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#### Chapter 5: OS (Free NAS) Remote Installation by IPMI

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Introduction

The Intelligent Platform Management Interface (IPMI) is a common system management web interface that provides remote access, monitoring and administration over networks. IPMI allows administrators to view server’s hardware status remotely and monitor a server’s physical health. See the following chapters for more instructions on how to configure and use IPMI features.

Chapter 1 Remote Control Environment Setup

1.1 Network Connections

Connect a LAN cable from the laptop (client) to the dedicated IPMI LAN port on the Server.

1.2 BIOS Configuration (Server)

Then start the server and enter the BIOS. To do this, press <F2> or <Del> during the Post-On-Self-Test (POST).

1. On the Main menu screen, you can check the UEFI version and BMC version information.
2. Go to the **Server Mgmt → BMC network configuration** and configure the IP addresses in the **Lan channel 1** section. Adjust the settings as desired and then exit the BIOS.

Configuration Example:

- **Configuration Address source** = [Static]
- **Station IP address** = [192.168.3.1]
- **Subnet mask** = [255.255.255.0]
- **Router IP address** = [192.168.3.254]

3. After configuration, save the changes and reboot the server.
1.3 Web Interface Configuration (Client)

Note: The Java application is required to use the management system. Please download and install the Java application on your laptop (client) before using the IPMI management.

1. Go to the “Local Area Connection” on your laptop to configure the client’s TCP/IP settings.
   In the “Local Area Connection Properties” window, select Networking > Internet Protocol Version 4(TCP/IPv4) > Properties. Then assign the IP address.

   Configuration Example:
   IP address = [192.168.3.77]
   Subnet mask = [255.255.255.0]

2. Then you can check if your connection is working properly by running the Ping (Packet InterNet Grouper) command. Click Start, enter “cmd”(cmd.exe) into the search field, and type [ping <IP address>].

   Configuration Example:
   ping 192.168.3.1
3. To enter the management system (Megarac SP), simply enter the Server IP in the address bar of your browser.

Configuration Example: 192.168.3.1

**Note:** It is recommended to delete the Internet Explorer browsing history before and after using management system.
Chapter 2 Megarac SP Management Platform

Introduction of Megarac SP
Megarac SP is a server management solution that 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.

3.1 Login page

The default username and password are both “admin”. It is recommended to change the username and password after your first login.
3.2 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.*

1. Click **Launch**. Downloading the **jviewer.jnlp** file begins.
2. If the automatic download blocking message appears as below, click **Download File...** to continue.

![Download File...](image)

3. After installation, select “I accept the risk and want to run this application.” and click **Run** to launch the file.

![Security Warning](image)

4. Once the file is 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.
3.3 Field Replaceable Unit (FRU)

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
3.4 Server Health

3.4.1 Sensor Readings

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.

3.4.2 Event Log

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.
3.4.3 System and Audit Log

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.
3.5 Configuration

3.5.1 Active Directory Settings

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’.

3.5.2 DNS Server Settings

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.
3.5.3 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.
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.
3.5.5 LDAP/E-Directory Settings

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’.
3.5.6 Mouse Mode Settings

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.
3.5.7 Network Settings

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.
3.5.8 Network Bonding Configuration

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.
3.5.9 Network Link Configuration

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.
3.5.10 NTP Settings

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.
3.5.11 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.
3.5.12 PEF Management

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’.

### 3.5.13 RADIUS Settings

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.

---

### 3.5.14 Configure Remote Session

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.
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.
- Session timeout support : Maximum = 1800 seconds
3.5.16 SMTP Settings

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.
3.5.17 SSL Certificate Configuration

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.
3.5.18 System and Audit Log Settings

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.
3.5.19 User Management

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’.
3.5.20 Virtual Media Devices

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.
3.6 Remote Control

3.6.1 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.
3.6.2 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.
3.6.3 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.
3.7 Auto Video Recording

3.7.1 Triggers Configuration

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.

3.7.2 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.
3.8 Maintenance

3.8.1 Preserve Configuration

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.

3.8.2 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.
3.8.3 System Administrator

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.
3.9 Firmware Update

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.
3.9.2 Image Transfer Protocol

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.
Chapter 3 BMC Firmware Update by IPMI

To update the BMC firmware via IPMI, please follow the steps below.

1. Enter the management system and click the **Firmware Update** from the top menu bar.

2. Click **Enter Update Mode > OK**.

3. Click **Browse**... to select the BMC firmware file from the directory. Click **Open > Upload**.
4. Click **Proceed > OK** to start.

5. When you see the screen below, firmware upgrade is completed.

6. Go back to your server and, in the BIOS screen, press **<F10>** and **Yes** to save the configuration changes and reboot the server.
Chapter 4 BIOS Firmware Update by IPMI

1. Make sure you have connected a LAN cable from the laptop (client) to the dedicated IPMI LAN port on the Server. Prepare an USB device with the BIOS firmware installed.

2. Enter the management system from your laptop (client). Go to Remote Control > Console Redirection.

3. Click Java Console > Open to open the JViewer.
4. Select “I accept the risk and want to run this application.” and click **Run** to launch the JViewer.

5. In the BIOS screen, go to **Advanced > Instant Flash**.

6. Insert the USB device with the BIOS firmware installed into your laptop (client).
7. Click **Hard Disk/USB Redirection**.

8. Select the inserted USB and click **Connect Hard disk/USB**.

9. Confirm the inserted USB device is found and click **Close** to exit.
10. In the BIOS, go to Advanced > Instant Flash and press the <ENTER> key on the keyboard to select.
11. Choose the desired BIOS firmware and press <ENTER>.

12. The BIOS updating begins.

13. After upgrade, press <ENTER> key to reboot the server and confirm the BIOS and BMC versions.
1. Enter the management system from your laptop (client). Go to Remote Control > Console Redirection.

2. Click Java Console > Open to open the JViewer.
3. Select “I accept the risk and want to run this application.” and click **Run** to launch the JViewer.

4. Click **Hard Disk/USB Redirection**.

5. Insert a Free NAS operating system installation CD into the DVD-ROM.
6. Select the D from the “CD/DVD Media1” section, and click Connect CD/DVD.

7. When it is ready, click OK > Close.
8. Reboot the server.

9. In the BIOS screen, press <F11> key to select the boot device (USB AMI Virtual CDROM0 1.00).

10. Press <ENTER> to select 1 Install/Upgrade to start Free NAS installation.
11. The Free NAS installation is completed.