	0.09.01	Idle
192.168.36.138	X299 WS/IPMI	1.01.00	Idle
192.168.36.42	EP2C622D24LM2	0.01.00	Idle

**IP:** Select server from the IP list.

**Model:** The model name of the server.

**BMC Ver.:** BMC firmware version of the server.

**Status:** Current status of the BMC firmware.



### 4.15.3. Create/Modify

This function edits user account settings. You can reset all the settings and then apply them to servers.

**User id:** Select user account ID.

**Username:** Enter the name of the user.

**Password Size:** Either 16 Bytes or 20 Bytes password size can be chosen.

**Password:** Enter the password of the user.

**Confirm Password:** Confirm the password.

**Enable User Access:** Enabling user access will intern assign the IPMI messaging privilege to user.

**Network Privilege:** Select the network privileges assigned to the user.

**Serial Privilege:** Select the serial privileges assigned to the user.

**KVM Access:** Assign the KVM privilege for the user.

**VMedia Access:** Assign the VMedia privilege for the user.

**Note:** Both KVM and VMedia privilege will enable/disable automatic when Network Privilege is administrator(other).

**Email Format:** Specify the format for the email. Two types of formats are available.

**AMI-Format:** The subject of this mail format is 'Alert from (your Host name)'. The mail content shows sensor information, ex: Sensor type and Description.

**Fixed-Subject Format:** This format displays the message according to user's setting. You must set the *subject and message for email alert*.

**Email ID:** Enter the email ID of the user. If the user forgets the password, the new password will be mailed to the configured email address.

Create/modify user account on servers. After filling up the form, you can apply the settings to servers.

The screenshot displays the ASRockRack Server Management v2.0.5 interface. The main content area is titled 'User Management / Edit user / Deploy' and features a table with the following data:

IP	Model	BMC Ver.	Status
192.168.36.114	X7P-MB	0.09.02	Idle
192.168.36.92	D2100D4I	0.09.00	Idle
192.168.36.182	EP2C621D8-16R	0.03.00	Idle
192.168.36.99	EP2C621D16GM Series	1.00.00	Idle
192.168.36.40	EP2C622D16NM	1.14.15	Idle
192.168.36.150	X299 WS/IPMI	1.01.00	Idle
192.168.36.63	EPYCD8	0.05.02	Idle
192.168.36.158	EPYCD8	0.07.00	Idle
192.168.36.155	EP2C621D16-4LP	0.09.01	Idle
192.168.36.138	X299 WS/IPMI	1.01.00	Idle
192.168.36.42	EP2C622D24LM2	0.01.00	Idle

**IP:** Select server from the IP list.

**Model:** The model name of the server.

**BMC Ver.:** BMC firmware version of the server.

**Status:** Current status of the BMC firmware.

## 5. Command line (cli)

This utility supports command line interface, it will enter command line mode when it launch with arguments. Run it in console with --help parameter to display the usage.

```
Usage: asrrmgttool <command> [options]

Commands:
  asrrmgttool group           Group management
  asrrmgttool bmc_update     Update BMC firmware
  asrrmgttool bios_update    Update BIOS firmware
  asrrmgttool power          Power control
  asrrmgttool vmedia         Virtual media
  asrrmgttool user           User account control
  asrrmgttool bios_settings  Bios settings
  asrrmgttool smbios         SMBIOS data
  asrrmgttool event          System event log
  asrrmgttool                launch GUI interface           [default]

Options:
  --help           Show help                               [boolean]
  --version        Show version number                     [boolean]
  --log            Write log to file
  --logappend     Append log to existing file              [boolean]

Examples:
  1. Update 2 servers BMC firmware: asrrmgttool bmc_update -f file -h
  192.168.0.100 192.168.0.101 -u admin -p admin
  2. Create Group1 servers: asrrmgttool group -b 192.168.0.100 -e
  192.168.0.120 --scan
  3. Power on Group1 servers: asrrmgttool power on -g Group1 -u admin -p
  admin
```

```
Options:
  --help           Show help
  --version        Show version number
  --log=filename  Write log to file
  --logappend     Append log to existing file
```

### 5.1. group

Use group command to maintain group information which define a range of IP addresses, extra IP address list and/or excluded IP addresses.

#### 5.1.1. new

```
new           Create a group
```

Options:

-g, --group	Set name of the group
-b, --begin	Begin IP address of the group
-e, --end	End IP address of the group
-h, --host	Extra IP address list
-x, --exclude	IP address list to exclude
-s, --scan	Scan the IP range for servers
-o, --override	Override group if exist

### 5.1.2. **delete**

delete Delete a group or remove server from group

Options:

-g, --group	Name of the group to delete
-h, --host	IP address of the server to remove

### 5.1.3. **add**

add Add a server into group

Options:

-g, --group	Name of the group
-h, --host	IP address of the server to add

### 5.1.4. **scan**

scan Scan servers and update to the group info

Options:

-g, --group	Name of the group to scan
-------------	---------------------------

### 5.1.5. **list**

list List the group info

Options:

-g, --group	Name of the group to show the info
-------------	------------------------------------

## 5.2. **bmc\_update**

Use `bmc_update` command to update BMC firmware, with various options you can update servers' BMC firmware by group or by IP address list.

`bmc_update` Update BMC firmware

**Options:**

-f, --file	Firmware image
-g, --group	The group to update
-b, --begin	Begin IP address of the range
-e, --end	End IP address of the range
-h, --host	IP address list to update
-x, --exclude	IP address list to exclude
-s, --scan	Scan the IP range for servers before update
-u, --username	Username to login
-p, --password	Password to login

**5.3. bios\_update**

Use bios\_update command to update BIOS firmware, with various options you can update servers' BIOS firmware by group or by IP address list.

bios\_update      Update BIOS firmware

**Options:**

-f, --file	Firmware image
-g, --group	The group to update
-b, --begin	Begin IP address of the range
-e, --end	End IP address of the range
-h, --host	IP address list to update
-x, --exclude	IP address list to exclude
-s, --scan	Scan the IP range for servers before update
-u, --username	Username to login
-p, --password	Password to login

**5.4. power**

Use power command to control servers' power state such as on, off, cycle, reset or shutdown.

**5.4.1. status**

status            Return power status

**Options:**

-g, --group	The group to do power control
-b, --begin	Begin IP address of the range
-e, --end	End IP address of the range

-h, --host IP address list to do power control  
 -x, --exclude IP address list to exclude  
 -s, --scan Scan the IP range for servers  
 -u, --username Username to login  
 -p, --password Password to login

#### 5.4.2. **on**

on Power on servers

Options:

-g, --group The group to do power control  
 -b, --begin Begin IP address of the range  
 -e, --end End IP address of the range  
 -h, --host IP address list to do power control  
 -x, --exclude IP address list to exclude  
 -s, --scan Scan the IP range for servers  
 -u, --username Username to login  
 -p, --password Password to login

#### 5.4.3. **off**

on Power off servers

Options:

-g, --group The group to do power control  
 -b, --begin Begin IP address of the range  
 -e, --end End IP address of the range  
 -h, --host IP address list to do power control  
 -x, --exclude IP address list to exclude  
 -s, --scan Scan the IP range for servers  
 -u, --username Username to login  
 -p, --password Password to login

#### 5.4.4. **cycle**

cycle Power cycle servers

Options:

-g, --group The group to do power control  
 -b, --begin Begin IP address of the range  
 -e, --end End IP address of the range  
 -h, --host IP address list to do power control  
 -x, --exclude IP address list to exclude

- s, --scan Scan the IP range for servers
- u, --username Username to login
- p, --password Password to login

#### 5.4.5. reset

- reset Hard reset servers

##### Options:

- g, --group The group to do power control
- b, --begin Begin IP address of the range
- e, --end End IP address of the range
- h, --host IP address list to do power control
- x, --exclude IP address list to exclude
- s, --scan Scan the IP range for servers
- u, --username Username to login
- p, --password Password to login

#### 5.4.6. shutdown

- shutdown ACPI shutdown(Soft shutdown) servers

##### Options:

- g, --group The group to do power control
- b, --begin Begin IP address of the range
- e, --end End IP address of the range
- h, --host IP address list to do power control
- x, --exclude IP address list to exclude
- s, --scan Scan the IP range for servers
- u, --username Username to login
- p, --password Password to login

### 5.5. vmedia

Use vmedia command to do virtual media function, you can redirect and local iso image or local hard drive to remote servers.

- vmedia Virtual media

##### Options:

- g, --group The group to do power control
- b, --begin Begin IP address of the range
- e, --end End IP address of the range
- h, --host IP address list to do virtual media function
- x, --exclude IP address list to exclude



-s, --scan	Scan the IP range for servers
-u, --username	Username to login
-p, --password	Password to login
--image	Image file to redirect to server
--drive	Drive to redirect to server
--install	Reboot server to boot from virtual media

## 5.6. user

Use user command to do user account control, you can set user account with various options or delete user account.

### 5.6.1. list

list List user account

Options:

-g, --group	The group to do user control
-b, --begin	Begin IP address of the range
-e, --end	End IP address of the range
-h, --host	IP address list to do user control
-x, --exclude	IP address list to exclude
-s, --scan	Scan the IP range for servers
-u, --username	Username to login
-p, --password	Password to login
--id	Specific user ID (1 ~ 10)

### 5.6.2. set

set Set user account

Options:

-g, --group	The group to do user control
-b, --begin	Begin IP address of the range
-e, --end	End IP address of the range
-h, --host	IP address list to do user control
-x, --exclude	IP address list to exclude
-s, --scan	Scan the IP range for servers
-u, --username	Username to login
-p, --password	Password to login
--id	User ID (1 ~ 10)
--name	User name
--pswd	User password

--access	User access
--kvm	User kvm
--vmedia	User virtual media
--snmp	User snmp
--prev_snmp	User prev_snmp
--network_privilege	User network privilege
--snmp_access	User snmp access
--privilege_limit_serial	User privilege limit serial
--snmp_authentication_protocol	User snmp authentication protocol
--snmp_privacy_protocol	User snmp privacy protocol
--email_id	User email address
--password_size	User password size

### 5.6.3. delete

delete Delete user account

Options:

-g, --group	The group to do user control
-b, --begin	Begin IP address of the range
-e, --end	End IP address of the range
-h, --host	IP address list to do user control
-x, --exclude	IP address list to exclude
-s, --scan	Scan the IP range for servers
-u, --username	Username to login
-p, --password	Password to login
--id	User ID (1 ~ 10)

## 5.7. bios\_settings

Use bios\_settings command to get/set bios settings through BMC interface, you need to reboot the system to let the adjusting bios options to take effect.

### 5.7.1. get

get Collect the bios attribute

Options:

-g, --group	The group to do user control
-b, --begin	Begin IP address of the range
-e, --end	End IP address of the range
-h, --host	IP address list to do user control
-x, --exclude	IP address list to exclude

-s, --scan Scan the IP range for servers  
 -u, --username Username to login  
 -p, --password Password to login  
 --path File directory (the default is current path)  
 --dircet, -d Bios settings

### 5.7.2. value

value BIOS value to acquire

#### Options:

-g, --group The group to do user control  
 -b, --begin Begin IP address of the range  
 -e, --end End IP address of the range  
 -h, --host IP address list to do user control  
 -x, --exclude IP address list to exclude  
 -s, --scan Scan the IP range for servers  
 -u, --username Username to login  
 -p, --password Password to login  
 --path File directory (the default is current path)  
 --all, -a Get all bios attribute  
 --option, -o Option bios value to acquire

### 5.7.3. set

set Set BIOS settings

#### Options:

-g, --group The group to do user control  
 -b, --begin Begin IP address of the range  
 -e, --end End IP address of the range  
 -h, --host IP address list to do user control  
 -x, --exclude IP address list to exclude  
 -s, --scan Scan the IP range for servers  
 -u, --username Username to login  
 -p, --password Password to login  
 --path File directory (the default is current path)  
 --all, -a Get all bios attribute  
 --dircet, -d Bios settings

### 5.7.4. apply

apply Apply bios settings

**Options:**

-g, --group	The group to do user control
-b, --begin	Begin IP address of the range
-e, --end	End IP address of the range
-h, --host	IP address list to do user control
-x, --exclude	IP address list to exclude
-s, --scan	Scan the IP range for servers
-u, --username	Username to login
-p, --password	Password to login
--path	File directory (the default is current path)
--reference, -r	Reference ip of bios settings

**5.8. smbios**

Use smbios command to retrieve SMBIOS data through BMC.

**5.8.1. info**

info Return SMBIOS data info

**Options:**

-g, --group	The group to do user control
-b, --begin	Begin IP address of the range
-e, --end	End IP address of the range
-h, --host	IP address list to do user control
-x, --exclude	IP address list to exclude
-s, --scan	Scan the IP range for servers
-u, --username	Username to login
-p, --password	Password to login

**5.8.2 get**

get Get SMBIOS data structure

**Options:**

-g, --group	The group to do user control
-b, --begin	Begin IP address of the range
-e, --end	End IP address of the range
-h, --host	IP address list to do user control
-x, --exclude	IP address list to exclude
-s, --scan	Scan the IP range for servers
-u, --username	Username to login
-p, --password	Password to login

--handle            Specific the SMBIOS data handle number  
 --decode            Display decoded data

## 5.9.            **event**

Use event command to download event log data from BMC.

### 5.9.1.        **download**

download            Download ipmi event log

Options:

-g, --group        The group to do user control  
 -b, --begin        Begin IP address of the range  
 -e, --end          End IP address of the range  
 -h, --host        IP address list to do user control  
 -x, --exclude     IP address list to exclude  
 -s, --scan        Scan the IP range for servers  
 -u, --username    Username to login  
 -p, --password    Password to login  
 --path            Event log file directory (the default is current path)

### 5.9.2.        **clear**

clear                Clear event log

Options:

-g, --group        The group to do user control  
 -b, --begin        Begin IP address of the range  
 -e, --end          End IP address of the range  
 -h, --host        IP address list to do user control  
 -x, --exclude     IP address list to exclude  
 -s, --scan        Scan the IP range for servers  
 -u, --username    Username to login  
 -p, --password    Password to login

## **6. Compatibility**

This utility supports server motherboard built with BMC AST2500 chip.

Intel Platform: Purley, Denverton, Skylake-D, Mehlow, Basin Falls.

AMD Platform: Naples.

Some of the functions may need to update BIOS/BMC firmware to support them, contact ASRock Rack support team to check the approval models.

## 7. Contact Information

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