

Integrated Baseboard Management Controller (iBMC)



Configuration Guide



AST2300 iBMC Configuration Guide

Version 1.0

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1. IPMI OS Drivers and Open Source Software

AST2300 firmware is full compliant with IPMI 2.0 specification. So users could use standard IPMI driver comes from operation system distribution.

1.1 Windows IPMI Driver

AST2300 supports Intel reference driver, you can get it from

http://www.intel.com/design/servers/ipmi/tools.htm

From Windows Server 2003 R2, Microsoft also provide in box IPMI driver. You can use it also.

1.2 Open IPMI Driver on Linux

AST2300 supports the Open IPMI driver in Linux Kernel. Use the following commands to load IPMI drivers.

"modprobe ipmi_devintf"

"modprobe ipmi_si"

If you use old version Linux Kernel, you need to replace module "ipmi_si" with

"ipmi_kcs"

Note that TYAN motherboard BIOS encodes IPMI Base IO address at 0xCA2 in its DMI table IPMI entry, any generic OS IPMI drivers should have no problem to support it.

1.3 IPMI Tool and Other Open Source Software

AST2300 supports open source software IPMI Tool, you can also use other ones like Open IPMI, IPMI Utility. Note that for IPMI Tool SOL session, user needs to use BIOS setup menu to configure "Remote Serial Console Redirect" to use COMA, and set baud rate to 38.4K, 8 bits, no parity, and Xon/Xoff handshaking.

NOTE

2. SP-X WEB GUI

2.1 MegaRAC[®] GUI Overview

The MegaRAC[®] SP-X SoC (System-on-Chips) has an AMI generic, user-friendly Graphics User Interface (GUI) called the **MegaRAC[®] GUI**. It is designed to be easy to use. It has a low learning curve because it uses a standard Internet browser. You can expect to be up and running in less than five minutes.

2.2 User Name and Password

Initial access of MegaRAC SP-X prompts you to enter the User Name and Password. A screenshot of the login screen is given below.

MEGARAC			American Megatrends
	Username:	I	
	Password:	Forgot Password?	
		Login	
Regu	ired Browser Setting	<u>s</u>	
1	Allow popups from	this site 🥝	
2	Allow file download	from this site. (How to 🔳)	
3	Enable javascript fo	or this site 🥝	
4	Enable cookies for	this site 🥝	

Default User Name and Password

The default user name and password are as follows:

Username: root

Password: superuser

NOTE:

- The default user name and password are in lower-case characters.
- When you log in using the user name and password, you get full administrative rights. It is advised to change your password once you login.

2.3 Dashboard

In MegaRAC GUI, the Dashboard page gives the overall information about the status of a device. To open the Dashboard page, click **Dashboard** from the main menu. A sample screenshot of the Dashboard page is shown below.

MEGARAC						American Megatrends
Dashboard FRU Information Server Health Configuration	n Rem	ote Control Main	ntenance		• root (Administrator)	C Refresh 🕏 Print 🍯 Logout HELP
Dashboard						
Dashboard gives the overall information about the status of the device and	remote se	rver.				
Device Information		Sensor Moni	toring		Event Lo	as
Device Power Status: On			-			CPU0_DMM_C0 (0.03%)
Firmware Revision: \$7052 R1.0	Status	Sensor	Reading			CPU0_DMM_A1 (0.03%) CPU0_DMM_A0 (0.03%)
1111Wale build fille, 169 13 2012 20, 10,30 COT	•	CPU0_DTS_Temp	41°C	م 0		Free Space (99.91%)
Network Information (Edit)		CPU1_DIS_Temp	Not Available	~		
MAC Address: 00:20:ED:53:03:03		CPU0_PECI_Temp	-50 G	0		
V4 Network Mode: DHCP IPv4 Address: 10.60.254.73		PCH Area	48 ° C	2		
V6 Network Mode: DHCP		PCI-E Air Inlet	33 ° C	م		
IPv6 Address: ::		CPU1 MOS Area	28°C	م		
		CPU0 DIMM A0	Not Available	م		
Remote Control		CPU0_DIMM_A1	Not Available	Q		
🛓 Java Console Launch		CPU0_DIMM_A2	Not Available	م		
		CPU0_DIMM_B0	31°C	Q		
		CPU0_DIMM_B1	Not Available	R		
		CPU0_DIMM_B2	Not Available	a		
		CPU0_DIMM_C0	Not Available	R		
		CPU0_DIMM_C1	Not Available	ą		
	•	CPU0_DIMM_C2	Not Available	P		
	•	CPU0_DIMM_D0	Not Available	R		
	٠	CPU0_DIMM_D1	Not Available	R		
	•	CPU0_DIMM_D2	Not Available	م		
	٠	CPU1_DIMM_A0	Not Available	R		
	•	CPU1_DIMM_A1	Not Available	م		
	٠	CPU1_DIMM_A2	Not Available	م		
	•	CPU1_DIMM_B0	Not Available	م		
	•	CPU1_DIMM_B1	Not Available	م		
	•	CPU1_DIMM_B2	Not Available	م		
	•	CPU1_DIMM_C0	Not Available	2		
	•	CPU1_DIMM_C1	Not Available	2		
	•	CPU1_DIMM_C2	Not Available	2		
		CPU1_DIMM_D0	Not Available	0		
		CPU1_DIMM_D1	Not Available	4		
		CPUILUMM_02	1 020 Volt-	~		
		CPU1 VCore	Not Available	2		
		CPU0 Memory	1.43 Volts	م		
		CPU1 Memory	Not Available	م		
		VBAT	3.306 Volts	R		
		3.3V	3.384 Volts	م		
		5V	5.226 Volts	Q		
		12V	12.007 Volts	م		
	•	CPU0_FAN	4560 RPM	م		
	•	CPU1_FAN	Not Available	P		
	٠	SYS_FAN_1	Not Available	R		
	٠	SYS_FAN_2	Not Available	P		
	٠	SYS_FAN_3	Not Available	P		
	•	SYS_FAN_4	Not Available	م		
	٠	SYS_FAN_5	Not Available	م		
	•	PSU Status	Not Available	2		
	•	PSU Power	Not Available	م		

2.4 FRU Information

In MegaRAC GUI, the FRU Information Page displays the BMC FRU file information. The information displayed in this page is Basic Information, Common Header Information, Chassis Information, Board Information and Product Information of the FRU device.

To open the FRU Information, click **FRU Information** from the top menu. Select a FRU Device ID from the Basic Information section to view the details of the selected device. A screenshot of FRU Information Page is given below.

MEGARAC					American Megatrends
Dashboard FRU Information Serve	r Health Configuration	Remote Control	Maintenance	🗘 root (A	iministrator) C Refresh 🕏 Print 🍜 Logout HELP
Field Replaceable Unit(FRU	I)				
This name displays the unious information life	Pasia Information Common	Lieuder Information Ob	annie lefermetien. Deerd lefermetien	and Draduct Information of the CDU I device	
Pasia Information:	basic mornatori, commor	rieader mornauon, ch	asolo mornaton, board mornaton	rand i rouber mormation of the rinks device.	
Basic mornation.					
FRU Device ID	0	-			
FRU Device Name	BMC_FRU				
Chassis Information:					
Chassis Information Area Format Versio	m O				
Chassis Type					
Chassis Part Number					
Chassis Serial Number					
Chassis Extra					
Board Information:					
Board Information Area Format Version	1				
Language	0				
Manufacture Date Time	Fri Feb 26 15:22:00	2010			
Board Manufacturer	ASPEED				
Board Product Name	AMI SPX				
Board Serial Number	00001				
Board Part Number					
FRU File ID					
Board Extra	AMI				
Product Information:					
Product Information Area Format Versio	n 0				
Language	0				
Manufacturer Name					
Product Name					
Product Part Number					
Product Version					
Product Serial Number					
Asset Tag					
FRU File ID					
Product Extra					

2.5 Server Health Group

The Server Health Group consists of two items.

- Sensor Readings
- Event Log

A screenshot displaying the menu items under the Server Health is shown below.

MEGA	RAC				American
					🗘 root (Administrator) 🗹 Refresh 🔗 Print 🍡 Logout
Dashboard		Server Health	Configuration	Maintenance	
		Sensor Readings			
		Event Log			

2.5.1 Sensor Readings

In MegaRAC GUI, the Sensor Readings Page displays all the sensor related information.

To open the Sensor Readings Page, click **Server Health** \rightarrow **Sensor Readings** from the top menu. Click on a record to show more information about that particular sensor, including thresholds and a graphical representation of all associated events. A screenshot of Sensor Readings Page is given below.

MEGARAC				Mega
shboard FRU Inforr	nation Server Health	Configuration Remote	Control Maintenance	🕯 root (Administrator) 🗢 Refresh 🖤 Print 🥻
ensor Reading	5			
shoor neuring		N 2.5 1 15.0756 .3		
sensor related informatic	on will be displayed here. Dout	ble click on a record to toggle (C	N / OFF) the live widget for that particular sensor.	0
Il Sensois 🔹				Sensor Count: 48 sens
ensor Name 🔺	Status 🔺	Current Reading 🔺		
PU0_DTS_Temp	Normal	41 ° C		
CPU1_DTS_Temp	Normal	Not Available	CPU0_DTS_Temp: 41 ° C	NORMAL
PU0_PECI_Temp	Normal	-58 ° C	Thresholds for this sensor	Ling Without Ora LOw
PU1_PECI_Temp	Normal	Not Available	The shous for this sensor	Live Wibder OFF I On
'CH_Area	Normal	48 ° C	Lewer Nee Deerwerkle (LND) 010	Unner Non-Recoverable (UNP) 010
CI-E_Air_Inlet	Normal	34 ° C	Lower Non-Recoverable (LNR): 0 ° C	Unper Critical (UC): 97 * C
PU1_MOS_Area	Normal	28 ° C	Lower Childal (LC): 0 ° C	Unner Non-Critical (UNC): 0.° C
PU0_DIMM_A0	Normal	Not Available	Lower Non-Childar (LNC). 0 ° C	opportion foliation (onto). 0 0
PU0_DIMM_A1	Normal	Not Available		
PU0_DIMM_A2	Normal	Not Available	Graphical View of this sensor's events	
PUO DIMM BO	Normal	32 ° C		
PUO DIMM B1	Normal	Not Available		
PUO DIMM B2	Normal	Not Available	LNR (0)	
PUO DIMM CO	Normal	Not Available	10 (0)	
PUO DIMM_C1	Normal	Not Available		
PLID DIMM_C2	Normal	Not Available	LNC (0)	
DPU0_DIMM_C2	Normal	NetAwiteble		
PUO_DIMM_DO	Normal	Not Available	UNR (0)	
PUO_DIMM_D1	Normal	Not Available	UC (0)	
POU_DIMM_D2	Normal	Not Available	00 (0)	
JPU1_DIMM_AU	Normai	Not Available	UNC (0)	
CPU1_DIMM_A1	Normal	Not Available	011-102	
CPU1_DIMM_A2	Normal	Not Available	Other (0)	
CPU1_DIMM_B0	Normal	Not Available	Discrete (0)	
PU1_DIMM_B1	Normal	Not Available		
PU1_DIMM_B2	Normai	Not Available	0 1 2 3 Number of Entries	3
CPU1_DIMM_C0	Normal	Not Available	wumber of Entries	
CPU1_DIMM_C1	Normal	Not Available		View this Event Log
CPU1_DIMM_C2	Normal	Not Available		
CPU0 VCore	Normal	1.039 Volts		
CPU1 VCore	Normal	Not Available		
CPU0 Memory	Normal	1.43 Volts		
PU1 Memory	Normal	Not Available		
BAT	Normal	3.306 Volts		
1.3V	Normal	3.384 Volts		
V	Normal	5.226 Volts		
2V	Normal	12.007 Volts		
PU0_FAN	Normal	4640 RPM		
PU1_FAN	Normal	Not Available		
YS_FAN_1	Normal	Not Available		
YS_FAN_2	Normal	Not Available		
YS_FAN_3	Normal	Not Available		
SYS_FAN_4	Normal	Not Available		
SYS_FAN_5	Normal	Not Available		
OLL Otatua	All deasserted	Not Available		
- ou otatus				

2.5.2 Event Log

In MegaRAC GUI, this page displays the list of event logs occurred by the different sensors on this device. Double click on a record to see the details of that entry. You can use the sensor type or sensor name filter options to view those specific events or you can also sort the list of entries by clicking on any of the column headers.

To open the Event Log page, click **Server Health** \rightarrow **Event Log** from the top menu. A sample screenshot of Event Log Page is shown below.

MEGAR	RAC				American Megatrends		
Dashboard	FRU Information	Server Health	Configuration	Remote Control	Maintenance	🗘 root (Administrator)	C Refresh 🕏 Print 📑 Logout HELP
Event Lo	O g ated by the system will be	logged here. Dout	ble-click on a record	to see description			
All Events		 Inter by. 	All Sendors	•			Event Log: 3 event entries
BMC Tin	nezone 🔘 Client Timezi	one					UTC Offset: (GMT+/-0)
Event ID 🔺	Time Stamp →		Sensor Name 🔺		Sensor Type 🗳	Description 🗅	
3	02/09/2012 20:19:22		CPU0_DIMM_C0		Temperature	Upper Critical - Going High - Asserted	Cherry All Formet Laure
2	02/09/2012 20:19:22		CPU0_DIMM_A1		Temperature	Upper Critical - Going High - Asserted	Citeat All Event Logs
1	02/09/2012 20:19:22		CPU0_DIMM_A0		Temperature	Upper Critical - Going High - Asserted	

2.6 Configuration Group

This group of pages allows you to access various configuration settings. A detailed description of each configuration group is given ahead. A screenshot of Configuration Group Page is shown below.



2.6.1 Active Directory

An active directory is a directory structure used on Microsoft Windows based computers and servers to store information and data about networks and domains. An active directory (sometimes referred to as an AD) does a variety of functions including the ability to provide information on objects, helps organize these objects for easy retrieval and access, allows access by end users and administrators and allows the administrator to set security up for the directory.

This page allows you to configure Active Directory Server Settings.

To open the Active Directory Settings Page, click **Configuration** \rightarrow **Active Directory** from the main menu. A sample screenshot of Active Directory Settings Page is shown in the screenshot below.

MEGAR	RAC					American Megatrends
Dashboard	FRU Information	Server Health	Configuration	Remote Control	Maintenance	🗘 root (Administrator) C Refresh 🖗 Print 🎐 Logout HELP
Active D	irectory Settin	igs				
The 'Active Dir	ectory is currently disab	led. To enable Active	e Directory and conf	gure its settings. Click	on 'Advanced Settings' button.	Advanced Settings
The list below	shows the current list o	f configured Role Gr	roups. If you would I	ike to delete or modify	a role group, select the name in the	list and press Delete Role Group or Modify Role Group. To add a new Role Group, select an
		or other				Number of configured Role groups: 0
Role Group	pID 🔺	Group Name	Δ		Group Domain 🔺	Group Privilege 🔺
1		~			~	~
2		~			~	~
3		~			~	~
4		~			~	
5		~			~	~

Add Role Group Modify Role Group Delete Role Group

2.6.2 DNS

The **Domain Name System (DNS)** is a distributed hierarchical naming system for computers, services, or any resource connected to the internet or a private network. It associates the information with domain names assigned to each of the participants. Most importantly, it translates domain names meaningful to humans into the numerical (binary) identifiers associated with networking equipment for the purpose of locating and addressing these devices worldwide.

In MegaRAC GUI, the DNS Server Settings page is used to manage the DNS settings of a device.

To open the DNS Server Settings Page, click **Configuration** \rightarrow **DNS** from the main menu. A sample screenshot of DNS Server Settings Page is sown in the screenshot below.

Database FRU Information Server Health Configuration Remote Control Maintenance Health Configuration Health Configuration Health Configuration Health Configuration	MEGAR	RAC						American Megatrends
DNS Server Settings Nange DNS settings of the device. Host Configuration Host Settings Antocantc Host Name Antocantc eth0 Diversion cello Diversion Domain Name Configuration Diversion Domain Name Server Configuration Diversion Diversion Name Server Configuration Diversion Name Server Configuration Diversion Name Server Configuration Diversion Name Server Configuration Diversion	Dashboard	FRU Information	Server Health	Configuration	Remote Control	Maintenance	Froot (Administrator) C	Refresh 🕏 Print 🖙 Logout HELP
Manage DNB settings of the divice. Host Configuration Host Settings Anterade Host Name Anttracted Dynamic DNS © DHOP Client FODH Domain Kame © Decd Dynamic DNS © DHOP Client FODH Domain Settings cdu/yd Domain Name DY4 Domain Name DY6 Server Settings cdu/yd DY6 Domain Name DY6 Server Settings cdu/yd DY6 Domain Name DY6 Server Settings cdu/yd DY6 Domain Name Server Configuration DY6 Server Settings cdu/yd DY6 Domain Name Server Configuration DY6 Server Settings cdu/yd DY6 Domain Name Server Configuration DY6 Server Settings cdu/yd DY6 Domain Name Server Configuration DY6 Server Settings cdu/yd BY6 Domain Name Server Configuration DY6 Server Settings cdu/yd BY6 Domain Name Server Configuration DY7	DNS Ser	rver Settings						
Host Configuration Host Settings Autoata/c Host Name Autoata/c Host Name Autoata/c Host Name Configuration Domain Name Configuration Domain Name Configuration PP4 Domain Name Server Configuration DIX Server Settings cd0	Manage DNS	settings of the device.						
Host Settings Autroadi: Host Name Autroadi: Register BMC Image: Configuration Domain Name Image: Configuration Domain Name Image: Configuration DMS Server Softings ch0 Preferred DKS Server 108821.86 DMS Server Softings ch0 DMS Server Softings ch0 DKS Server Softings ch0 DKS Server Softings ch0 DKS Server Softings ch0 DKS Server Softings ch0	Host Configur	ation						
Host Name AMEDICIDES 3003 Register BMC Comparison eth0 Comparison Domain Name Configuration Comparison Domain Name eth0 Proterior DIN Server Settings cdo DINS Server Settings cdo	Host Set	tings	Automati	•				
Register BMC Image: Register BMC eth0 Image: Direct Dynamic DND Domain Name Configuration Image: Direct Dynamic DND Domain Name Server Configuration Image: Direct Dynamic DND Direct Dynamic Name Server Configuration Image: Direct Dynamic DND Direct Dynamic Name Server Configuration Image: Direct Dynamic DND Direct Dynamic Name Server Configuration Image: Direct Dynamic DND Direct Dynamic Name Server Configuration Image: Direct Dynamic DND Direct Dynamic Name Server Configuration Image: Direct Dynamic DND Direct Dynamic Name Server Configuration Image: Direct Dynamic DND Direct Dynamic Name Server Configuration Image: Direct Dynamic DND Direct Dynamic Name Server Configuration Image: Direct Dynamic DND Direct Dynamic Name Server Configuration Image: Direct Dynamic DND Direct Dynamic Name Server Configuration Image: Direct Dynamic DND Direct Dynamic Name Server Configuration Image: Direct Dynamic Dynamic DND Direct Dynamic Name Server Configuration Image: Direct Dynamic Dy	Host Nan	ne	AM10020	ED530303				
etto Pedperd DIS Server Settings edu . Preferred DIS Server Settings edu . Dis Server Settings edu . Preferred DIS Serv	Register BMC							
Domain Kame Configuration Domain Kame Domain Kame Domain Kame IP40 Domain Kame Server Configuration Preferred DKS Server DISS Server Sottings noise DiSS Server Sottings noise DiSS Server Sottings noise DiSS Server Sottings noise	eth0		Regis	ster BMC irect Dynamic DNS	DHCP Client FG	DN		
Domain Settings eñoy4 Domain Name Image: Configuration DHS Server Settings eñoy4 Preferred DKS Server 10.80.020 DHS Server Settings eñoy4	Domain Name	e Configuration						
Domain Name Image: Configuration IPv4 Domain Name Server Configuration image: Configuration DNS Server Server 10:00.00 Attentate DNS Server 10:81.36 IPv4 Domain Name Server Configuration image: Configuration DNS Server Sottings ch0 Peterred DNS Server image: Configuration DNS Server Sottings ch0	Domain S	Settings	eth0_v4	-				
IPv4 Domain Name Server Configuration DKS Server Settings b.0 Preferred DKS Server 108:00:00 Alternate DKS Server 108:81:86 IPv4 Domain Name Server Configuration 108:81:86 IPv4 Domain Name Server Configuration et/o DKS Server Settings et/o Preferred DKS Server i	Domain M	lame						
DNS Server Sottings ch0 Preformed DNS Server 10:60:020 Alternate DNS Server 10:81:365 IPv6 Domain Name Server Configuration - DNS Server Sottings ch0 Preformed DNS Server - Preformed DNS Server -	IPv4 Domain I	Name Server Configura	ition					
Preferred DNS Server 10.80.0.20 Alternate DNS Server 10.83.1.86 PV6 Domain Name Server Configuration DNS Server Settings 640 Proferred DNS Server = Name Not DNS Server =	DNS Serv	ver Settings	eth0	-				
Alternate DNS Server 10.88.1.86 IPv6 Domain Name Server Configuration DNS Server Settings eloo Preferred DNS Server Plenstrool DNS Server	Preferred	d DNS Server	10.60.0.20)				
IPv6 Domain Name Server Configuration DNS Server Settings Preferred DNS Server Encode DNS Server	Alternate	DNS Server	10.88.1.86	5				
DNS Server Sottings ck0 Preterred DNS Server	IPv6 Domain I	Name Server Configura	ition					
Preferred DNS Server	DNS Serv	ver Settings	eth0	•				
Alternate DMS Conter	Preferred	d DNS Server						
Automate Division in Inc.	Alternate	DNS Server						

Save Reset

2.6.3 LDAP

The **Lightweight Directory Access Protocol (LDAP**) is an application protocol for querying and modifying data of directory services implemented in internet Protocol (IP) networks.

To open the LDAP Settings Page, click **Configuration** \rightarrow **LDAP** from the main menu. A sample screenshot of LDAP Settings Page is shown in the screenshot below.

MEGARA	AC °					Amer Megatr	ican rends
Dashboard f	FRU Information	Server Health	Configuration	Remote Control	Maintenance	🗘 root (Administrator) C Refresh 🐼 Print 🖝 I	HELP
LDAP Set	tings						
LDAP is currently	y disabled. To enable nows the current list o	LDAP and configure	its settings. Click o oups. If you would li	n 'Advanced Settings' t ke to delete or modify a	button. a role group, select the name in the	Advanced Bett	ngs an
unconligured alo	and press studied	Group.				Number of configured Role grou	ps: O
Role Group II	D 🛆	Group Name	Δ.		Group Search Base 🔺	Group Privilege 🗳	
1		~			~	~	
2		~			~	~	
3		~			~	~	
4		~			~	~	
5		~			~	*	

Add Role Group Modify Role Group Delete Role Group

2.6.4 Mouse Mode

In MegaRAC GUI, Redirection Console handles mouse emulation from local window to remote screen in either of two methods. User has to be an Administrator to configure this option.

To open the Mouse Mode Page, click **Configuration** \rightarrow **Mouse Mode** from the main menu. A sample screenshot of Mouse Mode Settings page is shown in the screenshot below.

MEGAR	RAC				American Megatrends	
Dashboard	FRU Information	Server Health	Configuration	Remote Control	Maintenance	🕴 root (Administrator) 🤇 Refresh 🕏 Print 🍡 Logout HELP
Mouse M Redirection co The cu Set M Set M	Mode Settings onsole mouse mode se rrent Mouse Mode ode to Absolute (Recom ode to Relative (Recom	ttings can be modifi- is ABSOLUTE. Imended when serve mended when serve	ed here. er OS is Windows) r OS is Linux)			
						Save Reset

2.6.5 NCSI

In MegaRAC GUI, this page is used to configure Network Controller Sideband Interface (NCSI) configuration settings.

To open the NCSI Page, click **Configuration** \rightarrow **NCSI** from the main menu. A sample screenshot of NCSI Settings Page is shown in the screenshot below.

MEGAF	RAC					American Megatrends
Dashboard	FRU Information	Server Health	Configuration	Remote Control	Maintenance	root (Administrator) ⊂ Refresh +0 Print / Logout HELP
NCSI Se	ttings options are to configur	e channel number a	nd package ID inform	nation for the NCSI inte	rface.	
NC SI Inte	rface	eth0	•			
Channel I	lumber	0 •				
Package	ID	0 🕶				

Save Reset

2.6.6 Network

In MegaRAC GUI, the Network Settings Page is used to configure the network settings for the available LAN channels.

To open the Network Settings Page, click **Configuration** \rightarrow **Network** from the main menu. A sample screenshot of Network Settings Page is shown in the screenshot below.

MEGARAC		Americ				
Dashboard FRU Information Serve	er Health Configuration	Remote Control	Maintenance	 € root	(Administrator) C Refresh 🕏 Print 🖙 Logou HELI	
Network Settings						
Manage network settings of the device.						
LAN Interface	eth0	*				
LAN Settings	Enable					
MAC Address	00.20 HD:53.03.03					
IPv4 Configuration						
Obtain an IP address automatically	Use DHCP					
IPv4 Address	10.60.254.73					
Subnet Mask	255.255.255.192					
Default Gateway	10.60.254.126					
IPv6 Configuration						
IPv6 Settings	Enable					
Obtain an IP address automatically	Use DHCP					
IPv6 Address						
Subnet Prefix length	64					
Default Gateway						
					Save	

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2.6.7 Network Link

In MegaRAC GUI, this page is used to configure network link configuration for available network interfaces.

To open the Network Link Page, click **Configuration** \rightarrow **Network Link** from the main menu. A sample screenshot of Network Link Configuration Page is shown in the screenshot below.

MEGA	RAC		American Megatends			
Dashboard	FRU Information	Server Health	Configuration	Remote Control	Maintenance	🗘 root (Administrator) C Refresh 🗞 Print 🍡 Logout HELP
Network Manage netw LAN Inter Auto Neg Link Spe	t Link Configu ork link settings of the d nace obtation ed	evice. evice. et 10	a0 ▼ ON © OFF 00Mbps	Y		
Duplex N	lode	Po	ill Duplex	Ŧ		Store Recen

20

2.6.8 NTP Settings

The **Network Time Protocol (NTP)** is a protocol for synchronizing the clocks of computer systems over packet-switched, variable-latency data networks. It is designed particularly to resist the effects of variable latency by using a jitter buffer.

In MegaRAC GUI, this page displays the device current date and time settings. It can be used to configure either Data & Time or NTP server settings for the device.

To open the NTP Settings Page, click **Configuration** \rightarrow **NTP** from the main menu. A sample screenshot of NTP Settings Page is shown in the screenshot below.

MEGAR	AC			American		
Dashboard	FRU Information	Server Health	Configuration	Remote Control	Maintenance	🕴 root (Administrator) 🔿 Refresh 🚳 Print 👘 Logout HELP
NTP Set	ings					
Here you can e	ither configure the NTF	e server or view and	modify the device's D	Date & Time settings.		
Date:	February	¥ 9	- 2012	v		
Time: (hh:mm:s:	s) 21	00	37			
UTC Time	zone: (GMT+/-0)	- Ho	ur(s)			
NTP Serve	er: pool.ntp.org					
🗹 Auton	natically synchronize D	ate & Time with NTP	Server			

Refresh Save Reset

2.6.9 PEF

Platform Event Filtering (PEF) provides a mechanism for configuring the BMC to take selected actions on event messages that is 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.

In MegaRAC GUI, the PEF Management is used to configure the following:

- Event Filter
- Alert Policy
- LAN Destination

To open the PEF Management Settings Page, click **Configuration** \rightarrow **PEF** from the main menu. A sample screenshot of PEF Management Page is shown in the screenshot below.

ard FRU Info				
	ormation Server Health Configuration	Remote Control Maintenance		
Manageme	ent			
page to configure	e Event Filter, Alert Policy and LAN Destination. To de	lete or modify a entry, select it in the list and pre	ess "Delete" or "Modify". To add a new entry, sel	ect an unconfigured slot and press "Add".
vent Filter	Alert Policy LAN Destination			
				Configured Event Filter count:
PEF ID 🔺	Filter Configuration →	Event Filter Action →	Event Severity 🗅	Sensor Name →
1	Enabled	[Alert]	Unspecified	Any
2	Enabled	[Alert]	Unspecified	Any
3	Enabled	[Alert]	Unspecified	Any
4	Enabled	[Alert]	Unspecified	Any
5	Enabled	[Alert]	Unspecified	Any
6	Enabled	[Alert]	Unspecified	Any
7	Enabled	[Alert]	Unspecified	Any
8	Enabled	[Alert]	Unspecified	Any
9	Enabled	[Alert]	Unspecified	Any
10	Enabled	[Alert]	Unspecified	Any
11	Enabled	[Alert]	Unspecified	Any
12	Enabled	[Alert]	Unspecified	Any
13	Enabled	[hlent]	Unspecified	Any
14	Enabled	[Alert]	Unspecified	Any
15	Enabled	IAlerti	Unspecified	Anv
16	~	~	~	~
1/	~	~	~	~
18	~	~	~	~
19	~	~	~	~
20	~	~	~	~
21	~	~	~	-
22	~	~	~	~
23	~	~	~	~
24	~	~	~	~
25	~	~	~	~
20	~	~	~	~
27	~	~	~	~
20	~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~	~
20	~	~	~	~
30				
31		~		
32				
33	~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~	~
34				
30				
30	~	~	~	~
30				
30	~		~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
	~	~	~	~

2.6.10 RADIUS

RADIUS is a modular, high performance and feature-rich RADIUS suite including server, clients, development libraries and numerous additional RADIUS related utilities.

In MegaRAC GUI, this page is used to set the RADIUS Authentication.

To open the RADIUS Settings Page, click **Configuration** \rightarrow **RADIUS** from the main menu. A sample screenshot of RADIUS Settings Page is shown in the screenshot below.

MEGA	RAC	American Megatrends				
Dashboard	FRU Information	Server Health	Configuration	Remote Control	Maintenance	root (Administrator) ⊂ Refresh
RADIUS	Settings					
Check the box	x below to enable RADIL	JS authentication and	d enter the required	information to access	he RADIUS server. Press the Save button to s	save your changes.
Port	US Authentication	1812				
Time	Out	3	seconds			
Serve	er Address					
Secr	et					

Save Reset

2.6.11 Remote Session

In MegaRAC GUI, use this page to configure virtual media configuration settings for the next redirection session. Encryption is disabled by default.

To open the Configure Remote Session Page, click **Configuration** \rightarrow **Remote Session** from the main menu. A sample screenshot of Configure Remote Session Page is shown in the screenshot below.

MEGAR	MEGARAC								America				
Deebboard	EDII Information	Server Health	Configuration	Pemote Control	Maintanance		_	_	ê root (A	iministrator)	C Refresh 🖇	🕈 Print	Logout HELD
Configu The following	re Remote Se	ssion r disable encryption o	on KVM or Media da	ta for the next redirectic	n session.								
KVM Enc	ryption	🖾 Enable											
Media En	cryption	🖾 Enable											
Virtual M	ledia Attach Mode	Auto Attach	•										
											1	Save	Reset

24

2.6.12 SMTP

Simple Mail Transfer Protocol (SMTP) is an Internet standard for electronic mail (e-mail) transmission across Internet Protocol (IP) networks.

Using the MegaRAC GUI, you can configure the SMTP settings of the device.

To open the SMTP Settings Page, click **Configuration** \rightarrow **SMTP** from the main menu. A sample screenshot of SMTP Settings Page is shown in the screenshot below.

MEGARAC		+ real (Admin	strator) C Ref	A N resh - S Prin	merica legatrenc	n is					
Dashboard FRU I	Information	Server Health	Configuration	Remote Control	Maintenance					HE	LP
SMTP Setting Manage SMTP settings Sender Address:	gs s of the device.										_
Machine Name: Primary SMTP Server Server Address:	r										
SMTP Server User Name: Password:	r requires Auth	entication									
Secondary SMTP Ser Server Address:	ver r requires Auth	entication									
Password:									Save	Reset	1

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2.6.13 SSL

The **Secure Socket Layer (SSL)** protocol was created by Netscape to ensure secure transactions between web servers and browsers. The protocol uses a third party, a **Certificate Authority (CA)**, to identify one end or both end of the transactions.

Using the MegaRAC GUI, configure SSL certificate into the BMC. Using this, the device can be accessed in a secured mode.

To open the SSL Certificate Configuration Page, click **Configuration** \rightarrow **SSL** from the main menu. There are three tabs in this page.

- **Upload SSL** option is used to upload the certificate and private key file into the BMC.
- **Generate SSL** option is used to generate the SSL certificate based on configuration details.
- View SSL option is used to view the uploaded SSL certificate in readable format.

A sample screenshot of SSL Certificate Configuration Page is shown in the screenshot below.

MEGAR	AC								4	A M	merican egatrends
Dashboard	FRU Informa	ation Server Hea	Ith Configuration	Remote Control	Maintenance			🕯 root (Admi	nistrator) C Refre	sh 🕏 Prin	Logout HELP
SSL Cert	ificate C	onfiguration									
This page is us details. View SS	sed to configure SL option is us	e SSL certificate into th ed to view the uploade	e BMC. Upload SSL optic d SSL certificate in reada	on is used to upload the ible format.	certificate and priva	te key file into the BMC	C. Generate SSL option	n is used to generate	the SSL certificate b	ased on cor	figuration
Upload	SSL	Generate SSL	View SSL								
Current	Certificate	Thu Ja	n 1 00:00:00 1970								
New SSI	L Certificate	Thu Se	1100.00.00 1270	瀏覽							
										Jpload	Cancel

2.6.14 User Management

In MegaRAC GUI, the User Management Page allows you to view the current list of user slots for the server. You can add a new user and modify or delete the existing users.

To open the User Management Page, click **Configuration** \rightarrow **Users** from the main menu. A sample screenshot of User Management Page is shown in the screenshot below.

MEGA	RAC						American Megatrends
							🕯 root (Administrator) 🗢 Refresh 🕏 Print 🎯 Logout
Dashboard			Configuration		Maintenance		
User Ma	anagement	f available users. To	delete or modify a u	user, select their name	in the list and press "Delete User" or "Modify	y User". To add a new user, s	elect an unconfigured slot and press "Add User".
							Number of configured users: 2
UserIE	D 🗅	Username 🛆		User Access		Email ID 🔺	Network Privilege
1		anonymous		Enabled		~	Administrator
2		root		Enabled		~	Administrator
3		~		~		~	~
4		~		~		~	2
5		~		~		~	~
6		~		~		~	~
7		~		~		~	*
8		~		~		~	~
9		~		2		~	<i>2</i>
10		~		~		~	~

Add User Modify User Delete User

2.6.15 Virtual Media

In MegaRAC GUI, this page is used to configure Virtual Media Devices settings. If you change the configuration of the Virtual Media Devices in this page, it show the appropriate device in the JViewer Vmedia dialog. For example, if you select two floppy devices in Configure Virtual Media Page, then in JViewer Vmedia, you can view two floppy device panel.

To open the Virtual Media Devices Page, click **Configuration** \rightarrow **Virtual Media** from the main menu. A sample screenshot of Virtual Media Devices Page is shown in the screenshot below.

MEGARAC					American Megatrends
Dashboard FRU Informatio	n Server Health	Configuration	Remote Control	Maintenance	I root (Administrator) ⊂ Refresh Ø Print Ø Logout HELP
Virtual Media Devic The following option will allow to o Floppy devices CDDVD devices Harddisk devices	es onfigure virtual media d 1 1 1	evices. • •			

Save Reset

2.7 Remote Control

The Remote Control consists of the following menu items.

- Console Redirection
- Server Power Control
- Other Control

A sample screenshot of the Remote Control menu is given below.

MEGA	RAC								4		merica	an Ids
								🕯 root (Administr	ator) Ċ Refre	sh 🚷 Prin	- 💽 Log	out
Dashboard		Server Health	Configuration		Maintenance							ELP
				Console Redirection								
				Server Power Contro	d.							
				Other Control								

2.7.1 Console Redirection

The remote console application, which is started using the WebGUI, allows you to control your server's operating system remotely, using the screen, mouse, and keyboard, and to redirect local CD/DVD, Floppy diskette and hard disk/USB thumb drives as if they were connected directly to the server.

MEGA	RAC					American Megatrends
						🕴 root (Administrator) \sub Refresh 😒 Print 🖙 Logout
Dashboard		Server Health		Remote Control	Maintenance	
Console Press the but	e Redirection	ction console and ma	anage the server rem	notely.		

Java Console

Browser Settings

For launching the KVM, pop-up block should be disabled. For Internet Explorer, enable the download file options from the settings.

Java Console

This is an OS independent plug-in which can be used in Windows as well as Linux with the help of JRE. JRE should be installed in the client's system. You can install JRE from the following link.

http://www.java.com/en/download/manual.jsp

The Console Redirection main menu consists of the following menu items.

- Video
- Keyboard
- Mouse
- Options
- Media
- Keyboard Layout

A detailed explanation of these menu items are given below.

2.7.1.1 Video



2.7.1.2 Keyboard



2.7.1.3 Mouse



2.7.1.4 Options



2.7.1.5 Media



Redirecting the Devices CD/FD/HD to host

LALT LCTRL RALT RCTRL Num Cops Scroll

Virtual Media Wizard

To add or modify a media, select and click **Virtual Media Wizard**, which pops out a box named "Virtual Media" where you can configure the media. A sample screenshot of Virtual Media Page is given below.

Viewer[10.60.254.65] - 0 fps		23 (a) -
Video Keyboard Mouse Options	Media Keyboard Layout Help Zoom Size : 100%	
Applications Places System	8 k	6:13 PM 🚯
	🛛 Virtual Media	
	Floppy Key Media1	
Computer	Floppy Image Gonnect Floppy Gonnect Floppy	
root's Home		
	CD/DVD Media1	
	ISO Image Forward Browse Connect CD/DVD	
Terminal		
T	Hard disk/USB Key Media1	
Trash	HD/USB Image Browse Connect Hard disk/USB Key	
	PhysicalDrive0-[C-D] - Fixed Drive	
	Status	
	Target Drive Connected To Read Bytes	
	Virtual Floppy 1 Not connected n/a Virtual CD 1 Not connected n/a	
	Virtual HardDisk 1 Not connected n/a Close	
Redirecting the Devices CD/FD/HD to hos	at the second	LALT LCTRL RALT RCTRL Num Caps Scroll

2.7.1.6 Keyboard Layout



A sample screenshot of the US Keyboard is given below.

2 JViewer[10:60.254.73] - 0 fps	
Video Keyboard Mogse Options Megia Keyboard Layout Help Zoom Size:100%	
Applications Places System 🛞	0 PM 🚯 📫
SoftKeyboard - Eng(US)	
Computer esc F1 F2 F3 F4 F5 F6 F7 F8 F9 F10 F11 F12 psc slk brk	
1 2 3 4 5 6 7 8 9 0 - = bksp ins hm pup nlk / ^ -	
tab q w e r t y u i o p [] \ del end pdn hm up pup	
root's Home caps a s d f g h j k i ; ent Ift rgt	
shift v v b n m , / shift * end dn pdn ent ent ent ent ent ent ent ent	
Terminal Ctrl win alt CM alt win ctrl <= v ⇒ Ins Del	
Trash	
Invoke the English(US) softkeyboard layout	LALI LETRE RALI RCTRL NUM Caps Scroll

2.7.2 Server Power Control

This page allows you to view and control the power of your server.

To open the Power Control and Status Page, click **Remote Control** \rightarrow **Server Power Control** from the main menu. A sample screenshot of Power Control and Status Page is shown in the screenshot below.

MEGARAC	American Megatrends					
Dashboard FRU Information Server Health Configuration Remote Control Maintenance	🗘 root (Administrator) C Refresh 😒 Print 📑 Logout HELP					
Power Control and Status						
The current server power status is shown below. To perform a power control operation, select one of the options below and press "Perform Action".						
Host is currently on						
Reset Server						
Power Off Server - Immediate						
Power Off Server - Orderly Shutdown						
O Power On Server						
Power Cycle Server						
O Power Button						

Perform Action

2.7.3 Other Control

Select options in the All Others Control Page to Chassis Locate LED, Clear CMOS and Local Panel Lock control.

MEGARAC					American Megatrends
Dashboard FRU Information	Server Health	Configuration	Remote Control	Maintenance	root (Administrator) C Refresh V Print C Lagour HELP
All Others Control • of • of • 15 Seconds • 08 Seconds • Avays On • Avays On • Coast Econe LED • One: CMOC Local Panet Unlocked Lock Load Panet					

2.8 Maintenance Group

This group of pages allows you to do maintenance tasks on the device. The menu contains of the following items:

- Firmware Update
- Restore Factory Defaults
- BIOS Update

MEGA	RAC					American Megatrends
Dashboard	FRU Information	Server Health	Configuration	Remote Control	Maintenance	root (Administrator) ⊂ Refresh V Print ✓ Logout HELP
					Firmware Update	
					Restore Factory Defaults	
					BIOS Update	

A detailed description is give ahead.

2.8.1 Firmware Update

In MegaRAC GUI, this wizard takes you through the process of firmware upgrade. A reset of the box will automatically follow if the upgrade is completed or cancelled. An option to preserve configuration will be presented. Enable it, if you wish to preserve configured settings through the upgrade.

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

NOTE:

The firmware upgrade process is a crucial operation. Make sure that the chances of a power or connectivity loss are minimal when performing this operation.

Once you enter into Update Mode and choose to cancel the firmware flash operation, the MegaRAC card must be reset. This means that you must close the Internet browser and log back onto the MegaRAC card before you can perform any other types of operations.

To open the Firmware Update Page, click **Maintenance** \rightarrow **Firmware Update** from the main menu. A sample screenshot of Firmware Update Page is shown in the screenshot below.



Enter Update Mode

2.8.2 Restore Factory Defaults

In MegaRAC GUI, this option is used to restore the factory defaults of the device firmware.

WARNING: Please note that after entering restore factory defaults widgets, other web pages and services will not work. All open widgets will be closed automatically. The device will reset and reboot within few minutes.

To open the Restore Factory Defaults Page, click **Maintenance** \rightarrow **Restore Factory Defaults** from the main menu. A sample screenshot of Restore Factory Defaults Page is shown in the screenshot below.

MEGA	RAC					American
Dashboard	FRII Information	Server Health	Configuration	Remote Control	Maintenance	I root (Administrator) ⊂ Refresh Ø Print → Logout HELP
Restore	Factory Defa	ults a. Press "Restore Fa	ctory" to restore the	device defaults.		
WARNING	: Please note that after e	entering restore facto	ory widgets, other we	b pages and services	will not work. All op	en widgets will be closed automatically. The device will reset and reboot within few minutes.

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2.8.3 BIOS Update

This page allows you to upgrade BIOS of the device.

To open the BIOS Update Page, click **Maintenance** \rightarrow **BIOS Update** from the main menu. A sample screenshot of BIOS Update Page is shown in the screenshot below.

MEGA	RAC					American Megatrends
						🗘 root (Administrator) 🗢 Refresh 🔅 Print 🌁 Logout
Dashboard		Server Health			Maintenance	
BIOS Up	odate					
Upgrade BIO: WARNING	S of the device. Press "E : Please note that after e	inter Update Mode" t	o put the device in up e widgets, other wet	odate mode. o pages and services w	till not work.	

Enter Update Mode

2.9 Log Out

To log out of the MegaRAC GUI, click the logout link on the top right corner of the screen.



The Log in screen will pop out.



3. BMC Port Number

This section will list a table of the BMC Port numbers.

	Web Server: 80, 443			
	KVM: 7578, 7582			
	CD Media: 5120, 5124			
BMC Port Number	FD Media: 5123, 5127			
	HD Media: 5122, 5126			
	IPMI: 623			
	UPnP Discovery: 1900, 50000			



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