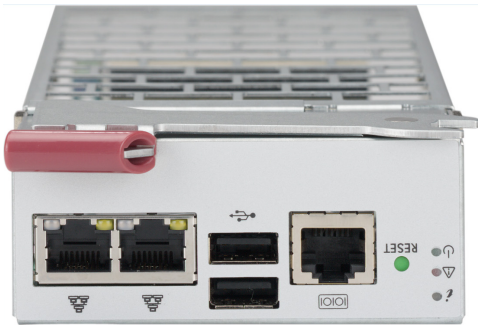
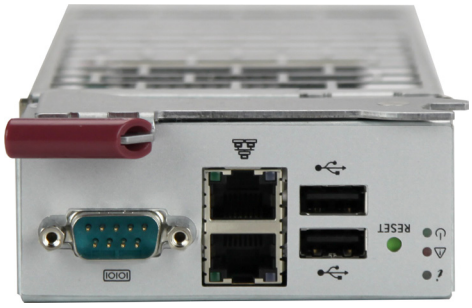
Blade CMM
MBM-CMM-FIO, MBM-CMM-001





User's Manual
Revision 1.1

The information in this User's Manual has been carefully reviewed and is believed to be accurate. The vendor assumes no responsibility for any inaccuracies that may be contained in this document, and makes no commitment to update or to keep current the information in this manual, or to notify any person or organization of the updates. Please Note: For the most up-to-date version of this manual, please see our website at www.supermicro.com.

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Manual Revision 1.1

Release Date: March 09, 2023 mk

Preface

About this Manual

This manual is written for professional system integrators and PC technicians. It provides information for the installation and use of this module. Installation and maintenance should be performed by experienced technicians only.

Please refer to the Blade CMM module specifications page on our website for updates on supported memory, processors and operating systems (www.supermicro.com).

Notes

For your system to work properly, please follow the links below to download all necessary drivers/utilities and the user's manual for your server.

- Supermicro product manuals: https://www.supermicro.com/support/manuals/
- Product drivers and utilities: https://www.supermicro.com/wdl/
- Product safety info: https://www.supermicro.com/en/about/policies/safety-information

If you have any questions, please contact our support team at: support@supermicro.com

This manual may be periodically updated without notice. Please check the Supermicro website for possible updates to the manual revision level.

Secure Data Deletion

A secure data deletion tool designed to fully erase all data from storage devices can be found on our website: https://www.supermicro.com/about/policies/disclaimer.cfm?url=/wdl/utility/Lot9_Secure_Data_Deletion_Utility/

Warnings

Special attention should be given to the following symbols used in this manual.

Warning! Indicates important information given to prevent equipment/property damage or personal injury.

Warning! Indicates high voltage may be encountered when performing a procedure.

Contents

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Chapter 1

Introduction

The Blade System Chassis Management Module (CMM) Web-based Management Utility is an interface that consolidates and simplifies system management for Supermicro systems. It aggregates and displays data from the SIMCM (the IPMI card designed for Supermicro's CMM).

The CMM Web-based Management Utility provides the following key management features:

- Enables IT administrators to view in-depth hardware configuration and status information using a single intuitive interface.
- Provides an OS-independent, remote graphical console.
- Allows remote users to map local media (removable disks and drives) or ISO images on a shared network drive to a blade server.

Supported Browsers

The following browsers have been tested for use with the Blade System CMM Web-based Management Utility. It is recommended that you use the most current revision of the browser you choose. The minimum browser revisions supported are shown below:

- Internet Explorer 7
- Firefox 2.0.0.7
- Google Chrome

1.1 Features

The following pages show the module front panel features.

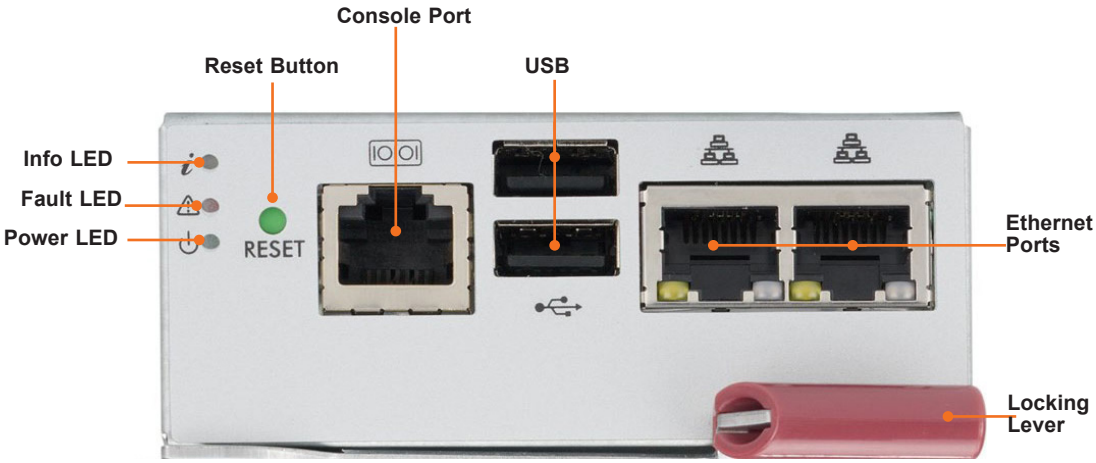


Figure 1-1. MBM-CMM-FIO Features

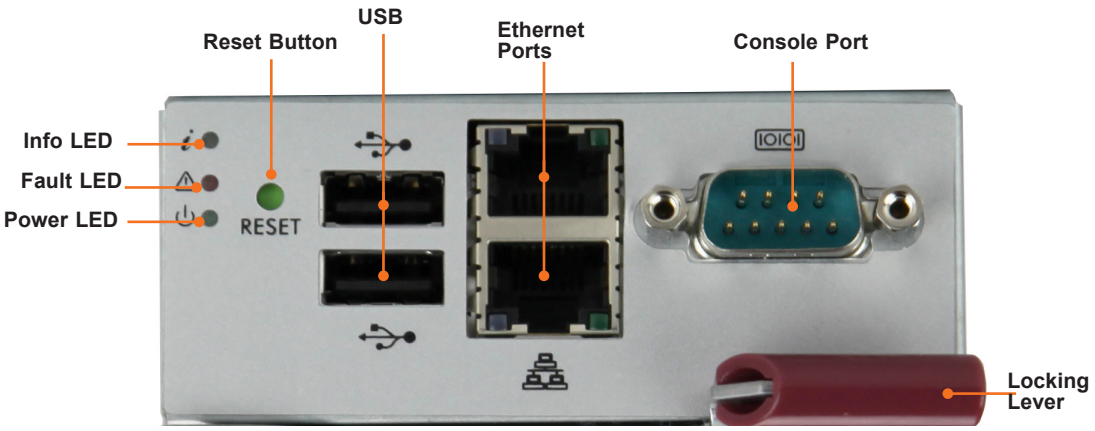


Figure 1-2. MBM-CMM-001 (EOL) Features

Features	
Item	**Description**
LEDs	See description below
Reset Button	Resets the CMM

LED Indicators		
LED	**State**	**Description**
Power LED	Green, steady on	Power is on.
Fault LED	Red, steady on	Fatal error has occured; this may be the result of a power supply eerror, a thermal error, or some other fault.
Info LED	Blue, steady on	Unit ID
	Blue, bllinking at one second	Master heartbeat, normal
	Blue, blinking faster than one second	Firmwawre updating
Ethernet LED (Activity)	Green, blinking	Network connection active
Ethernet LED (Link speed)	Amber, steady on Green, steady on Off	1G speed link 100MB speed link No link connection or slower connection

1.2 Network Connection/Login

To log into the Blade System CMM Web-based Management Utility:

1. Launch a web browser.
2. In the address field of the browser, enter the IP address that you assigned to the Blade System CMM and hit the <Enter> key. If no DHCP or static IP assign, input the default IP list in the table at next page.
3. When the browser makes contact with the Blade CMM, enter your username and password, then click Login.

   Note: Supermicro ships standard products with a unique password for the BMC ADMIN user. This password can be found on a label on the CMM chassis or the service tag. For more information, refer to our website at https://www.supermicro.com/support/BMC_Unique_Password_Guide.pdf.
4. The Web-based Management Utility Home Page will then display as shown in Figure 1-6.

1.3 Defaults

Restoring Factory Default

Press and Hold the reset hole in the back of the CMM module for 5 seconds. When the LED indicator quick flashes release the button. This will restore the CMM to factory default.

Restoring All Blade BMC/IPMI to Default setting

Press and hold the reset hole in the back of the CMM module until the LED indicator flashes faster and then changes to a solid light. This will restore the BMC/IPMI of all blade servers to the default setting.

Address Defaults

This table shows the default addresses that are initially set for the CMM. Afterwards, you can change these values within the program (see Chapter 4).

Address Defaults	
Default	**Description**
Default IP Address	https://192.168.100.100
Default Gateway Address	0.0.0.0
Default Subnet Mask	255.255.255.0

1.4 Setting up the CMM Using the Serial Console

This section covers connecting the CMM serial console to the system and the serial port allocation on the CMM.

Setting Up the CMM Using Serial Console

1. Connect to the client computer using the serial port connection.

Cables	
Model	**Cables**
MBM-CMM-FIO	DB9 to RJ45
MBM-CMM-001	DB9 to DB9

2. Open the Serial Terminal (using Putty, Hyper Terminal, etc.) and enter the following settings.

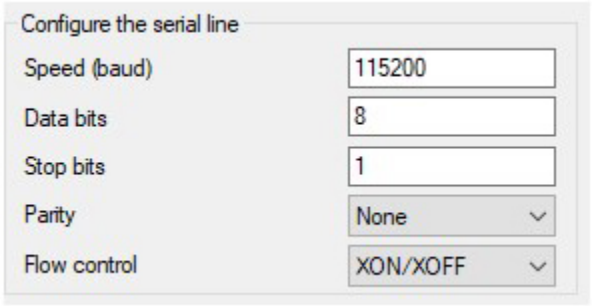


Figure 1-4. Terminal Settings

Command List

A list of CMM commands to help setup the CMM follows.

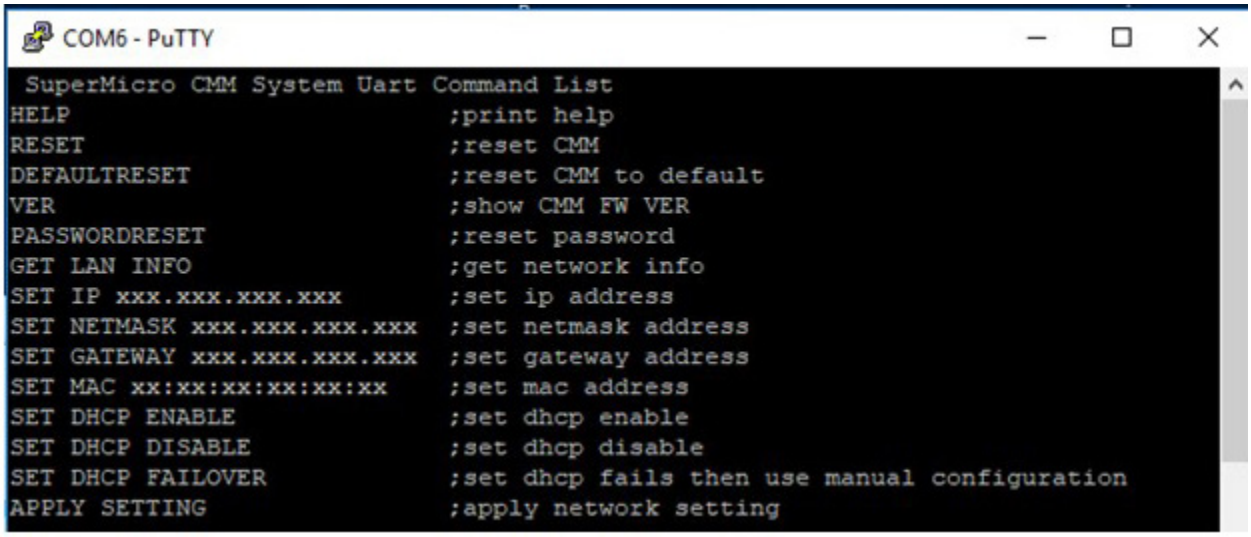


Figure 1-5. Command List

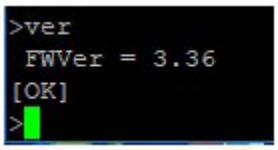
Command List	
Command	**Descriptioni**
HELP	;print help
RESET	;reset CMM
DEFAULTRESET	;reset CMM to default
VER	;show CMM FW VER
PASSWORDRESET	;reset password
GET LAN INFO	;get network info
SET IP xxx.xxx.xxx.xxx	;set ip address
SET NETMASK xxx.xxx.xxx.xxx	;set netmask address
SET GATEWAY xxx.xxx.xxx.xxx	;set gateway address
SET MAC xx:xx:xx:xx:xx:xx	;set mac address
SET DHCP ENABLE	;set dhcp enable
SET DHCP DISABLE	;set dhcp disable
SET DHCP FAILOVER	;set dhcp fails then use manual configuration
APPLY SETTING	;apply network setting

All CMM SET commands must be followed with the APPLY SETTING command to save and then apply the changes, as in this example.

>SET IP 192.168.22.101

>APPLY SETTING

Below is an example of Version and Get LAN commands.



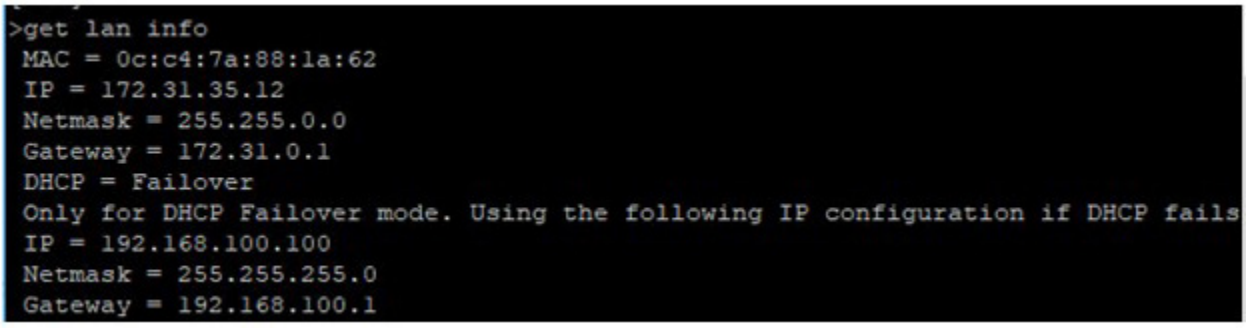


Figure 1-6. Example Command

1.5 Page Elements and Controls

This figure displays a Web-based Management Utility Home page elements and its controls.

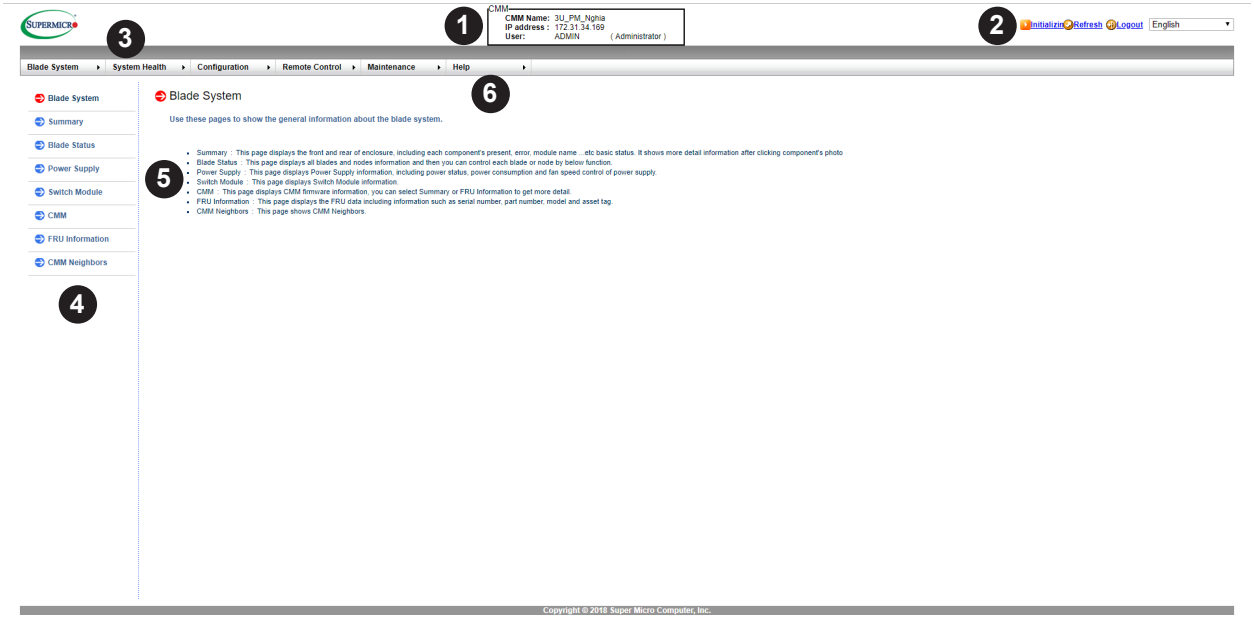


Figure 1-7. Home Page

Home Page Elements and Controls		
Item	**Name**	**Description**
1	Host Identification	This displays the host identification information including host server IP address and user ID.
2	Page Controls	Control links for page refresh and logout are found here in the upper right corner of the page. Additionally, there is a Language drop-down list box for selecting the language used.
3	Menu Bar	This menu bar contains control buttons for the CMM Web-based Management Utility's menus. Clicking on a button brings up the summary page for that menu, plus the menu items listed in the MENU LIST pane on the left. Also placing the cursor over these buttons brings up a drop-down list of all the menu items for that menu that allow you to select one of them.
4	Menu List Pane	This is a list of links for each menu item from a selected menu from the MENU BAR. Clicking on one of these links brings up the control pane for that menu item and its controls.
5	Control Pane	This pane controls for the menu item selected from the menu bar. You can use these controls to configure and control blade modules, other equipment or services for your CMM.
6	Help Display Box	This menu is actually a button that activates help information for the page you have selected. To activate help, press the Help button to toggle on or off the Help Display box.

Main Menu Buttons

The buttons in the table below cover the main functions of CMM Web-based Management Utility. Clicking on an button will reveal a menu of related functions that you can select. Clicking on a button will bring up a summary page for that menu with all the menu items shown in the right pane of the page. These you click on to go their pages.

Main Menu Buttons

Menu Buttons	Description
Blade System	These pages contains general information about the blade system.
System Health	These pages shows you data related to the server's health, such as sensor readings and the event log.
Configuration	Use these pages to configure various settings, such as alerts, users, or network etc.
Remote Control	These pages allows you to perform various remote operations on the server, such as launching the remote console.
Maintenance	Use these pages to maintain the IPMI device, such as update firmware or reset the IPMI device.
Help	This button toggles on or off the HELP DISPLAY box on the page.

CMM Default Settings

The table belows shows default settings for the CMM.

CMM Default Settings

Web Page	Subitem	Value	Default Value
Main Page		English, Japanese, Simple Chinese	English
Blade Status	PwrFail Policy	PowerOff, Throttle, Performance	Throttle
	Pwr Capping	Read Only, Disabled, 90%, 80%, 70%, 60%, 50%	Read Only
	ACLost Policy	PowerOff, PowerOn, LastState	LastState
Power Supply	Redundancy Option	Max Power, Redundancy N+1, Redundancy N+N	Max Power
	Fan Control Option	Auto Control, User Control	Auto Control
CMM	CMM Name	Standard text format	Blank
Event Log - Advanced Settings	Enable AC Power On Event Log	Checked(Enable advance log)/unchecked(disable advance log)	Checked
Alerts	Define event alert rule	Trigger event alert on severity level, destination host, Email server Address, subject of the message, and body message of the email.	None
Date and Time	Time Update Mode	NTP, Local, Blade System	Local
LDAP	Enable LDAP Authentication	Checked(Enable)/unchecked(Disable)	Unchecked
Active Directory - Advanced Settings	Enable Active Directory Authentication	Checked(Enable)/unchecked(Disable)	Unchecked
Active Directory	Add, Modify, and Delete AD Group name and domain	Edit Group name, group Domain, and privilege for individual group ID	None
RADIUS	Enable RADIUS	Checked(Enable)/unchecked(Disable)	Unchecked

CMM Default Settings			
CMM Network	Hostname	standard test format	Blank
	Obtain an IP address automatically(use DHCP mode)	Checked(Enable)/unchecked(Disable)	Unchecked
	Use the following IP address(use Static mode)	Checked(Enable)/unchecked(Disable)	Unchecked
	Use the following IP address when DHCP fails(use Static mode when DHCP fails)	Checked(Enable)/unchecked(Disable)	Checked
	IPv4 Setting when DHCP fails	Enable when "Use the following IP address when DHCP fails(use Static mode when DHCP fails)" checked	Enabled
	IP Address	Standard IPv4 format xxx.xxx.xxx.xxx	192.168.100.100
	Subnet Mask	Standard IPv4 format xxx.xxx.xxx.xxx	255.255.255.0
	Gateway	Standard IPv4 format xxx.xxx.xxx.xxx	192.168.100.1
	DNS Server IP	Standard IPv4 format xxx.xxx.xxx.xxx	10.2.1.205(?)
	IPv6 Address	Standard IPv6 format	Blank
	Auto Configuration	Checked(Enable)/unchecked(Disable)	Checked
	DHCPv6 Stateless	Checked(Enable)/unchecked(Disable)	Checked
	DHCPv6 Stateful	Checked(Enable)/unchecked(Disable)	Unchecked
	VLAN	enable, disable	disable
	VLAN ID	0-4094	0
	RMCP Port	0-65535	623
Blade IPMI Network	Obtain an IP address automatically(use DHCP mode)	Checked(Enable)/unchecked(Disable)	Unchecked
	Use the following IP address(use Static mode)	Checked(Enable)/unchecked(Disable)	Unchecked
	Apply above setting to all blades and EFFECTIVE all the time. (always autoly apply to the Blades which are re-plugged in)	Checked(Enable)/unchecked(Disable)	Unchecked
Dynamic DNS	Dynamic Update Enable	Checked(Enable)/unchecked(Disable)	Unchecked
	Dynamic Update Disable	Checked(Enable)/unchecked(Disable)	Unchecked
	Dynamic DNS Server IP	Standard IPv4 format xxx.xxx.xxx.xxx	Blank
	BMC Hostname	Standard text format	Blank
	Enable TSIG Authentication	Checked(Enable)/unchecked(Disable)	Unchecked

CMM Default Settings			
SMTP	SMTP SSL Auth	Checked(Enable)/unchecked(Disable)	Unchecked
	SMTP Server	Standard IPv4 format xxx.xxx.xxx.xxx	Blank
	SMTP port Number	0 - 65535	587
	SMTP User Name	Standard test format	Blank
	SMTP Password	Test, number, special charactor	Blank
	Sender's Address	Standard IPv4 format xxx.xxx.xxx.xxx	NULL
Users	Anonymous	Role access privileges: Administrator, Operator, User, No Access.	Reserved
	ADMIN	Role access privileges: Administrator, Operator, User, No Access.	ADMINISTRATOR
Port	Web port	Checked(Enable)/unchecked(Disable), 0 - 65535	Checked, 80
	Web SSL port	Checked(Enable)/unchecked(Disable), 0 - 65535	Checked, 443
	IKVM server port	Checked(Enable)/unchecked(Disable), 0 - 65535	Checked, 5900
	Virtual media port	Checked(Enable)/unchecked(Disable), 0 - 65535	Checked, 623
	SSH port	Checked(Enable)/unchecked(Disable), 0 - 65535	Checked, 22
	Wsman port	Checked(Enable)/unchecked(Disable), 0 - 65535	Unchecked, 5985
	SNMP port	Checked(Enable)/unchecked(Disable), 0 - 65535	Unchecked, 161
	SYSLOG port	Checked(Enable)/unchecked(Disable), 0 - 65535	Unchecked, 514
	SSL Redirection	Checked(Enable)/unchecked(Disable), 0 - 65535	Checked
IP Access Control	Enable IP Access Control	Checked(Enable)/unchecked(Disable)	Unchecked
SNMP	Enable SNMP	Checked(Enable)/unchecked(Disable)	Unchecked
Web Session	Session timeout value	0, 1~30	0
SMC RAKP	Current RAKP status	Off, On	Off
Auto Update Slave CMM	Auto Update Status	This mid-plane does not support redundant CMM, Disabled, Enabled(Update if master CMM firmware is newer than slave), Enabled(Update if master and slave CMM firmware are different)	This mid-plane does not support redundant CMM or Disabled
Syslog Setting	Enable Syslog	Checked(Enable)/unchecked(Disable)	Unchecked
System Event log	Enable System Event Log	Checked(Enable)/unchecked(Disable)	Checked

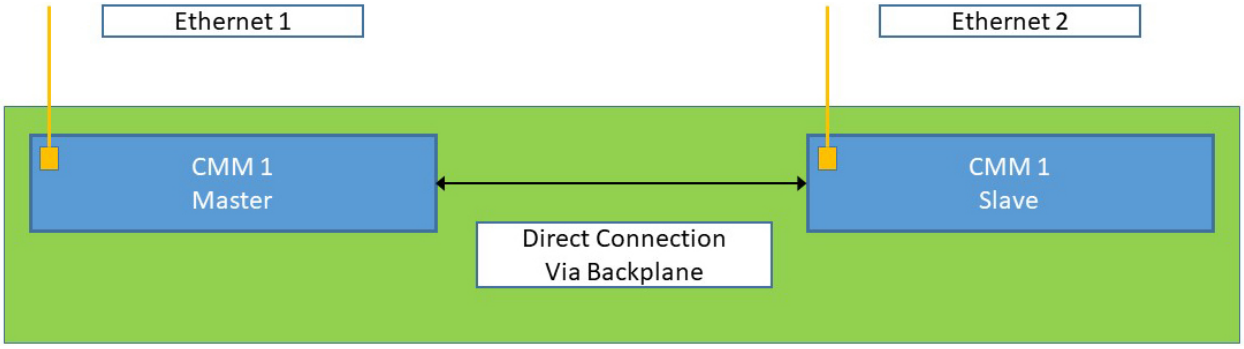
CMM Functions

The table below provides CMM functions.

CMM Functions							
Feature	**Feature Name**	**CMM CLI Command**	**CMM WEB Interface**	**CMM Redfish**	**Blade BMC/ IPMI CLI**	**Blade BMC/ IPMI WEB**	**Blade BMC/ IPMI REDfish**
Standard	Power Reset on Indifividual Blade Node	Y	Y	Y	Y	Y	Y
Standard	Hardware inventory, processor, memory, serial number, MACs for all NICs	Y to read FRU of CMM, Switch, PSU, Fan, mid-plane	Y to get all	N	Y	Y	Y
Standard	Remote Console IP VGA	N	Y	N	Y	Y	N
Standard	SEL logs, decoded, and they have to wrap, never lock.	Y	Y	Y	Y	Y	Y
Standard	Identifier LED (UID lamp)	Y	Y	Y	Y	Y	Y
Standard	Auth with delay protection (delay after bad password x times)	Y	Y	Y	Y	Y	Y
Standard	Current temp and alert/fail limits	Y	Y	Y	Y	Y	Y
Standard	CLI access to some of the commands to OOB	Y	Y	Y	Y	Y	Y
Standard	Extraction of SEL/BMC logs via command, remotely programmatically	Y	Y	Y	Y	Y	Y
Standard	OOB access and control usage	N	Y	Y	N	Y	Y
Advanced	ASR (watchdog)	N	N	N	Y	N	N
Advanced	Last Boot Sequence	N	N	N	Y	N	N
Advanced	Remote Console Recording	N	N	N	N	Y	N
Advanced	SEL/BMC logs with enough depth (lifetime) *512entires	Y	Y	Y	Y	Y	Y
Advanced	Power measurement and across time	N	Y	N	N	Y	N
Advanced	Virtual Media	N	Y	N	N	Y	N
Advanced	Auth with LDAP/AD support, including groups	Y	Y	Y	Y	Y	Y

Redundant CMM

Redundant CMM		
CMM Info	**MBM-CMM-001 Firmware:3.23**	**Note**: Only available on SBE-820J, SBE-610J, and MBE-628E.



Redundant CMM				
Mid-plane	**BPN-SB-J820 /BPN-SB-J610 /BPN-MB-E628B /BPN-MB-E628**	**Operation Period**	**System Log**	**Comment**
Sync method				
1	Once setup, Master CMM will clone all firmware and configuration to slave CMM	Instant	YES	Enable auto update Slave CMM
2	All changes will sync to slave CMM once applied	Instant	YES	
3	CMM1 is design to be load as master CMM when whole system power up	Instant	NO	
4	Slave CMM won't show configuration on console	N/A	NO	
5	Slave CMM will stay in standard mode and can't be access from outside	N/A	NO	
Failover Scenario				
1	The CMM 1 (master) will failover to CMM 2 (slave) if Ethernet 1 disconnect	Instant	YES	Require WEB GUI session re-login
2	The CMM 1 (master) will failover to CMM 2 (slave) if CMM master removed or not functional	Instant	YES	Require WEB GUI session re-login
3	Once CMM 2 become master, it will not switchback to CMM 1 even CMM 1 got reconnect/replace		NO	When slave become master, the network configuration will copy over and the network configuration stay in static mode.
4	The replaced CMM will become slave and sync firmware and configuration from master CMM	> 10 mins	NO	Enable auto update slave CMM/Default disabled
CMM physical Reset button behavior				
1	Click and hold the reset button until the indicator light flash faster and then release the button	5 seconds	NO	Reset default CMM setting on both Master and Slave CMM
2	Click and hold the reset button until the indicator light flash faster and change to solid light, then release button	10 seconds	NO	Reset default to all Blades BMC/IPMI only

Chapter 2

Blade System Pages

The BLADE SYSTEM menu allows you to access and configure the various blades in your system. Clicking the BLADE SYSTEM icon allows you to access the following pages through its sub-menus:

- Blade System Summary Page
- Blade Status Page
- Power Supply Page
- Switch Module Page
- CMM Page
- FRU Information
- CMM Neighbors

2.1 Blade System Page

This page (Figure 2-1) displays a summary status of all blades and nodes, switch modules and power supplies. The CONTROL pane displays a column for each module's error status. Press the REFRESH button to refresh the view on this page.

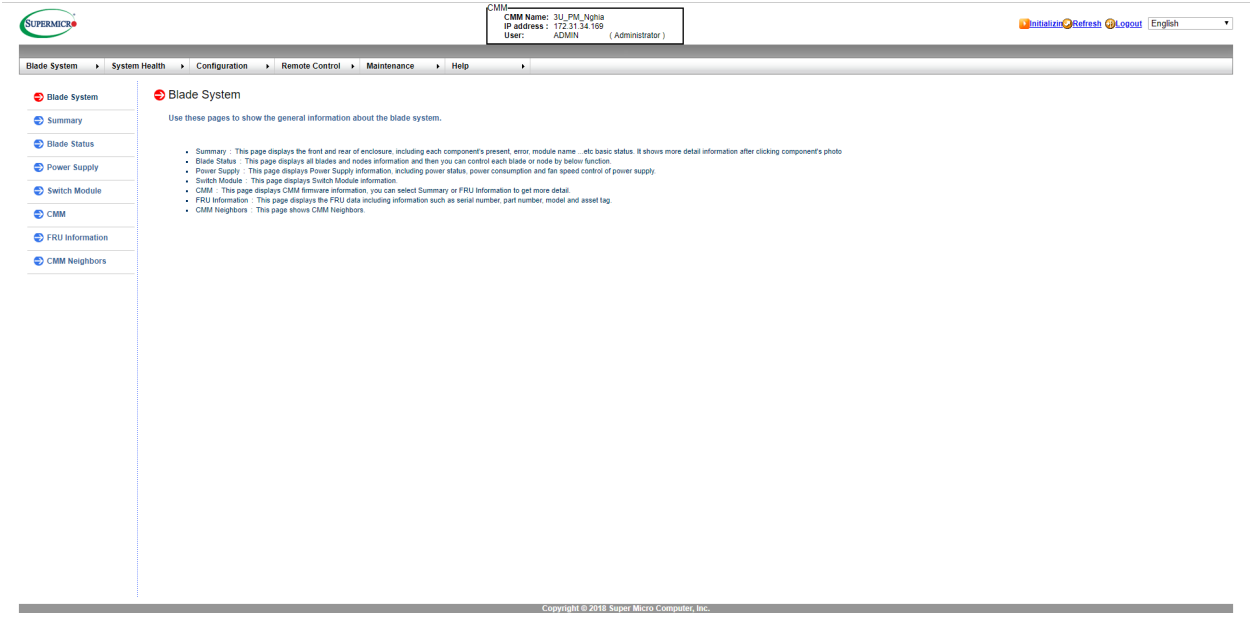


Figure 2-1. Blade System Summary Page

2.2 Summary Page

The SUMMARY page (Figure 2-2) displays a photo graphic of the front and rear of the blade enclosure, including each of the components that are present, errors, module names and the basic status of the components. Clicking on a component in the front or rear photo brings up a table with a summary of details on that component to the right of the page. Controls for REFRESH and AUTO REFRESH are located at the bottom of the page.

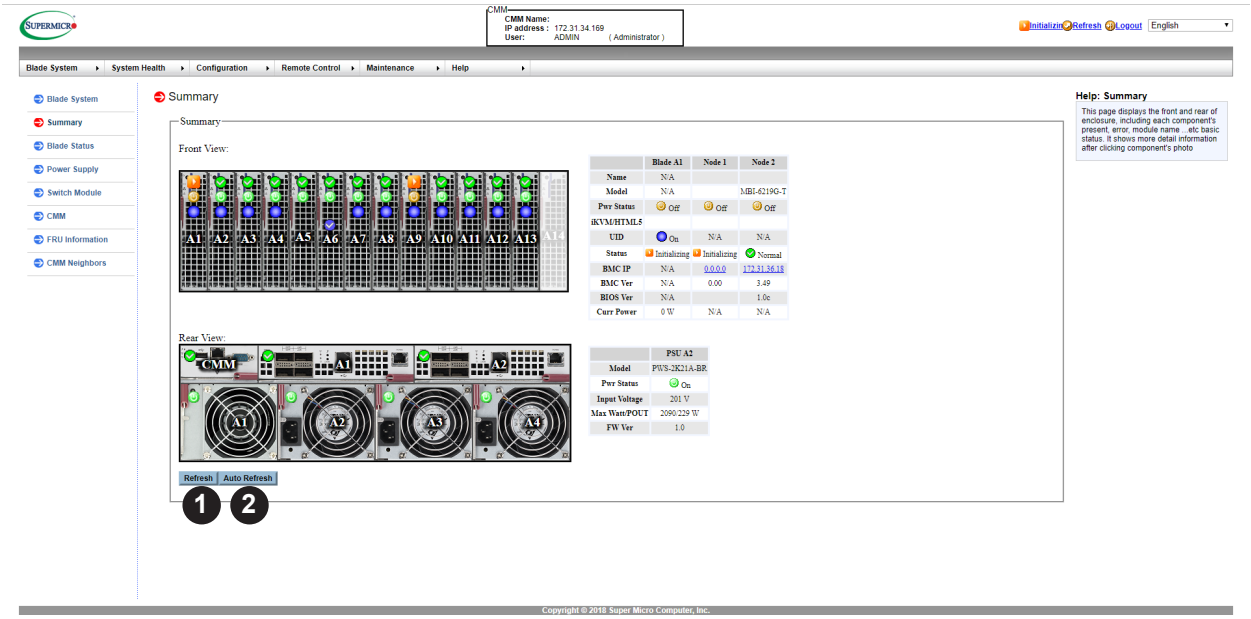


Figure 2-2. Summary Page

Summary Page Controls		
Item	**Control Name**	**Description**
1	Refresh Button	Pressing this button will refresh the screen to accurately show the new status of all blade modules or nodes in the system.
2	Auto Refresh Button	Pressing this button will automatically refresh the screen to accurately show the new status of all blade modules or nodes in the system. This refresh will automatically continue until you press the button again (labeled STOP REFRESH).

2.3 Blade Status Page

The BLADE STATUS page allows you to check and set up the status of all the blade modules in the system and displays information in columns of a table including BLADE, NAME, MODEL, POWER STATUS, MAXIMUM POWER, KVM, UID, ERROR, BMC IP, BMC VERSION, POWER FAIL POLICY and AC LOST POLICY.

Function buttons at the top of the table include POWER ON/OFF, POWER CYCLE, POWER RESET, GRACEFUL SHUTDOWN, AC CYCLE, POWER FAIL POLICY, AC LOST POLICY and REFRESH of the blade module. Selecting a blade module or node from the blade table, and then pushing a function button at the top of the table changes the status and functions of the blade module. There are also control buttons and drop-down list box controls within the table for changing status on a blade module as well.

The command functions on the page and in some of the columns allow you to perform various functions, as shown in Figure 2-3 and described in the table below.

To perform a function, first click the box(es) next to the blade(s) or node(s) you wish to issue a command to and then click the command button on top of the table. You can also click on any of the individual nodes listed to bring up additional pages with details about that particular node's status, and the controls for setting them (see "Node Status Page" for details).

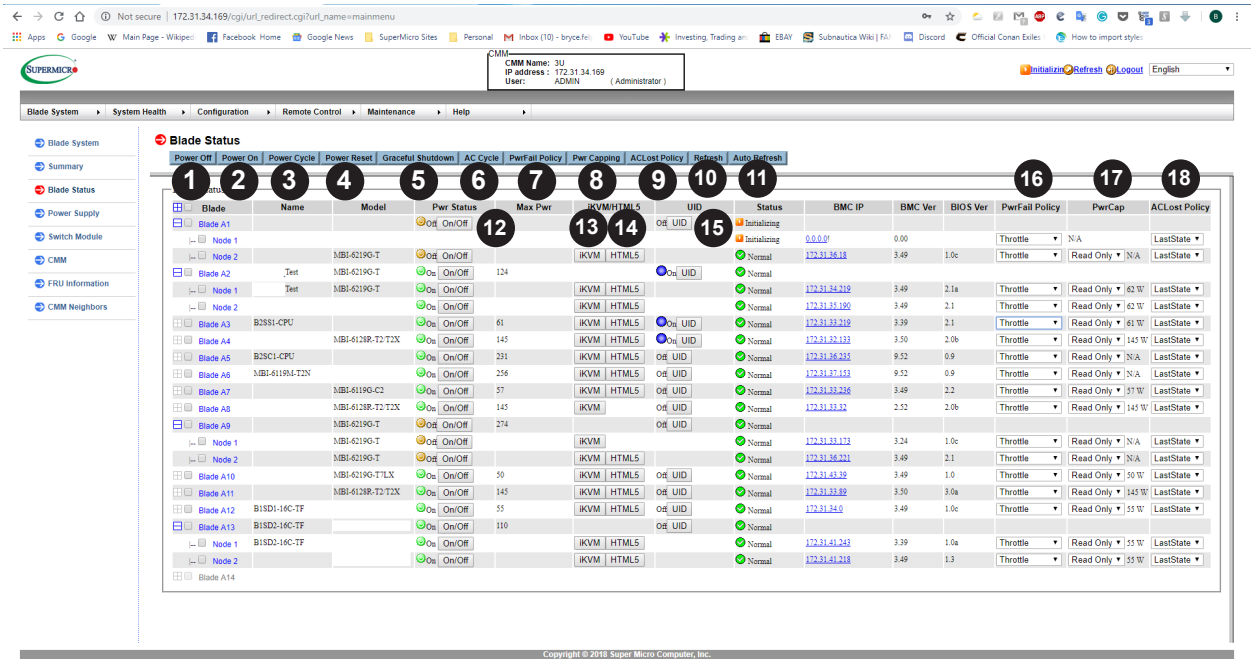


Figure 2-3. Blade Status Page

Blade Status Page Controls		
Item	**Control Name**	**Description**
1	Power Off Button	Checking the check box next to a node or blade module and then pressing this button will power off the selected node or blade system.
2	Power On Button	Checking the check box next to a node or blade module and then pressing this button will power on the selected node or blade system.
3	Power Cycle Button	Checking the check box next to a node or blade module and then pressing this button will initiate the power cycle for the selected node or blade system.
4	Power Reset Button	Checking the check box next to a node or blade module and then pressing this button will reset the selected node or blade system.
5	Graceful Shutdown Button	Checking the check box next to a node or blade module and then pressing this button will initiate a graceful shutdown for the selected node or blade system.
6	AC Cycle Button	Checking the check box next to a node or blade module and then pressing this button will initiate the AC cycle for the selected node or blade system.
7	Power Fail Policy Button	Checking the check box next to a node or blade module, and then selecting an option from the drop-down list box for the item and then pressing this button will set the selected power fail policy for the selected node or blade system.
8	Pwr Capping Button	Checking this button for a selected node or blade module sets power capping for that node or blade by bringing up a confirmation pop-up.
9	AC Lost Policy Button	Checking the button next to a node or blade module, and then selecting an option from the drop-down list box for the item and then pressing this button will set the selected AC lost policy for the selected node or blade system.
10	Refresh Button	Pressing this button will refresh the screen to accurately show the new status of all blade modules or nodes in the system.
11	Auto Refresh Button	Pressing this button will automatically refresh the screen to accurately show the new status of all blade modules or nodes in the system. This refresh will automatically continue until you press the button again (labeled Stop Refresh).
12	Pwr Status On/Off Button	The button in this column allows you to power on or off a node or blade in the selected row.
13	KVM Button	Pressing the button in this column for a selected blade or node starts up a KVM window for viewing that blade or node.
14	HTML5 Button	Pressing the button in this column for a selected blade or node starts up a HTML web page window for viewing that blade or node.
15	UID Button	Pressing the button in this column for a selected blade lights up the UID for that blade.
16	Pwr Fail Policy	This column contains a pull-down menu for selecting the Power Fail Policy for the selected blade or node. Options include Throttle, PowerOff or Performance.
17	Pwr Cap	This column contains a pull-down menu for selecting the Power Cap for the selected blade or node. Options include Read Only, Disabled, and percentage values from 50% to 90%.
18	AC Lost Policy	This column contains a pull-down menu for selecting the AC Lost Policy for the selected blade or node. Options include PowerOff, PowerON and LastState.

Note: If there is mismatch between CMM and BMC firmware revision, the column 'BMC Ver' will displays exclamation mark '!'. Please consult provider to update CMM or BMC firmware.

Blade Node Sub-pages

The BLADE NODE SUB-PAGES can be accessed through the BLADE STATUS page. They can be accessed by doing the following:

1. Select the BLADE STATUS link from either the menu bar (BLADE SYSTEM>BLADE STATUS) or through the links on the right side of the screen.
2. Select the blade to view from the list of blades in the BLADE STATUS page. The blade information pane will appear on the right.

The following sub-pages will appear in the window pane on the right:

- Summary
- Sensor Reading
- Network Config
- Health Event Log
- Maintenance Event Log
- FRU Information
- Date & Time
- Power/Temp Record
- Node Product Key
- HW Information
- Reset Default Configuration

Summary Pane

The SUMMARY pane (Figure 2-4) contains summary information for a selected blade module and controls for changing parameters for the blade module. See the table below for details on these controls.

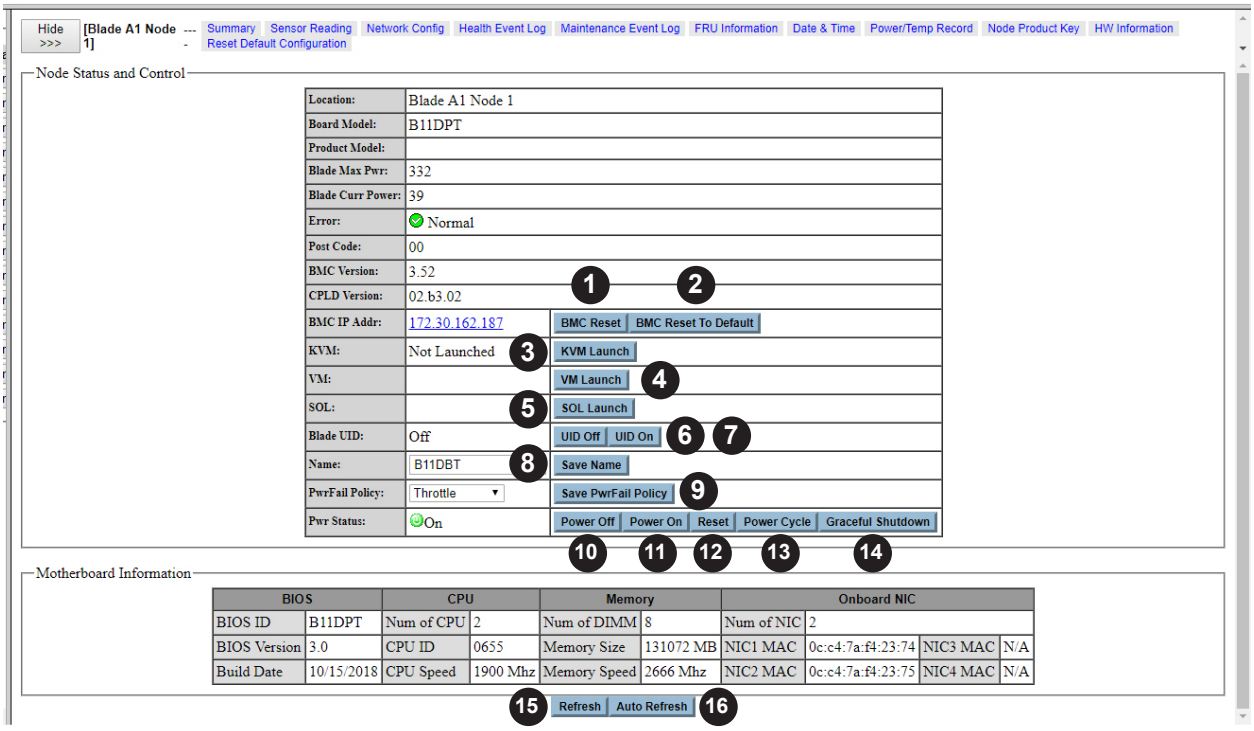


Figure 2-4. Summary Pane

Summary Pane Controls		
Item	**Control Name**	**Description**
1	BMC Reset	Pressing this button resets the BMC address.
2	BMC Reset to Default	Pressing this button resets the BMC address to default.
3	KVM Launch	Pressing this button launches the KVM window.
4	VM Launch	Pressing this button launches a VM window.
5	SOL Launch	Pressing this button launches a SOL window.
6	UID Off	Pressing this button turns off the blade's UID light.
7	UID On	Pressing this button turns on the blade's UID light.
8	Save Name	Entering a name in the field and pressing this button assigns a name or the blade module in the system.
9	Save PwrFail Policy	This button saves the Power Fail Policy selected from the drop-down list box to the right.
10	Power On	Pressing this button will power on the blade.
11	Power Off	Pressing this button will power off the blade.
12	Reset	Pressing this button resets to default parameters.
13	Power Cycle	Press this button to set the power cycle.
14	Graceful Shutdown	Pressing this button initiates a graceful shutdown of the blade module.
15	Refresh	Push this button to refresh the screen with the latest data.
16	Auto Refresh	Push this button to automatically refresh the screen periodically with the latest data.

Sensor Reading Pane

The SENSOR READING pane (Figure 2-5) contains sensor readings from several types of sensors in the blade module. See the table below for details on this pane's controls.

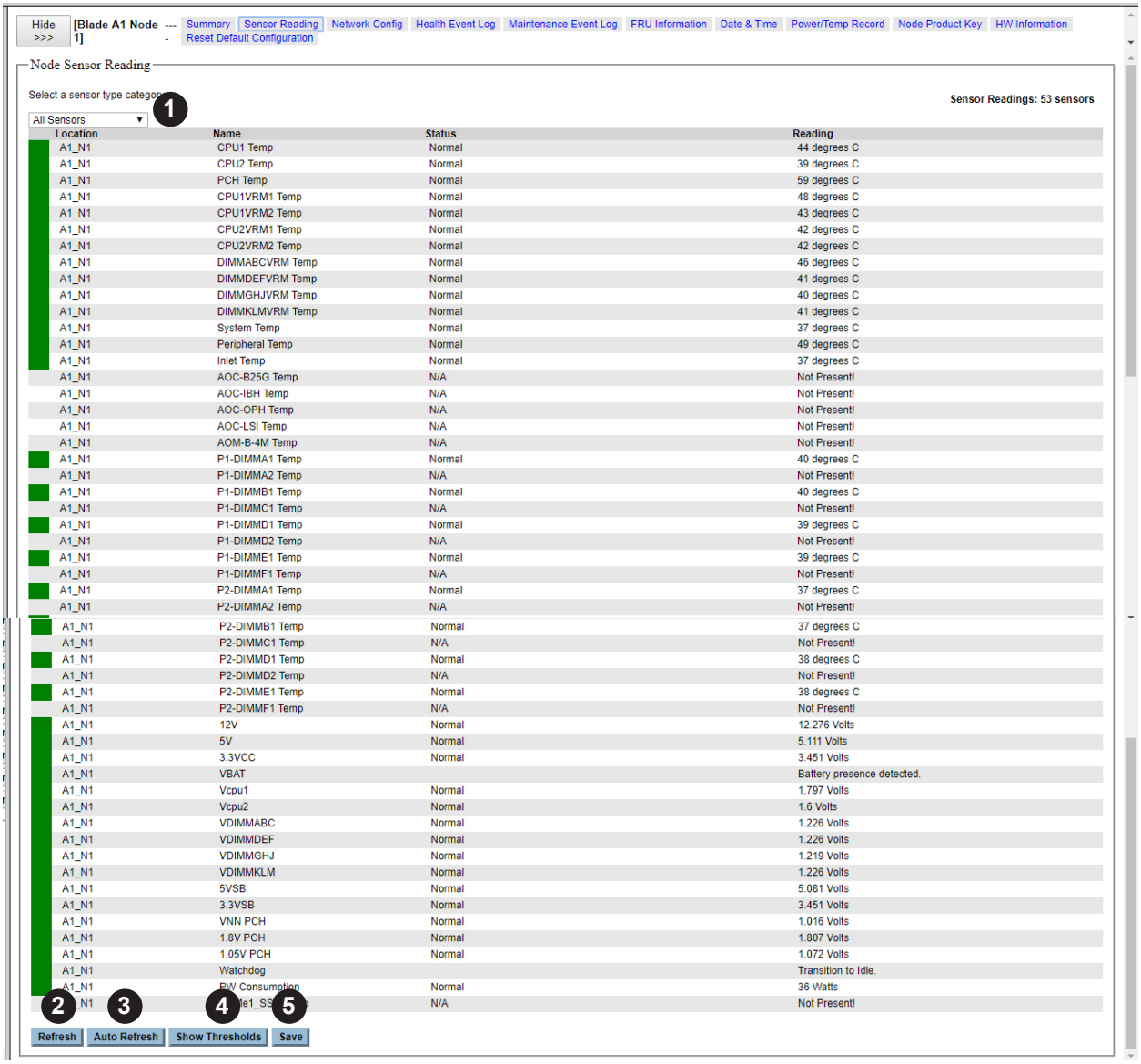


Figure 2-5. Sensor Reading Pane

Sensor Reading Pane Controls		
Item	**Control Name**	**Description**
1	Sensor Type Drop-down Menu	Use this drop-down list box to select the type of sensor to display in the pane's table.
2	Refresh Button	Push this button to refresh the screen with the latest data.
3	Auto Refresh Button	Push this button to automatically refresh the screen periodically with the latest data.
4	Show Thresholds Button	Pressing this button shows the thresholds for the selected sensor type.
5	Save Button	You may press this button to save your data to an Excel spreadsheet file on your system at a chosen location.

Network Config Pane

The NETWORK CONFIG pane (Figure 2-6) contains network configuration controls for the blade module. See the table below for details on this pane's controls.

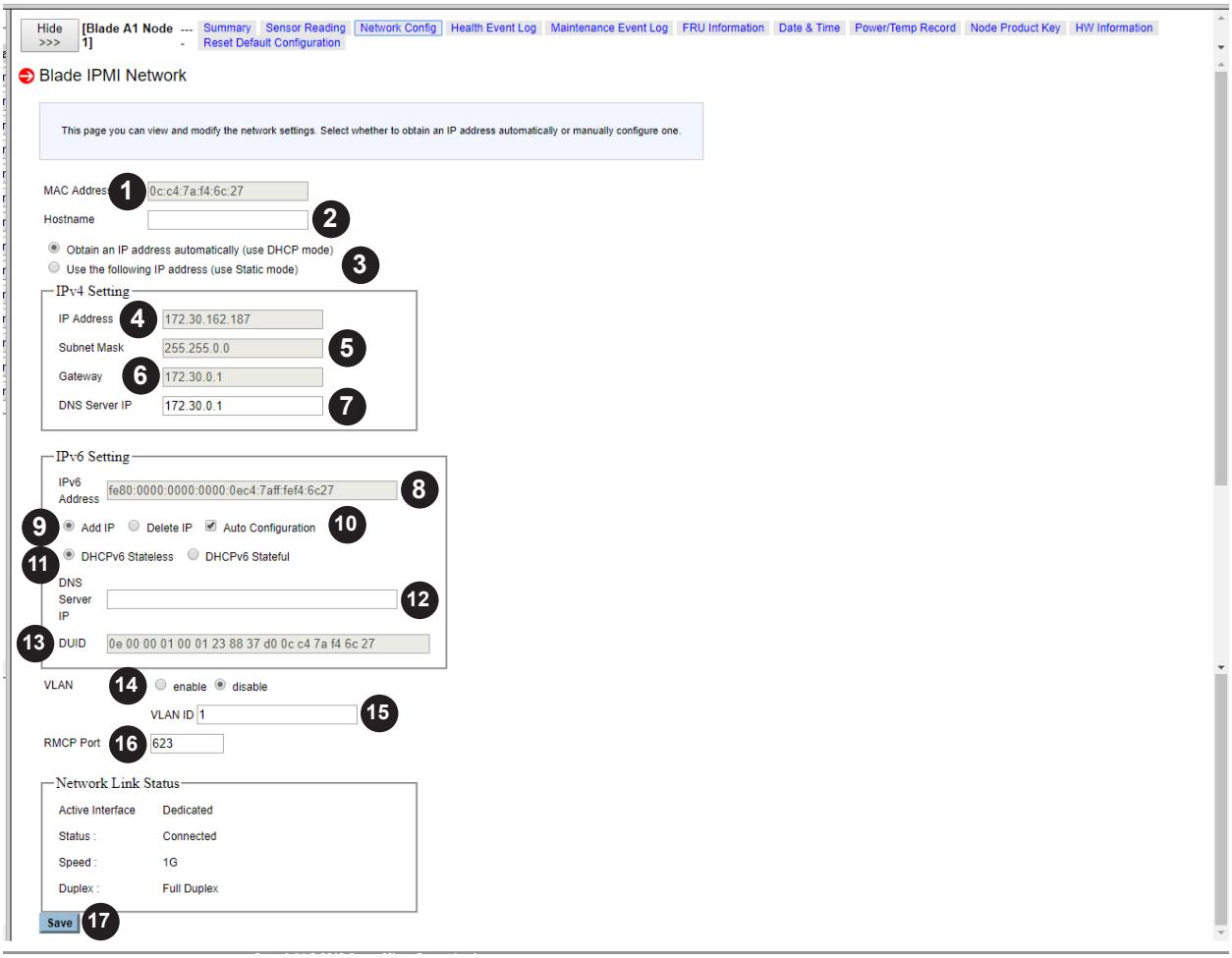


Figure 2-6. Network Config Pane

Network Config Pane Controls		
Item	**Control Name**	**Description**
1	MAC Address	This field displays the assigned IPMI MAC address (Read Only) or the assigned IPMI MAC address (Read Only).
2	Hostname field	This field shows the customized hostname for each node
3	DHCP and Static option buttons	Use these option buttons to select either a DHCP or Static IP Address modes.
4	IP(v4) Address	This field shows the IPv4 address assigned in DHPC Mode. You can instead enter the static IP address when in static mode.
5	Subnet Mask	This field shows the subnet mask assigned in DHPC Mode. You can instead enter the static subnet mask when in static mode.
6	Gateway	This field shows the gateway assigned in DHPC Mode. You can instead enter the static gateway when in static mode.
7	DNS Server IP	This shows the DNS server IP either assigned from DHCP or you can manually type in the IP. The IP is entered here in IPv4 format.
8	IPv6 Address	This field shows the IPv6 address assigned in DHPC Mode. You can instead enter the static IP when in static mode.
9	Add/Delete IP option buttons	These options buttons allow you choose to either delete or add an an IP address. • Add IP - When selected, the IP address in IPv6 Address field will be applied. • Delete IP - When selected, the IP address in IPv6 Address field will be deleted.
10	Auto Configuration check box	When checked, BMC will calculate a stateless auto-configuration address based on the prefix information from RA.
11	DHCPv6 Stateless/ DHCPv6 Stateful option buttons	These options buttons allow you to choose either a stateful or stateless DHCPv6 address. • DHCPv6 stateless - When selected, BMC will NOT apply the prefix/IPv6 address from DHCPv6 server. • DHCPv6 Stateful - When selected, BMC will apply the prefix/IPv6 address from DHCPv6 server.
12	DNS Server IP field	The DNS server IP either assigns from the DHCP or the manual type in the IP in IPv6 format.
13	DUID	This field displays the device unique ID (Read Only).
14	VLAN Enable/Disable option buttons	Choose one of these option buttons to enable or disable VLAN
15	VLAN ID field	Enter your customized VLAN ID in this field once VLAN is enabled.
16	RMCP Port field	The DNS server IP in this field is either assigned from DHCP or manual type in the IP. This IP is in Pv4 format.
17	Save button	Press this button to permanently save the configuration on this page.

Health Event Log Pane

The HEALTH EVENT LOG pane (Figure 2-7) contains a log of health events for the blade module. Clicking on the HERE link brings up the HEALTH EVENT LOG - ADVANCED SETTINGS pane (Figure 2-8) with more advanced health event log controls. See the tables below for details on these pane's controls.

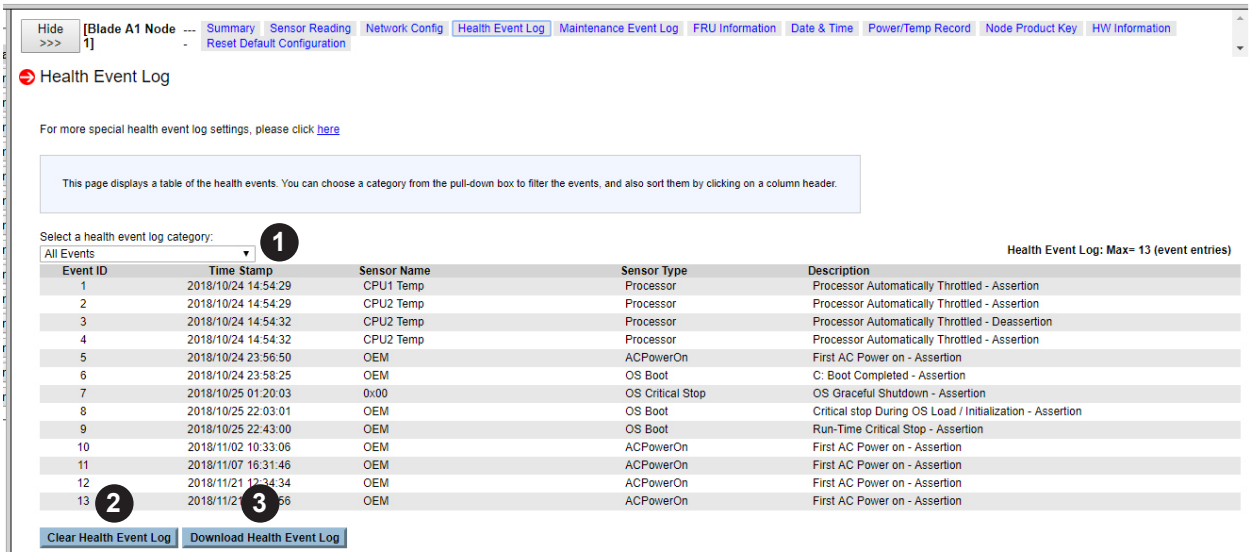


Figure 2-7. Health Event Log Pane

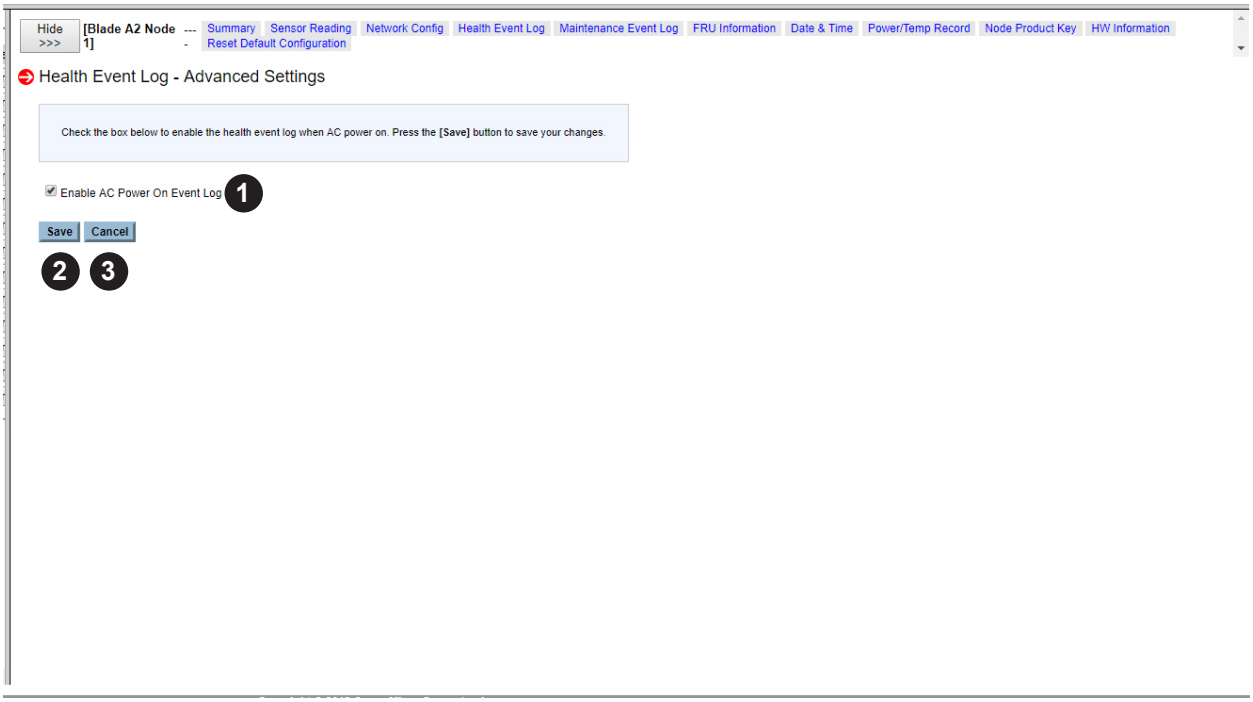


Figure 2-8. Health Event Log - Advanced Settings Pane

Health Event Log Pane Controls		
Item	**Control Name**	**Description**
1	Select a Health Event Log Category drop-down list box	Use this drop-down list to choose a different event log category list below: All Events, Sensor-Specific Event, BIOS Generated Events, System Management software Events.
2	Clear Health Event Log button	Press this button to remove all health event log information saved in BMC.
3	Download Health Event Log button	Press this button to download the health event log to a local computer.

Health Event Log - Advanced Settings Pane Controls		
Item	**Control Name**	**Description**
1	Enable AC Power on Event Log check box	User these check boxes to enable or disable the function of logging AC power events.
2	Save button	Press this button to save the setting into the BMC.
3	Cancel button	Press this button to cancel the settings and return to the Health event log.

Maintenance Event Log Pane

The HEALTH EVENT LOG pane (Figure 2-9) contains a log of maintenance events for the blade module. See the table below for details on this pane's controls.

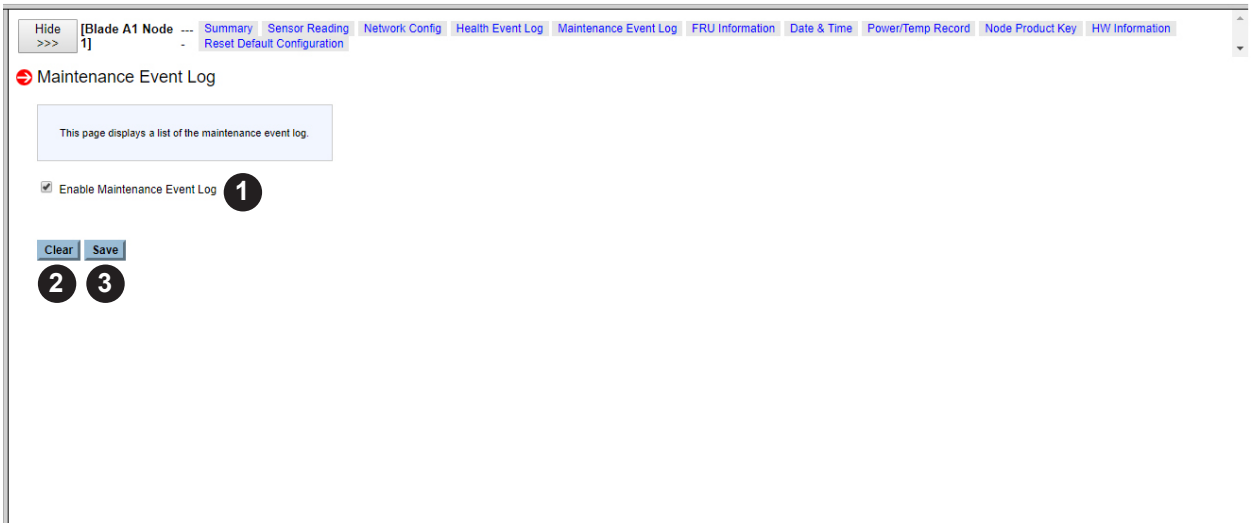


Figure 2-9. Maintenance Event Log Pane

Maintenance Event Log Controls		
Item	**Control Name**	**Description**
1	Enable Maintenance Event Log check box	Use this check box to enable or disable the function of the maintenance event log.
2	Clear button	Press this button to remove all maintenance event log information saved in BMC.
3	Save button	Press this button to save the settings into BMC.

FRU Information Pane

The FRU INFORMATION pane (Figure 2-10) contains a displayed list of FRU information for the blade module. This is a static display list of information and so this pane has no controls.

Figure 2-10. FRU Information Pane

Date & Time Pane

The DATE & TIME pane contains date & time controls for the blade module. See the table below for details on this pane's controls.

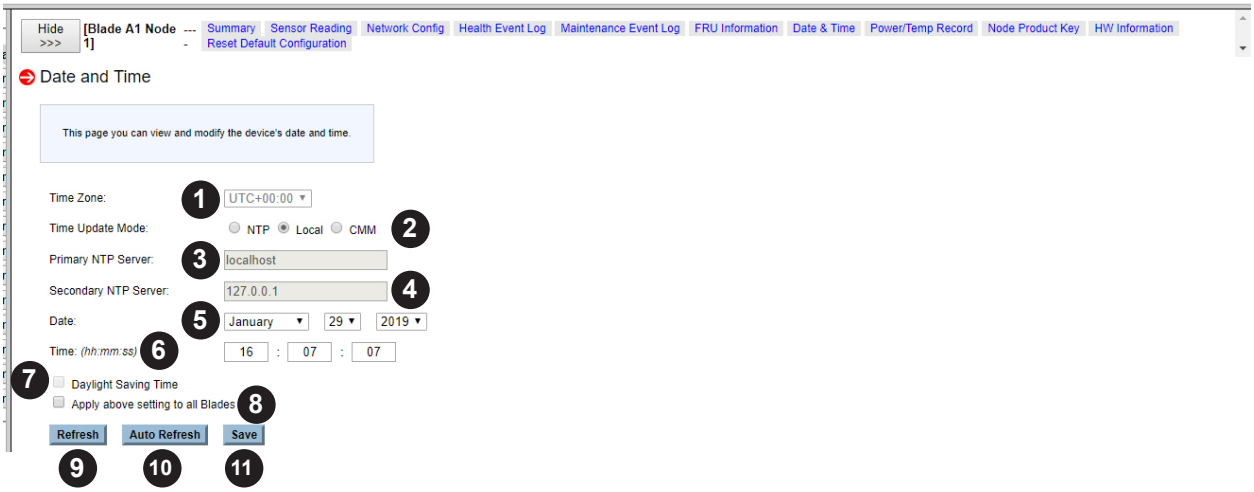


Figure 2-6. Date & Time Pane

Date & Time Pane Controls		
Item	**Control Name**	**Description**
1	Time Zone drop-down list box	Use this drop-down list box to pick the time Zone the server is located at.
2	Time Update Mode option buttons	Use these option buttons to select one of three different time update Mode available to set: • NTP: This syncs the BMC system time to the Network Time Protocol (NTP) that is host on private or public. • Local: This syncs the BMC system time to the Motherboard BIOS system clock. • CMM: This syncs the BMC system to the CMM clock.
3	Primary NTP Server	Use this field to enter the primary NTP server if the NTP mode is selected.
4	Secondary NTP Server	Enter the secondary NTP server if NTP mode is selected.
5	Date drop-down list boxes	Click this drop-down list to select the appropriate Month, Day, and Year.
6	Time fields	Use these fields to enter the time in Hours : Minutes : Seconds.
7	Daylight Savings Time check box	Click in this check box if daylight saving applies to where the system is located.
8	Apply Above Setting to All Blades check box	By checking this check box, you will deploy and sync the Date & Time setting across all blade servers in the system.
9	Refresh button	Press this button to refresh the page to display update information.
10	Auto Refresh button	Press this button to enable automatic page refresh to display the update information in the date and time panel.
11	Save button	Click this button to save and apply settings on the date and time panel.

Power/Temperature Record Pane

The POWER/TEMPERATURE RECORD pane (Figure 2-12) displays the power and temperature information. This includes the maximum, minimum and average record in the last hour, last day and last week for the blade module. See the table below for details on this pane's controls.

The hightest and lowest peak name	Value	Time
Max Power Consumption (Watt)	275	2018/09/30 05:42:10
Min Power Consumption (Watt)	28	2018/10/09 22:30:37
CPU Temperature (Degree C)	67	2018/09/27 04:50:57
DIMM Temperature (Degree C)	61	2018/10/01 21:36:28
System Temperature (Degree C)	62	2018/10/01 21:36:28
PCH Temperature (Degree C)	72	2018/10/01 21:37:27
CPUVRM Temperature (Degree C)	63	2018/10/01 21:35:29
DIMMVRM Temperature (Degree C)	60	2018/10/01 21:36:28
CARD Temperature (Degree C)	30	2018/09/25 00:54:44
HDD Temperature (Degree C)	0	0
Min 12V (Voltage)	11.91	2018/09/25 19:44:46

Max Power/Temperature Statistics	Last Hour	Time	Past 24 Hr	Time	Past 7 days	Time
Avr Power Consumption(Watt)	49	None	36	None	40	None
Max Power Consumption(Watt)	92	2019/01/29 16:12:47	130	2019/01/29 13:50:10	138	2019/01/29 08:50:12
Min Power Consumption(Watt)	37	2019/01/29 16:17:42	36	2019/01/29 15:33:26	31	2019/01/23 08:30:29
CPU Temperature(Degree C)	45	2019/01/29 16:22:37	46	2019/01/29 15:28:31	49	2019/01/25 14:16:22
DIMM Temperature(Degree C)	40	2019/01/29 16:22:37	40	2019/01/29 16:22:37	41	2019/01/27 15:02:17
System Temperature(Degree C)	50	2019/01/29 16:22:37	50	2019/01/29 16:22:37	50	2019/01/29 16:22:37
PCH Temperature(Degree C)	60	2019/01/29 16:17:42	60	2019/01/29 16:17:42	61	2019/01/28 16:11:57
CPUVRM Temperature(Degree C)	48	2019/01/29 16:22:37	48	2019/01/29 16:22:37	48	2019/01/29 16:22:37
DIMMVRM Temperature(Degree C)	46	2019/01/29 16:22:37	46	2019/01/29 16:22:37	46	2019/01/29 16:22:37
CARD Temperature(Degree C)	30	2019/01/29 16:22:37	30	2019/01/29 16:22:37	30	2019/01/29 16:22:37
HDD Temperature(Degree C)	0	0	0	0	0	0
Min 12V (Voltage)	12.28	2019/01/29 16:22:37	12.28	2019/01/29 16:22:37	12.22	2019/01/28 00:22:52

Figure 2-12. Power/Temperature Record Pane

Health Event Log - Advanced Settings Pane Controls		
Item	**Control Name**	**Description**
1	Download All Record button	Press this button to export and download all records in the CVS format.
2	Sytem Temperature Category check boxes	Check these check boxes to show a temperature category's information on the page.

Node Product Key Pane

The NODE PRODUCT KEY pane allows you to register the product key to enable the BIOS update feature for the blade module. See the table below for details on this pane's controls.

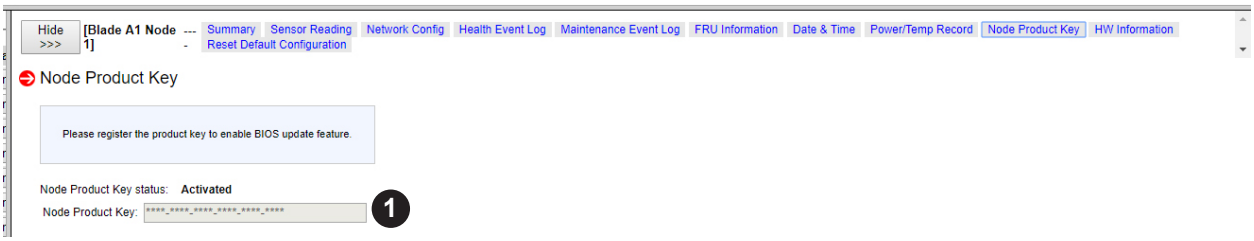


Figure 2-7. Node Product Key Pane

Node Product Key Pane Controls		
Item	**Control Name**	**Description**
1	Node Product Key	Use this field to enter the Node Product Key, when required.

HW Information Pane

The HW INFORMATION pane (Figure 2-14) allows you to view hardware information for the blade module. Information can be minimized or maximized for viewing by clicking on the expansion arrows in the tree displayed in this pane.

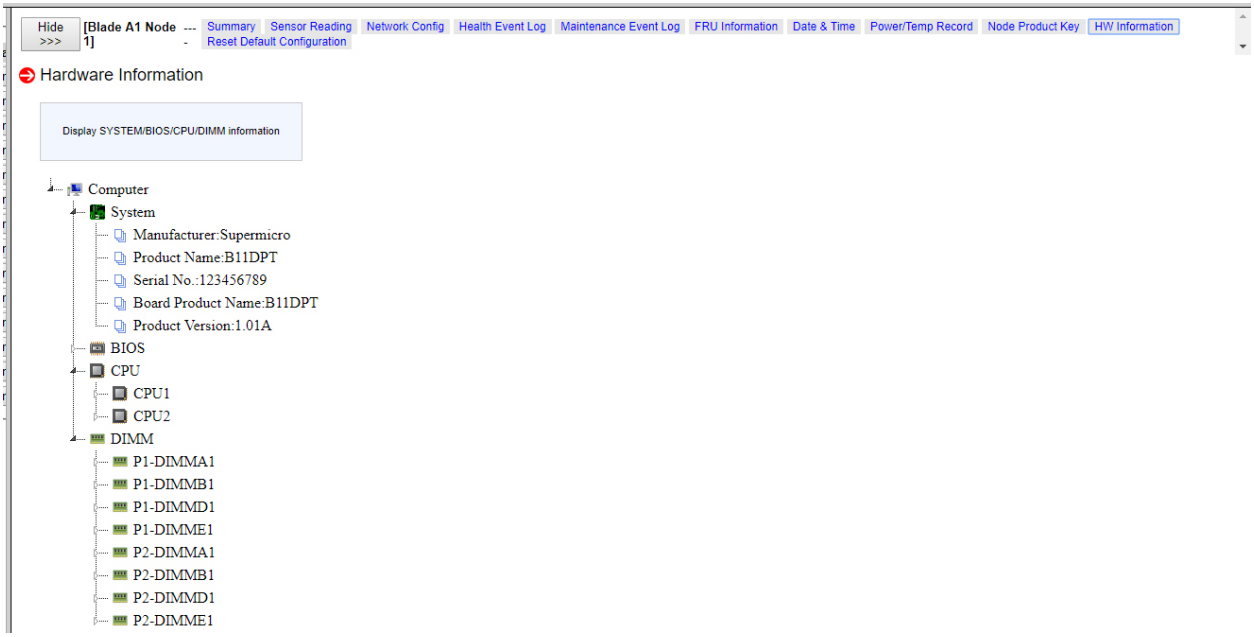


Figure 2-14. HW Information Pane

Reset Default Configuration Pane

The RESET DEFAULT CONFIGURATION pane allows you to reset parameters for your blade's default configuration. To do this, simply check the check boxes next to the parameters you wish change to active, then press the pane's RESET button at the bottom ot set them as default..

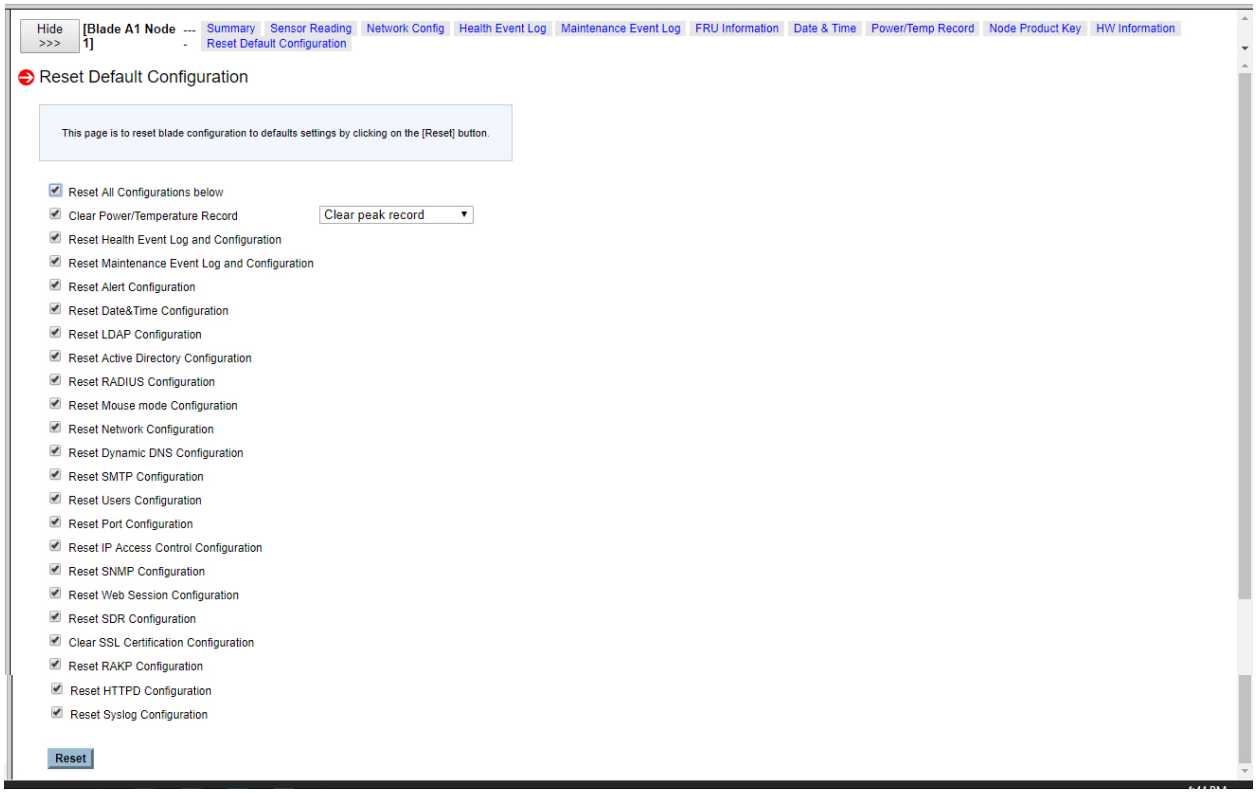


Figure 2-8. Reset Default Configuration Pane

2.4 Power Supply Page

Click the Power Supply link to reveal the Power Supply page (Figure 2-4). You can use the commands listed in he table below to control the power supplies in your system.

To perform a function, first click the box(es) next to the power supplies you wish to issue a command to and then click the command icon you wish to use. You can also click on any of the individual power supplies listed to bring up additional panes with details about that particular power supply's status, and the controls for setting them.

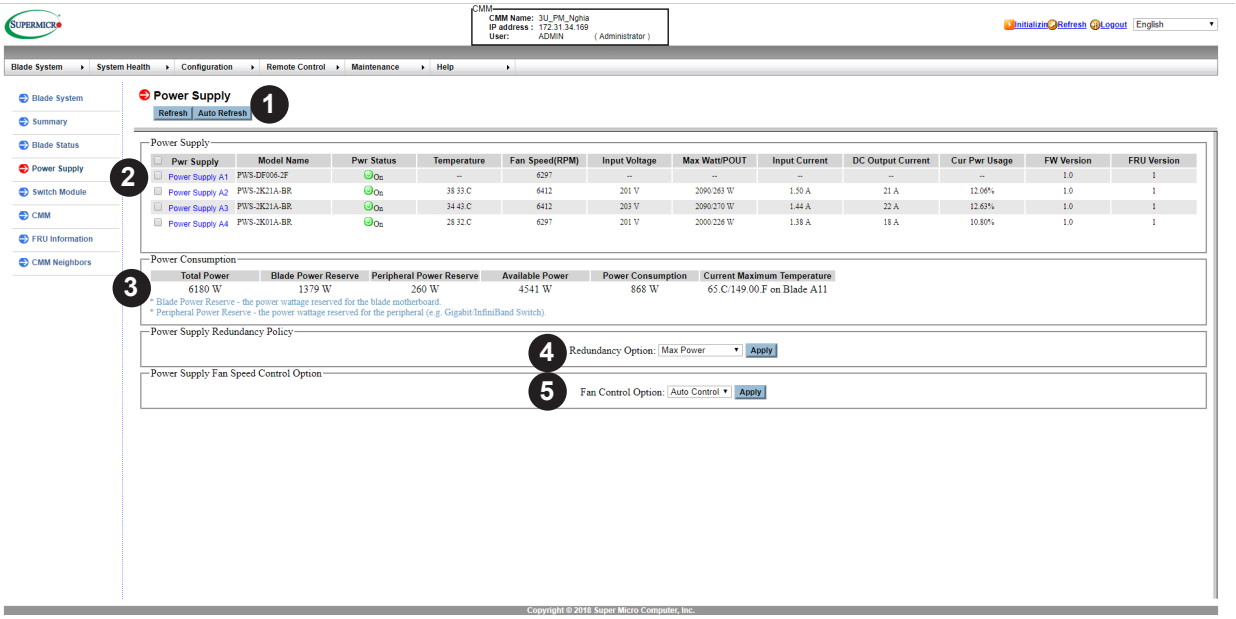


Figure 2-4. Power Supply Page

Power Supply Page Controls		
Item	**Name**	**Description**
1	Refresh Buttons	Pressing either of these buttons refreshes the page display.
2	Power Supply	This area displays all power supply status, sensor, FW version and FRU version information.
3	Power Consumption	This area displays Total Power, Blade Power Reserve, Peripheral Power Reserve, Available Power and Current Maximum Temperature information.
4	Power Supply Redundancy Policy	You can choose the Redundancy Option by using the pull-down menu in this area. Click Apply to apply the setting.
5	Power Supply Fan Speed Control Option	You can choose Fan Control Option by using the pull-down menu in this area. Click Apply to apply the setting

Power Supply Panes

If you click on the link for a power supply in the POWER SUPPLY page, a new pane will appear on the side of the page with additional controls and information for that specific power supply in your system. The following control panes can be selected for this pane by clicking on links that are available at the top of the control pane in the new window:

- Power Supply – Summary Pane
- Power Supply – FRU Information Page

Power Supply – Summary Pane

Clicking on the SUMMARY link brings up a POWER SUPPLY SUMMARY pane with controls that are listed and described in the table below.

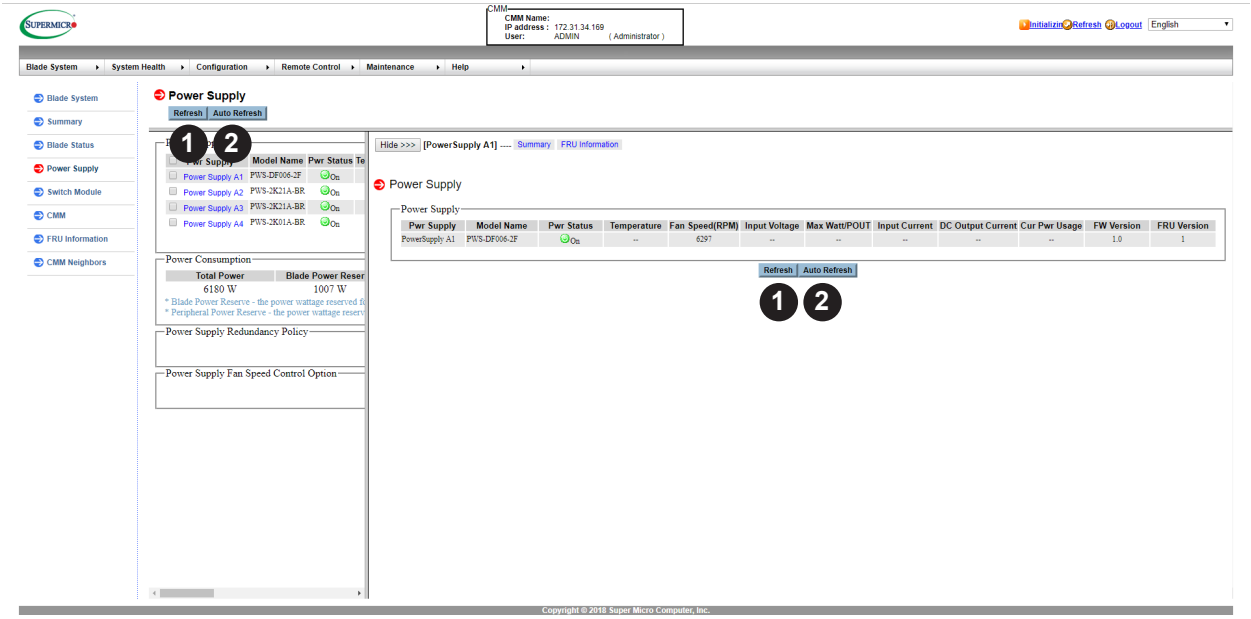


Figure 2-9. Power Supply Page – Summary Pane

Power Supply – Summary Pane Controls		
Item	**Name**	**Description**
1	Refresh Button	Pressing this button refreshes the page display.
2	Auto Refresh Button	Pressing this button automatically refreshes this page until you press it again to cancel the automatic refresh.

Power Supply – FRU Information Page

Clicking on the FRU INFORMATION LINK brings up a FRU INFORMATION pane (Figure 2-6) with static FRU information about the Power Supply module selected.

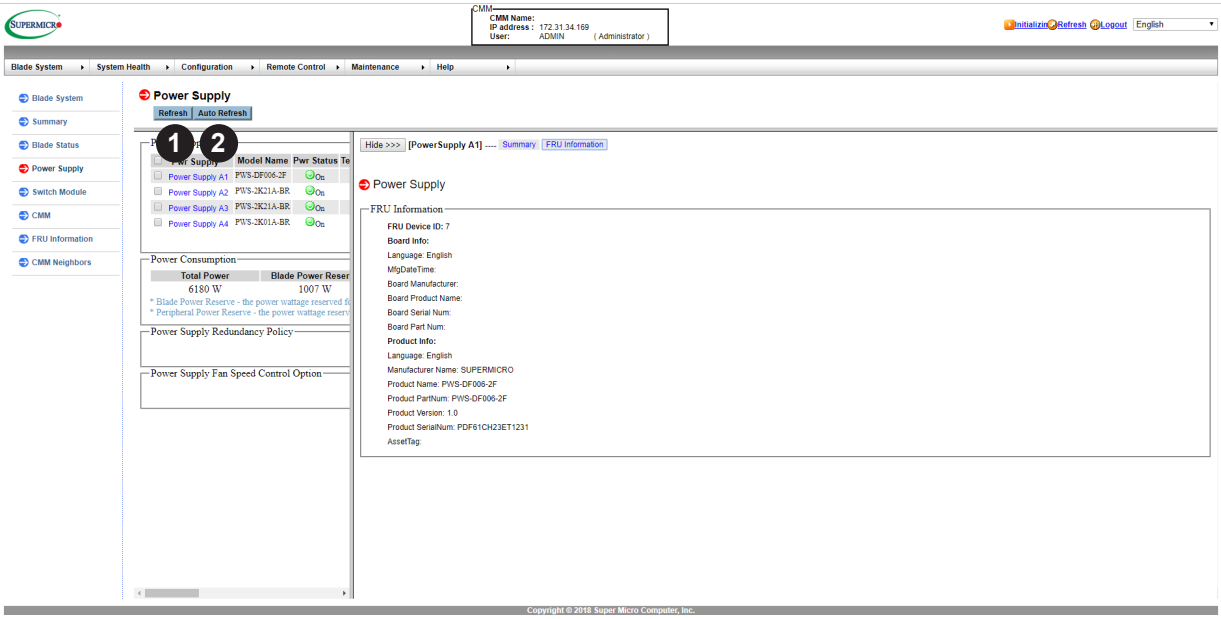


Figure 2-6. Power Supply Page – FRU Information Pane

Power Supply – FRU Information Pane Controls		
Item	**Name**	**Description**
1	Refresh Button	Pressing this button refreshes the page display.
2	Auto Refresh Button	Pressing this button automatically refreshes this page until you press it again to cancel the automatic refresh.

2.5 Switch Module Page

Click on SWITCH MODULE to reveal the SWITCH MODULE page. This page displays Switch information that includes Type, Name, Power Status, Temperature, UID Status, Error Status, Management IP, and Firmware Version. You also can modify the switch settings. You can use the commands listed in the table below to control the switch modules in your system.

To perform a function, first click the box(es) next to the power supplies you wish to issue a command to and then click the command icon you wish to use. You can also click on any of the individual power supplies listed to bring up additional pages with details about that particular power supply's status, and the controls for setting them.

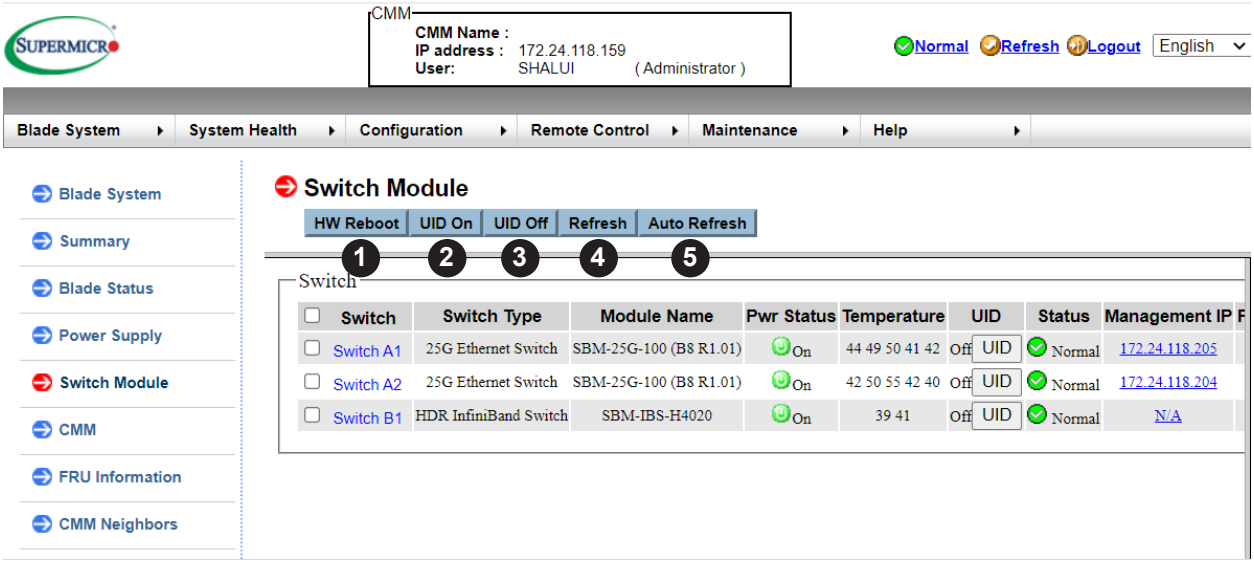


Figure 2-10. Switch Module Page

Switch Module Page Controls		
Item	**Name**	**Description**
1	HW Reset Button	Press this button to reset a selected switch to its default configuration. The reset button will reset all switch configurations, including IP address and so on.
2	UID On Button	Press this button to turn on a UID for a selected switch.
3	UID Off Button	Press this button to turn off a UID for a selected switch.
4	Refresh Button	Pressing this button refreshes the page display.
5	Auto Refresh Button	Pressing this button automatically refreshes this page until you press it again to cancel the automatic refresh.

Using the Switch Module Page Controls

1. Click on the check box next to the switch which you wish to control.

   a. **HW Reset:** Click this button to reset switch.

   b. **UID On:** Click this button to turn on switch UID.

   c. **UID Off:** Click this button to turn off switch UID.

   d. **Refresh:** Click this button to refresh each switch information.

2. Switch information can also be viewed on this page.

- **Switch:** This column displays all available switches and offers users more options if the switch selected.
- **Switch Type:** This column displays the type of the switch.
- **Module Name:** This column displays the name of the switch (May also display hardware version on specific switch).
- **Pwr Status:** This column displays the power state of the switch.
- **Temperature:** This column displays the temperature reading of the embedded sensor.
- **UID:** This column displays the status of the identification LED.
- **Error:** This column displays the condition of each switch (Normal, Initializing, and Error).
- **Management IP:** This column displays the IP that allows user to manage and customize the switch.
- **FW Ver:** This column displays the current firmware version of each switch.
- **Pwr Consumption:** This column displays the Power Consumption of each switch.

3. Click on the individual switch under [Switch] for more options.
   - **Summary:** Click this button to go to default switch page.
   - **FRU Information:** Click this button to access FRU related information that includes FRU ID, Board Info, and Product Info.
4. To manage Date & Time Settings, follow the instructions below:
   a. Click on the individual switch under Switch.
   b. Select CMM to use the CMM's Date and Time profile, which can be configured under Configuration.
   c. Select Local to manually set Data and Time.
   d. To apply this configuration to all of the available switches, check the check box and click on Save.
5. To manage the Switch Network Settings, follow the instructions below:
   a. To manually set IP address, select Static Mode and fill in the appropriate fields.
   b. To automatically set IP address, select DHCP Mode.
   c. Click Save to complete the process.
6. To update and change Switch access credentials, enter the new information and click on Save.
7. Click on Reset to restore the switch to the factor default settings.

Switch Module Status Page

If you click on the link for a switch module in the SWITCH MODULE page, a new pane will appear with additional controls for that specific switch module in your system. The following control panes can be selected for this window by clicking on links that are available at the top of the control pane in the new window:

- Switch Module Status – Summary Pane
- Switch Module Status – FRU Information Page

Switch Module Page– Summary Pane

Clicking on the SUMMARY link brings up a SWITCH MODULE PAGE SUMMARY pane with controls that are listed and described in the table below.

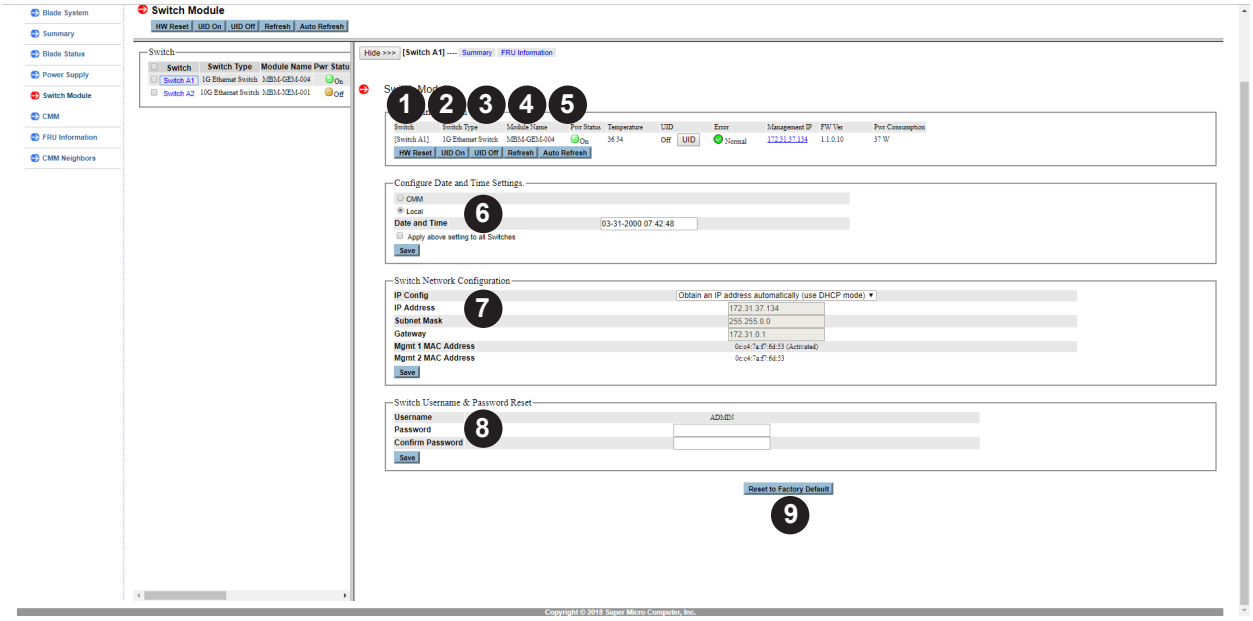


Figure 2-11. Switch Module Page – Summary Pane

Switch Module Summary Pane Controls		
Item	**Name**	**Description**
1	HW Reset Button	Press this button to reset a selected switch to its default configuration. The reset button will reset all switch configurations, including IP address and so on.
2	UID On Button	Press this button to turn on a UID for a selected switch.
3	UID Off Button	Press this button to turn off a UID for a selected switch.
4	Refresh Button	Pressing this button refreshes the page display.
5	Auto Refresh Button	Pressing this button automatically refreshes this page until you press it again to cancel the automatic refresh.
6	Configure Date and Time Settings Section	Use this section to configure the date and time settings for your selected switch. Enter the time and date settings in the field provided and then press the Save button.
7	Switch Network Configuration Section	Use this section to configure the selected switches IP addresses (IP, Subnet Mask and Gateway addresses). You may either do this manually using static mode or do it automatically by using DCHP mode according to the selection you make in the drop down list box provided. When finished press the Save button.
8	Switch Username and Password Reset Section	Use this section to enter the ADMIN password for the switch and confirm it by entering the password in the fields provided. When finished press the Save button.
9	Reset to Factory Default	Press this button to reset the switch back to its factory default settings.

Switch Module Status – FRU Information Page

Clicking on the FRU INFORMATION link brings up a FRU INFORMATION pane (Figure 2-9) with static FRU information about the switch module selected.

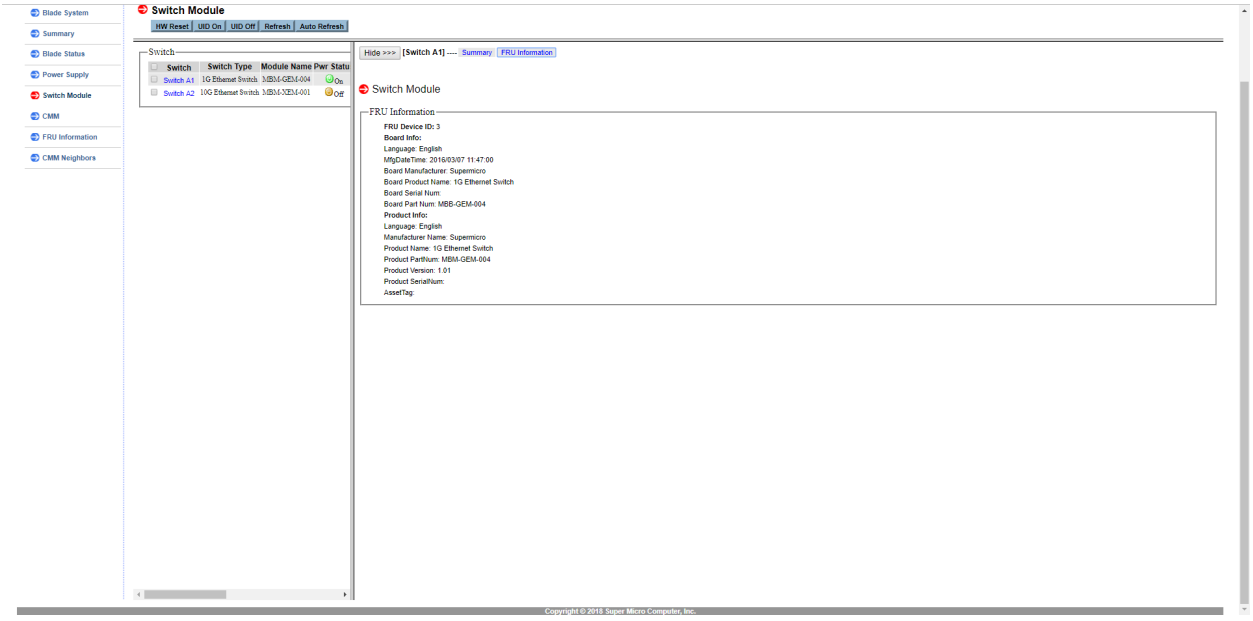


Figure 2-9. Switch Module Page – FRU Information Pane

2.6 CMM Page

Click on CMM to reveal the CMM SUMMARY page. This page allows you to check the status the CMM module in the system you are accessing. Operating status, temperature, firmware information and IP address information are all shown on this page. Additionally, you can view CMM FRU INFORMATION page, which you can bring up by pressing the FRU INFORMATION link.

The commands you may give on this page are described in the table below.

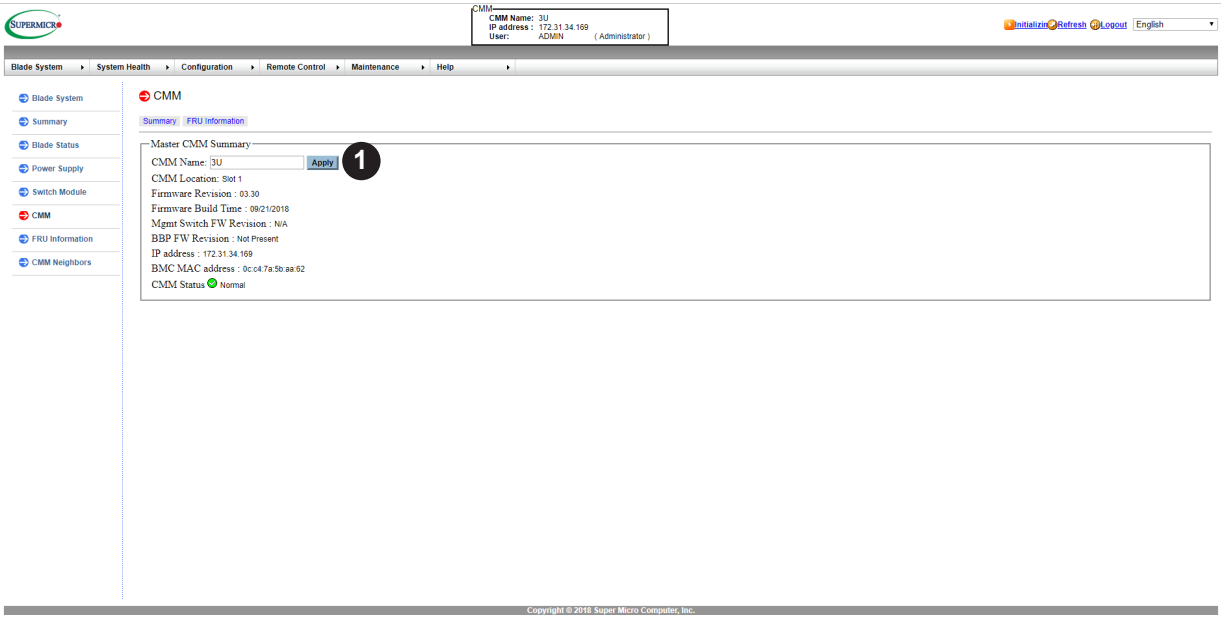


Figure 2-12. CMM Page – Summary Pane

CMM Page – Summary Pane Controls		
Item	**Name**	**Description**
1	CMM Name Field	Select a name for Master CMM in this field and press the APPLY button to apply the name to it.

Note: By default, when the enclosure power turns, the CMM on slot 1 will be the master and the CMM on slot 2 will be the slave. When the master CMM becomes “failed”, the slave CMM will take over. When the failed CMM on slot 1 is replaced, the master CMM will not swap back to slot 1. You may wait until the CMM on slot 2 is “failed” or power cycle whole the enclosure to return to slot 1 resuming to be the master CMM.

Figure 2-11. CMM FRU Information Page

2.7 FRU Information Page

Clicking on the FRU INFORMATION link brings up the FRU INFORMATION page (Figure 2-12) with static FRU information. Use the drop-down list box on the page to select the type of information you wish to view.

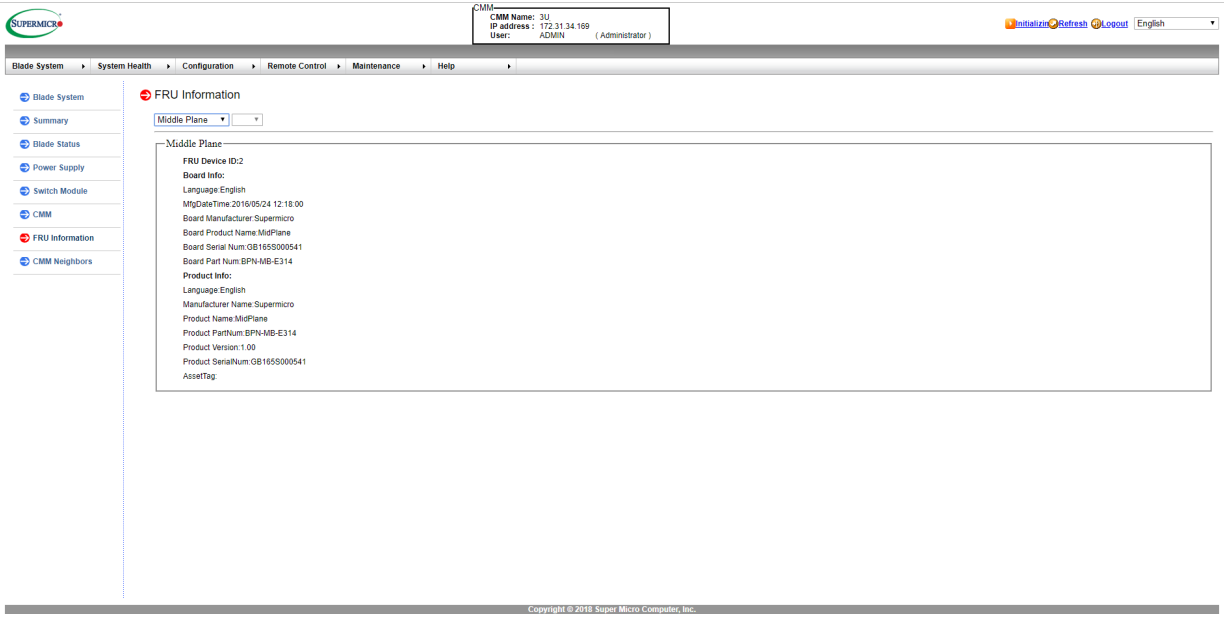


Figure 2-12. FRU Information Page

2.8 CMM Neighbors Page

Clicking on the CMM NEIGHBORS link brings up the CMM NEIGHBORS page. This page shows CMM Neighbors, which are other connected systems with CMM modules.An '*' means the CMM itself. The maximum number of machines is 1000. Clicking on an IP address link in the CMM IP column will bring up a login page for that IP address.

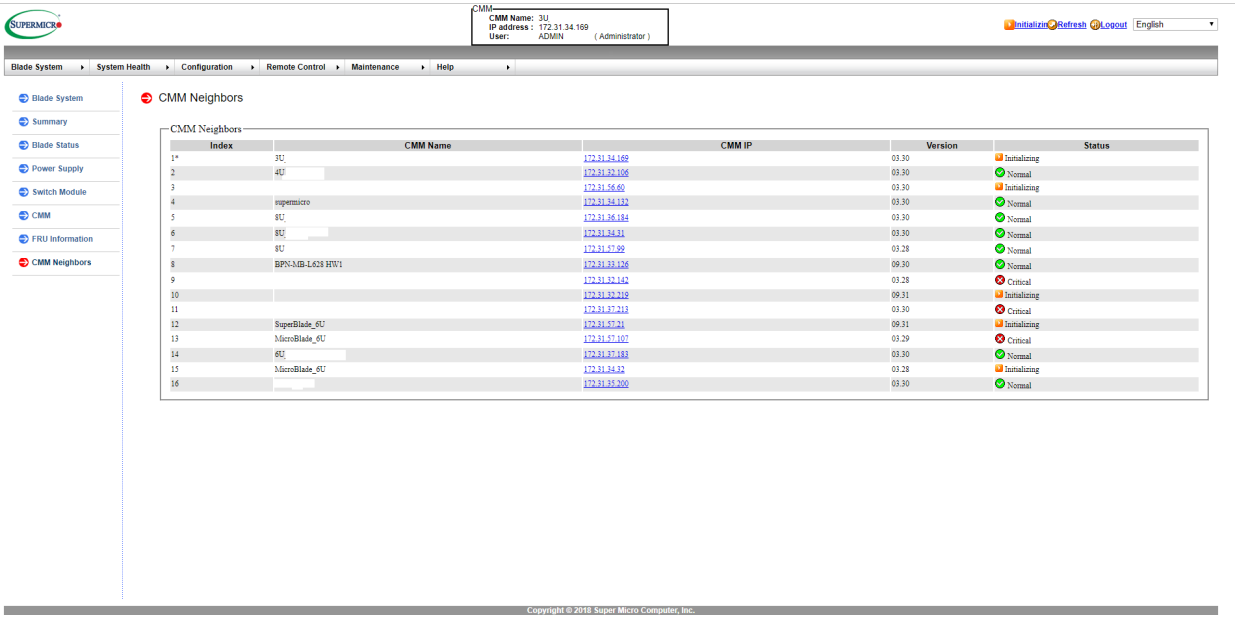


Figure 2-13. CMM Neighbors Page

Chapter 3

System Health

The SYSTEM HEALTH menu allows you to access and configure logs and alert settings in your system. Clicking the SYSTEM HEALTH icon allows you to access the following pages through its sub-menus:

- Sensor Readings Page
- System Event Log Page
- Power/Temperature Record Page

3.1 Sensor Readings Page

The SENSOR READING page (Figure 3-1) displays system sensor information, including readings and status. You can toggle viewing the thresholds for the sensors by pressing the SHOW THRESHOLDS button below.

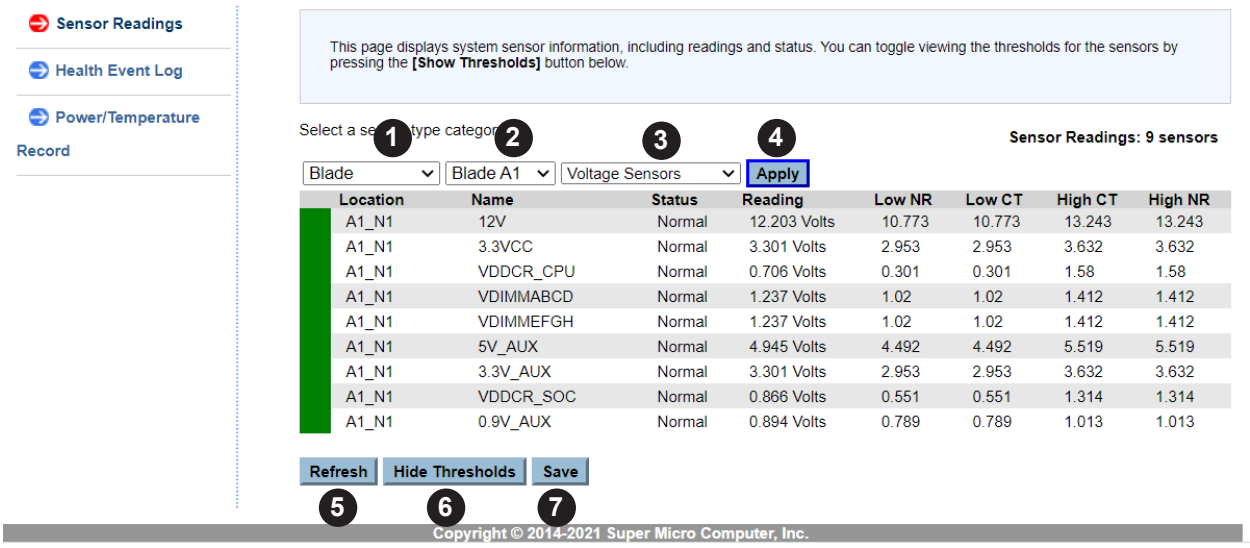
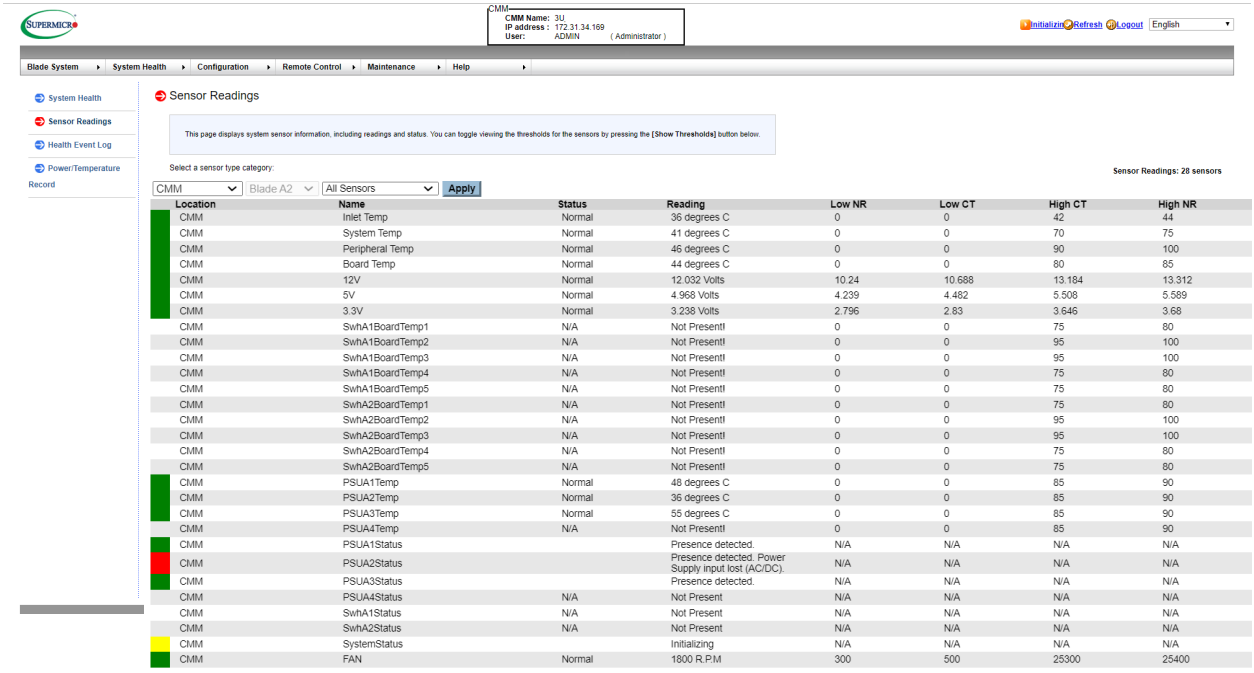


Figure 3-1. Sensor Readings Page

Sensor Readings Page Controls		
Item	**Name**	**Description**
1	Module Selection Drop-down List Box	Select from here the module type whose sensors you wish to view. Options include: CMM, BLADE, SWITCH or POWER SUPPLY.
2	Module Number Selection Drop-down List Box	Select the specific module of the type you selected in the MODULE SELECTION list whose sensors you wish to view.
3	Sensor Selection Drop-down List Box	Select in this drop-down list box the type of sensor you wish to view from the previous selected module. Options include ALL SENSORS, TEMPERATURE SENSORS or VOLTAGE SENSORS. When you have made all your selections, press the APPLY button to view the sensors.
4	Apply Button	Press this button to apply changes selected from the drop-down boxes above to the page.
5	Refresh Button	Press this button to refresh the page.
6	Show Thresholds Button	Pressing this button shows the thresholds for your system, as shown in Figure 3-2.
7	Save Button	Pressing this button saves information on this page to a file on your system.



Location	Name	Status	Reading	Low NR	Low CT	High CT	High NR
CMM	Inlet Temp	Normal	36 degrees C	0	0	42	44
CMM	System Temp	Normal	41 degrees C	0	0	70	75
CMM	Peripheral Temp	Normal	46 degrees C	0	0	90	100
CMM	Board Temp	Normal	44 degrees C	0	0	80	85
CMM	12V	Normal	12.032 Volts	10.24	10.688	13.184	13.312
CMM	5V	Normal	4.968 Volts	4.239	4.482	5.508	5.589
CMM	3.3V	Normal	3.238 Volts	2.796	2.83	3.646	3.68
CMM	SwhA1BoardTemp1	N/A	Not Present!	0	0	75	80
CMM	SwhA1BoardTemp2	N/A	Not Present!	0	0	95	100
CMM	SwhA1BoardTemp3	N/A	Not Present!	0	0	95	100
CMM	SwhA1BoardTemp4	N/A	Not Present!	0	0	75	80
CMM	SwhA1BoardTemp5	N/A	Not Present!	0	0	75	80
CMM	SwhA2BoardTemp1	N/A	Not Present!	0	0	75	80
CMM	SwhA2BoardTemp2	N/A	Not Present!	0	0	95	100
CMM	SwhA2BoardTemp3	N/A	Not Present!	0	0	95	100
CMM	SwhA2BoardTemp4	N/A	Not Present!	0	0	75	80
CMM	SwhA2BoardTemp5	N/A	Not Present!	0	0	75	80
CMM	PSUA1Temp	Normal	48 degrees C	0	0	85	90
CMM	PSUA2Temp	Normal	36 degrees C	0	0	85	90
CMM	PSUA3Temp	Normal	55 degrees C	0	0	85	90
CMM	PSUA4Temp	N/A	Not Present!	0	0	85	90
CMM	PSUA1Status		Presence detected.	N/A	N/A	N/A	N/A
CMM	PSUA2Status		Presence detected. Power Supply input lost (AC/DC).	N/A	N/A	N/A	N/A
CMM	PSUA3Status		Presence detected.	N/A	N/A	N/A	N/A
CMM	PSUA4Status	N/A	Not Present	N/A	N/A	N/A	N/A
CMM	SwhA1Status	N/A	Not Present	N/A	N/A	N/A	N/A
CMM	SwhA2Status	N/A	Not Present	N/A	N/A	N/A	N/A
CMM	SystemStatus		Initializing	N/A	N/A	N/A	N/A
CMM	FAN	Normal	1800 R.P.M	300	500	25300	25400

Figure 3-2. Sensor Readings Page – Show Thresholds

Using the Sensor Readings Page

1. To check a specific sensor type (category), click on the ALL SENSOR pull-down menu, which includes the following menu items that you may select: TEMPERATURE SENSORS, VOLTAGE SENSORS, FAN SENSORS, PHYSICAL SECURITY and POWER SUPPLY.
2. The color on the left of the sensor name indicates the status of that sensor.
   - **Green:** Sensor reading is normal. The part is functioning normally.
   - **Amber:** There is an alert on the sensor reading. Attention needed to ensure the system is functioning properly.
   - **Red:** The sensor have reached a critical state. Immediate action is needed to resolve the problem.
3. The NAME column displays the sensors that are currently active in the monitoring system, which includes system temperature, CPU temperature, fan speeds, CPU core voltages, +3.3Vcc, and +12V voltage monitoring.
4. The STATUS column indicates the status of each sensor reading.
5. The READING This column indicates the information read from each sensor.
6. The REFRESH To refresh the sensor reading.
7. The SHOW THRESHOLDS To display thresholds for each sensor.

Note: NR=non-recoverable, CT=Critical

3.2 Health Event Log Page

The HEALTH EVENT LOG option in the HEALTH EVENT LOG submenu allows you to view and clear the contents of the system event log for a remote system. The event logs indicate the time when a critical condition occurred and the time when the condition was resolved. You can choose a specific event category from the pull-down menu which includes the following:

- **Sensor-Specific Events:** These health event logs are generated by the BMC, event occurs when the sensor's reading reaches the threshold.
- **BIOS-Generated Events:** These health event logs are generated by the BIOS and logged to the BMC.
- **System Management Software Events:** These health event logs are generated by the OS, application software, etc. They are then logged to the BMC.
- **All Events:** This category includes all the above health event logs.

The page that appears (Figure 3-2) and its controls are shown below.

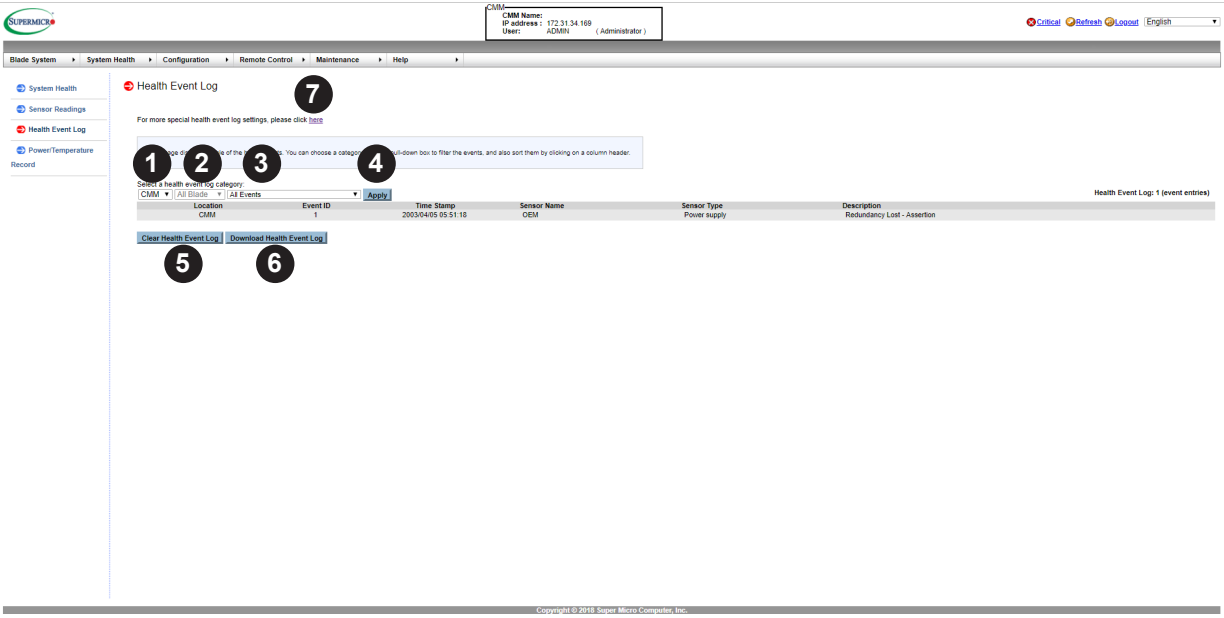


Figure 3-3. Health Event Log Page

System Event Log Page Controls		
Item	**Name**	**Description**
1	Module Selection Drop-down List Box	Select from here the module type whose event you wish to view. Options include: CMM or Blade.
2	Module Number Selection Drop-down List Box	Select the specific module of the type you selected in the Module Selection list whose event you wish to view.
3	Event Type Selection Drop-down List Box	Select the specific event type whose event you wish to view. Options include ALL EVENTS, SENSOR SPECIFIC EVENTS, BIOS SPECIFIC EVENTS or SYSTEM MANAGEMENT SOFTWARE EVENTS.
4	Apply Button	When you have selected your options from all the above drop-down list boxes, press the APPLY button to apply your changes.
5	Clear Event Log Button	Press this button to clear the event log of all entries.
6	Download Event Log Button	Press this button to download the event log.
7	Event Log Advanced Settings Link	Press this link to go the EVENT LOG ADVANCED SETTINGS page (Figure 3-4). This page has a check box to Enable the AC Power Event Log and buttons to SAVE or CANCEL this configuration.

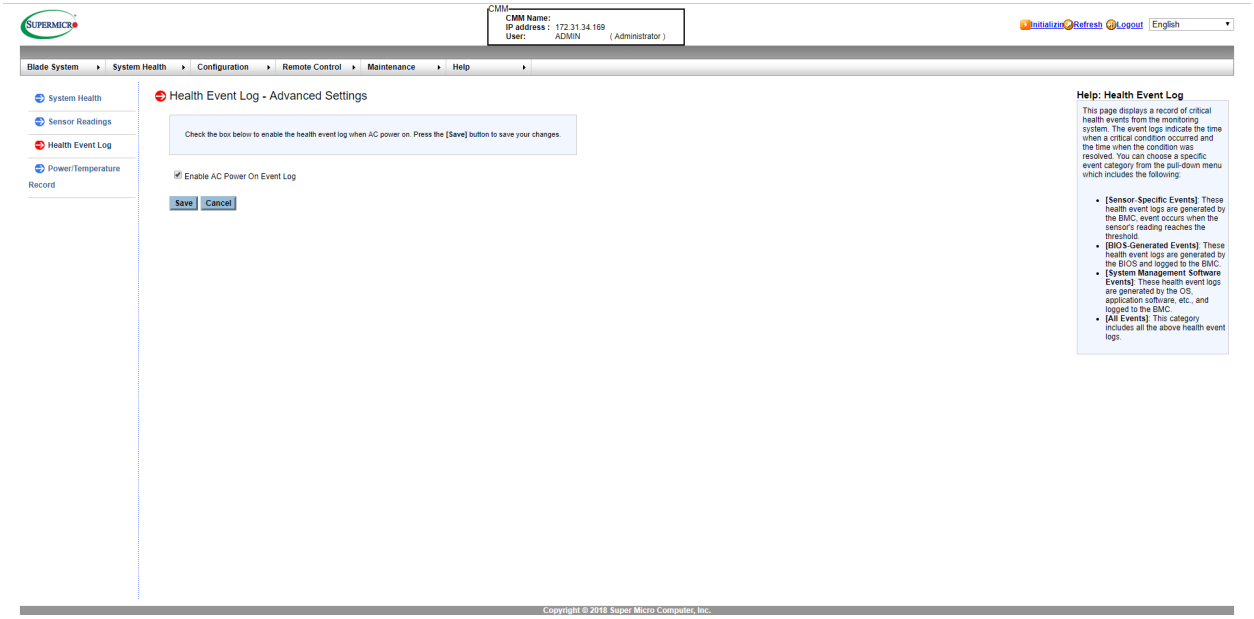


Figure 3-3. Health Event Log Page – Advanced Settings

3.3 Power/Temperature Record Page

The POWER/TEMPERATURE RECORD option in the SYSTEM HEALTH submenu allows you to view and download power and temperature records of the system. The POWER/TEMPERATURE RECORD page that appears (Figure 3-4) and its controls are shown below.

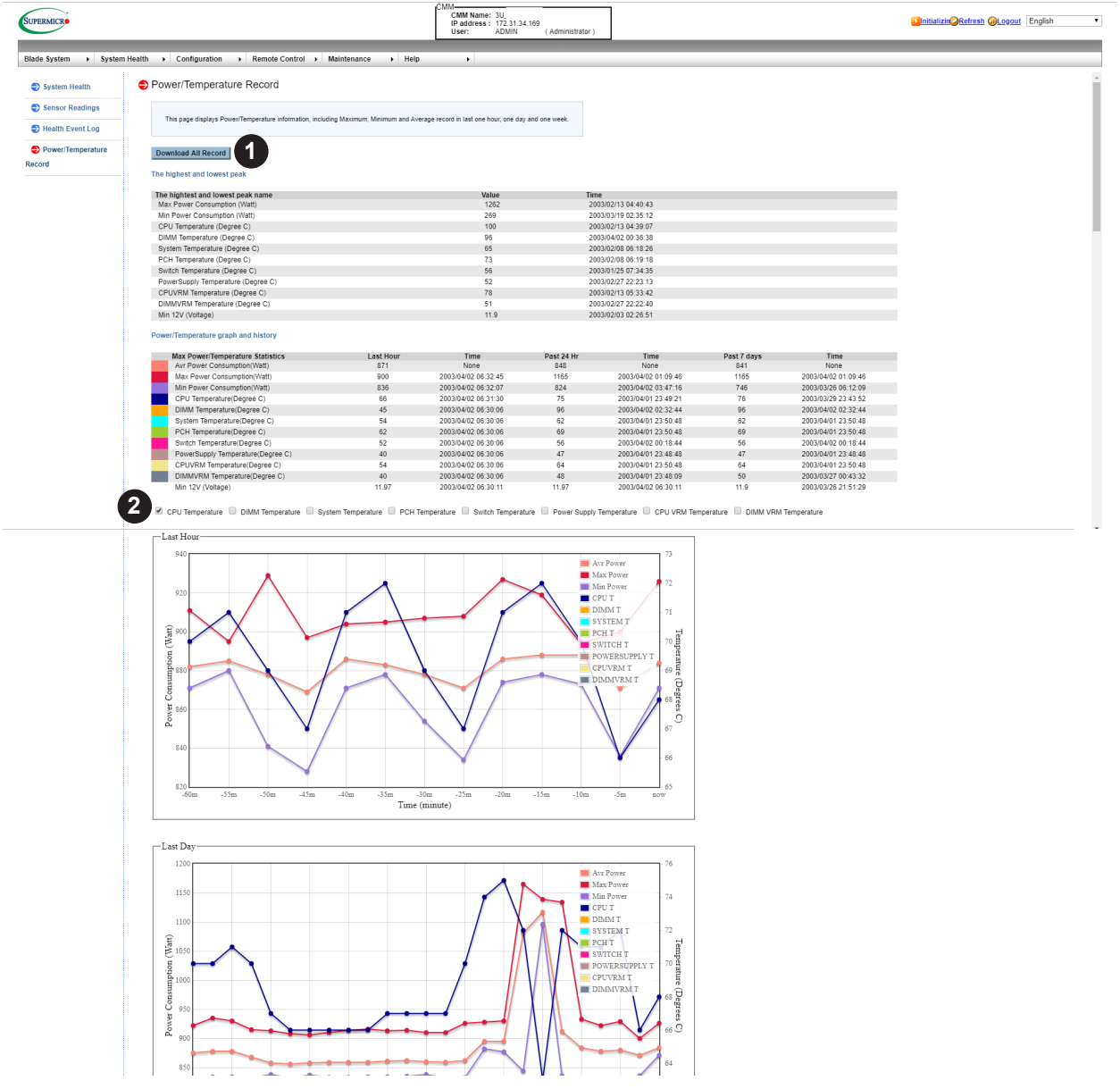


Figure 3-3. Power/Temperature Record Page

System Event Log Page Controls		
Item	**Name**	**Description**
1	Download All Record Button	Press this button to download records for all the check boxes above you have selected.
2	Record Selection Check Boxes	Check the boxes here in order to select the records you wish to download and display on this page. You may select one or all for viewing.

Chapter 4

Configuration

The USER MANAGEMENT menu allows you to configure users for your system. Clicking the USER MANAGEMENT icon allows you to access the following pages through its sub-menus:

- Alerts Page
- Date and Time Page
- LDAP Page
- Active Directory Page
- RADIUS Page
- CMM Network Page
- Blade IPMI Network Page
- Dynamic DNS Page
- SMTP Page
- SNMP Page
- SSL Certification Page
- Users Page
- Port Page
- IP Access Control Page
- Web Session Page
- SMC RAKP Page
- Auto Update Redundant CMM Page
- Syslog

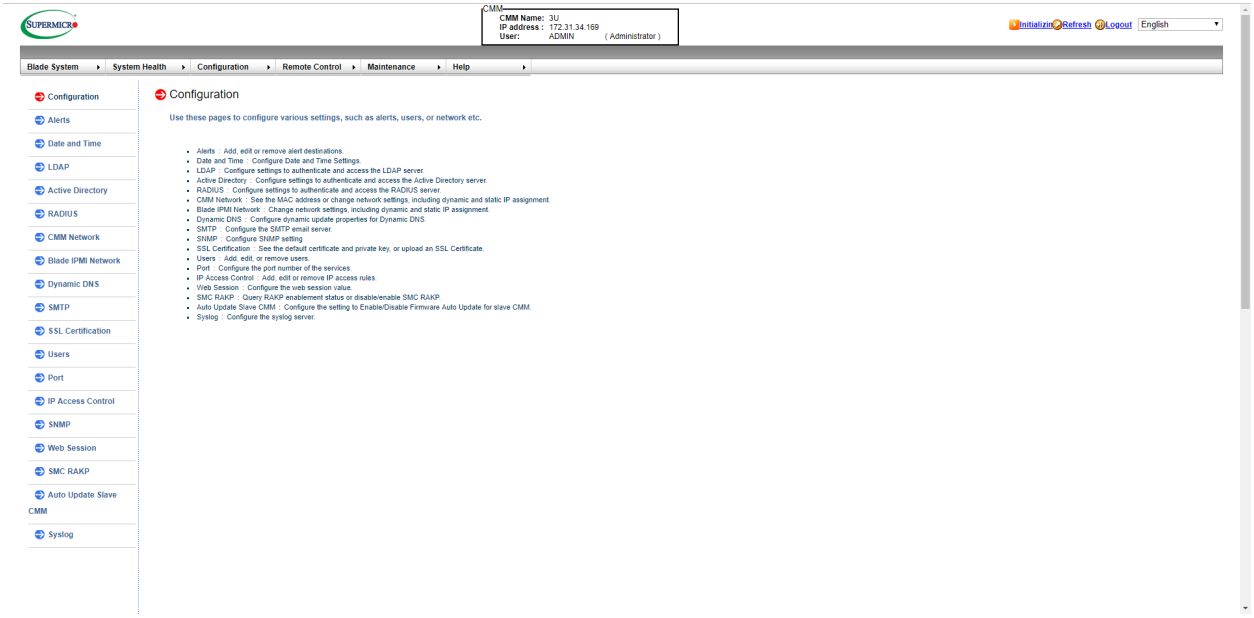


Figure 4-1. Configuration Page

4.1 Alerts Page

Click on ALERTS to reveal the ALERTS page (Figure 4-2). This page displays a list of the configured alert destinations. You can select an alert and press the MODIFY button to configure it, or press the SEND TEST ALERT button to send a test alert to the destination. The commands you may give on this page, are described in the table below.

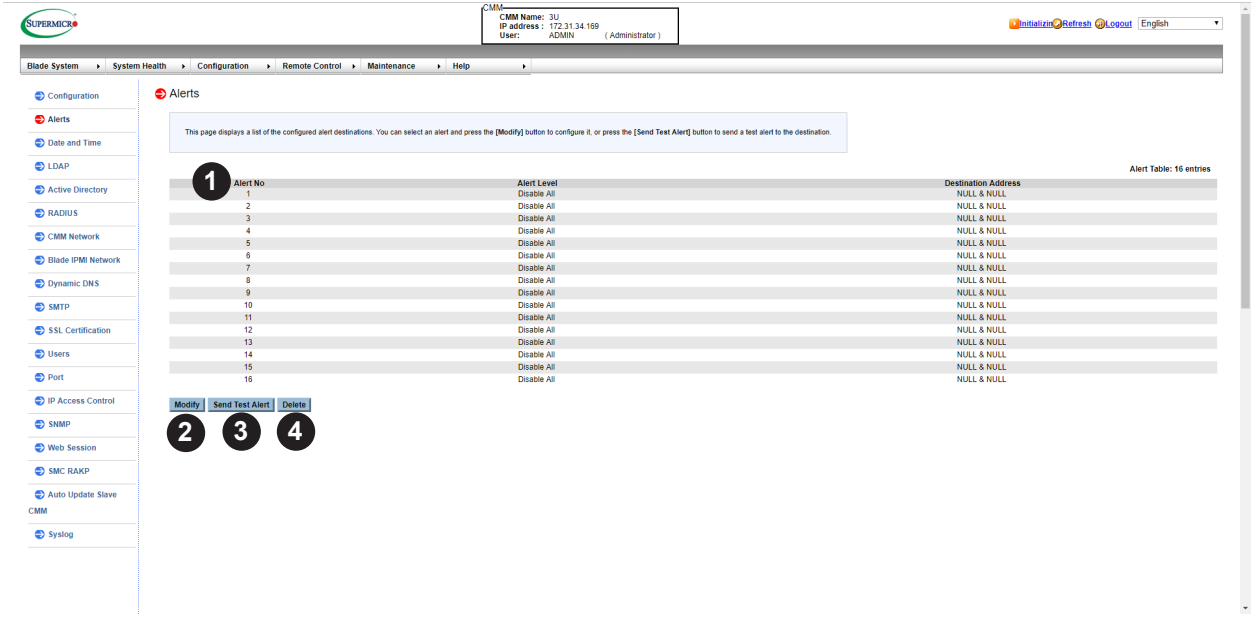


Figure 4-2. Alerts Page

To setup an alert or to modify an alert setting, do the following.

1. Select an alert entry.
2. Click MODIFY to configure or modify the settings of an alert.
3. Click SEND TEST ALERT is used to check if the alerts have been set and sent out correctly.
4. Click DELETE to delete an alert.

Blade Status Page Controls		
Item	**Control Name**	**Description**
1	Alert List	This table shows the currently active alerts, their number, their alert level and their destination address. Select from this list in order to modify an alert.
2	Modify Button	Press this button after selecting an alert from the table brings up the MODIFY ALERT page (Figure 4-3), which you use to modify an alert. In this new page select the EVENT SEVERITY, DESTINATION IP, EMAIL ADDRESS, SUBJECT and MESSAGE from the drop-down lists provided and press the SAVE button. If yo wish to cancel the alert, press the CANCEL button.
3	Send Test Alert Button	Press this button to send a test alert to its specified destination after you have modified the alert.
4	Delete Button	Press this button to delete an alert from the list.

Figure 4-3. Modify Alerts Page

Setting up or Modifying Alerts

To setup an alert or to modify an alert setting, do the following.

1. Select an alert entry.
2. Click MODIFY to configure or modify the settings of an alert.
3. Click SEND TEST ALERT is used to check if the alerts have been set and sent out correctly, or click DELETE to delete an alert.

4.2 Date and Time Page

Click on DATE & TIME to reveal the DATE & TIME page (Figure 4-4). Use this page to set up date and time information for your system. The commands you may give on this page are described in the table below.

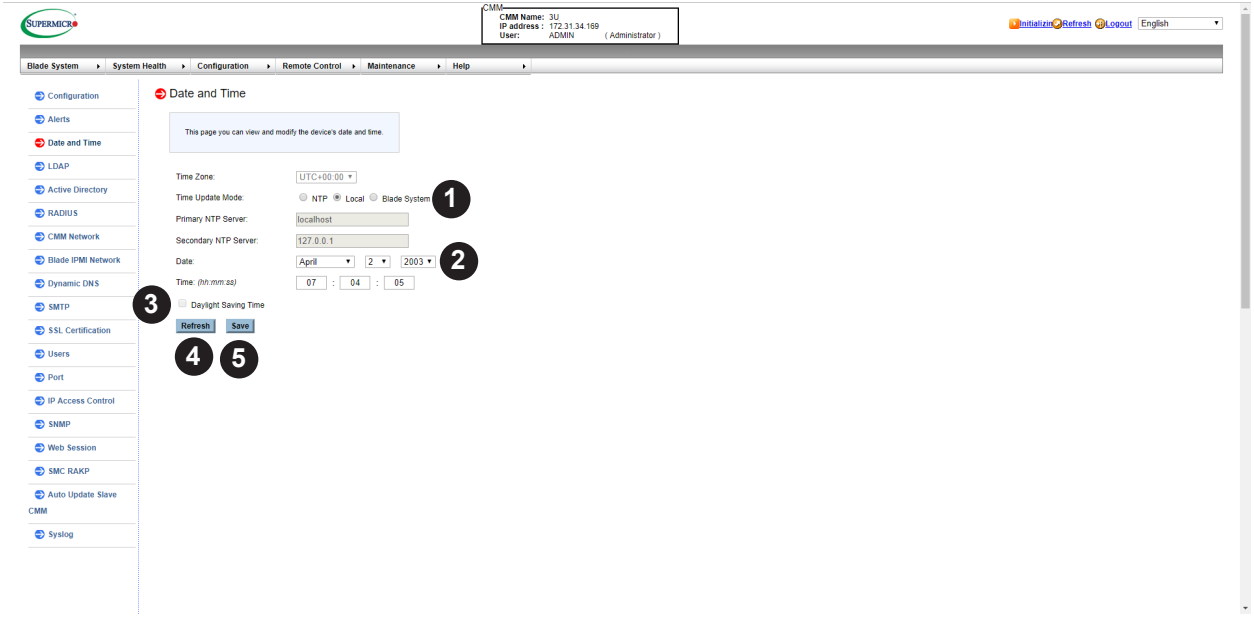


Figure 4-4. Date and Time Page

Date and Time Page Controls		
Item	**Control Name**	**Description**
1	Time Update Mode Option Buttons	Using these option buttons, you may select either NTP ENABLE or NPT DISABLE mode for time updates to the system. Each mode, when selected, activates or deactivates fields or drop-down list boxes for specifying date and time information or the primary or secondary NTP server.
2	Time Specification Drop-down List Box	Use these drop-down list boxes to specify the date and time information. These controls change depending upon which options you choose in the NTP or NPT option buttons.
3	Daylight Savings Time Check Box	Click this check box if you wish to use daylight savings time for your time settings.
4	Refresh Button	Press this button to refresh the page.
5	Save Button	Pressing the SAVE button saves the configuration for the selected node or blade module.

You can set the date & time update mode to manual mode, NTP Server or Sync from first available blade's system time.

Follow the instructions below to set date & time manually:

1. Check LOCAL for manually setting date & time.
2. Enter the date.
3. Enter the time in hh/mm/ss format.

4. Click SAVE to save the entries.

Follow the instructions below to configure NTP SERVER settings:

1. Check NTP to activate NTP SERVER settings.
2. Select the time zone.
3. Enter the IP address for the primary NTP server.
4. Enter the IP address for the secondary NTP server.
5. Click **Save** to save the entries.

Follow the instructions below to sync date & time from first available blade's system time: (**Note:** This function only be supported on Blade system with Intel ME)

1. Check BLADE SYSTEM for syncing date & time from first available Blade's system time.
2. Click SAVE to save the entries.

Note: Time zone is enabled when NTP is selected. The options are UTC -12:00 hr. ~ +12:00 hr.

4.3 LDAP Page

Click on LDAP to reveal the LDAP page (Figure 4-4). This page allows you to configure the Light-Weight Directory Access Protocol (LDAP) settings. Check the box below to enable LDAP authentication and enter the required information to access the LDAP server. Press the SAVE button to save your changes. The commands you may give on this page are described in the table below.

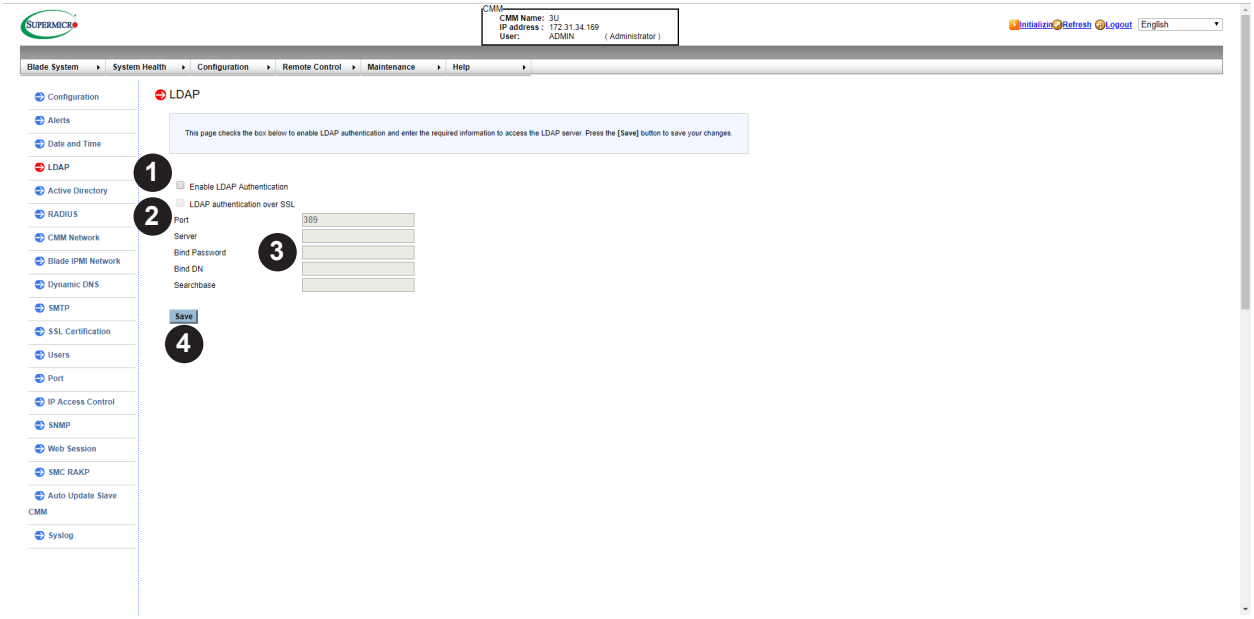


Figure 4-5. LDAP Page

LDAP Page Controls		
Item	**Control Name**	**Description**
1	Enable LDAP Authentication	Use this check box to enable the controls below to configure LDAP for your system.
2	LDAP Authentication over SSL	Check this box to allow LDAP Authentication over SSL in your system.
3	Configuration fields	Enter Port, IP Address, Bind Password, Bind DN and Searchbase in the fields in this section to configure LDAP for your system.
4	Save Button	Once you are done configuring LDAP, press this button to save this information to your system.

Configuring LDAP Settings

Follow the steps below to configure the LDAP settings.

1. Check ENABLE LDAP AUTHENTICATION to enable LDAP Authentication and LDAP Authentication over SSL support.
2. Enter a port number for the LDAP server.
3. Enter an IP Address for the LDAP server.
4. Enter a Bind Password for the LDAP server.
5. Enter a Bind DN value in the field. (The bind DN is the user or the LDAP server that is permitted to do search in the LDAP directory within a defined search base.)
6. Enter a SearchBase value in the field. The SearchBase is the directory that allows the external user to search data.
7. After entering the information in the fields, click SAVE to save the information you've entered.

4.4 Active Directory Page

Click on Active Directory to reveal the Active Directory page (Figure 4-6). This page displays a list of role groups and their Group IDs, Group Names, Domains and Network Privilege settings. If you would like to delete or modify a role group, select the name in the list and press Delete Role Group or Modify Role Group. To add a new role group, select an un-configured slot from the table and press Add Role Group. The commands you may give on this page are described in the table below.

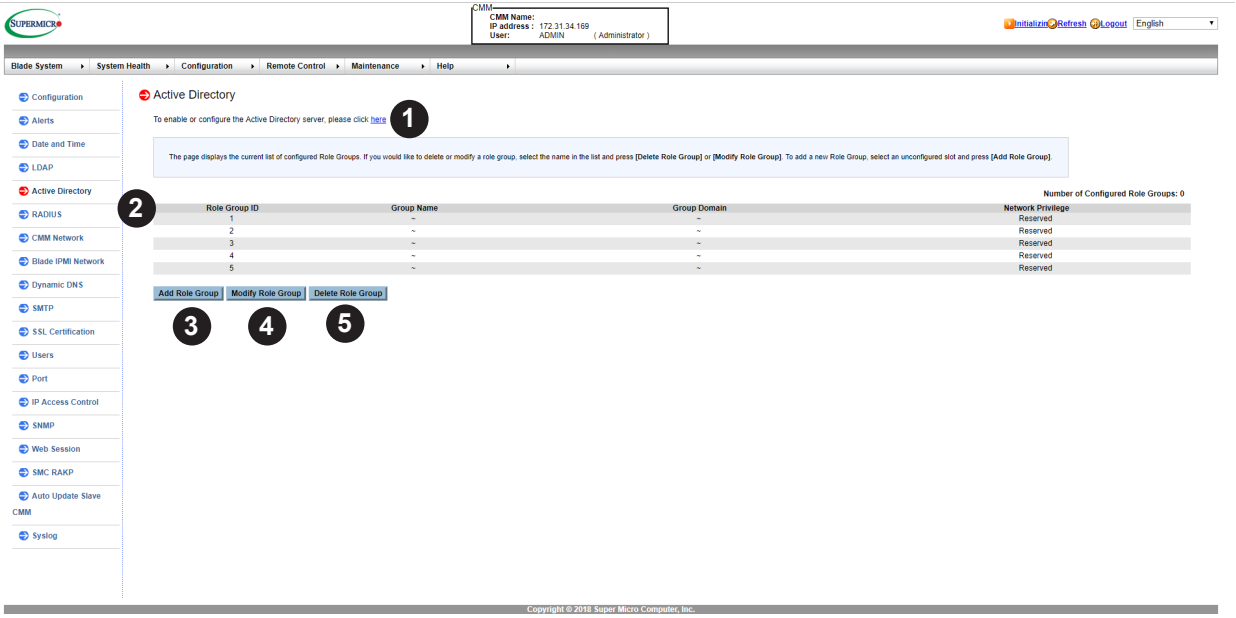


Figure 4-6. Active Directory Page

Active Directory Page Controls		
Item	**Control Name**	**Description**
1	Active Directory Server Link	Click on this link to go to the Active Directory - Advanced Settings page (Figure 4-7).
2	Role Group List	Select a role group from this list to modify or delete a role group. Press the Add Role Group button to add a role group or select a role group and press the Modify Role Group button to modify one of them in the list.
3	Add Role Group Button	Press this button to add a role group to the list of role groups in the table above. This will bring up the Add Role Group page (Figure 4-8) where you can enter information and save it as a new role group in the Role Group list.
4	Modify Role Group Button	After selecting a role group from the list above, press this button to modify a role group. Pressing this button brings up the Modify Role Group page (Figure 4-9) where you can modify information in the group and save it in the Role Group list.
5	Delete Role Group Button	If you wish to delete a role group, select it from the list and press this button.

This page displays a list of role groups and their Group IDs, Group Names, Domains and Network Privilege settings.

1. Click here to enable or configure the Active Directory server. See the next page for enabling or configuring Active Directory instructions.
2. Select a group and click ADD ROLE GROUP to add a role group.
3. Select a group and click MODIFY ROLE GROUP to modify a role group.
4. Select a group and click DELETE ROLE GROUP to delete a role group.

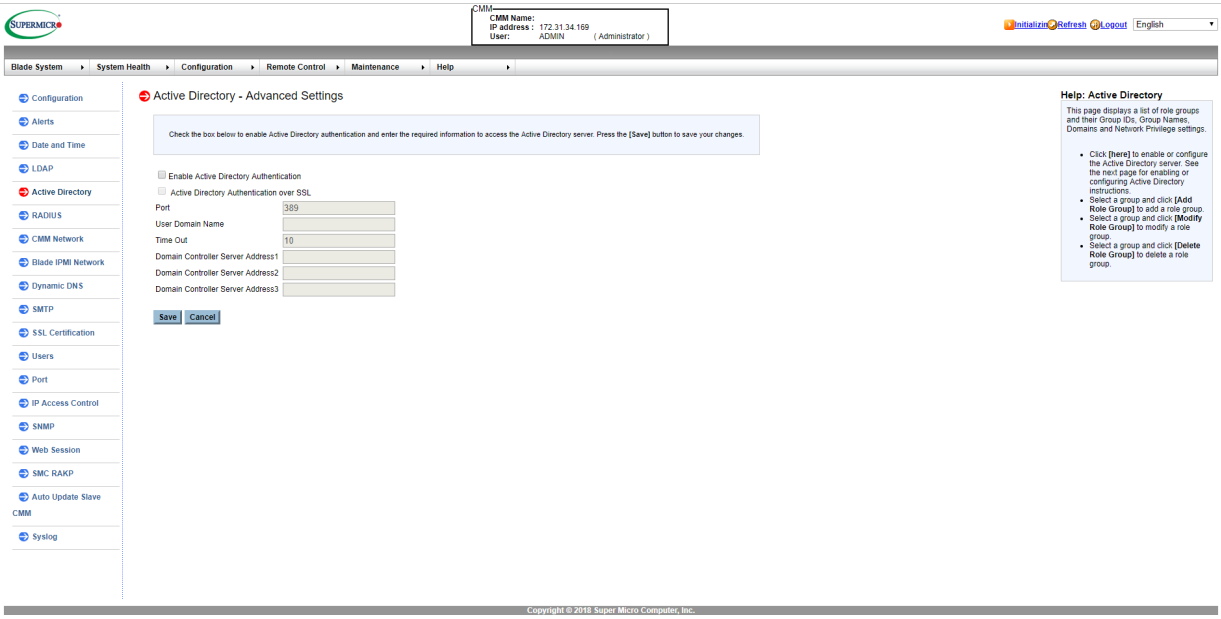


Figure 4-7. Active Directory – Advanced Settings Page

Click on the ACTIVE DIRECTORY SERVER link to reveal the ACTIVE DIRECTORY - ADVANCED SETTINGS page (Figure 4-7). This page displays two check boxes that allow you to enable ACTIVE DIRECTORY AUTHENTICATION and ACTIVE DIRECTORY AUTHENTICATION OVER SSL. When checked, the table below opens allowing you to specify Port, User Domain Name, Time Out and Domain Controller Server Addresses. Pressing the SAVE button allows you to save this configuration, while pressing CANCEL cancels the configuration.

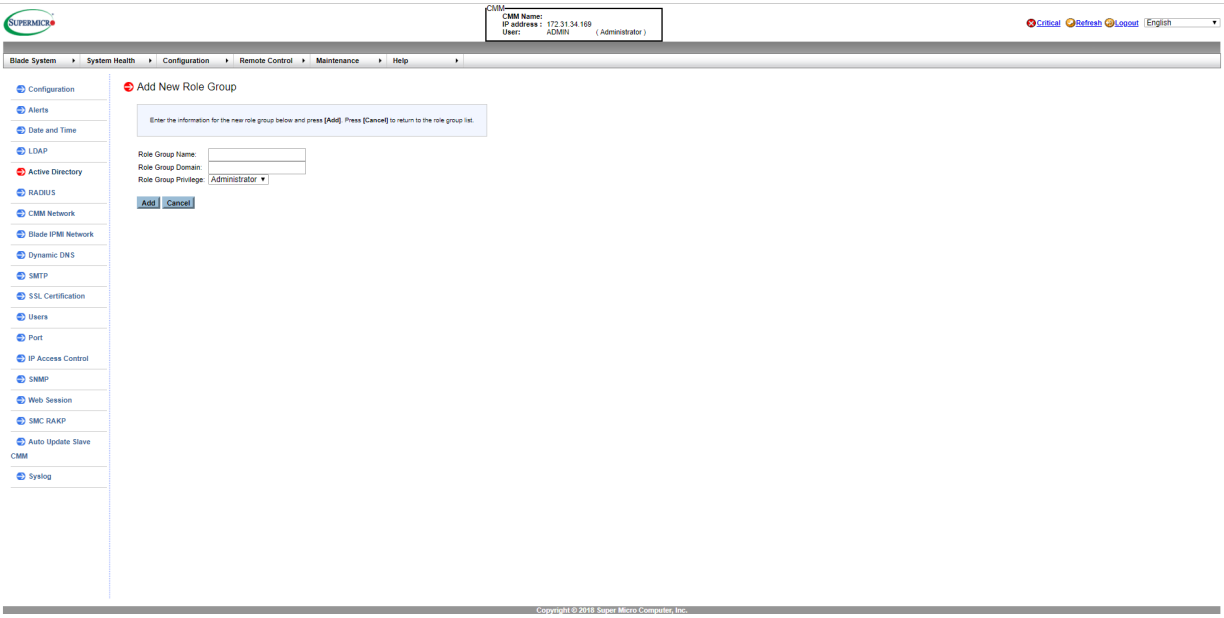


Figure 4-8. Add Role Group Page

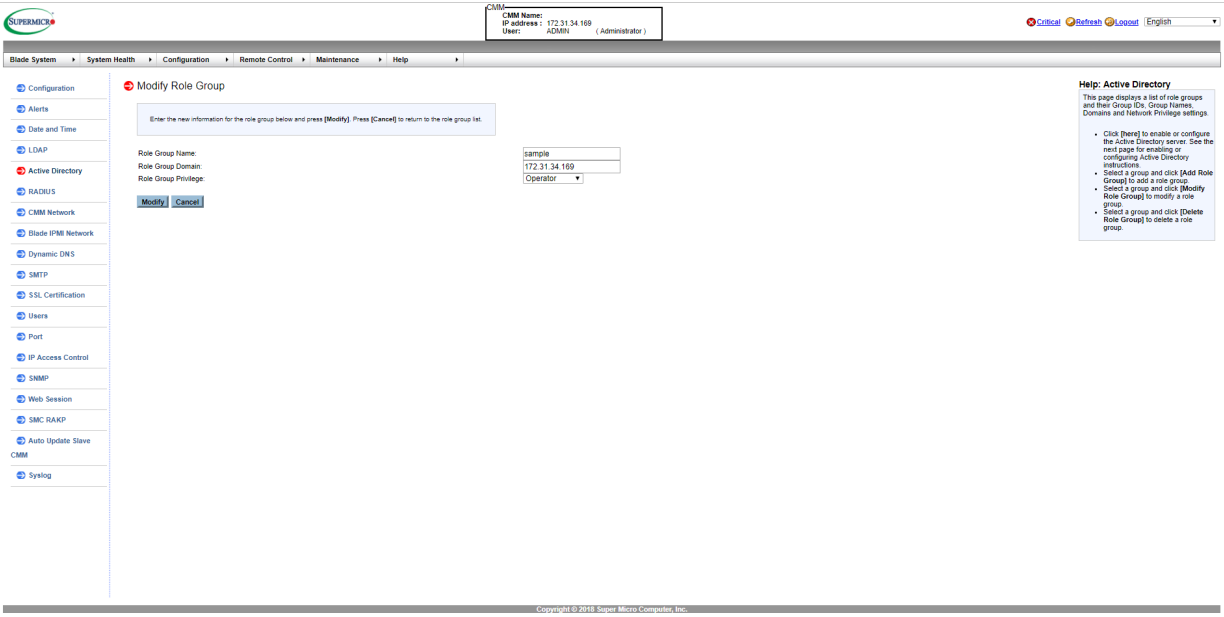


Figure 4-9. Modify Role Group Page

4.5 RADIUS Page

Click on RADIUS to reveal the RADIUS page (Figure 4-10). You can use this page to enable RADIUS and enter the required information to access the RADIUS server. The commands you may give on this page are described below in the table below.

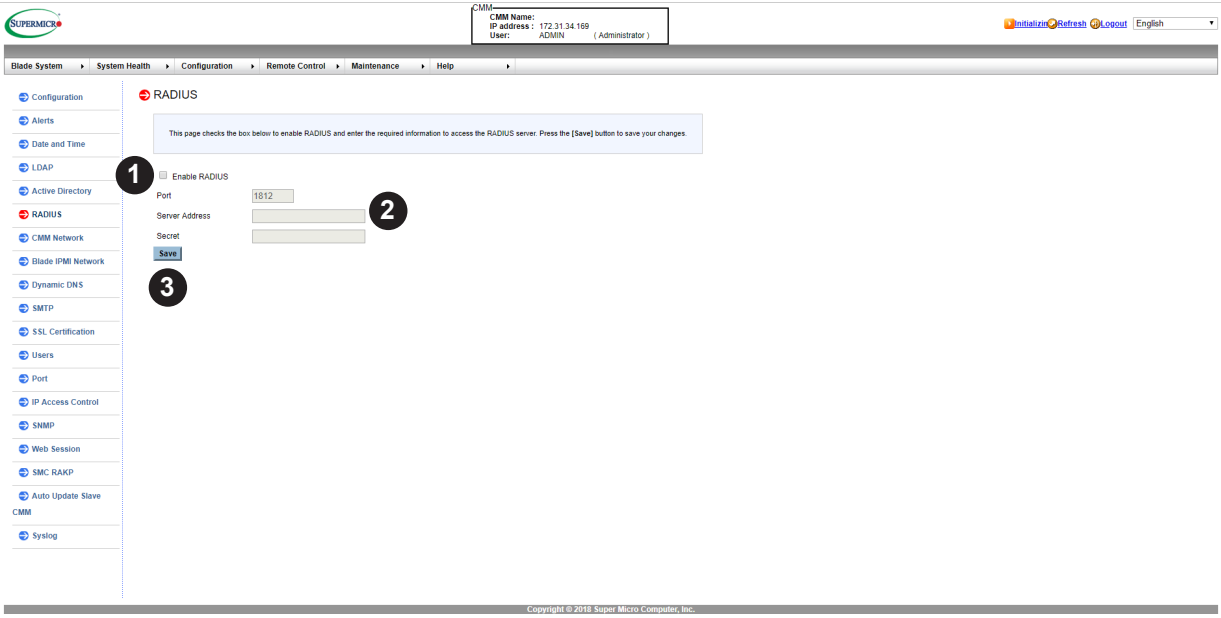


Figure 4-10. RADIUS Page

RADIUS Page Controls		
Item	**Control Name**	**Description**
1	Enable RADIUS Check Box	Check this box to enable RADIUS.
2	RADIUS Information Fields	Fill out these fields to configure RADIUS.
3	Save Button	Once you are done configuring RADIUS, press this button to save.

This feature allows the user to configure Radius Option settings.

1. Check the ENABLE RADIUS box to enable Radius support. Enter the information in the fields below to configure Radius settings.
2. Enter the port number for the Radius server.
3. Enter the IP address of the Radius server.
4. Enter a (secret) password for the user to access the Radius server.
5. After entering the information in the fields, click SAVE to save the information you've entered.

4.6 CMM Network Page

Click on CMM Network to reveal the CMM Network page (Figure 4-11). You can view and modify the network settings on this page and select whether to obtain an IP address automatically or manually configure one. The commands you may give on this page are described below in the table below.

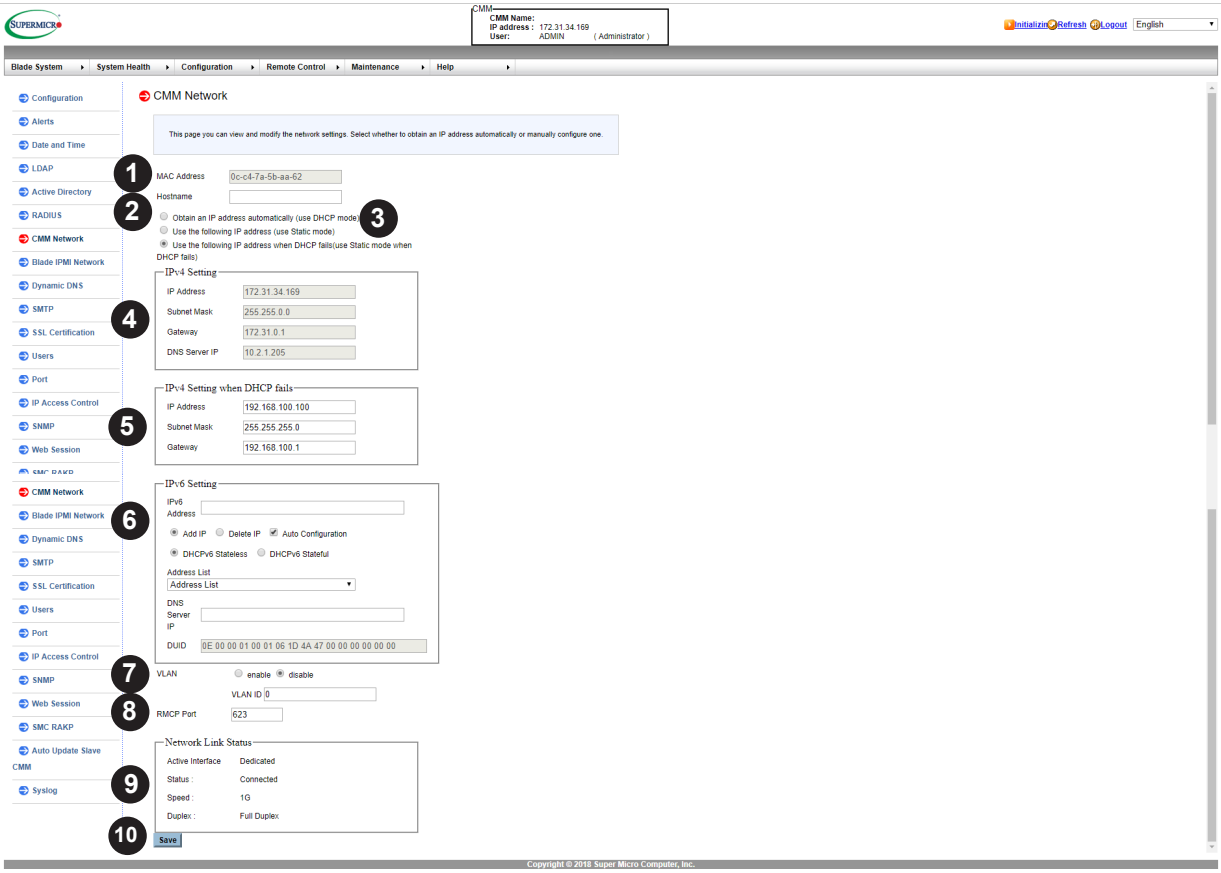


Figure 4-11. CMM Network Page

CMM Network Page Controls		
Item	**Control Name**	**Description**
1	MAC Address	When you specify the IP Address manually, use this field to specify your MAC Address. If you have chosen to have your IP address automatically determined, then this control is greyed-out and cannot be modified.
2	Hostname	Use this field to specify your Hostname.
3	Automatic or Manual IP Address Controls	Use these two option buttons to either Obtain an IP address automatically (using DHCP mode) or Use the following IP addresses (use Static mode) to either automatically or manually specify an IP address for the network.
4	IPv4 Setting Controls	Use these controls to specify your IP Address, Subnet Mask, Gateway address and DNS Server IP. If you have chosen to have your IP address automatically determined, then these fields are greyed-out and cannot be modified except for DNS Server IP address.
5	IPv4 Setting when DHCP fails	Use these controls to specify your IP Address, Subnet Mask and Gateway address when DHCP fails.

6	IPv6 Setting Controls	Use these controls to do the following: set IPv6 Address, Add IP, Delete IP, use Auto Configuration, select either DHCPv6 Stateless or DHCPv6 Stateful modes, specify your DNS Server IP or specify your DUID.
7	VLAN Controls	Use these controls to Enable or Disable VLAN or specify the VLAN ID.
8	RMCP Port	Use this field to specify your RMCP port number.
9	Network Link Status	This section shows your network link status for Active Interface, Status, Speed and Duplex.
10	Save Button	Once you are done configuring your network settings, press this button to save your configurations.

To configure Network settings, follow the instructions below.

1. Check the first option button to obtain an IP address automatically by using DHCP (Dynamic Host Configuration Protocol) or check the second option button to setup the IP address by manually entering the information in the fields below. The third option button is the default setting which is the combination of the first and the second setting. It means CMM will use the static IP after it can't obtain the dynamic IP from the DHCP server
2. To use IPv4, enter information under IPv4 Settings.
3. To set the IP address using the IPv6 format, enter an IPv6 Address in the field. Enter a DNS Server IP and DUID (unit ID) in the boxes below.
4. Check this box to enable Virtual LAN support, and enter the VLAN ID in the field.
5. Select the desired RMCP (Remote Mail Checking Protocol) port based on his configuration. The default port is **623**.
6. After entering all fields above, click SAVE to save the Network settings.

Note: DHCP is the default setting.

4.7 Blade IPMI Network Page

Click on BLADE IPMI NETWORK to reveal the BLADE IPMI NETWORK page (Figure 4-12). This page allows you to modify all blade and their networks by one click on this page. If you use Static mode, the base IP address will set to the first Node of a blade's A1 and increase base IP address in the order for the following nodes. The commands you may give on this page are described in the table below.

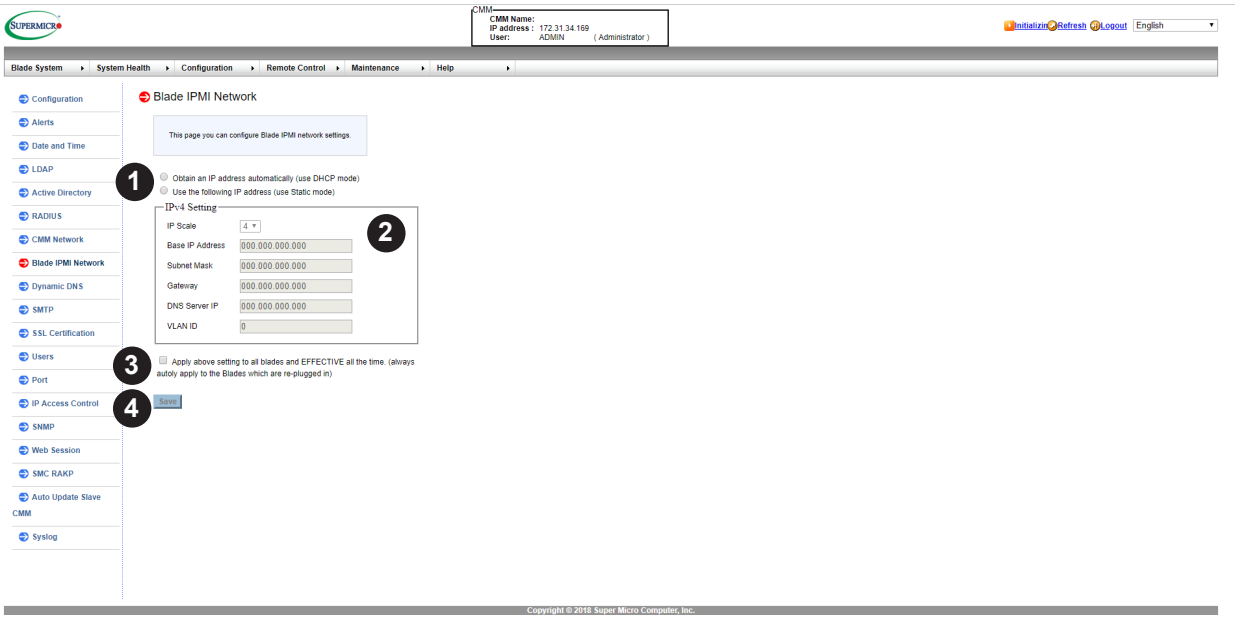


Figure 4-12. Blade IPMI Network Page

Blade IPMI Network Page Controls		
Item	**Control Name**	**Description**
1	Automatic or Manual IP Address Controls	Use these two option buttons to either OBTAIN AN IP ADDRESS automatically (using DHCP mode) or USE THE FOLLOWING IP ADDRESSES (use Static mode) to either automatically or manually specify an IP address for the network.
2	IPv4 Setting Controls	Use these controls specify your Base IP Address, Subnet Mask and Gateway address. If you have chosen to have your IP address automatically determined, then these fields are greyed-out and cannot be modified.
3	Apply Above Settings to All Blades and Effective All the Time Check Box	If you check this box, then all IPv4 settings in the above section for ALL blade modules will use these settings ALL THE TIME and auto reset to these settings when the blades start up.
4	Save Button	Once you are done configuring your Blade Network settings, press this button to save your configurations.

This page you can configure Blade IPMI network settings.

1. Select the first option button to obtain an IP address automatically by using DHCP (Dynamic Host Configuration Protocol) or check the second option button to setup the IP address by manually entering the information in the fields below.
2. To set the IP address using the IPv4 format.
3. Select IP Scale to set each blade IP increase base by 1, 2 or 4.
4. You can check box to apply network setting to all blades IPMI.

   Note: Blade IPMI network setting will apply to the blade which is re-plugged in.
5. Check last box to apply network setting to all blades and EFFECTIVE all the time. CMM always autoly applies Blade IPMI network setting to the blades which are re-plugged in.

4.8 Dynamic DNS Page

Click on Dynamic DNS to reveal the Dynamic DNS page (Figure 4-13). Use this page to configure dynamic update properties. The commands you may give on this page are described in the table below.

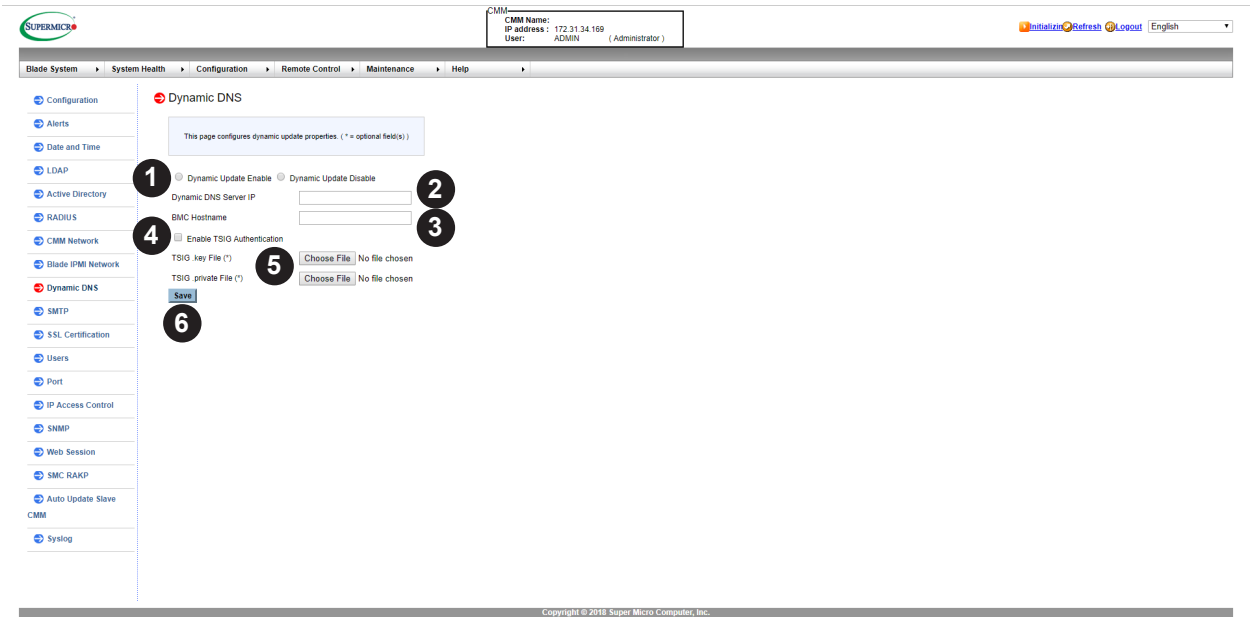


Figure 4-13. Dynamic DNS Page

Dynamic DNS Page Controls		
Item	**Control Name**	**Description**
1	Dynamic Update Enable/Disable Check Boxes	Use these check boxes to enable or disable the Dynamic DNS feature for your system.
2	Dyanmic DNS Server IP Field	Enter the Dynamic DNS Server IP address in this field.
3	BMC Hostname Field	Enter the BMC Hostname in this field.
4	Enable TSIG Authentication Check Box	If you want to enable TSIG Authentication, then check this box.
5	TSIG .key File/TSIG .private File fields	Optionally, you may use these controls to browse and specify the locations for TSIG .key or TSIG .private files.
6	Save Button	Once you are done configuring your Dynamic DNS settings, press this button to save your configurations.

Using the Dynamic DNS Page

1. Click the DYNAMIC UPDATE ENABLE option button to enable Dynamic DNS update support. Click DYNAMIC UPDATE DISABLE to disable Dynamic DNS update support (Default: Disabled).
2. Enter the IP address of your Dynamic DNS (Domain Name System) server.
3. Enter the name of the BMC (Baseboard Management Controller) Host Server.
4. Check the box to enable TSIG Authentication support, and browse the files to select the TSIG.key file (optional).
5. Browse the files to select the TSIG-private file (optional).
6. After entering the required information in the fields, click SAVE to save the information you have entered.

4.9 SMTP Page

Click on SMTP to reveal the SMTP page (Figure 4-14). Use this page to enter the IP Address for the SMTP Mail server and some of its configurations. The commands you may give on this page are described in the table below.

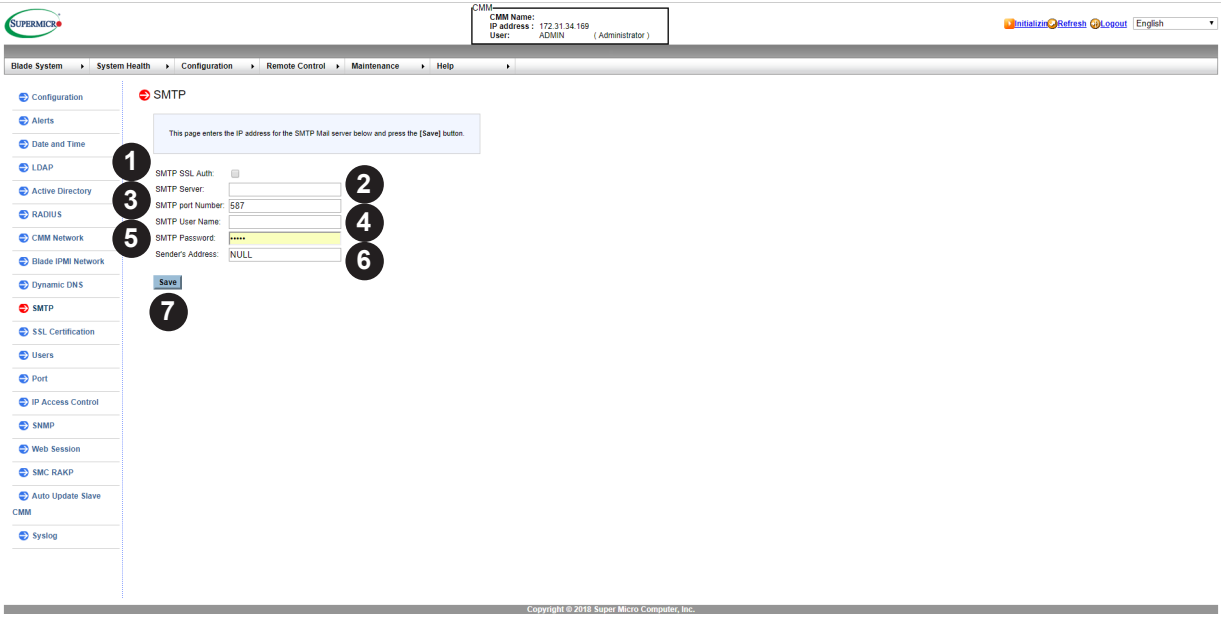


Figure 4-14. SMTP Page

SMTP Page Controls		
Item	**Control Name**	**Description**
1	SMTP SSL Auth Check Box	Checking this check box allows you to require SMTP SSL authorization.
2	SMTP Server Field	This field is used to specify the SMTP Server address.
3	SMTP Port Number Field	This field is used to specify the SMTP Port Number.
4	SMTP User Name Field	This field is used to specify the SMTP User Name.
5	SMTP Password Field	This field is used to specify the SMTP Password.
6	Sender's Address Field	This field is used to specify the Sender's Address.
7	Save Button	Once you are done configuring your Dynamic DNS settings, press this button to save your configurations.

Configuring the SMPT Settings Page

To configure SMTP settings, follow the instructions below.

1. Check SMTP SSL AUTH to enable this feature. Once SMTP SSL Authentication is enabled, enter information in the fields below.
2. Enter the IP address for the SMTP Mail server. The SMTP port number will be displayed.
3. Enter the user name for your SMTP Mail server. (optional)
4. Enter the user password for your SMTP Mail server. The status of the sender's address will be displayed. (optional)

5. After entering the information above, click SAVE to save the settings.

Note: Both SHA2 and RSA 2048 bit SSL are supported.

4.10 SSL Certification Page

Click on SSL CERTIFICATION to reveal the SSL CERTIFICATION page (Figure 4-15). Use this page to specify the dates for the default certificate and private key and upload an SSL certificate. The commands you may give on this page are described in the table below.

Figure 4-15. SSL Certification Page

SSL Certification Page Controls		
Item	**Control Name**	**Description**
1	New SSL Certificate Choose File Button	Press this button to select a SSL Certificate file to use from your system.
2	New Private Key Choose File Button	Press this button to select a New Private Key to use from your system.
3	Upload Button	Press this button to upload the selected files for the SSL Certificate and the New Private Key to your system.

Entering a New Certificate

1. To enter a new SSL Certificate, enter a new certificate in the field. You can also browse the data base to select a new certificate.

2. Enter a new Private Key in the field, if desired. You can also browse the data base to select a new key.

3. After entering the new SSL certificate or/and a new private key, press [Upload] to upload the certificate and private key to the server.

Note: SHA2 and RSA 2048 bit SSL supported.

4.11 Users Page

The USERS page (Figure 4-16) is where you specify and manage groups and users, which helps you manage the remote systems you are managing. Its controls are shown in the table below.

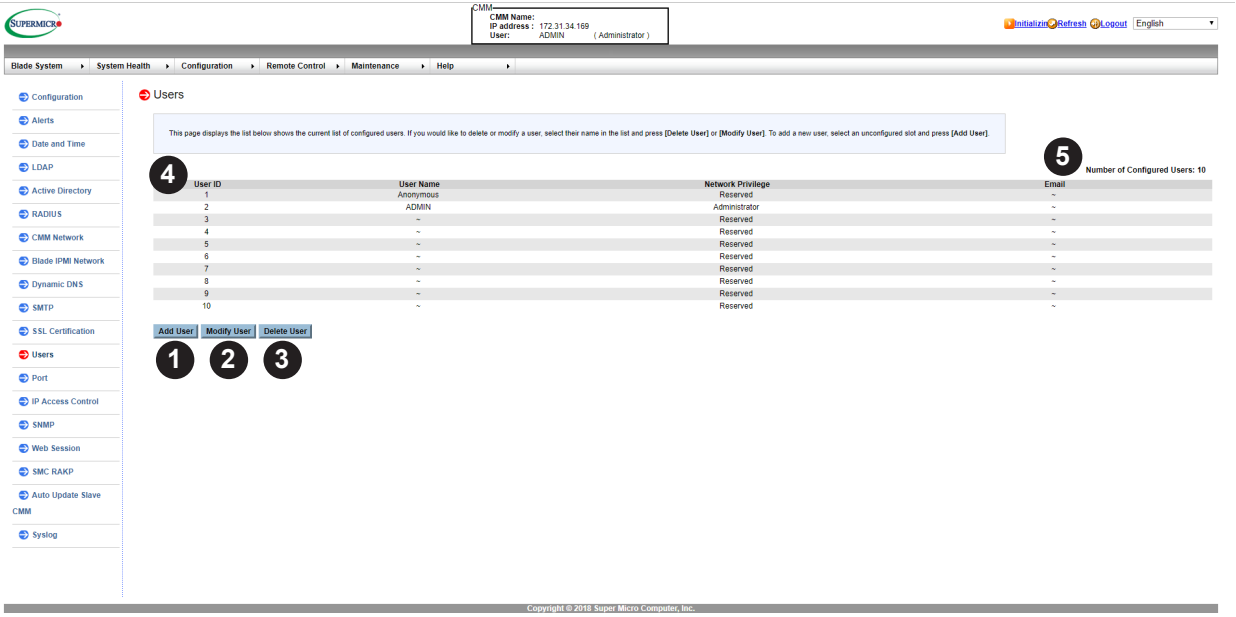


Figure 4-16. Users Page

Users Page Controls		
Item	**Control Name**	**Description**
1	Add User Button	Selecting an unconfigured slot and pressing this button allows you to specify a new user for the User List on the page.
2	Modify User Button	Selecting a user and pressing this button allows you to modify a user from the User List on the page.
3	Delete User Button	Selecting a user and pressing this button allows you to delete a user from the User List on the page.
4	User ID Column	This lists the current user information, including User ID, User Name and Network Privilege settings.
5	Number of Configured Users	This displays the number of the users that are set up for the network. The maximum of 10 user profiles can be made.

Using the Users Page

1. Select an empty slot from the users list and then click [Add User] to add a new user.
2. When prompted, enter username, password, and network privilege level.
3. Select [Add] to finish the process.
4. To modify user information, click on an existing user and then click [Modify User].
5. When prompted, check [Change Password] to modify user password.
6. Select the options under [Network Privileges] to change user privilege level.
7. To delete a user from the network, select a user and click [Delete User]. When prompted, click [OK] to permanently delete the user.

4.12 Port Page

Click on PORT to reveal the PORT page (Figure 4-17). Use this page to configure a port number for your system. To enable/disable each port, check/un-check the box next to each port setting and enter the port number. To enable/disable SSL redirection, check/uncheck the box.

The commands you may give on this page are described in the table below.

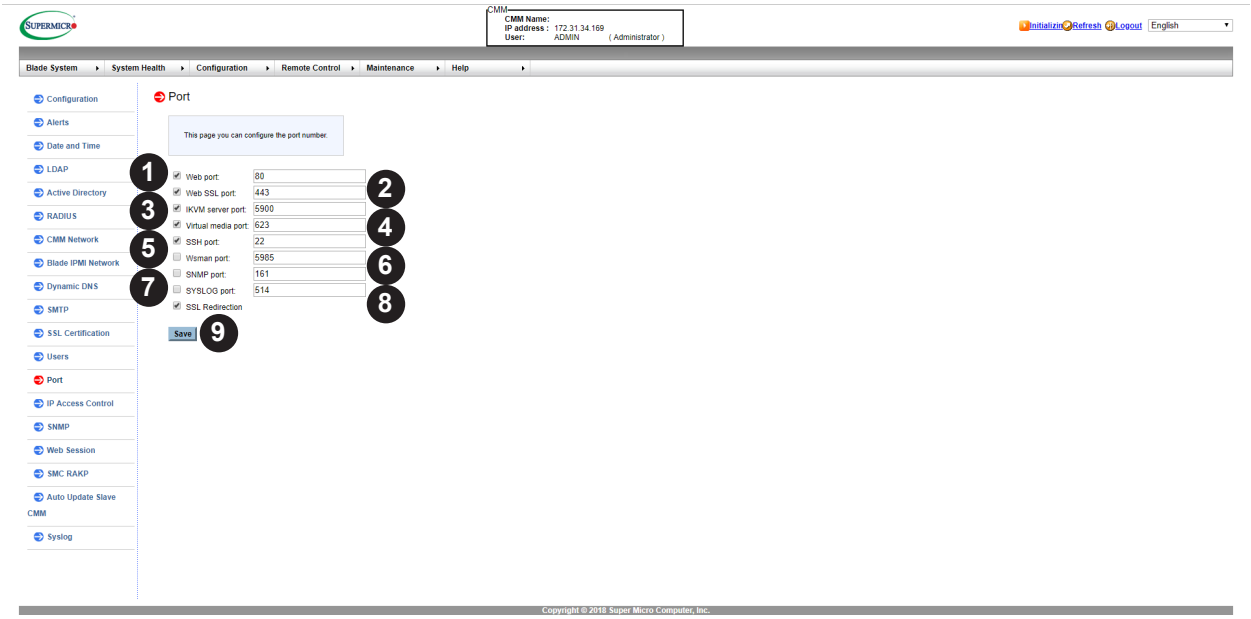


Figure 4-17. Port Page

Port Page Controls		
Item	**Control Name**	**Description**
1	Web Port Number Field	User this field to enter the Web Port number.
2	Web SSL Port Number Field	User this field to enter the Web SLL Port number.
3	KVM Server Port Number	User this field to enter the KVM Server Port number.
4	Virtual Media Port Number	User this field to enter the Virtual Media Port number.
5	Wsman port	User this field to enter the Wsman number.
6	SNMP port	User this field to enter the SNMP Port number.
7	SYSLOG port	User this field to enter the SYSLOG Port number.
8	SSL Redirection check box	To enable/disable SSL redirection, check/un-check the box.
9	Save Button	Once you are done configuring your Port Number settings, press this button to save your configuration.

4.13 IP Access Control Page

Click on IP Access Control to reveal the IP Access Control page (Figure 4-18). This page displays the IP access control table. You can select an IP access rule and press the Modify button to configure your IP access policy.

The commands for this page are described in the table below.

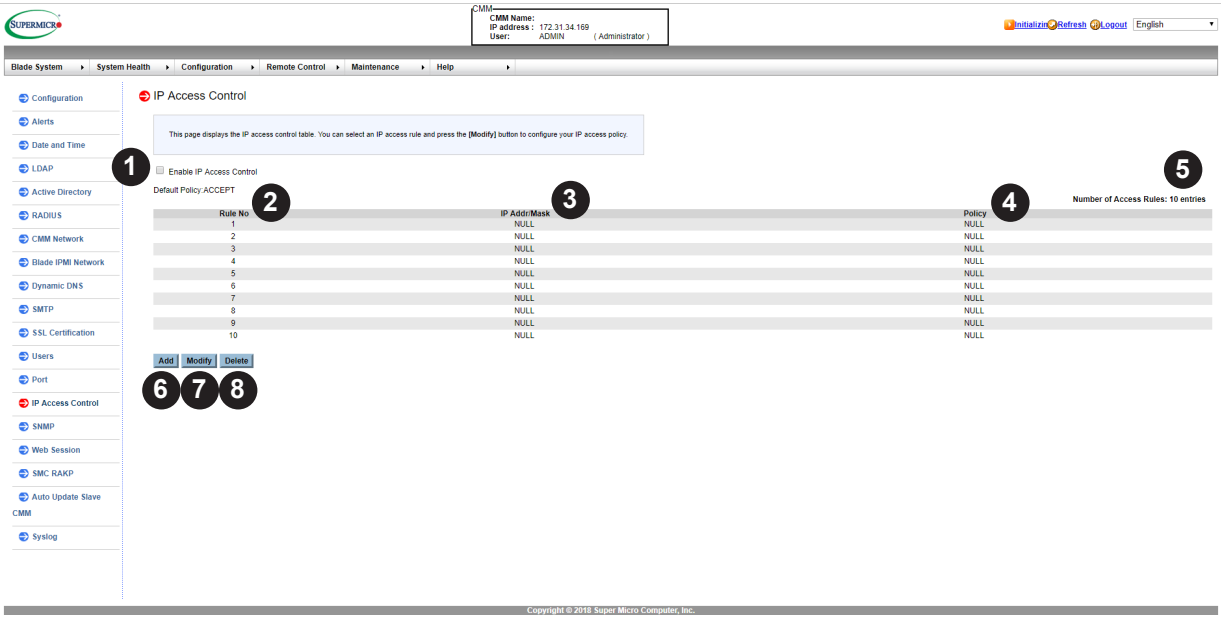


Figure 4-18. IP Access Control Page

IP Access Control Page Controls		
Item	**Control Name**	**Description**
1	Enable IP Access Control check box	Check this check box to configure settings for the page. The default setting is Accept.
2	Rule No. Column	This column lists the number of IP Access Control rules.
3	IP Add. Mask Column	This column displays IP Address/Mask settings.
4	Policy Column	This column displays the status of an IP Access policy.
5	Number of Access Rules	This displays the maximum number of IP Access rules you can set for the system.
6	Add Button	Press this button to add a new rule to the table.
7	Modify Button	Select a rule from the table and press this button to modify it's parameters
8	Delete Button	Select a rule from the table and press this button to delete a rule.

4.14 SNMP Page

Click on SNMP to bring up the SNMP page (Figure 4-19). This page checks the box below to set SNMP Setting and enter the required information to enable the SNMP. Please press the SAVE button to save your changes.

The commands for this page are described in the table below.

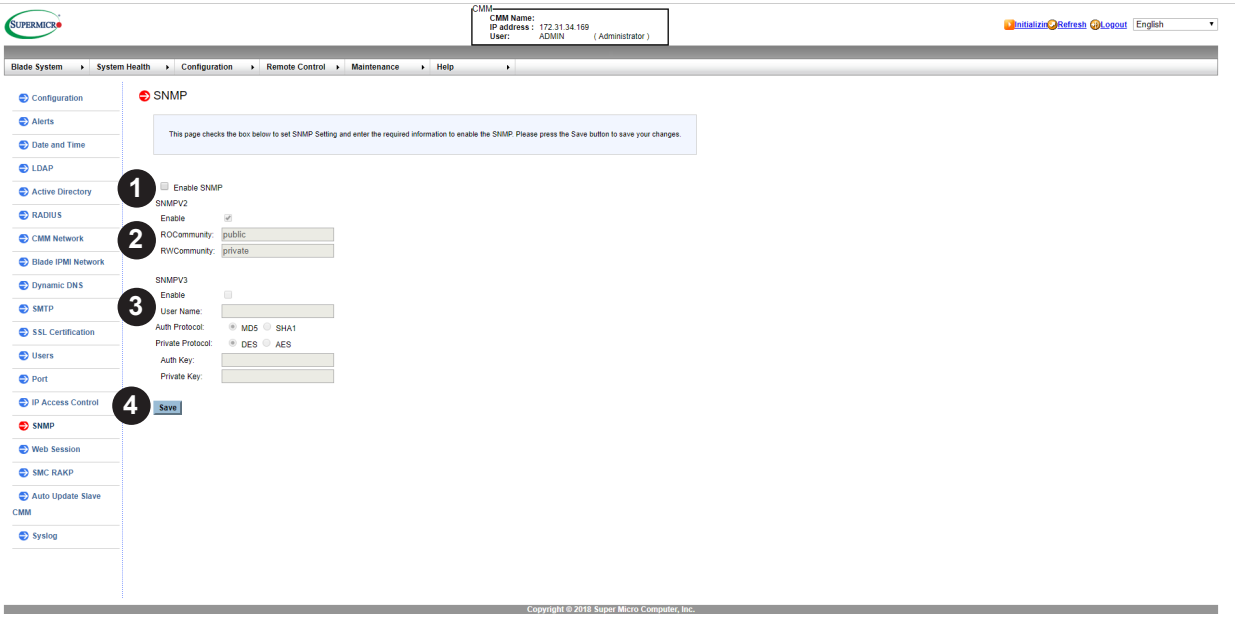


Figure 4-19. SNMP Page

SNMP Page Controls		
Item	**Control Name**	**Description**
1	Enable SNMP Check Box	To configure SNMP and select either of the two SNMP protocols, you must check this check box first.
2	SNMPV2 Controls	Use these controls to set up SNMPV2. First check the ENABLE check box, then enter in the fields below your read-only community string and read-write community string.
3	SNMPV3 Controls	Use these controls to set up SNMPV3. First check the ENABLE check box, then input your username, choose a preferred authentication (e.g. MD5) and encryption protocol (e.g. DES), and then input your passwords in AUTH KEY and PRIVATE KEY fields respectively.
4	Save Button	Press the SAVE button to save your SNMP configuration to the system.

You can choose either SNMPv2 or SNMPv3 as the protocol for communicating with your SNMP client program.

Configuring SNMP Settings

To configure SNMP settings, refer to the following steps:

1. Check the ENABLE SNMP checkbox for enabling the SNMP daemon, and then choose SNMP version. Uncheck it to disable.

2. If SNMPV2 is enabled, please input your read-only community string and read-write community string.

3. If SNMPV3 is enabled, please input your username, choose preferred authentication (e.g. MD5) and encryption protocol (e.g. DES), and then input your passwords in AUTH KEY and PRIVATE KEY fields respectively.

4. Press the SAVE button. The IPMI firmware will remember your setting and depend on your decision to start or stop the SNMP daemon.

5. If you want to change SNMP port number, please go to the PORT page.

4.15 Web Session Page

Click on WEB SESSION to reveal the WEB SESSION page (Figure 4-20). This page enters web session parameters.

The commands for this page are described in the table below.

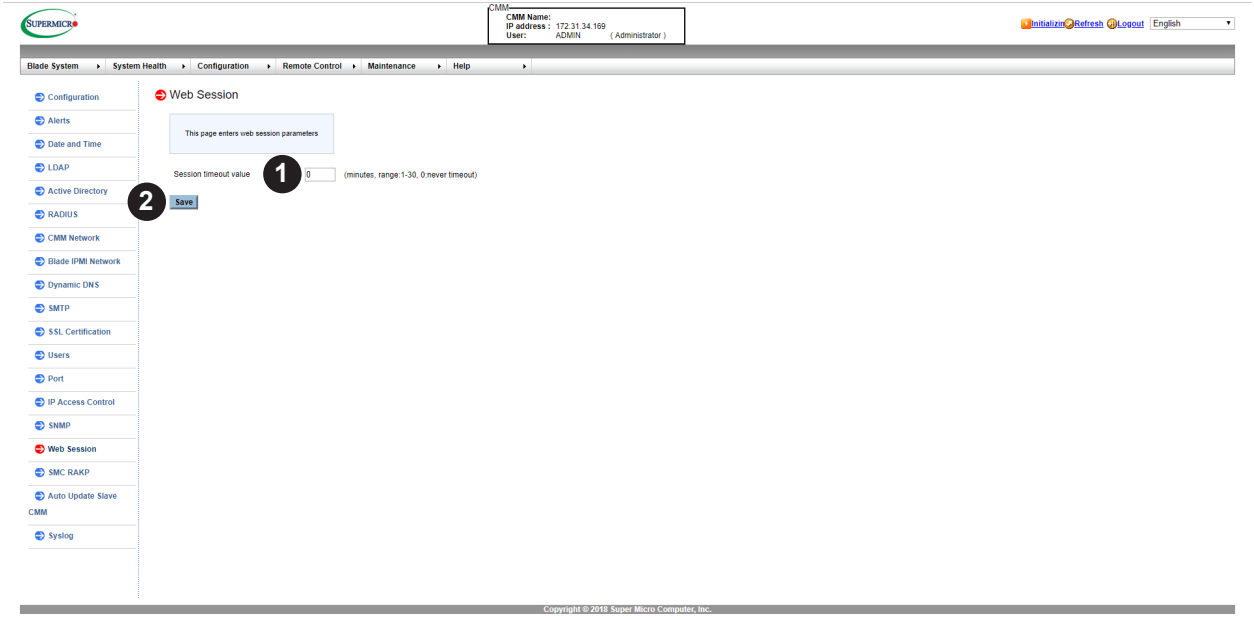


Figure 4-20. Web Session Page

Web Session Page Controls		
Item	**Control Name**	**Description**
1	Session Timeout Value Field	Set the SESSION TIMEOUT VALUE (MINUTE) of the WEB SESSION range from 1 to 30, or 0 for never having a timeout (Default Timeout is 30 minutes).
2	Save Button	Press the SAVE button to save the configuration to the system.

4.16 SMC RAKP Page

Click on SMC RAKP to reveal the SMC RAKP page (Figure 4-21). This page you can enable/disable SMC RAKP.

The commands for this page are described in the table below.

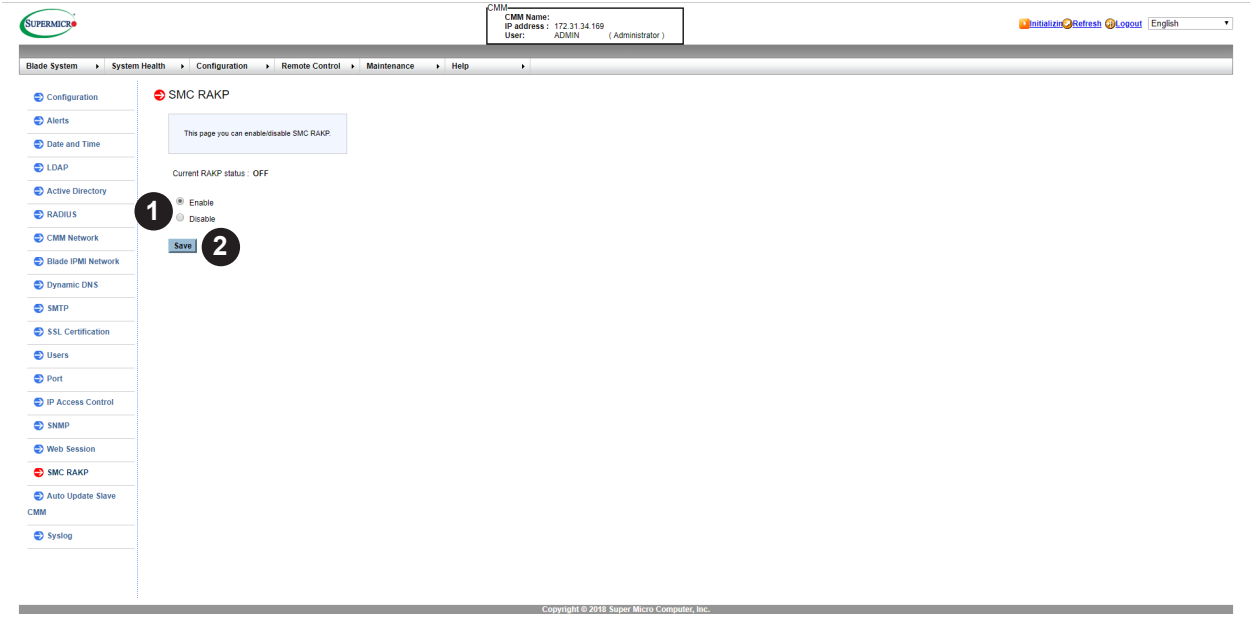


Figure 4-21. SMC RAKP Page

ISMC RAKP Page Controls		
Item	**Control Name**	**Description**
1	Enable/Disable Selector	Click ENABLE/DISABLE to control SMC RAKP.
2	Save Button	Click SAVE to save the settings to your system.

4.17 Auto Update Slave CMM Page

Click on AUTO UPDATE SLAVE CMM to reveal the AUTO UPDATE SLAVE CMM page (Figure 4-22). This page is to enable/disable Firmware Auto Update for slave CMM.

The commands for this page are described in the table below.

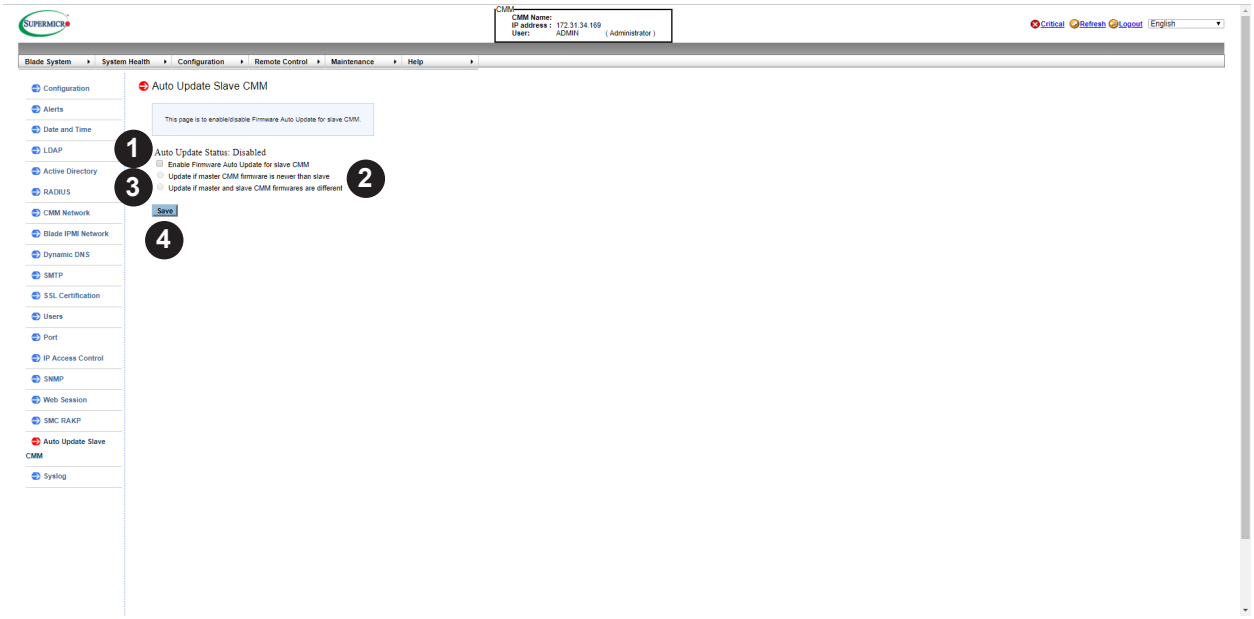


Figure 4-22. Auto Update Slave CMM Page

Auto Update Slave CMM Page Controls		
Item	**Control Name**	**Description**
1	Enable Firmware Auto Update for slave CMM check box	Check this check box to enable the slave CMM firmware auto update function.
2	Update if master CMM firmware is newer than slave option button	When you select this option button, if the master's firmware version is newer than slave BMC's, then the slave BMC would be automatically updated to master BMC's firmware.
3	Update if master and slave CMM firmwares are different option button	When you select this option button, if the firmware version is different between master and slave, then the slave BMC would be automatically updated to master BMC's firmware.
4	Save Button	Click SAVE to save the settings to your system.

4.18 Syslog Setting Page

Click on SYSLOG to reveal the SYSLOG SETTING page (Figure 4-23). This page you can configure the syslog server.

The commands for this page are described in the table below.

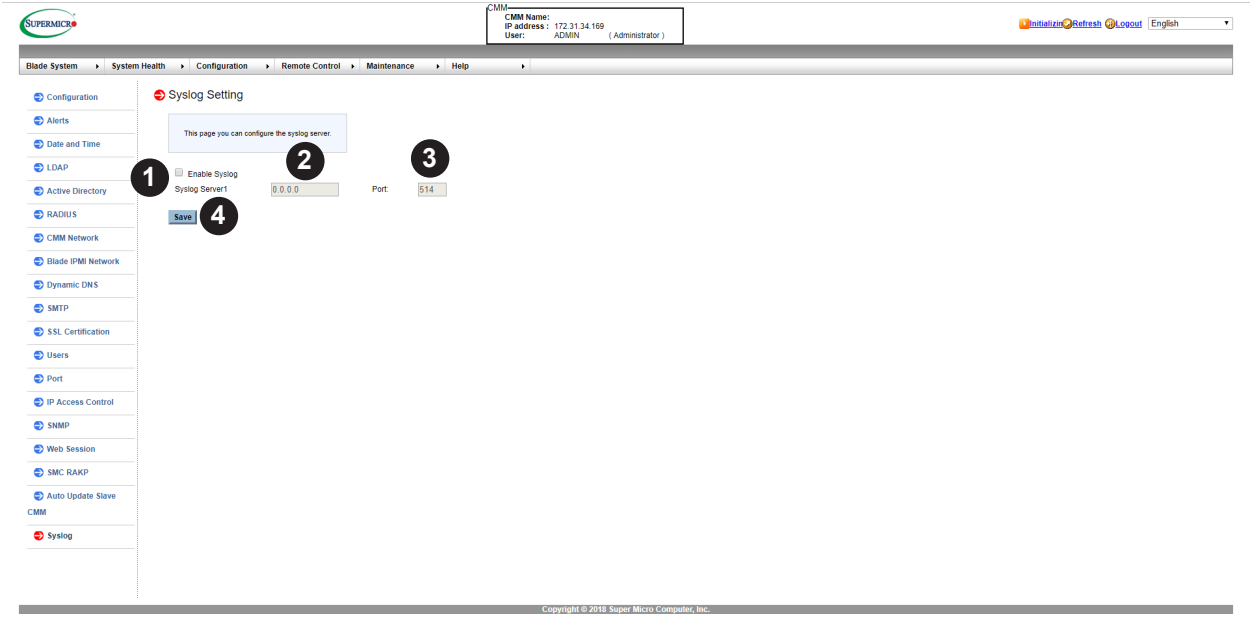


Figure 4-23. SMC RAKP Page

ISMC RAKP Page Controls		
Item	**Control Name**	**Description**
1	Enable Syslog check box	Use this check box to enable Syslog support.
2	Syslog Server 1	Use this field to enter the IP address of the Syslog server.
3	Port	Use this field to enter the Port number for the Syslog server
4	Save Button	Click Save to save the settings to your system.

Configuring the Syslog

1. Before using this feature, ensure that the Syslog server is ready.
2. Check the ENABLE SYSLOG check box to enable Syslog support.
3. Enter the IP address of the Syslog server in the SYSLOG SERVER 1 field.
4. Enter the port number for the Syslog server in the PORT field.
5. Click the SAVE button to complete the configuration.

Chapter 5

Remote Control

Use these pages to perform various remote operations on the server, such as launching the remote console.

- **Console Redirection:** Launch the redirection console via Java viewers.
- **Launch SOL:** Launch the SOL console.

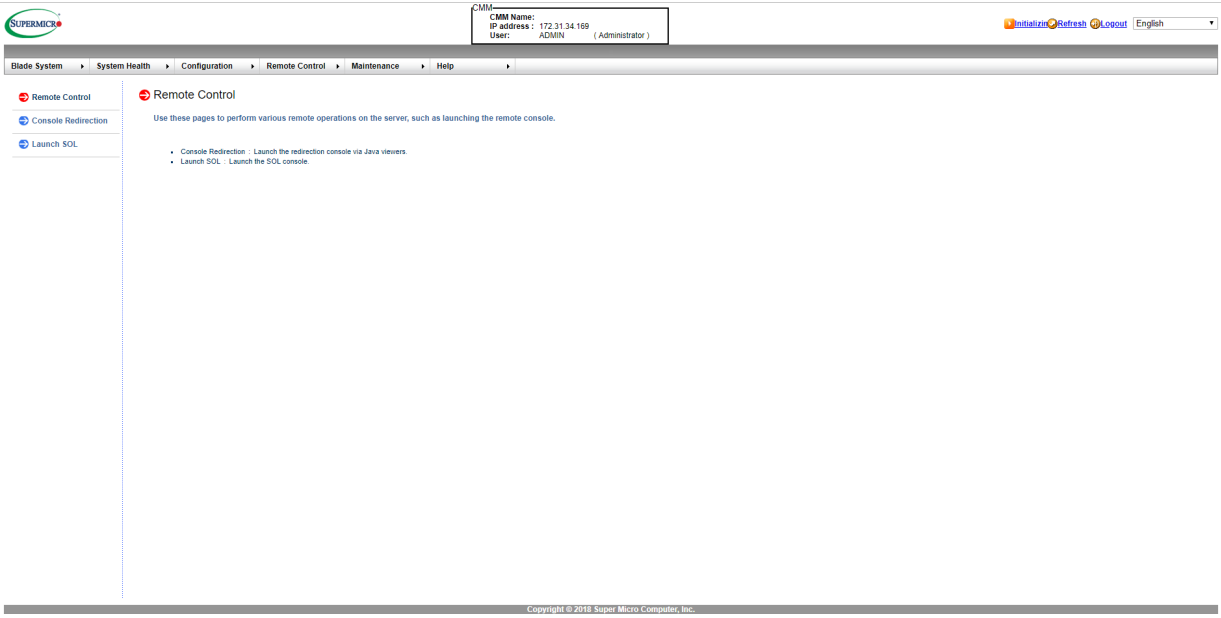


Figure 5-1. Remote Control Page

5.1 Console Redirection Page

Click on Console Redirection to reveal the Console Redirection page (Figure 5-1). The page is to launch the redirection console and manage the server remotely.

The controls for this page are shown in the table below.

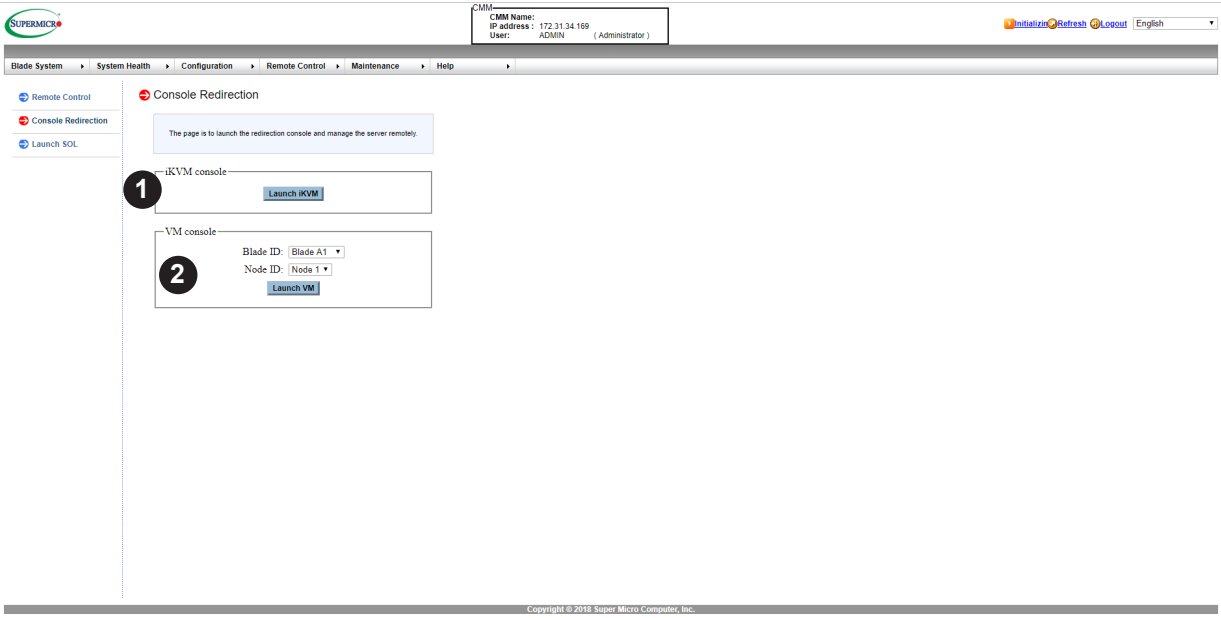


Figure 5-2. Console Redirection Page

Console Redirection Page Controls		
Item	**Control Name**	**Description**
1	iKVM Console section	Press the Launch KVM button to automatically start the download.
2	VM Controls section	Select the Blade ID and Node ID from the drop-down boxes in this section. Press the Launch VM button to open the console.

Using the Console Redirection Page

1. To launch remote console via Java or Active X (for Internet Explorer), press Launch Console button. It will automatically start the download. If the download is blocked due to security reasons, check the download page and the browser security option.

2. A Java loading screen will appears to indicate that Java is launching.

3. If a warning screen appears after loading screen, press the Run button to launch the remote console.

5.2 Launch SOL Page

Click on LAUNCH SOL to reveal the LAUNCH SOL page (Figure 5-2). This page allows you to launch the remote console using SOL (Serial over LAN) which provides serial port connections over LAN to access host server via Console Redirection. It also allows the system administrator to monitor and manage servers from a remote site.

The controls for this page are shown in the table below.

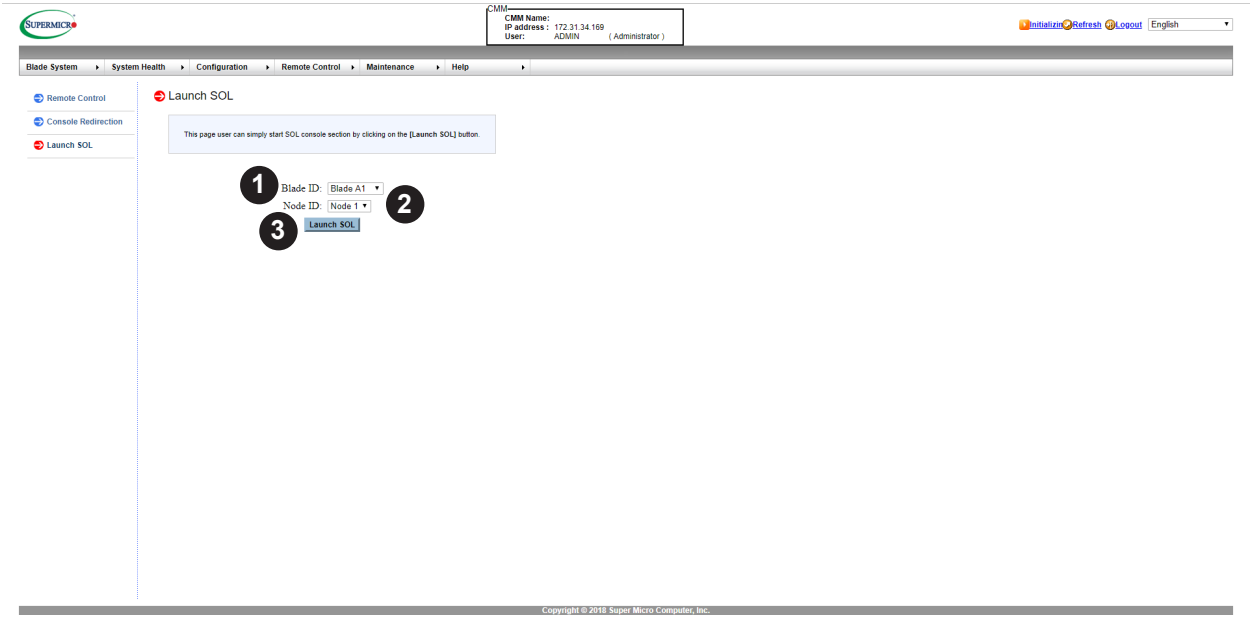


Figure 5-3. Launch SOL Page

Launch SOL Page Controls		
Item	**Control Name**	**Description**
1	Blade ID drop-down list box	Use this drop-down list box to select the Blade ID.
2	Node ID drop-down list box	Use this drop-down list box to select the Node ID.
3	Launch SOL	Press this button to launch the SOL page.

Using the Launch SOL Page

In order to connect the console through SOL, please do the following:

1. Enable console redirection in your system's BIOS settings.
2. Configure the remote system properly, based upon the operaing system in use.

Chapter 6

Maintenance Control

Use these pages to maintain the CMM, such as update firmware or reset the CMM.

- **CMM Firmware Update:** Performs a CMM firmware update.
- **CMM Unit Reset:** Reboots the CMM.
- **Factory Default:** Resets the CMM to Factory defaults settings. CMM connection will be reset.
- **CMM Configuration:** Saves or reloads the CMM configuration.
- **Maintenance Event Log:** Turns the maintenance event log on/off.
- **UID Control:** Sets the UID On/Off.
- **Trouble Shooting:** This function is used to debug issues.

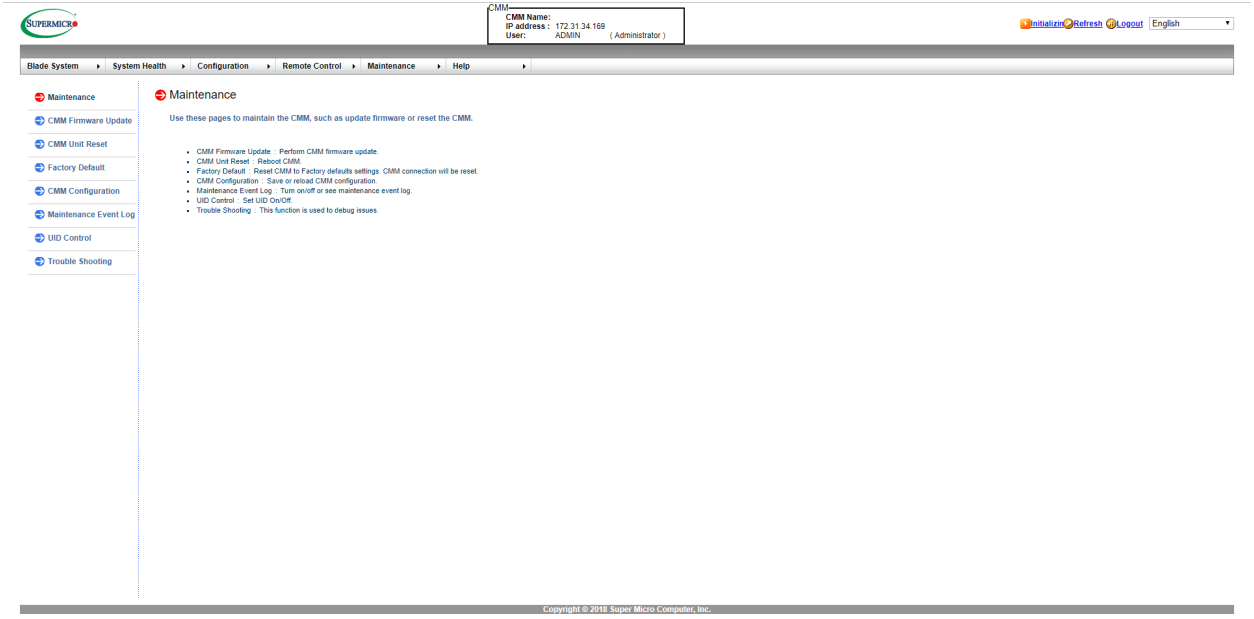


Figure 6-1. Maintenance Control Page

6.1 CMM Firmware Update Page

Click on CMM Firmware Update to reveal the CMM Firmware Update page (Figure 6-2). This page allows firmware update by pressing Enter Update Mode to put the device in a special mode.

The controls for this page are shown in the table below.

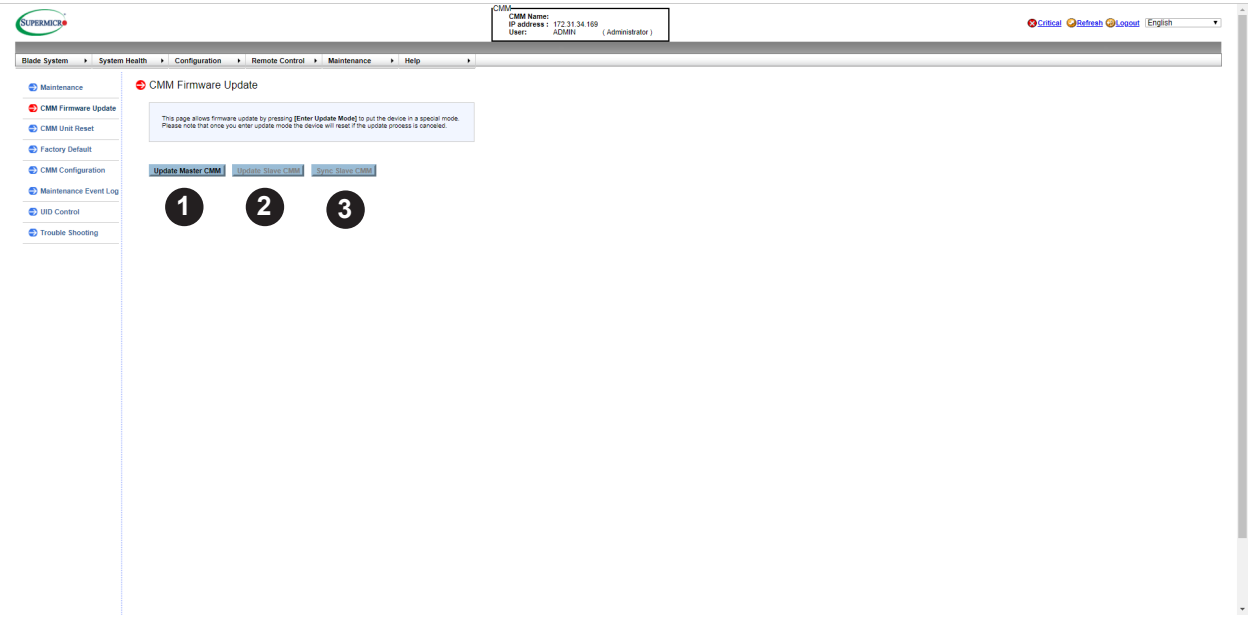


Figure 6-2. CMM Firmware Update Page

CMM Firmware Update Page Controls		
Item	**Control Name**	**Description**
1	Update Master CMM Button	Press this button to update the Master CMM.
2	Update Slave CMM Button	Press this button to update the Slave CMM.
3	Sync Slave CMM Button	Pres this button to sync the slave CMM.

Updating the CMM Firmware

1. To enter update mode, press a button to update the CMM (either Update Master or Update Slave CMM). A warning message will display after that.

2. Click OK to update your CMM firmware. Once you've clicked OK to update the firmware, the Firmware Upload screen will display.

Warning: Once the server is in the firmware update mode, the device will be reset, and the server will reboot even if you cancel firmware updating.

6.2 CMM Unit Reset Page

Click on CMM UNIT RESET to reveal the CMM UNIT RESET page (Figure 6-3). This page is used to reboot the CMM.

The controls for this page are shown in the table below.

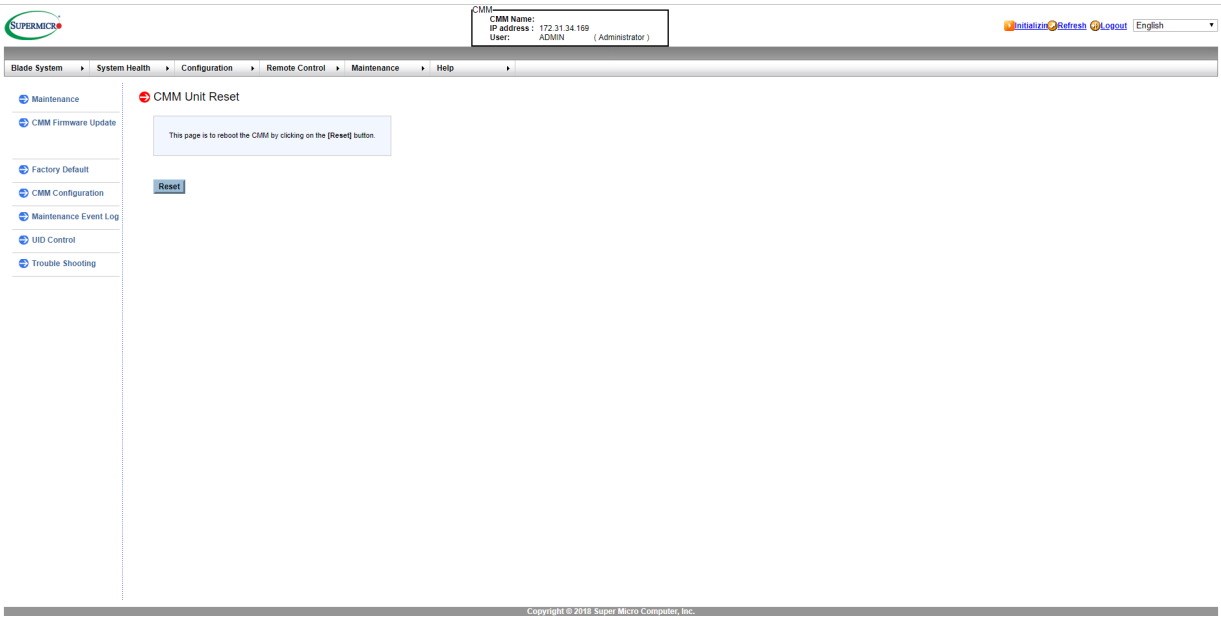


Figure 6-3 CMM Unit Reset Page

CMM Unit Reset Page Controls		
Item	**Control Name**	**Description**
1	Reset Button	Press this button to reset the CMM.

6.3 Factory Default Page

Click on FACTORY DEFAULT to reveal the FACTORY DEFAULT page (Figure 6-4). This page can reset each configuration of the CMM to default by clicking RESET button.

The controls for this page are shown in the table below.

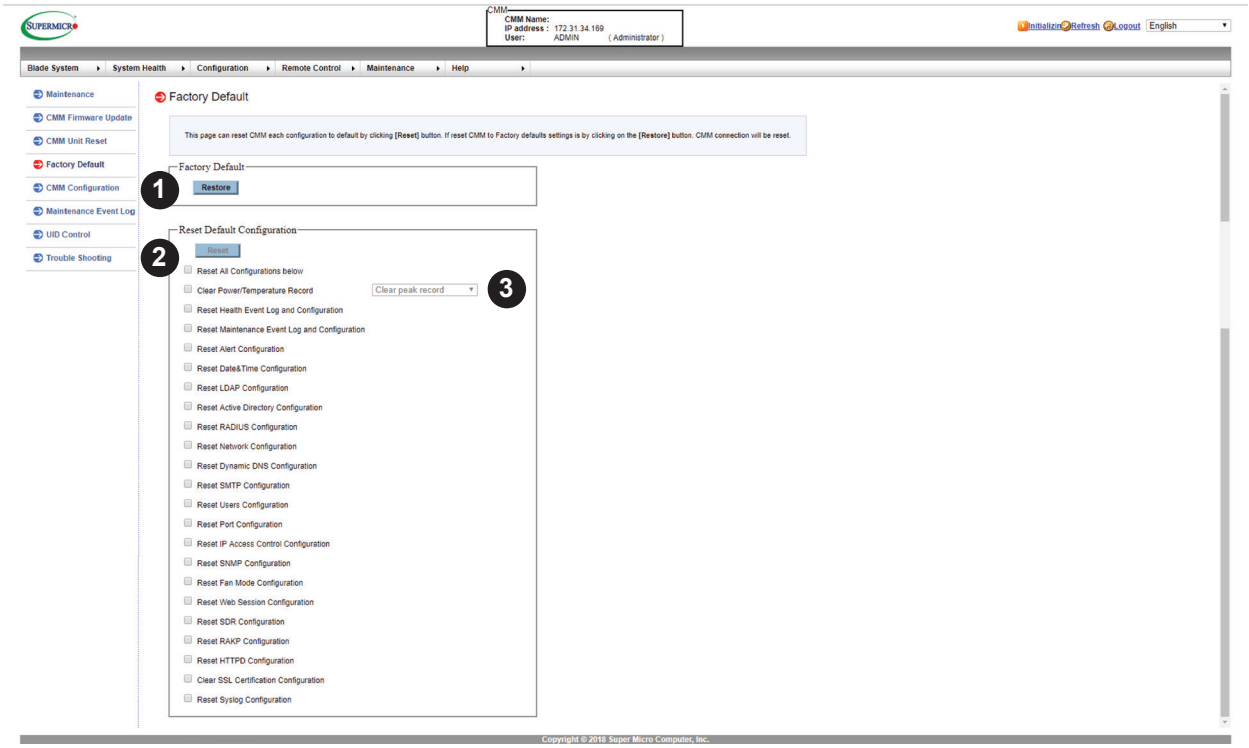


Figure 6-4. Factory Default Page

Factory Default Page Controls		
Item	**Control Name**	**Description**
1	Restore Button	Press this button to reset the CMM to all of the factory defaults.
2	Reset Default Configuration	In this section, check the check box for all configurations you want to reset, then press the RESET button to reset the selected configurations to their factory defaults.
3	Clear Peak Record	

6.4 CMM Configuration Page

Click on CMM CONFIGURATION to reveal the CMM CONFIGURATION page (Figure 6-5). This page allows you to save the current CMM configuration and restore it.

The controls for this page are shown in the table below.

Figure 6-5 CMM Configuration Page

CMM Configuration Page Controls		
Item	**Control Name**	**Description**
1	Save Button	To save the CMM CONFIGURATION settings press the Save button. This will create and download a .bin file with the CMM configuration information.
2	Choose File Button	To reload a saved CMM Configuration, press the CHOOSE FILE button to open a window where you can choose the file to upload with the saved configuration.
3	Reload Button	Press the RELOAD button to reload a saved CMM Configuration Setting.

6.5 Maintenance Event Log Page

Click on MAINTENANCE EVENT LOG to reveal the MAINTENANCE EVENT LOG page (Figure 6-6). This page displays the records of maintenance events. The event logs indicate the time when a critical condition occurred and the time when the condition resolved.

The controls for this page are shown in the table below.

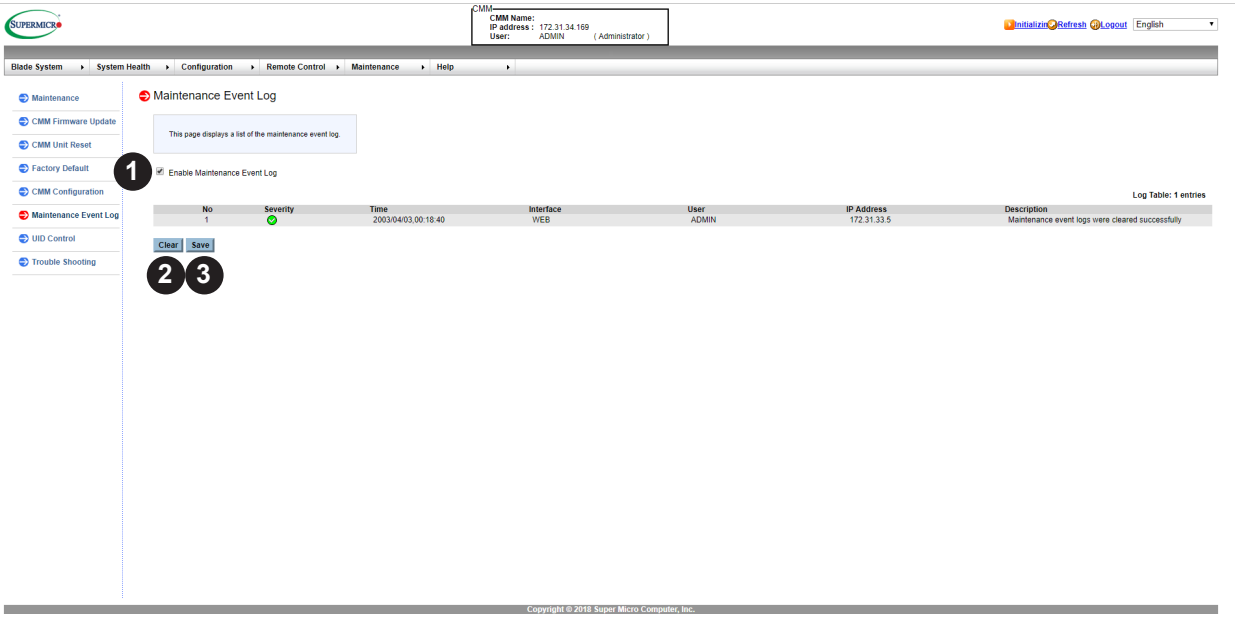


Figure 6-6 Maintenance Event Log Page

Maintenance Event Log Page Controls		
Item	**Control Name**	**Description**
1	Enable Maintenance Event Log check box	Check this check box to record maintenance events.
2	Clear Button	Press this button to empty maintenance event logs
3	Save Button	Press this button to save maintenance event log information.

Severity Levels:

Informational - Green

Critical - Red

Warning - Yellow

6.6 UID Control Page

Click on UID Control to reveal the UID Control page (Figure 6-7). This page allows you to turn-on or turn-off the UID (Unit Identification) control.

The controls for this page are shown in the table below.

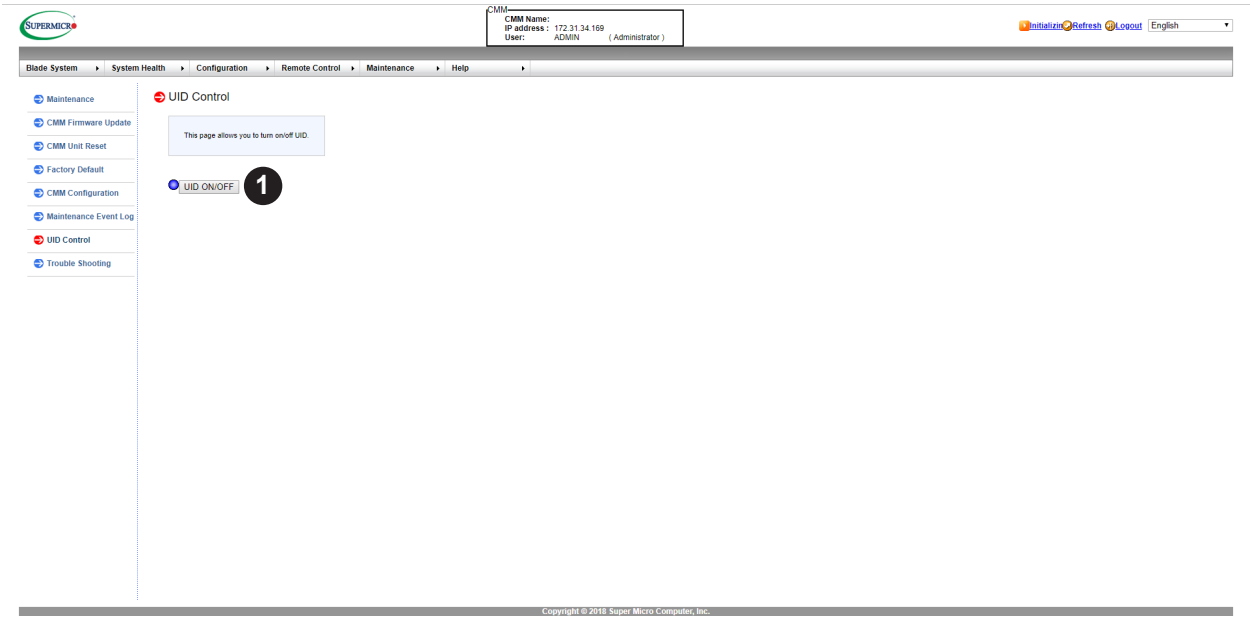


Figure 6-7 UID Control Page

UID Control Page Controls		
Item	**Control Name**	**Description**
1	UID On/Off Button	Press this button to turn on or off the UID control LED.

6.7 Trouble Shooting Page

Click on TROUBLE SHOOTING to reveal the TROUBLE SHOOTING page (Figure 6-8). This function is used to debug issues. It may take several minutes to generate the debug data. Please be patient!

The controls for this page are shown in the table below.

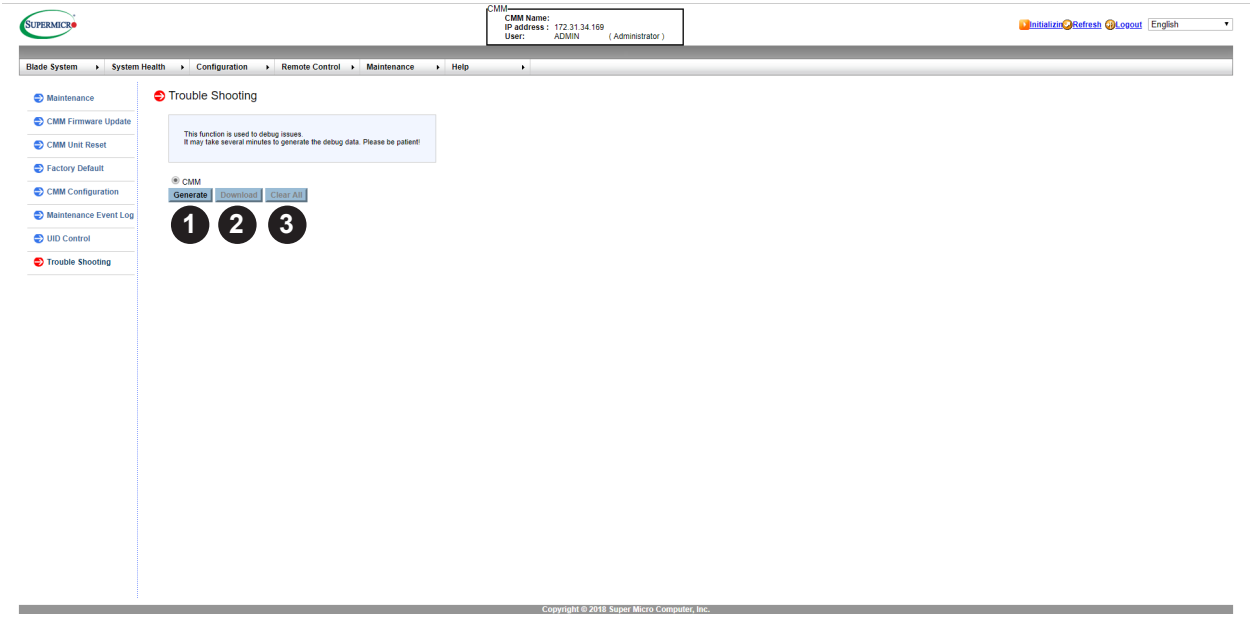


Figure 6-8 Trouble Shooting Page

Trouble Shooting Page Controls		
Item	**Control Name**	**Description**
1	Generate Button	Press this button to generate a trouble shooting report on the page.
2	Download Button	Press this button to download trouble shooting information to a file.
3	Clear All Button	Press this button to clear information from the page.

Appendix A

Advance CMM Configuration via SSH

Use the following procedure to check the additional information and configuration of the CMM through the command line interface. This can be accessed with the CMM IP address through Putty SSH.

1. Login as an ADMIN using the command **ssh ADMIN@CMMIP**.
2. Connect to the command line interface using the command **connect cli**.
3. Type in **Help** to list out available commands.

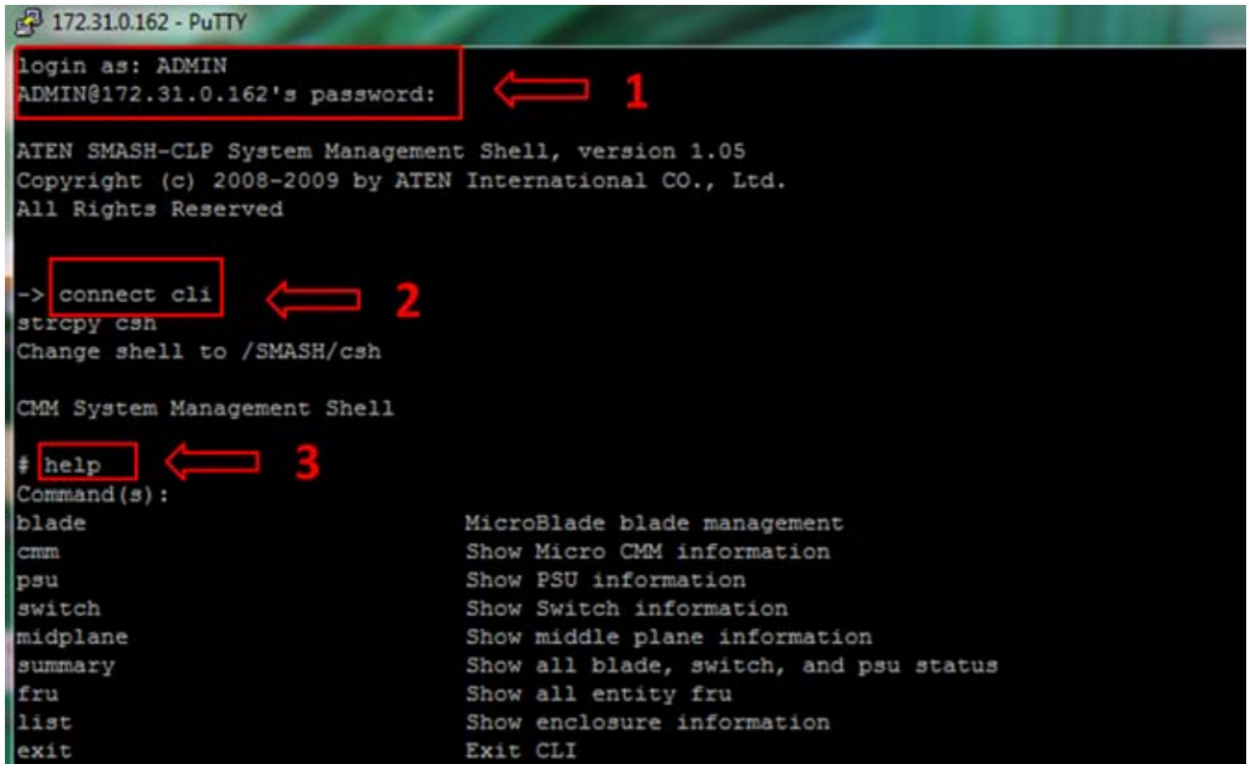


Figure A-1. Accessing the CMM Command Line INterface

Appendix B

CMM Redfish API

For an introduction to the Redfish API, see https://www.supermicro.com/en/solutions/management-software/redfish, and then proceed with a commands as detailed below.

CMM Redfish API					
URI	**Oper**	**Properties**	**accept string**	**Example**	**Note**
https://%IP/redfish/v1/	Get				
https://%IP/redfish/v1/Systems/1/	Get				
https://%IP/redfish/v1/Systems/1/	Patch	IndicatorLED	Lit, Blinking, Off	{"IndicatorLED" : "Lit"}	
https://%IP/redfish/v1/Chassis/1/	Get				
https://%IP/redfish/v1/Chassis/1/Switch	Get				
https://%IP/redfish/v1/Chassis/1/Switch/%x	Get				%x is switch index
	Patch	HWReset	true, false	{"HWReset" : true}	
	Patch	UID	On, Off	{"UID" : "On"}	
	Patch	DateTimeMode	CMM, Local	{"DateTimeMode" : "CMM"}	
	Patch	DateTime	mm-dd-yyyy hh:mm:ss	{"DateTime" : "01-02-2000 07:28:20"}	
	Patch	IPConfig	Static, DHCP	{"NetworkConfig": {"IPConfig": "Static", "IPAddr": "10.132.161.107", "SubnetMask": "255.255.0.0", "Gateway": "10.132.0.250"}}	
	Patch	IPAddr	xxx.xxx.xxx.xxx		
	Patch	SubnetMask	xxx.xxx.xxx.xxx		
	Patch	Gateway	xxx.xxx.xxx.xxx		
	Patch	Password		{"Password" : "123456789"}	
https://%IP/redfish/v1/Chassis/1/Blade/	Get				
https://%IP/redfish/v1/Chassis/1/Blade/%b	Get				%b is blade index

CMM Redfish API					
URI	**Oper**	**Properties**	**accept string**	**Example**	**Note**
https://%IP/redfish/v1/Chassis/1/Blade/%b/Node	Get				
https://%IP/redfish/v1/Chassis/1/Blade/%b/Node/%n	Get				%n is node index
https://%IP/redfish/v1/Chassis/1/Blade/%b/Node/%n/Status	Get				
	Patch	PowerControl	PowerOff, PowerOn, PowerCycle, PowerReset, GracefulShutdown, ACCycle	{"PowerControl" : "PowerOff"}	
	Patch	PwrFailPolicy	PowerOff, Throttle, Performance	{"PwrFailPolicy" : "Throttle"}	
	Patch	PwrCap	Read Only, Disabled, 90%, 80%, 70%, 60%, 50%	{"PwrCap" : "90%"}	
	Patch	ACLostPolicy	PowerOff, PowerOn, LastState	{"ACLostPolicy" : "LastState"}	
	Patch	UID	Off, On	{"UID" : "On"}	
	Patch	BMCReset	Reset, ResetToDefault	{"BMCReset" : "ResetToDefault"}	
	Patch	ServerName		{"ServerName" : "abcdefg"}	
	Patch	BladeName		{"BladeName" : "abcdefg"}	
https://%IP/redfish/v1/Chassis/1/Blade/%b/Node/%n/Sensor	Get				
https://%IP/redfish/v1/Chassis/1/Blade/%b/Node/%n/EventLog	Get				
https://%IP/redfish/v1/Chassis/1/Blade/%b/Node/%n/Network	Get				
	Patch	Host Name		{"Host Name": "1234567890"}	

CMM Redfish API					
URI	**Oper**	**Properties**	**accept string**	**Example**	**Note**
	Patch	IPv4IPAddresses		{"IPv4Addresses": {"LanMode": "Static", "IPAddress": "10.132.161.107", "SubnetMask": "255.255.0.0", "GateWay": "10.132.0.250", "DNS Server": "10.136.8.1"}}	
	Patch	LanMode	Static, DHCP		
	Patch	IPAddress	xxx.xxx.xxx.xxx		
	Patch	SubnetMask	xxx.xxx.xxx.xxx		
	Patch	GateWay	xxx.xxx.xxx.xxx		
	Patch	DNS	xxx.xxx.xxx.xxx		
	Patch	VLAN		{"VLAN" : {"VLANEnable" : true, "VLANId" : 40}}	
	Patch	VLANEnable			
	Patch	VLANId			
	Patch	RMCP Port		{"RMCP Port": 623}	
https://%IP/redfish/v1/Chassis/1/Blade/%b/Node/%n/DateTime	Get				
	Patch	TimeUpdateMode	NTP, CMM, Local	{"TimeUpdateMode" : "NTP", "Primary TimeServer" : "1.1.1.1", "SecondaryDate TimeServer" : "2.2.2.2", "DaylightSavingTime" : true, "Timezone" : "+0800", "ApplyToAll" : false}	
	Patch	PrimaryTimeServer			
	Patch	SecondaryDateTime Server			
	Patch	DaylightSavingTime	true, false		
	Patch	Timezone	-1200, -1100, -1000, -0930, -0900, -0800, -0700, -0600, -0500, -0430, -0400, -3300, -0300, -0230, -0200, -0100, +0000, +0100, +0200, +0300, +0330, +0400, +0430, +0500, +0530, +0545, +0600, +0630, +0700, +0800, +0900, +0930, +1000, +1030, +1100, +1130, +1200, +1300, +1400		
	Patch	DateTime	mm-dd-yyyy hh:mm:ss	{"TimeUpdateMode" : "Local", "DateTime" : "04-18-2018 17:33:46"}	
	Patch	ApplyToAll	true, false	{"TimeUpdateMode" : "CMM", "ApplyToAll" : true}	
https://%IP/redfish/v1/Chassis/1/Blade/%b/Node/%n/ProductKey	Get				

CMM Redfish API					
URI	**Oper**	**Properties**	**accept string**	**Example**	**Note**
https://%IP/redfish/v1/Chassis/1/Blade/%b/Node/%n/ProductKey/Actions/ProductKey.Activate	Post	ProductKey	xxxx-xxxx-xxxx-xxxx-xxxx-xxxx	{"ProductKey" : "xxxx-xxxx-xxxx-xxxx-xxxx-xxxx"}	
https://%IP/redfish/v1/Chassis/1/Blade/%b/Node/%n/Actions/NodeNumber.Reset	Post	Record, SEL, System Event Log, Alert, Date&Time, LDAP, Active Directory, RADIUS, Mouse Mode, Network, DDNS, SMTP, Users, Port, IP Access Control, SNMP, Web Session, SDR, RAKP, HTTPD, SSL Certification, Syselog	true, false Record Type: peak, hour, 24hr, full	{"SEL" : true, "Record" : true, "Record Type" : "24hr"}	
https://%IP/redfish/v1/Chassis/1/CMM	Get				
	Patch	CMMName		{"CMMName" : "1234567890 123456"}	
https://%IP/redfish/v1/Chassis/1/Power/	Get				
	Patch	RedundancyOption	Max Power, Redundancy N+1, Redundancy N+N	{"RedundancyOption" : "Max Power"}	
	Patch	FanControlOption	Auto Control, User Control	{"FanControlOption" : "Auto Control"}	
	Patch	FanSpeedControl	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	{"FanSpeedControl" : 10}	
	Patch	BBPControl	Enable, Disable	{"BBPControl" : "Enable"}	
https://%IP/redfish/v1/Chassis/1/Power/PowerSupply/%x	Get				%x is power supply index
https://%IP/redfish/v1/Chassis/1/Thermal/	Get				
https://%IP/redfish/v1/Managers/1/	Get				
https://%IP/redfish/v1/Managers/1/EthernetInterfaces/1/	Get				
	Patch	HostName		{"HostName": "1234567890"}	
	Patch	IPv4IPAddresses			

CMM Redfish API					
URI	**Oper**	**Properties**	**accept string**	**Example**	**Note**
	Patch	AddressOrigin	Static, DHCP, DHCPFailStatic	{"IPv4Addresses": {"AddressOrigin": "Static", "Address": "10.132.161.107", "SubnetMask": "255.255.0.0", "Gateway": "10.132.0.250"}}	
	Patch	Address	xxx.xxx.xxx.xxx		
	Patch	SubnetMask	xxx.xxx.xxx.xxx		
	Patch	Gateway	xxx.xxx.xxx.xxx		
	Patch	NameServers	xxx.xxx.xxx.xxx	{"NameServers": "10.136.8.1"}	
	Post/ Delete	IPv6Addresses			
	Post/ Delete	Address			
	Post/ Delete	PrefixLength			value need between 0-128
	Patch	VLAN		{"VLAN" : {"VLANEnable" : true, "VLANId" : 40}}	
	Patch	VLANEnable			
	Patch	VLANId	1-4094		
https://%IP/redfish/ v1/Managers/1/ NetworkProtocol	Get				
	Patch		KVMIP, HTTP, HTTPS, IPMI, SNMP, SSH, VirtualMedia, Wsman	{"KVMIP" : {"ProtocolEnabled" : false, "Port" : 123}}	
	Patch	ProtocolEnabled	true, false		
	Patch	Port			
https://%IP/redfish/ v1/Managers/1/ LogServices//Log1/	Get				
https://%IP/redfish/ v1/Managers/1/ LogServices//Log1/	Patch	EnableACPowerOn EventLog	true, false	{"EnableACPower OnEventLog":ture}	
https://%IP/redfish/ v1/Managers/1/ LogServices//Log1/	Patch	EnableFilterPower StatusEventLog	true, false	{"EnableFilterPow erStatusEventLog ":true}	
https://%IP/redfish/ v1/Managers/1/ LogServices//Log1/ Entries	Get				
https://%IP/redfish/ v1/Managers/1/ LogServices//Log1/ Entries/%d	Get				%d is event log index, max index is 512

CMM Redfish API					
URI	**Oper**	**Properties**	**accept string**	**Example**	**Note**
https://%IP/redfish/v1/Managers/1/LogServices//Log1/Actions/LogService.Reset	Post				
https://%IP/redfish/v1/Managers/1/Actions/Oem/ManagerConfig.Reset	Post	Option	With Unique Password: PreserveUser, ClearConfig, ResetToADMIN Without Unique Password: PreserveUser, ResetToADMIN	{"Option" : "ResetToADMIN"}	factory default
https://%IP/redfish/v1/Managers/1/Actions/Oem/Configuration.Reset	Post	Record, SEL, System Event Log, Alert, Date&Time, LDAP, Active Directory, RADIUS, Mouse Mode, Network, DDNS, SMTP, Users, Port, IP Access Control, SNMP, Web Session, SDR, RAKP, HTTPD, SSL Certification, Syselog	"true, false Record Type: peak, hour, 24hr, full"	{"SEL" : true, "Record" : true, "Record Type" : "24hr"}	
https://%IP/redfish/v1/Managers/1/Actions/Manager.Reset	Post				unit reset
https://%IP/redfish/v1/Managers/1/Alert	Get				
https://%IP/redfish/v1/Managers/1/Alert/%d	Get				
	Patch	EventSeverity	Disable All, Information, Warning, Critical, Non-recoverable	{"EventSeverity" : "Information", "DestinationIP" : "1.2.3.4", "EmailAddress" : "a@a.com", "Subject" : "11", "Message" : "22"}	
	Patch	DestinationIP	xxx.xxx.xxx.xxx		
	Patch	EmailAddress			
	Patch	Subject			
	Patch	Message			

CMM Redfish API					
URI	**Oper**	**Properties**	**accept string**	**Example**	**Note**
https://%IP/redfish/v1/Managers/1/ActiveDirectory	Get				
	Patch	AuthenticationEnabled	true, false	{"Authentication Enabled" : true, "AuthenticationOver SSLEnabled" : false, "PortNumber" : 389, "UserDomainName" : "1.1.1.1", "Timeout" : 12, "DCSAddress1" : "10.11.12.13", "DCSAddress2" : "10.11.12.14", "DCSAddress3" : "10.11.12.15"}	
	Patch	AuthenticationOver SSLEnabled	true, false		
	Patch	PortNumber	AuthenticationOverSSL Enabled : true, port :636 AuthenticationOverSSL Enabled: false, port: 389		AuthenticationOverSSL Enabled : true, port :636 AuthenticationOverSSL Enabled: false, port: 389
	Patch	UserDomainName			
	Patch	Timeout	10-30		
	Patch	DCSAddress1			
	Patch	DCSAddress2			
	Patch	DCSAddress3			
https://%IP/redfish/v1/Managers/1/BladeNetwork	Get				
	Patch	AlwaysApplyNetwork	true, false	{"AlwaysApply Network" : true, "IPv4Addresses" : { "LanMode" : "Static", "IPScale" : 4, "IPAddress" : "1.1.1.1", "SubnetMask" : "10.11.12.13", "GateWay" : "10.11.12.14", "DNSServerIP" : "10.11.12.15", "VLANID" : 1}}	
	Patch	LanMode	Static, DHCP		
	Patch	IPScale	1, 2, 4		
	Patch	IPAddress	xxx.xxx.xxx.xxx		
	Patch	SubnetMask	xxx.xxx.xxx.xxx		
	Patch	GateWay	xxx.xxx.xxx.xxx		
	Patch	DNSServerIP	xxx.xxx.xxx.xxx		
	Patch	VLANID	1-4094		
https://%IP/redfish/v1/Managers/1/DDNS	Get				
	Patch	DynamicUpdateEnable	true, false	{"DynamicUpdate Enable" : true}	
	Patch	DNSServerIP		{"DNSServerIP" : "1.2.3.4"}	
	Patch	BMCHostname		{"BMCHostname" : "1234"}	

CMM Redfish API					
URI	**Oper**	**Properties**	**accept string**	**Example**	**Note**
https://%IP/redfish/v1/Managers/1/SMTP	Get				
	Patch	SmtpSSLEnabled	true, false	{"SmtpSSLEnabled" : true, "SmtpServer" : "1.1.1.1", "SmtpPortNumber" : 123, "SmtpUserName" : "12345678", "SmtpPassword" : "12345678", "SmtpSenderAddress" : "a@a.com"}	
	Patch	SmtpServer	xxx.xxx.xxx.xxx		
	Patch	SmtpPortNumber			
	Patch	SmtpUserName			
	Patch	SmtpPassword			
	Patch	SmtpSenderAddress			
https://%IP/redfish/v1/Managers/1/RADIUS	Get				
	Patch	RadiusEnabled	true, false	{"RadiusEnabled" : true, "RadiusPortNumber" : 111, "RadiusServerIP" : "1.1.1.1", "RadiusSecret" : "abcd"}	
	Patch	RadiusPortNumber			
	Patch	RadiusServerIP			
	Patch	RadiusSecret			
https://%IP/redfish/v1/Managers/1/NTP	Get				
	Patch	TimeUpdateMode	NTP, Local, BladeSystem	{"TimeUpdateMode" : NTP, "PrimaryNTPServer" : "tock.stdtime.gov.tw", "SecondaryNTPServer" : "watch.stdtime.gov.tw", "DaylightSavingTime" : true}	
	Patch	PrimaryNTPServer			
	Patch	SecondaryNTPServer			
	Patch	DaylightSavingTime	true, false		
https://%IP/redfish/v1/Managers/1/LDAP	Get				
	Patch	LDAPEnabled	true, false	{"LDAPEnabled" : true, "LDAPAuthOverSSL" : false, "LDAPServerIP" : "1.1.1.1", "LDAPPortNumber" : 389, "LDAPPassword" : "secret", "LDAPDN" : "1234", "LDAPSearchbase" : "5678"}	
	Patch	LDAPAuthOverSSL	true, false		
	Patch	LDAPPortNumber			"AuthenticationOverSSLEnabled : true, port :636 AuthenticationOverSSLEnabled: false, port: 389"
	Patch	LDAPServerIP			
	Patch	LDAPPassword			
	Patch	LDAPDN			
	Patch	LDAPSearchbase			

CMM Redfish API					
URI	**Oper**	**Properties**	**accept string**	**Example**	**Note**
https://%IP/redfish/v1/Managers/1/IPAccessControl/	Get				
	Patch	ServiceEnabled	true, false	{"ServiceEnabled" : true}	
https://%IP/redfish/v1/Managers/1/IPAccessControl/FilterRule/	Get				
	Post	Address	xxx.xxx.xxx.xxx	{"Address" : "5.3.3.3", "Policy" :"Accept", "PrefixLength" : 32}	
	Post	Policy	Accept, Drop		
	Post	PrefixLength	0-32		
https://%IP/redfish/v1/Managers/1/IPAccessControl/FilterRule/%d	Get				
	Patch	Address	xxx.xxx.xxx.xxx	{"Address" : "5.3.3.3", "Policy" :"Accept", "PrefixLength" : 32}	
	Patch	Policy	Accept, Drop		
	Patch	PrefixLength	0-32		
	Delete				
https://%IP/redfish/v1/Managers/1/SMCRAKP/	Get				
	Patch	Mode	Enabled, Disabled	{"Mode" : "Enabled"}	
https://%IP/redfish/v1/Managers/1/SNMP/	Get				
	Patch	SnmpEnabled	true, false	{"SnmpEnabled" : true}	
https://%IP/redfish/v1/Managers/1/SNMP/SNMPv2	Get				
	Patch	Snmpv2Enabled	true, false	{"Snmpv2Enabled" : true, "ROCommunity" : "public1", "RWCommunity" : "private1"}	
	Patch	ROCommunity			
	Patch	RWCommunity			

CMM Redfish API					
URI	**Oper**	**Properties**	**accept string**	**Example**	**Note**
https://%IP/redfish/v1/Managers/1/SNMP/SNMPv3	Get				
	Patch	Snmpv3Enabled	true, false	{"Snmpv3Enabled" : true, "UserName" : "public1", "AuthProtocol" : "MD5", "PrivateProtocol" : "DES", "AuthKey" : "Abc12345", "PrivateKey" : "Def23456"}	
	Patch	UserName			
	Patch	AuthProtocol	SHA1, MD5		
	Patch	PrivateProtocol	AES, DES		
	Patch	AuthKey			
	Patch	PrivateKey			
https://%IP/redfish/v1/Managers/1/WebSession/	Get				
	Patch	SessionTimeout	0-30	{"SessionTimeout" : 10}	
https://%IP/redfish/v1/Managers/1/Syslog/	Get				
	Patch	EnableSyslog	true, false	{"EnableSyslog" : true, "Syslog PortNumber" : 555, "Syslog ServerIP" : "1.1.1.1"}	
	Patch	Syslog ServerIP			
	Patch	Syslog PortNumber			
https://%IP/redfish/v1/Managers/1/SystemEventLog/	Get				
https://%IP/redfish/v1/Managers/1/SystemEventLog/Actions/SystemEventLog.Reset	Post				
https://%IP/redfish/v1/SessionService/	Get				
	Patch	SessionTimeout	30-86400	{"SessionTimeout": 600}	
https://%IP/redfish/v1/SessionService/Sessions/	Get				
	Post	UserName, Password		{ "UserName" : "ADMIN","Password" : "ADMIN" }	X-Auth-Token is in response header
	Delete	"The request header must include X-Auth-Token"			

CMM Redfish API					
URI	**Oper**	**Properties**	**accept string**	**Example**	**Note**
https://%IP/redfish/v1/SessionService/Sessions/%d	Get				%d is session index, max index is 16
	Delete	"The request header must include X-Auth-Token"			
https://%IP/redfish/v1/AccountService	Get				
	Patch	AuthFailureLoggingThreshold	>0	{ "AuthFailureLoggingThreshold": 5, "AccountLockoutThreshold": 3, "AccountLockoutDuration": 30, "AccountLockoutCounterResetAfter":20 }	
		AccountLockoutThreshold	>=0		
		AccountLockoutDuration	>=0		
		AccountLockoutCounteResetAfter	>0		"This value shall be less than or equal to AccountLockoutDuration"
https://%IP/redfish/v1/AccountService/Accounts	Get				
	Post	UserName		{ "UserName": "user", "Password": "passwd12345", "RoleId": "Admin", "EmailAddress": "aaa@bbb.com", "Enabled": false }	Mandatory.
		Password			Mandatory.
		RoleId			Mandatory.
		Enabled	true, false		Optional.
		EmailAddress			Optional.
https://%IP/redfish/v1/AccountService/Accounts/%d	Get				%d is session index, max index is 10
	Patch	UserName		{ "UserName": "user", "Password": "passwd12345", "RoleId": "Admin", "EmailAddress": "SMC@supermicro.com", "Enabled": true }	
		Password			
		RoleId			
		Enabled	true, false		
		EmailAddress			
	Delete				

CMM Redfish API					
URI	**Oper**	**Properties**	**accept string**	**Example**	**Note**
https://%IP/redfish/v1/AccountService/Roles	Get				
https://%IP/redfish/v1/AccountService/Roles/Admin	Get				
https://%IP/redfish/v1/AccountService/Roles/Operator	Get				
https://%IP/redfish/v1/AccountService/Roles/ReadOnlyUser	Get				
https://%IP/redfish/v1/EventService	Get				
https://%IP/redfish/v1/EventService/Subscriptions	Get				
	Post	Destination		{ "Destination": "http://<ip>/uri", "EventTypes": ["Alert", "ResourceAdded"], "Protocol": "Redfish", "Context": "This is a test" }	Mandatory.
		EventTypes	"StatusChange ResourceUpdated ResourceAdded ResourceRemoved Alert"		Mandatory.
		Protocol	Redfish		Mandatory
		Context			Mandatory.
https://%IP/redfish/v1/EventService/Subscriptions/%d	Get				%d is session index, max index is 16
	Patch	Context		{"Context": "This is a tests"}	
	Delete				

CMM Redfish API					
URI	**Oper**	**Properties**	**accept string**	**Example**	**Note**
https://%IP/redfish/v1/EventService/Actions/EventService.SendTestEvent	Post	EventType	"StatusChange, ResourceUpdated, ResourceAdded, ResourceRemoved, Alert"	{ "EventType": "ResourceAdded", "Message": "The property %1 is set to %1 by %1", "MessageArgs": ["Name", "IPMI", "SMC"], "Severity": "Information", "MessageId": "10", "OriginOfCondition": "/redfish/v1/" }	Mandatory
		Severity			
		Message			It could include maximun 3 %1 that to be replaced by MsgArgs
		MessageArgs	a list		
		MessageId			
		OriginOfCondition	a uri		

Appendix C

CMM SEL

Below is the CMM system error log with the severity indication and description from the extension of Chapter 3.

Common CMM

Common CMM		
Assert Severity	**De-assert Severity**	**Description**
Threshold Based States		
Warning	Info	Lower Non-critical - going low
Warning	Info	Lower Non-critical - going high
Critical	Info	Lower Critical - going low
Critical	Info	Lower Critical - going high
Critical	Info	Lower Non-recoverable - going low
Critical	Info	Lower Non-recoverable - going high
Warning	Info	Upper Non-critical - going low
Warning	Info	Upper Non-critical - going high
Critical	Info	Upper Critical - going low
Critical	Info	Upper Critical - going high
Critical	Info	Upper Non-recoverable - going low
Critical	Info	Upper Non-recoverable - going high
DMI Usage States		
Info	Info	Transition to Idle
Info	Info	Transition to Active
Info	Info	Transition to Busy
Digital/Discrete Event States		
Info	Info	State Deasserted
Info	Info	State Asserted
Info	Info	Predictive Failure deasserted

Common CMM		
Assert Severity	**De-assert Severity**	**Description**
Warning	Info	Predictive Failure asserted
Info	Info	Limit Not Exceeded
Warning	Info	Limit Exceeded
Info	Info	Performance Met
Info	Info	Performance Lags
Severity Event States		
Info	Info	transition to OK
Info	Info	transition to Non-Critical from OK
Info	Info	transition to Critical from less severe
Info	Info	transition to Non-recoverable from less severe
Info	Info	transition to Non-Critical from more severe
Info	Info	transition to Critical from Non-recoverable
Info	Info	transition to Non-recoverable
Info	Info	Monitor
Info	Info	Infoal
Availability Status States		
Info	Info	Device Removed / Device Absent
Info	Info	Device Inserted / Device Present
Info	Info	Device Disabled
Info	Info	Device Enabled
Info	Info	transition to Running
Info	Info	transition to In Test
Info	Info	transition to Power Off
Info	Info	transition to On Line
Info	Info	transition to Off Line
Info	Info	transition to Off Duty
Info	Info	transition to Degraded
Info	Info	transition to Power Save

Common CMM		
Assert Severity	**De-assert Severity**	**Description**
Warning	Info	Install Error
Info	Info	Fully Redundant (formerly Redundancy Regained)
Warning	Info	Redundancy Lost
Warning	Info	Redundancy Degraded
Info	Info	Non-redundant:Sufficient Resources from Redundant
Info	Info	Non-redundant:Sufficient Resources from Insufficient Resources .
Info	Info	Non-redundant:Insufficient Resources
Warning	Info	Redundancy Degraded from Fully Redundant
Warning	Info	Redundancy Degraded from Non-redundant
Info	Info	D0 Power State
Info	Info	D1 Power State
Info	Info	D2 Power State
Info	Info	D3 Power State
Info	Info	Info

Specific Sensor CMM

Specific Sensor CMM		
Assert Severity	**Deassert Severity**	**Description**
Processor		
Critical	Info	IERR
Critical	Info	Thermal Trip
Critical	Info	FRB1/BIST Failure
Critical	Info	FRB2/Hang in POST Failure
Critical	Info	FRB3/Processor Startup/Initialization Failure
Warning	Info	Configuration Error
Critical	Info	SM BIOS 'Uncorrectable CPU-Complex Error'
Info	Info	Processor presence detected
Info	Info	Processor disabled
Info	Info	Terminator presence detected

Specific Sensor CMM		
Assert Severity	**Deassert Severity**	**Description**
Critical	Info	Processor automatically throttled
Info	Info	Machine Check Exception (Uncorrectable)
Info	Info	Correctable machine check error
Critical	Info	Configuration Error@CPU%cpusocket@%banktype@%ErrorType error
CPU Socket IFU - Instruction Fetch Unit DCU - Data Cache Unit DTLB - Data Translation Look-aside Buffer MLC - Mid Level Cache PCU - Power Control Unit. IIO - Integrated I/O Controller. CHA - Caching and Home Agent UPI - Ultra Path Interconnect		
Physical Security		
Critical	Info	General chassis intrusion
Warning	Info	Drive bay intrusion
Warning	Info	I/O card area intrusion
Warning	Info	Processor area intrusion
Warning	Info	LAN Leash Lost (system is unplugged from LAN, network controller: %Data3%)
Warning	Info	Unauthorized dock
Warning	Info	FAN area intrusion (supports detection of hot plug fan tampering)
Platform Security Violation Attempt		
Warning	Info	Secure mode (front panel lockout) violation attempt
Warning	Info	Pre-boot password violation - user password
Warning	Info	Pre-boot password violation - setup password
Warning	Info	Pre-boot password violation - network boot password
Warning	Info	Other pre-boot password violation
Warning	Info	Out-of-band access password violation
Power Supply		
Info	Info	Presence detected
Critical	Info	Power Supply Failure detected
Warning	Info	Predictive Failure
Critical	Info	Power Supply input lost (AC/DC)

Specific Sensor CMM		
Assert Severity	**Deassert Severity**	**Description**
Warning	Info	Power Supply input lost or out-of-range
Warning	Info	Power Supply input out-of-range, but present
Warning	Info	Configuration error - Vendor mismatch
Warning	Info	Configuration error - Revision mismatch
Warning	Info	Configuration error - Processor missing
Warning	Info	Configuration error - Power Supply rating mismatch
Warning	Info	Configuration error - Voltage rating mismatch
Power Unit		
Info	Info	Power Off / Power Down
Info	Info	Power Cycle
Info	Info	240VA Power Down
Info	Info	Interlock Power Down
Critical	Info	AC lost / Power input lost
Critical	Info	Soft Power Control Failure
Critical	Info	Power Unit Failure detected
Warning	Info	Predictive Failure
Event Logging Disabled		
Warning	Info	System Firmware Error (POST Error) - Unspecified
Warning	Info	System Firmware Error (POST Error) - No system memory is physically installed in the system
Warning	Info	System Firmware Error (POST Error) - No usable system memory, all installed memory has experienced an unrecoverable failure
Warning	Info	System Firmware Error (POST Error) - Unrecoverable hard-disk/ATAPI/IDE device failure
Warning	Info	System Firmware Error (POST Error) - Unrecoverable system-board failure
Warning	Info	System Firmware Error (POST Error) - Unrecoverable diskette subsystem failure
Warning	Info	System Firmware Error (POST Error) - Unrecoverable hard-disk controller failure
Warning	Info	System Firmware Error (POST Error) - Unrecoverable PS/2 or USB keyboard failure
Warning	Info	System Firmware Error (POST Error) - Removable boot media not found
Warning	Info	System Firmware Error (POST Error) - Unrecoverable video controller failure
Warning	Info	System Firmware Error (POST Error) - No video device detected

Specific Sensor CMM		
Assert Severity	**Deassert Severity**	**Description**
Warning	Info	System Firmware Error (POST Error) - Firmware (BIOS) ROM corruption detected
Warning	Info	System Firmware Error (POST Error) - CPU voltage mismatch (processors that share same supply have mismatched voltage requirements)
Warning	Info	System Firmware Error (POST Error) - CPU speed matching failure
Warning	Info	System Firmware Error (POST Error) - reserved
Warning	Info	System Firmware Hang - Unspecified
Info	Info	System Firmware Hang - Memory initialization
Info	Info	System Firmware Hang - Hard-disk initialization
Info	Info	System Firmware Hang - Secondary processor(s) initialization
Info	Info	System Firmware Hang - User authentication
Info	Info	System Firmware Hang - User-initiated system setup
Info	Info	System Firmware Hang - USB resource configuration
Info	Info	System Firmware Hang - PCI resource configuration
Info	Info	System Firmware Hang - Option ROM initialization
Info	Info	System Firmware Hang - Video initialization
Info	Info	System Firmware Hang - Cache initialization
Info	Info	System Firmware Hang - SM Bus initialization
Info	Info	System Firmware Hang - Keyboard controller initialization
Info	Info	System Firmware Hang - Embedded controller/management controller initialization
Info	Info	System Firmware Hang - Docking station attachment
Info	Info	System Firmware Hang - Enabling docking station
Info	Info	System Firmware Hang - Docking station ejection
Info	Info	System Firmware Hang - Disabling docking station
Info	Info	System Firmware Hang - Calling operating system wake-up vector
Info	Info	System Firmware Hang - Starting operating system boot process, e.g. calling Int 19h
Info	Info	System Firmware Hang - Baseboard or motherboard initialization
Info	Info	System Firmware Hang - reserved
Info	Info	System Firmware Hang - Floppy initialization
Info	Info	System Firmware Hang - Keyboard test

Specific Sensor CMM		
Assert Severity	**Deassert Severity**	**Description**
Info	Info	System Firmware Hang - Pointing device test
Info	Info	System Firmware Hang - Primary processor initialization
Info	Info	System Firmware Hang - reserved
Info	Info	System Firmware Hang - BIOS handover to OS
Warning	Info	System Firmware Progress - Unspecified
Info	Info	System Firmware Progress - Memory initialization
Info	Info	System Firmware Progress - Hard-disk initialization
Info	Info	System Firmware Progress - Secondary processor(s) initialization
Info	Info	System Firmware Progress - User authentication
Info	Info	System Firmware Progress - User-initiated system setup
Info	Info	System Firmware Progress - USB resource configuration
Info	Info	System Firmware Progress - PCI resource configuration
Info	Info	System Firmware Progress - Option ROM initialization
Info	Info	System Firmware Progress - Video initialization
Info	Info	System Firmware Progress - Cache initialization
Info	Info	System Firmware Progress - SM Bus initialization
Info	Info	System Firmware Progress - Keyboard controller initialization
Info	Info	System Firmware Progress - Embedded controller/management controller initialization
Info	Info	System Firmware Progress - Docking station attachment
Info	Info	System Firmware Progress - Enabling docking station
Info	Info	System Firmware Progress - Docking station ejection
Info	Info	System Firmware Progress - Disabling docking station
Info	Info	System Firmware Progress - Calling operating system wake-up vector
Info	Info	System Firmware Progress - Starting operating system boot process, e.g. calling Int 19h
Info	Info	System Firmware Progress - Baseboard or motherboard initialization
Info	Info	System Firmware Progress - reserved
Info	Info	System Firmware Progress - Floppy initialization
Info	Info	System Firmware Progress - Keyboard test

Specific Sensor CMM		
Assert Severity	**Deassert Severity**	**Description**
Info	Info	System Firmware Progress - Pointing device test
Info	Info	System Firmware Progress - Primary processor initialization
Info	Info	System Firmware Progress - reserved
Info	Info	System Firmware Progress - BIOS handover to OS
Event Logging Disabled		
Info	Info	Correctable Memory Error Logging Disabled
Info	Info	Event type logging has been disabled for Event/Reading Type Code %Data2%, Offset %Data3%
Info	Info	Log Area Reset/Cleared
Info	Info	All Event Logging Disabled
Warning	Info	System Event Log (SEL) is full
Info	Info	System Event Log (SEL) is almost full: %Data3% percent full
Info	Info	Correctable Machine Check Error Logging Disabled
Boot Error		
Warning	Info	no bootable media
Info	Info	non-bootable diskette has been left in the drive
Warning	Info	the PXE Server can't be found
Warning	Info	the boot sector is invalid
Info	Info	the timer for the user's selection of the boot source has expired
OS Boot		
Info	Info	A: Boot Completed
Info	Info	C: Boot Completed
Info	Info	PXE Boot Completed
Info	Info	Diagnostic Boot Completed
Info	Info	CD-ROM Boot Completed
Info	Info	ROM Boot Completed
Info	Info	Boot completed -boot device not specified
Info	Info	Base OS/Hypervisor Installation started
Info	Info	Base OS/Hypervisor Installation completed
Info	Info	Base OS/Hypervisor Installation aborted

Specific Sensor CMM		
Assert Severity	**Deassert Severity**	**Description**
Info	Info	Base OS/Hypervisor Installation failed
OS Critical Stop		
Critical	Info	critical stop during OS load or initialization
Critical	Info	runtime critical stop (a.k.a. core dump, blue screen)
Warning	Info	OS graceful stop
Warning	Info	OS graceful shutdown
Warning	Info	soft shutdown initiated by PEF
Warning	Info	agent not responding. Graceful shutdown request to agent via BMC did not occur due to missing or malfunctioning local agent
Watchdog 2		
Info	Info	Timer expired
Info	Info	Hard Reset
Info	Info	Power Down
Info	Info	Power Cycle
Info	Info	Timer interrupt
Battery		
Warning	Info	battery low
Critical	Info	battery failed
Info	Info	battery presence detected
Session Audit		
Info	Info	Session Activated
Info	Info	Session Deactivated
Info	Info	Invalid Username or Password
Info	Info	Invalid password disable
Memory		
Warning	Info	Correctable ECC / other correctable memory error @%string
Critical	Info	Uncorrectable ECC / other uncorrectable memory error @%string
Info	Info	Parity @%string
Critical	Info	Memory Scrub Failed (stuck bit) @%string

Specific Sensor CMM		
Assert Severity	**Deassert Severity**	**Description**
Info	Info	Memory Device Disabled @%string
Info	Info	Correctable ECC / other correctable memory error logging limit reached @%string
Info	Info	Presence detected @%string
Warning	Info	Configuration error @%string
Info	Info	Spare @%string
Info	Info	Memory Automatically Throttled @%string
Warning	Info	Critical Overtemperature @%string
* if only one cpu, %string = DIMM%B%C else %string = P%A-DIMM%B%C(CPU%A) A=data3[3:0]+1, B=data2[7:4]+0x40(ASCII Character), C=data2[3:0]+0x27(ASCII Character)		
HDD Slot		
Info	Info	Drive Fault @ PDSlot%DATA2
Warning	Info	HDD slot %data2 (EId %data3) not present
Critical	Info	HDD slot %data2 (EId %data3) Err:(Media: %ld Other: %ld Pred: %ld LastPred: %ld)
Info	Info	HDD slot %data2 (EId %data3) is Rebuilding
System Event		
Info	Info	System Reconfigured
Info	Info	OEM System Boot Event
Warning	Info	Undetermined system hardware failure
Info	Info	Entry added to Auxiliary Log - Log Entry Action: entry added, Log Type: MCA Log
Info	Info	Entry added to Auxiliary Log - Log Entry Action: entry added, Log Type: OEM 1
Info	Info	Entry added to Auxiliary Log - Log Entry Action: entry added, Log Type: OEM 2
Info	Info	Entry added to Auxiliary Log - Log Entry Action: Entry added because event did not be map to standard IPMI event, Log Type: MCA Log
Info	Info	Entry added to Auxiliary Log - Log Entry Action: Entry added because event did not be map to standard IPMI event, Log Type: OEM 1
Info	Info	Entry added to Auxiliary Log - Log Entry Action: Entry added because event did not be map to standard IPMI event, Log Type: OEM 2
Info	Info	Entry added to Auxiliary Log - Log Entry Action: Entry added along with one or more corresponding SEL entries, Log Type: MCA Log
Info	Info	Entry added to Auxiliary Log - Log Entry Action: Entry added along with one or more corresponding SEL entries, Log Type: OEM 1
Info	Info	Entry added to Auxiliary Log - Log Entry Action: Entry added along with one or more corresponding SEL entries, Log Type: OEM 2

Specific Sensor CMM		
Assert Severity	**Deassert Severity**	**Description**
Info	Info	Entry added to Auxiliary Log - Log Entry Action: Log cleared, Log Type: MCA Log
Info	Info	Entry added to Auxiliary Log - Log Entry Action: Log cleared, Log Type: OEM 1
Info	Info	Entry added to Auxiliary Log - Log Entry Action: Log cleared, Log Type: OEM 2
Info	Info	Entry added to Auxiliary Log - Log Entry Action: Log disabled, Log Type: MCA Log
Info	Info	Entry added to Auxiliary Log - Log Entry Action: Log disabled, Log Type: OEM 1
Info	Info	Entry added to Auxiliary Log - Log Entry Action: Log disabled, Log Type: OEM 2
Info	Info	Entry added to Auxiliary Log - Log Entry Action: Log enabled, Log Type: MCA Log
Info	Info	Entry added to Auxiliary Log - Log Entry Action: Log enabled, Log Type: OEM 1
Info	Info	Entry added to Auxiliary Log - Log Entry Action: Log enabled, Log Type: OEM 2
Info	Info	PEF Action - Diagnostic interrupt
Info	Info	PEF Action - OEM action
Info	Info	PEF Action - Power cycle
Info	Info	PEF Action - Reset
Info	Info	PEF Action - Power off
Info	Info	PEF Action - Alert
Info	Info	Timestamp Clock Synch - first/second: event is first of pair, Timestamp Clock Type: SEL Timestamp Clock updated
Info	Info	Timestamp Clock Synch - first/second: event is first of pair, Timestamp Clock Type: SDR Timestamp Clock updated
Info	Info	Timestamp Clock Synch - first/second: event is second of pair, Timestamp Clock Type: SEL Timestamp Clock updated
Info	Info	Timestamp Clock Synch - first/second: event is second of pair, Timestamp Clock Type: SDR Timestamp Clock updated
Critical Interrupt		
Warning	Info	Front Panel NMI / Diagnostic Interrupt
Warning	Info	Bus Timeout
Warning	Info	I/O channel check NMI
Warning	Info	Software NMI
Critical	Info	PCI PERR @Bus%Data2 (Dev%(Data3&0xF8 >> 3), Func%(Data3&0x7))
Critical	Info	PCI SERR @Bus%Data2 (Dev%(Data3&0xF8 >> 3), Func%(Data3&0x7))
Warning	Info	EISA Fail Safe Timeout

Specific Sensor CMM		
Assert Severity	**Deassert Severity**	**Description**
Warning	Info	Bus Correctable Error @Bus%Data2 (Dev%(Data3&0xF8 >> 3), Func%(Data3&0x7))
Critical	Info	Bus Uncorrectable Error @Bus%Data2 (Dev%(Data3&0xF8 >> 3), Func%(Data3&0x7))
Critical	Info	Fatal NMI
Critical	Info	Bus Fatal Error @Bus%Data2 (Dev%(Data3&0xF8 >> 3), Func%(Data3&0x7))
Warning	Info	Bus Degraded @Bus%Data2 (Dev%(Data3&0xF8 >> 3), Func%(Data3&0x7))
System Boot Initiated		
Info	Info	Initiated by power up
Info	Info	Initiated by hard reset
Info	Info	Initiated by warm reset
Info	Info	User requested PXE boot
Info	Info	Automatic boot to diagnostic
Info	Info	OS/run-time software initiated hard reset
Info	Info	OS/run-time software initiated warm reset
Info	Info	System restart Caused by Unknown
Info	Info	System restart Caused by Chassis control cmd
Info	Info	System restart Caused by Watchdog timeout
Info	Info	System restart Caused by PEF power reset policy
Info	Info	System restart Caused by PEF Power cycle policy

Sensor Type and Name		
Assert Severity	**Deassert Severity**	**Description**
HDD (OEM)		
Critical	Info	Overpower Throttle
Critical	Info	Disk%DiskNumber SMART failure
Critical	Info	Disk%DiskNumber SMART Raw Read Error Rate
Critical	Info	Disk%DiskNumber SMART Throughput Performance
Critical	Info	Disk%DiskNumber SMART Spin-up Time
Critical	Info	Disk%DiskNumber SMART Start/Stop Count

Sensor Type and Name		
Assert Severity	**Deassert Severity**	**Description**
Critical	Info	Disk%DiskNumber SMART Reallocated Sectors Count
Critical	Info	Disk%DiskNumber SMART Read Channel Margin
Critical	Info	Disk%DiskNumber SMART Seek Error Rate
Critical	Info	Disk%DiskNumber SMART Seek Time Performance
Critical	Info	Disk%DiskNumber SMART Power-on Hours
Critical	Info	Disk%DiskNumber SMART Spin Retry Count
Critical	Info	Disk%DiskNumber SMART Calibration Retry Count
Critical	Info	Disk%DiskNumber SMART Power Cycle Count
Critical	Info	Disk%DiskNumber SMART Soft Read Error Rate
Critical	Info	Disk%DiskNumber SMART Temperature Celsius
Critical	Info	Disk%DiskNumber SMART G-Sense Error Rate
Critical	Info	Disk%DiskNumber SMART Emergency/Power-off Retract Count
Critical	Info	Disk%DiskNumber SMART Load Cycle Count
Critical	Info	Disk%DiskNumber SMART Temperature Celsius
Critical	Info	Disk%DiskNumber SMART Hardware ECC Recovered
Critical	Info	Disk%DiskNumber SMART Reallocated Event Count
Critical	Info	Disk%DiskNumber SMART Current Pending Sector Count
Critical	Info	Disk%DiskNumber SMART Offline Uncorrectable
Critical	Info	Disk%DiskNumber SMART UDMA CRC Error Count
Critical	Info	Disk%DiskNumber SMART Write Error Rate/Multi Zone Error Rate
Critical	Info	Disk%DiskNumber SMART Detected TA Count/Soft Read Error Rate
Critical	Info	Disk%DiskNumber SMART TA Increase Count/Data Address Mark Errors
Critical	Info	Disk%DiskNumber SMART Run Out Cancel
Critical	Info	Disk%DiskNumber SMART Soft ECC Correction
Critical	Info	Disk%DiskNumber SMART Thermal Asperity Rate(TAR)
Critical	Info	Disk%DiskNumber SMART Flying Height
Critical	Info	Disk%DiskNumber SMART Spin High Current
Critical	Info	Disk%DiskNumber SMART Spin Buzz

Sensor Type and Name		
Assert Severity	**Deassert Severity**	**Description**
Critical	Info	Disk%DiskNumber SMART Offline Seek Performance
Critical	Info	Disk%DiskNumber SMART Disk Shift
Critical	Info	Disk%DiskNumber SMART G-Sense Error Rate
Critical	Info	Disk%DiskNumber SMART Loaded Hours
Critical	Info	Disk%DiskNumber SMART Load/Unload Retry Count
Critical	Info	Disk%DiskNumber SMART Load Friction
Critical	Info	Disk%DiskNumber SMART Load/Unload Cycle Count
Critical	Info	Disk%DiskNumber SMART Load-in Time
Critical	Info	Disk%DiskNumber SMART Torque Amplification Count
Critical	Info	Disk%DiskNumber SMART Power-off Retract Count
Critical	Info	Disk%DiskNumber SMART Head Amplitude
Critical	Info	Disk%DiskNumber SMART Temperature Celsius
Critical	Info	Disk%DiskNumber SMART Head Flying Hours
Critical	Info	Disk%DiskNumber SMART Read Error Retry Rate
Critical	Info	Disk%DiskNumber SMART Failure Prediction Threshold Exceeded
Critical	Info	Disk%DiskNumber SMART unknown Attribute
Sensor Type and Name:APML(CPU), if only one cpu or 1 > %sensor number or %sensor number > 8 Sensor Type and Name:APML(CPU%sensor number(decimal)), if more than one cpu and 1<=%sensor number<=8		
Critical	Info	MCE Error at Core %data2
CPLD (OEM)		
Critical	Info	MEM_EVENT_GH
Critical	Info	MEM_EVENT_EF
Critical	Info	MEM_EVENT_CD
Critical	Info	MEM_EVENT_AB
Critical	Info	CPU2_SKTOCC
Critical	Info	SKT2_IVB_OCC
Critical	Info	PROCHOT_P2
Critical	Info	MEMHOT_P2
Critical	Info	VRHOT_P2

Sensor Type and Name		
Assert Severity	**Deassert Severity**	**Description**
Critical	Info	VRHOT_EF
Critical	Info	VRHOT_GH
Critical	Info	CPU1_SKTOCC
Critical	Info	SKT1_IVB_OCC
Critical	Info	PROCHOT_P1
Critical	Info	MEMHOT_P1
Critical	Info	VRHOT_P1
Critical	Info	VRHOT_AB
Critical	Info	VRHOT_CD
Critical	Info	CPU1 THERM TRIP
Critical	Info	CPU2 THERM TRIP
Critical	Info	CATERR
Critical	Info	IERR
CPU (OEM)		
Critical	Info	CPU1 Error
Critical	Info	CPU2 Error
Critical	Info	CPU3 Error
Critical	Info	PCH HOT
Warning	Info	UPI link degrading
BBP (OEM)		
Critical	Info	BBP Timer expired/OS gracefully shutdown
Temperature (OEM)		
Critical	Info	Xeon Phi Throttle @ unknown Zone
Critical	Info	Xeon Phi Throttle @ Left Zone
Critical	Info	Xeon Phi Throttle @ Right Zone
Critical	Info	Xeon Phi Throttle @ Front Zone
Critical	Info	Xeon Phi Throttle @ Rear Zone
Critical	Info	Xeon Phi Throttle @ unknown Zone
Critical	Info	Unknown GPU @ unknown Zone

Sensor Type and Name		
Assert Severity	**Deassert Severity**	**Description**
AC PowerOn (OEM)		
Warning	Info	First AC Power on
BIOS OEM (CPU)		
Critical	Info	pCode has not completed initialization - ERR_UNSUPPORTED_BOOT_MODE %string
Critical	Info	pCode has not completed initialization - Socket is discovered but hasn't come out of reset %string
Critical	Info	Adding CPU to Minimum Path Tree failed - ERR_ADD_SOCKET_TO_ TOPOLOGY_TREE %string
Critical	Info	Adding CPU to Minimum Path Tree failed - ERR_TOPOLOGY_TREE %string
Critical	Info	Adding CPU to Minimum Path Tree failed - Data Structure Overflow %string
Critical	Info	Adding CPU to Minimum Path Tree failed - ERR_NONCPU_PARENT_NODE %string
Critical	Info	Adding CPU to Minimum Path Tree failed - Invalid Port connection between CPUs %string
Critical	Info	Adding CPU to Minimum Path Tree failed - ERR_SANITY_CHECK %string
Critical	Info	Adding CPU to Minimum Path Tree failed - ERR_SLOW_MODE_WA_FAIL %string
Critical	Info	Topology Discovery Failed - ERR_ADD_SOCKET_TO_TOPOLOGY_TREE %string
Critical	Info	Topology Discovery Failed - ERR_TOPOLOGY_TREE %string
Critical	Info	Topology Discovery Failed - ERR_INTERNAL_DATA_STRUCTURE %string
Critical	Info	Topology Discovery Failed - ERR_NONCPU_PARENT_NODE %string
Critical	Info	Topology Discovery Failed - ERR_INVALID_PORT_CONNECTION %string
Critical	Info	Topology Discovery Failed - Topology Discovery Failed %string
Critical	Info	Topology Discovery Failed - wa requested a reset fail %string
Critical	Info	Invalid MMCFG Size Supplied - ERR_INSUFFICIENT_RESOURCE_SPACE %string
Critical	Info	ERR_UNSUPPORTED_TOPOLOGY - Unknown Socket Type found in RingTree %string
Critical	Info	ERR_UNSUPPORTED_TOPOLOGY - ERR_INVALID_CPU_SOCKET_ID %string
Critical	Info	ERR_UNSUPPORTED_TOPOLOGY - Cbo Count/List mismatch between SBSP and CPU %string
Critical	Info	ERR_UNSUPPORTED_TOPOLOGY - HA Count mismatch %string
Critical	Info	ERR_UNSUPPORTED_TOPOLOGY - M3KTI Count mismatch between SBSP and CPU %string
Critical	Info	ERR_UNSUPPORTED_TOPOLOGY - ERR_SKU_MISMATCH %string

Sensor Type and Name		
Assert Severity	**Deassert Severity**	**Description**
Critical	Info	ERR_UNSUPPORTED_TOPOLOGY - Legacy PCH target NID mismatch between SBSP and CPU %string
Critical	Info	ERR_UNSUPPORTED_TOPOLOGY - ERR_MCP_LINK_COUNT_MISMATCH %string
Critical	Info	ERR_UNSUPPORTED_TOPOLOGY - Fail to add CPU to Ring Tree - Data Structure Overflow %string
Critical	Info	ERR_UNSUPPORTED_TOPOLOGY - CPU Link failed to train. Topology changed across reset %string
Critical	Info	Kti full speed transition failed - Kti link speed unsupported %string
Critical	Info	Kti full speed transition failed - Kti max clock ratio unsupported %string
Critical	Info	Kti full speed transition failed - Kti Electrical Parameters is not found %string
Critical	Info	Kti full speed transition failed - Eparam Table indicates otherwise %string
Critical	Info	ERR_S3_RESUME - Topology Doesn't Match - S3 Resume Failed %string
Critical	Info	ERR_S3_RESUME - Kti Setup Doesn't Match - S3 Resume Failed %string
* if only one cpu, %string = "" else %string = "(CPU%CPU_NUM)", where %CPU_NUM=DATA3[3:0]+1		
OOB (OEM)		
Info	Info	OOB file build date mis-match
Info	Info	OOB feature initial failure
Info	Info	OOB BIN file checksum ok
Info	Info	OOB BIN file checksum mismatch
Info	Info	OOB DAT file checksum ok
Info	Info	OOB DAT checksum file mismatch
Info	Info	Activate Node Product Key
Info	Info	Undefined OOB event
BIOS OEM (QPI Error)		
Critical	Info	ED1: %ED1, ED2: %ED2, ED3: %ED3 (all format=0x%02X)
BIOS OEM (Memory Error)		
Warning	Info	Max number of ranks exceeded on the channel.
Warning	Info	The number of ranks on this device is not supported.
Warning	Info	This DIMM does not support DDR4-1333 or higher.
Warning	Info	Memory DIMM incompatible with memory controllers. %Location
Warning	Info	DDR4 voltage is not supported.

Sensor Type and Name		
Assert Severity	**Deassert Severity**	**Description**
Warning	Info	Channel configuration is not supported.
Warning	Info	Failed to honor Lockstep mode. %Location
Warning	Info	(runtime) Failing DIMM: DIMM location. %Location
Warning	Info	Uncorrectable error found, Memory Rank is disabled. %Location
Warning	Info	Failed to honor Mirror mode. %Location
Warning	Info	Partial Mirror mode is disabled. %Location
Warning	Info	Failed to honor Interleave mode. %Location
Warning	Info	Number SAD rules exceeds.
Warning	Info	Number TAD rules exceeds.
Warning	Info	Number RIR rules exceeds.
Warning	Info	DIMM communication failed. %Location
Warning	Info	Sparing is disabled. %Location
Warning	Info	Memory training failure. %Location
Warning	Info	Memory training failed. (Round Trip delay exceeds limit.)
Warning	Info	Memory training failure. %Location
Warning	Info	Memory training failed. (Fault Patrs checking)
Warning	Info	Incorrect memory DIMM population. %Location
Warning	Info	A memory DIMM is populated out of order.
Warning	Info	Early read ID training warning. %Location
Warning	Info	DQ swizzling failed. %Location
Warning	Info	Memory signal is too marginal. %Location
Warning	Info	FNV opcode invalid. %Location
Warning	Info	Memory training failure. %Location
Warning	Info	Failing DIMM: DIMM location (Correctable memory component found). %Location
Warning	Info	Failing DIMM: DIMM location (Uncorrectable memory component found). %Location
Warning	Info	DIMM write Flyby is failed.
Warning	Info	DIMM read DqDqs is failed.
Warning	Info	DIMM Receive Enable training is failed.

Sensor Type and Name		
Assert Severity	**Deassert Severity**	**Description**
Warning	Info	DIMM write Leveling is failed.
Warning	Info	DIMM write DqDqs is failed.
Warning	Info	Correct error was found.
Warning	Info	LRDIMM training is failed.
Warning	Info	Unable to find the Tx/Rx Vref for the eye.
Warning	Info	Difference completion delay is exceeded. %Location
Warning	Info	Post package repair warning. %Location
Warning	Info	Check bounds error. %Location
Warning	Info	NVMDIMM boot related warning. %Location
Warning	Info	Adaptive Dual Device Data Correction is disabled. %Location
Warning	Info	Single Device Data Correction is disabled. %Location
Warning	Info	NVMDIMM controller FW is out of date. %Location
Warning	Info	NVMDIMM controller Media status warning. %Location
Critical	Info	No memory DIMM detected, install memory DIMMs. %Location
Critical	Info	Memory is not usefull. %Location
Critical	Info	Memory error (Vendor:IDT). %Location
Critical	Info	Incorrect memory DIMM population, check Memory Population Rule. %Location
Critical	Info	Memory initialization panic, apply AC Reset. %Location
Critical	Info	Failed to program voltage regulator. %Location
Critical	Info	Memory controller error. %Location
Critical	Info	Memory controller error. %Location
Critical	Info	Processor SMBUS error. %Location
Critical	Info	PCU error. %Location
Critical	Info	NVMDIMM error. %Location
Critical	Info	Memory rank interleave error. %Location
Critical	Info	DIMM capacity exceeded SKU limit. %Location
Critical	Info	DIMM mapped out %Location
Critical	Info	MajorCode: %MajorCode(format: 0x%02X) %Location
Critical	Info	No memory found.

Sensor Type and Name		
Assert Severity	**Deassert Severity**	**Description**
Critical	Info	All channels are disabled due to memory test failures.
Critical	Info	No memory DIMM detected, install memory DIMMs.
Critical	Info	Memory test error.
Critical	Info	Memory error (Vendor:IDT).
Critical	Info	RDIMM and UDIMM are mixed.
Critical	Info	Invalid DIMM population.
Critical	Info	3DS is mixed with non-3DS LRDIMM.
Critical	Info	Incorrect memory DIMM population, check Memory Population Rule.
Critical	Info	Unable to recognize S0 to S3 path.
Critical	Info	Unable to recognize cold/warm boot.
Critical	Info	Memory initialization panic, apply AC Reset.
Critical	Info	Cannot program memory VDD.
Critical	Info	Failed to program voltage regulator.
Critical	Info	Memory controller error.
Critical	Info	Failed to program memory voltage regulator.
Critical	Info	Processor SMBUS error.
Critical	Info	PCU error.
Critical	Info	NVDIMM error.
Critical	Info	Memory rank interleave error.
Critical	Info	DIMM capacity violation.
Critical	Info	DIMM capacity exceeded SKU limit.
12V		
Warning	Info	Voltage Protection (Force Shutdown) - Voltage Low
Warning	Info	Voltage Protection (Force Shutdown) - HotSwap MOSFET
Warning	Info	Voltage Protection (Force Shutdown) - MB side
Warning	Info	Voltage Protection (Force Shutdown) - HotSwap MOSFET & MB side
Warning	Info	Voltage Protection (Force Shutdown) - Unkown

Sensor Type and Name		
Assert Severity	**Deassert Severity**	**Description**
NVMe (OEM)		
Warning	Info	Slot @ %d Ejected
Warning	Info	Slot @ %d Inserted
Warning	Info	Slot @ %d Drive Fault
Warning	Info	Slot @ %d Removed
Warning	Info	Slot @ %d Installed
Warning	Info	Group @ %Group[3:0] Slot @ %string Ejected
Warning	Info	Group @ %Group[3:0] Slot @ %string Inserted
Warning	Info	Group @ %Group[3:0] Slot @ %string Drive Fault
Warning	Info	Group @ %Group[3:0] Slot @ %string Removed
Warning	Info	Group @ %Group[3:0] Slot @ %string Installed
if %DATA3[4:0] < 0x18 , %string = %DATA3[4:0], else out of range		
Components Changed (OEM)		
Info	Info	Device Removed
Info	Info	Device Installed
Info	Info	Device Changed
Info	Info	CPU removed on CPU Slot%DATA2[7:4]
Info	Info	CPU installed on CPU Slot%DATA2[7:4]
Info	Info	CPU changed on CPU Slot%DATA2[7:4]
Info	Info	DIMM removed on P%DATA2[7:5+1]-DIMM%DATA2[4:2+0x41]%DATA2[1:0+1]
Info	Info	DIMM installed on P%DATA2[7:5+1]-DIMM%DATA2[4:2+0x41]%DATA2[1:0+1]
Info	Info	DIMM changed on P%DATA2[7:5+1]-DIMM%DATA2[4:2+0x41]%DATA2[1:0+1]
Info	Info	PCI-E removed on CPU PCI-E Slot%DATA2[7:4]
Info	Info	PCI-E installed on CPU PCI-E Slot%DATA2[7:4]
Info	Info	PCI-E changed on CPU PCI-E Slot%DATA2[7:4]
Info	Info	PCI-E removed on PCH PCI-E Slot%DATA2[7:4]
Info	Info	PCI-E installed on PCH PCI-E Slot%DATA2[7:4]
Info	Info	PCI-E changed on PCH PCI-E Slot%DATA2[7:4]
Info	Info	HDD removed on PCH HDD Slot%DATA3 on eSATA controller %DATA2[3:0]

Sensor Type and Name		
Assert Severity	**Deassert Severity**	**Description**
Info	Info	HDD removed on PCH HDD Slot%DATA3 on SATA controller %DATA2[3:0]
Info	Info	HDD removed on PCH HDD Slot%DATA3 on Other controller %DATA2[3:0]
Info	Info	HDD installed on PCH HDD Slot%DATA3 on eSATA controller %DATA2[3:0]
Info	Info	HDD installed on PCH HDD Slot%DATA3 on SATA controller %DATA2[3:0]
Info	Info	HDD installed on PCH HDD Slot%DATA3 on Other controller %DATA2[3:0]
Info	Info	HDD changed on PCH HDD Slot%DATA3 on eSATA controller %DATA2[3:0]
Info	Info	HDD changed on PCH HDD Slot%DATA3 on SATA controller %DATA2[3:0]
Info	Info	HDD changed on PCH HDD Slot%DATA3 on Other controller %DATA2[3:0]
Info	Info	Device removed on %SLOT->Slot%DATA2[3:0]->Slot%DATA3[7:4]->Slot%DATA3[3:0] if %DATA#[#:#] == 0, then drop "->Slot%DATA#[#:#]"
Info	Info	Device installed on %SLOT->Slot%DATA2[3:0]->Slot%DATA3[7:4]->Slot%DATA3[3:0] if %DATA#[#:#] == 0, then drop "->Slot%DATA#[#:#]"
Info	Info	Device changed on %SLOT->Slot%DATA2[3:0]->Slot%DATA3[7:4]->Slot%DATA3[3:0] if %DATA#[#:#] == 0, then drop "->Slot%DATA#[#:#]"
Info	Info	TPM removed from TPM Slot
Info	Info	TPM installed on TPM Slot
Info	Info	TPM changed on TPM Slot
Info	Info	Others components changed
when (0 < %DATA2[7:4] < 7) %SLOT=SXB%DATA2[7:4] when (%DATA2[7:4] == 7) %SLOT=AOM when (%DATA2[7:4] == 8) %SLOT=SIOM when (%DATA2[7:4] == Others) %SLOT=Other OEM Slot		
System Overpower		
Info	Info	System Overpower Event - Deasserted
Critical	Info	Overpower Throttle Event - Asserted
Info	Info	Overpower Throttle Event - Deasserted
Critical	Info	BBP Throttle Event - Asserted
Info	Info	BBP Throttle Event - Deasserted
Blade		
Info	Info	Removal Detected on Blade A1
Info	Info	Removal Detected on Blade A2
Info	Info	Removal Detected on Blade A3
Info	Info	Removal Detected on Blade A4

Sensor Type and Name		
Assert Severity	**Deassert Severity**	**Description**
Info	Info	Removal Detected on Blade A5
Info	Info	Removal Detected on Blade A6
Info	Info	Removal Detected on Blade A7
Info	Info	Removal Detected on Blade A8
Info	Info	Removal Detected on Blade A9
Info	Info	Removal Detected on Blade A10
Info	Info	Removal Detected on Blade A11
Info	Info	Removal Detected on Blade A12
Info	Info	Removal Detected on Blade A13
Info	Info	Removal Detected on Blade A14
Info	Info	Removal Detected on Blade B1
Info	Info	Removal Detected on Blade B2
Info	Info	Removal Detected on Blade B3
Info	Info	Removal Detected on Blade B4
Info	Info	Removal Detected on Blade B5
Info	Info	Removal Detected on Blade B6
Info	Info	Removal Detected on Blade B7
Info	Info	Removal Detected on Blade B8
Info	Info	Removal Detected on Blade B9
Info	Info	Removal Detected on Blade B10
Info	Info	Removal Detected on Blade B11
Info	Info	Removal Detected on Blade B12
Info	Info	Removal Detected on Blade B13
Info	Info	Removal Detected on Blade B14
Info	Info	Presence Detected on Blade A1
Info	Info	Presence Detected on Blade A2
Info	Info	Presence Detected on Blade A3
Info	Info	Presence Detected on Blade A4
Info	Info	Presence Detected on Blade A5

Sensor Type and Name		
Assert Severity	**Deassert Severity**	**Description**
Info	Info	Presence Detected on Blade A6
Info	Info	Presence Detected on Blade A7
Info	Info	Presence Detected on Blade A8
Info	Info	Presence Detected on Blade A9
Info	Info	Presence Detected on Blade A10
Info	Info	Presence Detected on Blade A11
Info	Info	Presence Detected on Blade A12
Info	Info	Presence Detected on Blade A13
Info	Info	Presence Detected on Blade A14
Info	Info	Presence Detected on Blade B1
Info	Info	Presence Detected on Blade B2
Info	Info	Presence Detected on Blade B3
Info	Info	Presence Detected on Blade B4
Info	Info	Presence Detected on Blade B5
Info	Info	Presence Detected on Blade B6
Info	Info	Presence Detected on Blade B7
Info	Info	Presence Detected on Blade B8
Info	Info	Presence Detected on Blade B9
Info	Info	Presence Detected on Blade B10
Info	Info	Presence Detected on Blade B11
Info	Info	Presence Detected on Blade B12
Info	Info	Presence Detected on Blade B13
Info	Info	Presence Detected on Blade B14
Info	Info	Power Off Blade A1
Info	Info	Power Off Blade A1 Node 1
Info	Info	Power Off Blade A1 Node 2
Info	Info	Power Off Blade A1 Node 3
Info	Info	Power Off Blade A1 Node 4
Info	Info	Power Off Blade A2

Sensor Type and Name		
Assert Severity	**Deassert Severity**	**Description**
Info	Info	Power Off Blade A2 Node 1
Info	Info	Power Off Blade A2 Node 2
Info	Info	Power Off Blade A2 Node 3
Info	Info	Power Off Blade A2 Node 4
Info	Info	Power Off Blade A3
Info	Info	Power Off Blade A3 Node 1
Info	Info	Power Off Blade A3 Node 2
Info	Info	Power Off Blade A3 Node 3
Info	Info	Power Off Blade A3 Node 4
Info	Info	Power Off Blade A4
Info	Info	Power Off Blade A4 Node 1
Info	Info	Power Off Blade A4 Node 2
Info	Info	Power Off Blade A4 Node 3
Info	Info	Power Off Blade A4 Node 4
Info	Info	Power Off Blade A5
Info	Info	Power Off Blade A5 Node 1
Info	Info	Power Off Blade A5 Node 2
Info	Info	Power Off Blade A5 Node 3
Info	Info	Power Off Blade A5 Node 4
Info	Info	Power Off Blade A6
Info	Info	Power Off Blade A6 Node 1
Info	Info	Power Off Blade A6 Node 2
Info	Info	Power Off Blade A6 Node 3
Info	Info	Power Off Blade A6 Node 4
Info	Info	Power Off Blade A7
Info	Info	Power Off Blade A7 Node 1
Info	Info	Power Off Blade A7 Node 2
Info	Info	Power Off Blade A7 Node 3
Info	Info	Power Off Blade A7 Node 4

Sensor Type and Name		
Assert Severity	**Deassert Severity**	**Description**
Info	Info	Power Off Blade A8
Info	Info	Power Off Blade A8 Node 1
Info	Info	Power Off Blade A8 Node 2
Info	Info	Power Off Blade A8 Node 3
Info	Info	Power Off Blade A8 Node 4
Info	Info	Power Off Blade A9
Info	Info	Power Off Blade A9 Node 1
Info	Info	Power Off Blade A9 Node 2
Info	Info	Power Off Blade A9 Node 3
Info	Info	Power Off Blade A9 Node 4
Info	Info	Power Off Blade A10
Info	Info	Power Off Blade A10 Node 1
Info	Info	Power Off Blade A10 Node 2
Info	Info	Power Off Blade A10 Node 3
Info	Info	Power Off Blade A10 Node 4
Info	Info	Power Off Blade A11
Info	Info	Power Off Blade A11 Node 1
Info	Info	Power Off Blade A11 Node 2
Info	Info	Power Off Blade A11 Node 3
Info	Info	Power Off Blade A11 Node 4
Info	Info	Power Off Blade A12
Info	Info	Power Off Blade A12 Node 1
Info	Info	Power Off Blade A12 Node 2
Info	Info	Power Off Blade A12 Node 3
Info	Info	Power Off Blade A12 Node 4
Info	Info	Power Off Blade A13
Info	Info	Power Off Blade A13 Node 1
Info	Info	Power Off Blade A13 Node 2
Info	Info	Power Off Blade A13 Node 3

Sensor Type and Name		
Assert Severity	**Deassert Severity**	**Description**
Info	Info	Power Off Blade A13 Node 4
Info	Info	Power Off Blade A14
Info	Info	Power Off Blade A14 Node 1
Info	Info	Power Off Blade A14 Node 2
Info	Info	Power Off Blade A14 Node 3
Info	Info	Power Off Blade A14 Node 4
Info	Info	Power Off Blade B1
Info	Info	Power Off Blade B1 Node 1
Info	Info	Power Off Blade B1 Node 2
Info	Info	Power Off Blade B1 Node 3
Info	Info	Power Off Blade B1 Node 4
Info	Info	Power Off Blade B2
Info	Info	Power Off Blade B2 Node 1
Info	Info	Power Off Blade B2 Node 2
Info	Info	Power Off Blade B2 Node 3
Info	Info	Power Off Blade B2 Node 4
Info	Info	Power Off Blade B3
Info	Info	Power Off Blade B3 Node 1
Info	Info	Power Off Blade B3 Node 2
Info	Info	Power Off Blade B3 Node 3
Info	Info	Power Off Blade B3 Node 4
Info	Info	Power Off Blade B4
Info	Info	Power Off Blade B4 Node 1
Info	Info	Power Off Blade B4 Node 2
Info	Info	Power Off Blade B4 Node 3
Info	Info	Power Off Blade B4 Node 4
Info	Info	Power Off Blade B5
Info	Info	Power Off Blade B5 Node 1
Info	Info	Power Off Blade B5 Node 2

Sensor Type and Name		
Assert Severity	**Deassert Severity**	**Description**
Info	Info	Power Off Blade B5 Node 3
Info	Info	Power Off Blade B5 Node 4
Info	Info	Power Off Blade B6
Info	Info	Power Off Blade B6 Node 1
Info	Info	Power Off Blade B6 Node 2
Info	Info	Power Off Blade B6 Node 3
Info	Info	Power Off Blade B6 Node 4
Info	Info	Power Off Blade B7
Info	Info	Power Off Blade B7 Node 1
Info	Info	Power Off Blade B7 Node 2
Info	Info	Power Off Blade B7 Node 3
Info	Info	Power Off Blade B7 Node 4
Info	Info	Power Off Blade B8
Info	Info	Power Off Blade B8 Node 1
Info	Info	Power Off Blade B8 Node 2
Info	Info	Power Off Blade B8 Node 3
Info	Info	Power Off Blade B8 Node 4
Info	Info	Power Off Blade B9
Info	Info	Power Off Blade B9 Node 1
Info	Info	Power Off Blade B9 Node 2
Info	Info	Power Off Blade B9 Node 3
Info	Info	Power Off Blade B9 Node 4
Info	Info	Power Off Blade B10
Info	Info	Power Off Blade B10 Node 1
Info	Info	Power Off Blade B10 Node 2
Info	Info	Power Off Blade B10 Node 3
Info	Info	Power Off Blade B10 Node 4
Info	Info	Power Off Blade B11
Info	Info	Power Off Blade B11 Node 1

Sensor Type and Name		
Assert Severity	**Deassert Severity**	**Description**
Info	Info	Power Off Blade B11 Node 2
Info	Info	Power Off Blade B11 Node 3
Info	Info	Power Off Blade B11 Node 4
Info	Info	Power Off Blade B12
Info	Info	Power Off Blade B12 Node 1
Info	Info	Power Off Blade B12 Node 2
Info	Info	Power Off Blade B12 Node 3
Info	Info	Power Off Blade B12 Node 4
Info	Info	Power Off Blade B13
Info	Info	Power Off Blade B13 Node 1
Info	Info	Power Off Blade B13 Node 2
Info	Info	Power Off Blade B13 Node 3
Info	Info	Power Off Blade B13 Node 4
Info	Info	Power Off Blade B14
Info	Info	Power Off Blade B14 Node 1
Info	Info	Power Off Blade B14 Node 2
Info	Info	Power Off Blade B14 Node 3
Info	Info	Power Off Blade B14 Node 4
Info	Info	Power On Blade A1
Info	Info	Power On Blade A1 Node 1
Info	Info	Power On Blade A1 Node 2
Info	Info	Power On Blade A1 Node 3
Info	Info	Power On Blade A1 Node 4
Info	Info	Power On Blade A2
Info	Info	Power On Blade A2 Node 1
Info	Info	Power On Blade A2 Node 2
Info	Info	Power On Blade A2 Node 3
Info	Info	Power On Blade A2 Node 4
Info	Info	Power On Blade A3

Sensor Type and Name		
Assert Severity	**Deassert Severity**	**Description**
Info	Info	Power On Blade A3 Node 1
Info	Info	Power On Blade A3 Node 2
Info	Info	Power On Blade A3 Node 3
Info	Info	Power On Blade A3 Node 4
Info	Info	Power On Blade A4
Info	Info	Power On Blade A4 Node 1
Info	Info	Power On Blade A4 Node 2
Info	Info	Power On Blade A4 Node 3
Info	Info	Power On Blade A4 Node 4
Info	Info	Power On Blade A5
Info	Info	Power On Blade A5 Node 1
Info	Info	Power On Blade A5 Node 2
Info	Info	Power On Blade A5 Node 3
Info	Info	Power On Blade A5 Node 4
Info	Info	Power On Blade A6
Info	Info	Power On Blade A6 Node 1
Info	Info	Power On Blade A6 Node 2
Info	Info	Power On Blade A6 Node 3
Info	Info	Power On Blade A6 Node 4
Info	Info	Power On Blade A7
Info	Info	Power On Blade A7 Node 1
Info	Info	Power On Blade A7 Node 2
Info	Info	Power On Blade A7 Node 3
Info	Info	Power On Blade A7 Node 4
Info	Info	Power On Blade A8
Info	Info	Power On Blade A8 Node 1
Info	Info	Power On Blade A8 Node 2
Info	Info	Power On Blade A8 Node 3
Info	Info	Power On Blade A8 Node 4

Sensor Type and Name		
Assert Severity	**Deassert Severity**	**Description**
Info	Info	Power On Blade A9
Info	Info	Power On Blade A9 Node 1
Info	Info	Power On Blade A9 Node 2
Info	Info	Power On Blade A9 Node 3
Info	Info	Power On Blade A9 Node 4
Info	Info	Power On Blade A10
Info	Info	Power On Blade A10 Node 1
Info	Info	Power On Blade A10 Node 2
Info	Info	Power On Blade A10 Node 3
Info	Info	Power On Blade A10 Node 4
Info	Info	Power On Blade A11
Info	Info	Power On Blade A11 Node 1
Info	Info	Power On Blade A11 Node 2
Info	Info	Power On Blade A11 Node 3
Info	Info	Power On Blade A11 Node 4
Info	Info	Power On Blade A12
Info	Info	Power On Blade A12 Node 1
Info	Info	Power On Blade A12 Node 2
Info	Info	Power On Blade A12 Node 3
Info	Info	Power On Blade A12 Node 4
Info	Info	Power On Blade A13
Info	Info	Power On Blade A13 Node 1
Info	Info	Power On Blade A13 Node 2
Info	Info	Power On Blade A13 Node 3
Info	Info	Power On Blade A13 Node 4
Info	Info	Power On Blade A14
Info	Info	Power On Blade A14 Node 1
Info	Info	Power On Blade A14 Node 2
Info	Info	Power On Blade A14 Node 3

Sensor Type and Name		
Assert Severity	**Deassert Severity**	**Description**
Info	Info	Power On Blade A14 Node 4
Info	Info	Power On Blade B1
Info	Info	Power On Blade B1 Node 1
Info	Info	Power On Blade B1 Node 2
Info	Info	Power On Blade B1 Node 3
Info	Info	Power On Blade B1 Node 4
Info	Info	Power On Blade B2
Info	Info	Power On Blade B2 Node 1
Info	Info	Power On Blade B2 Node 2
Info	Info	Power On Blade B2 Node 3
Info	Info	Power On Blade B2 Node 4
Info	Info	Power On Blade B3
Info	Info	Power On Blade B3 Node 1
Info	Info	Power On Blade B3 Node 2
Info	Info	Power On Blade B3 Node 3
Info	Info	Power On Blade B3 Node 4
Info	Info	Power On Blade B4
Info	Info	Power On Blade B4 Node 1
Info	Info	Power On Blade B4 Node 2
Info	Info	Power On Blade B4 Node 3
Info	Info	Power On Blade B4 Node 4
Info	Info	Power On Blade B5
Info	Info	Power On Blade B5 Node 1
Info	Info	Power On Blade B5 Node 2
Info	Info	Power On Blade B5 Node 3
Info	Info	Power On Blade B5 Node 4
Info	Info	Power On Blade B6
Info	Info	Power On Blade B6 Node 1
Info	Info	Power On Blade B6 Node 2

Sensor Type and Name		
Assert Severity	**Deassert Severity**	**Description**
Info	Info	Power On Blade B6 Node 3
Info	Info	Power On Blade B6 Node 4
Info	Info	Power On Blade B7
Info	Info	Power On Blade B7 Node 1
Info	Info	Power On Blade B7 Node 2
Info	Info	Power On Blade B7 Node 3
Info	Info	Power On Blade B7 Node 4
Info	Info	Power On Blade B8
Info	Info	Power On Blade B8 Node 1
Info	Info	Power On Blade B8 Node 2
Info	Info	Power On Blade B8 Node 3
Info	Info	Power On Blade B8 Node 4
Info	Info	Power On Blade B9
Info	Info	Power On Blade B9 Node 1
Info	Info	Power On Blade B9 Node 2
Info	Info	Power On Blade B9 Node 3
Info	Info	Power On Blade B9 Node 4
Info	Info	Power On Blade B10
Info	Info	Power On Blade B10 Node 1
Info	Info	Power On Blade B10 Node 2
Info	Info	Power On Blade B10 Node 3
Info	Info	Power On Blade B10 Node 4
Info	Info	Power On Blade B11
Info	Info	Power On Blade B11 Node 1
Info	Info	Power On Blade B11 Node 2
Info	Info	Power On Blade B11 Node 3
Info	Info	Power On Blade B11 Node 4
Info	Info	Power On Blade B12
Info	Info	Power On Blade B12 Node 1

Sensor Type and Name		
Assert Severity	**Deassert Severity**	**Description**
Info	Info	Power On Blade B12 Node 2
Info	Info	Power On Blade B12 Node 3
Info	Info	Power On Blade B12 Node 4
Info	Info	Power On Blade B13
Info	Info	Power On Blade B13 Node 1
Info	Info	Power On Blade B13 Node 2
Info	Info	Power On Blade B13 Node 3
Info	Info	Power On Blade B13 Node 4
Info	Info	Power On Blade B14
Info	Info	Power On Blade B14 Node 1
Info	Info	Power On Blade B14 Node 2
Info	Info	Power On Blade B14 Node 3
Info	Info	Power On Blade B14 Node 4
Info	Info	Power Reset Blade A1
Info	Info	Power Reset Blade A1 Node 1
Info	Info	Power Reset Blade A1 Node 2
Info	Info	Power Reset Blade A1 Node 3
Info	Info	Power Reset Blade A1 Node 4
Info	Info	Power Reset Blade A2
Info	Info	Power Reset Blade A2 Node 1
Info	Info	Power Reset Blade A2 Node 2
Info	Info	Power Reset Blade A2 Node 3
Info	Info	Power Reset Blade A2 Node 4
Info	Info	Power Reset Blade A3
Info	Info	Power Reset Blade A3 Node 1
Info	Info	Power Reset Blade A3 Node 2
Info	Info	Power Reset Blade A3 Node 3
Info	Info	Power Reset Blade A3 Node 4
Info	Info	Power Reset Blade A4

Sensor Type and Name		
Assert Severity	**Deassert Severity**	**Description**
Info	Info	Power Reset Blade A4 Node 1
Info	Info	Power Reset Blade A4 Node 2
Info	Info	Power Reset Blade A4 Node 3
Info	Info	Power Reset Blade A4 Node 4
Info	Info	Power Reset Blade A5
Info	Info	Power Reset Blade A5 Node 1
Info	Info	Power Reset Blade A5 Node 2
Info	Info	Power Reset Blade A5 Node 3
Info	Info	Power Reset Blade A5 Node 4
Info	Info	Power Reset Blade A6
Info	Info	Power Reset Blade A6 Node 1
Info	Info	Power Reset Blade A6 Node 2
Info	Info	Power Reset Blade A6 Node 3
Info	Info	Power Reset Blade A6 Node 4
Info	Info	Power Reset Blade A7
Info	Info	Power Reset Blade A7 Node 1
Info	Info	Power Reset Blade A7 Node 2
Info	Info	Power Reset Blade A7 Node 3
Info	Info	Power Reset Blade A7 Node 4
Info	Info	Power Reset Blade A8
Info	Info	Power Reset Blade A8 Node 1
Info	Info	Power Reset Blade A8 Node 2
Info	Info	Power Reset Blade A8 Node 3
Info	Info	Power Reset Blade A8 Node 4
Info	Info	Power Reset Blade A9
Info	Info	Power Reset Blade A9 Node 1
Info	Info	Power Reset Blade A9 Node 2
Info	Info	Power Reset Blade A9 Node 3
Info	Info	Power Reset Blade A9 Node 4

Sensor Type and Name		
Assert Severity	**Deassert Severity**	**Description**
Info	Info	Power Reset Blade A10
Info	Info	Power Reset Blade A10 Node 1
Info	Info	Power Reset Blade A10 Node 2
Info	Info	Power Reset Blade A10 Node 3
Info	Info	Power Reset Blade A10 Node 4
Info	Info	Power Reset Blade A11
Info	Info	Power Reset Blade A11 Node 1
Info	Info	Power Reset Blade A11 Node 2
Info	Info	Power Reset Blade A11 Node 3
Info	Info	Power Reset Blade A11 Node 4
Info	Info	Power Reset Blade A12
Info	Info	Power Reset Blade A12 Node 1
Info	Info	Power Reset Blade A12 Node 2
Info	Info	Power Reset Blade A12 Node 3
Info	Info	Power Reset Blade A12 Node 4
Info	Info	Power Reset Blade A13
Info	Info	Power Reset Blade A13 Node 1
Info	Info	Power Reset Blade A13 Node 2
Info	Info	Power Reset Blade A13 Node 3
Info	Info	Power Reset Blade A13 Node 4
Info	Info	Power Reset Blade A14
Info	Info	Power Reset Blade A14 Node 1
Info	Info	Power Reset Blade A14 Node 2
Info	Info	Power Reset Blade A14 Node 3
Info	Info	Power Reset Blade A14 Node 4
Info	Info	Power Reset Blade B1
Info	Info	Power Reset Blade B1 Node 1
Info	Info	Power Reset Blade B1 Node 2
Info	Info	Power Reset Blade B1 Node 3

Sensor Type and Name		
Assert Severity	**Deassert Severity**	**Description**
Info	Info	Power Reset Blade B1 Node 4
Info	Info	Power Reset Blade B2
Info	Info	Power Reset Blade B2 Node 1
Info	Info	Power Reset Blade B2 Node 2
Info	Info	Power Reset Blade B2 Node 3
Info	Info	Power Reset Blade B2 Node 4
Info	Info	Power Reset Blade B3
Info	Info	Power Reset Blade B3 Node 1
Info	Info	Power Reset Blade B3 Node 2
Info	Info	Power Reset Blade B3 Node 3
Info	Info	Power Reset Blade B3 Node 4
Info	Info	Power Reset Blade B4
Info	Info	Power Reset Blade B4 Node 1
Info	Info	Power Reset Blade B4 Node 2
Info	Info	Power Reset Blade B4 Node 3
Info	Info	Power Reset Blade B4 Node 4
Info	Info	Power Reset Blade B5
Info	Info	Power Reset Blade B5 Node 1
Info	Info	Power Reset Blade B5 Node 2
Info	Info	Power Reset Blade B5 Node 3
Info	Info	Power Reset Blade B5 Node 4
Info	Info	Power Reset Blade B6
Info	Info	Power Reset Blade B6 Node 1
Info	Info	Power Reset Blade B6 Node 2
Info	Info	Power Reset Blade B6 Node 3
Info	Info	Power Reset Blade B6 Node 4
Info	Info	Power Reset Blade B7
Info	Info	Power Reset Blade B7 Node 1
Info	Info	Power Reset Blade B7 Node 2

Sensor Type and Name		
Assert Severity	**Deassert Severity**	**Description**
Info	Info	Power Reset Blade B7 Node 3
Info	Info	Power Reset Blade B7 Node 4
Info	Info	Power Reset Blade B8
Info	Info	Power Reset Blade B8 Node 1
Info	Info	Power Reset Blade B8 Node 2
Info	Info	Power Reset Blade B8 Node 3
Info	Info	Power Reset Blade B8 Node 4
Info	Info	Power Reset Blade B9
Info	Info	Power Reset Blade B9 Node 1
Info	Info	Power Reset Blade B9 Node 2
Info	Info	Power Reset Blade B9 Node 3
Info	Info	Power Reset Blade B9 Node 4
Info	Info	Power Reset Blade B10
Info	Info	Power Reset Blade B10 Node 1
Info	Info	Power Reset Blade B10 Node 2
Info	Info	Power Reset Blade B10 Node 3
Info	Info	Power Reset Blade B10 Node 4
Info	Info	Power Reset Blade B11
Info	Info	Power Reset Blade B11 Node 1
Info	Info	Power Reset Blade B11 Node 2
Info	Info	Power Reset Blade B11 Node 3
Info	Info	Power Reset Blade B11 Node 4
Info	Info	Power Reset Blade B12
Info	Info	Power Reset Blade B12 Node 1
Info	Info	Power Reset Blade B12 Node 2
Info	Info	Power Reset Blade B12 Node 3
Info	Info	Power Reset Blade B12 Node 4
Info	Info	Power Reset Blade B13
Info	Info	Power Reset Blade B13 Node 1

Sensor Type and Name		
Assert Severity	**Deassert Severity**	**Description**
Info	Info	Power Reset Blade B13 Node 2
Info	Info	Power Reset Blade B13 Node 3
Info	Info	Power Reset Blade B13 Node 4
Info	Info	Power Reset Blade B14
Info	Info	Power Reset Blade B14 Node 1
Info	Info	Power Reset Blade B14 Node 2
Info	Info	Power Reset Blade B14 Node 3
Info	Info	Power Reset Blade B14 Node 4
Info	Info	Power AC Cycle Blade A1
Info	Info	Power AC Cycle Blade A2
Info	Info	Power AC Cycle Blade A3
Info	Info	Power AC Cycle Blade A4
Info	Info	Power AC Cycle Blade A5
Info	Info	Power AC Cycle Blade A6
Info	Info	Power AC Cycle Blade A7
Info	Info	Power AC Cycle Blade A8
Info	Info	Power AC Cycle Blade A9
Info	Info	Power AC Cycle Blade A10
Info	Info	Power AC Cycle Blade A11
Info	Info	Power AC Cycle Blade A12
Info	Info	Power AC Cycle Blade A13
Info	Info	Power AC Cycle Blade A14
Info	Info	Power AC Cycle Blade B1
Info	Info	Power AC Cycle Blade B2
Info	Info	Power AC Cycle Blade B3
Info	Info	Power AC Cycle Blade B4
Info	Info	Power AC Cycle Blade B5
Info	Info	Power AC Cycle Blade B6
Info	Info	Power AC Cycle Blade B7

Sensor Type and Name		
Assert Severity	**Deassert Severity**	**Description**
Info	Info	Power AC Cycle Blade B8
Info	Info	Power AC Cycle Blade B9
Info	Info	Power AC Cycle Blade B10
Info	Info	Power AC Cycle Blade B11
Info	Info	Power AC Cycle Blade B12
Info	Info	Power AC Cycle Blade B13
Info	Info	Power AC Cycle Blade B14
Switch		
Info	Info	Removal Detected on Switch A1
Info	Info	Removal Detected on Switch A2
Info	Info	Removal Detected on Switch B1
Info	Info	Removal Detected on Switch B2
Info	Info	Presence Detected on Switch A1
Info	Info	Presence Detected on Switch A2
Info	Info	Presence Detected on Switch B1
Info	Info	Presence Detected on Switch B2
Info	Info	Power Off Switch A1
Info	Info	Power Off Switch A2
Info	Info	Power Off Switch B1
Info	Info	Power Off Switch B2
Info	Info	Power On Switch A1
Info	Info	Power On Switch A2
Info	Info	Power On Switch B1
Info	Info	Power On Switch B2
Info	Info	Power Reset Switch A1
Info	Info	Power Reset Switch A2
Info	Info	Power Reset Switch B1
Info	Info	Power Reset Switch B2
Critical	Info	System Error on Switch A1 - Asserted

Sensor Type and Name		
Assert Severity	**Deassert Severity**	**Description**
Info	Info	System Error on Switch A1 - Deasserted
Critical	Info	System Error on Switch A2 - Asserted
Info	Info	System Error on Switch A2 - Deasserted
Critical	Info	System Error on Switch B1 - Asserted
Info	Info	System Error on Switch B1 - Deasserted
Critical	Info	System Error on Switch B2 - Asserted
Info	Info	System Error on Switch B2 - Deasserted
PSU		
Info	Info	Removal Detected on Power Supply A1
Info	Info	Removal Detected on Power Supply A2
Info	Info	Removal Detected on Power Supply A3
Info	Info	Removal Detected on Power Supply A4
Info	Info	Removal Detected on Power Supply B1
Info	Info	Removal Detected on Power Supply B2
Info	Info	Removal Detected on Power Supply B3
Info	Info	Removal Detected on Power Supply B4
Info	Info	Presence Detected on Power Supply A1
Info	Info	Presence Detected on Power Supply A2
Info	Info	Presence Detected on Power Supply A3
Info	Info	Presence Detected on Power Supply A4
Info	Info	Presence Detected on Power Supply B1
Info	Info	Presence Detected on Power Supply B2
Info	Info	Presence Detected on Power Supply B3
Info	Info	Presence Detected on Power Supply B4
Info	Info	Power Off Power Supply A1
Info	Info	Power Off Power Supply A2
Info	Info	Power Off Power Supply A3
Info	Info	Power Off Power Supply A4
Info	Info	Power Off Power Supply B1

Sensor Type and Name		
Assert Severity	**Deassert Severity**	**Description**
Info	Info	Power Off Power Supply B2
Info	Info	Power Off Power Supply B3
Info	Info	Power Off Power Supply B4
Info	Info	Power On Power Supply A1
Info	Info	Power On Power Supply A2
Info	Info	Power On Power Supply A3
Info	Info	Power On Power Supply A4
Info	Info	Power On Power Supply B1
Info	Info	Power On Power Supply B2
Info	Info	Power On Power Supply B3
Info	Info	Power On Power Supply B4
Info	Info	Power Reset Power Supply A1
Info	Info	Power Reset Power Supply A2
Info	Info	Power Reset Power Supply A3
Info	Info	Power Reset Power Supply A4
Info	Info	Power Reset Power Supply B1
Info	Info	Power Reset Power Supply B2
Info	Info	Power Reset Power Supply B3
Info	Info	Power Reset Power Supply B4
Info	Info	Input AC Lost on Power Supply A1 - Asserted
Info	Info	Input AC Lost on Power Supply A1 - Dessserted
Info	Info	Input AC Lost on Power Supply A2 - Asserted
Info	Info	Input AC Lost on Power Supply A2 - Dessserted
Info	Info	Input AC Lost on Power Supply A3 - Asserted
Info	Info	Input AC Lost on Power Supply A3 - Dessserted
Info	Info	Input AC Lost on Power Supply A4 - Asserted
Info	Info	Input AC Lost on Power Supply A4 - Dessserted
Info	Info	Input AC Lost on Power Supply B1 - Asserted
Info	Info	Input AC Lost on Power Supply B1 - Dessserted

Sensor Type and Name		
Assert Severity	**Deassert Severity**	**Description**
Critcal	Info	Input AC Lost on Power Supply B2 - Asserted
Info	Info	Input AC Lost on Power Supply B2 - Dessserted
Critcal	Info	Input AC Lost on Power Supply B3 - Asserted
Info	Info	Input AC Lost on Power Supply B3 - Dessserted
Critcal	Info	Input AC Lost on Power Supply B4 - Asserted
Info	Info	Input AC Lost on Power Supply B4 - Dessserted
Critcal	Info	Power Supply Failure detected on Power Supply A1 - Asserted
Info	Info	Power Supply Failure detected on Power Supply A1 - Deasserted
Critcal	Info	Power Supply Failure detected on Power Supply A2 - Asserted
Info	Info	Power Supply Failure detected on Power Supply A2 - Deasserted
Critcal	Info	Power Supply Failure detected on Power Supply A3 - Asserted
Info	Info	Power Supply Failure detected on Power Supply A3 - Deasserted
Critcal	Info	Power Supply Failure detected on Power Supply A4 - Asserted
Info	Info	Power Supply Failure detected on Power Supply A4 - Deasserted
Critcal	Info	Power Supply Failure detected on Power Supply B1 - Asserted
Info	Info	Power Supply Failure detected on Power Supply B1 - Deasserted
Critcal	Info	Power Supply Failure detected on Power Supply B2 - Asserted
Info	Info	Power Supply Failure detected on Power Supply B2 - Deasserted
Critcal	Info	Power Supply Failure detected on Power Supply B3 - Asserted
Info	Info	Power Supply Failure detected on Power Supply B3 - Deasserted
Critcal	Info	Power Supply Failure detected on Power Supply B4 - Asserted
Info	Info	Power Supply Failure detected on Power Supply B4 - Deasserted
Critcal	Info	Input voltage %data3 V Power Supply Failure A1 - Asserted
Info	Info	Input voltage %data3 V Power Supply Failure A1 - Deasserted
Critcal	Info	Input voltage %data3 V Power Supply Failure A2 - Asserted
Info	Info	Input voltage %data3 V Power Supply Failure A2 - Deasserted
Critcal	Info	Input voltage %data3 V Power Supply Failure A3 - Asserted
Info	Info	Input voltage %data3 V Power Supply Failure A3 - Deasserted
Critcal	Info	Input voltage %data3 V Power Supply Failure A4 - Asserted

Sensor Type and Name		
Assert Severity	**Deassert Severity**	**Description**
Info	Info	Input voltage %data3 V Power Supply Failure A4 - Deasserted
Critcal	Info	Input voltage %data3 V Power Supply Failure B1 - Asserted
Info	Info	Input voltage %data3 V Power Supply Failure - Deasserted
Critcal	Info	Input voltage %data3 V Power Supply Failure - Asserted
Info	Info	Input voltage %data3 V Power Supply Failure - Deasserted
Critcal	Info	Input voltage %data3 V Power Supply Failure - Asserted
Info	Info	Input voltage %data3 V Power Supply Failure - Deasserted
Critcal	Info	Input voltage %data3 V Power Supply Failure - Asserted
Info	Info	Input voltage %data3 V Power Supply Failure - Deasserted
Fan		
Info	Info	Removal Detected on FAN C1
Info	Info	Removal Detected on FAN C2
Info	Info	Removal Detected on FAN C3
Info	Info	Presence Detected on FAN C1
Info	Info	Presence Detected on FAN C2
Info	Info	Presence Detected on FAN C3
Info	Info	Power Off FAN C1
Info	Info	Power Off FAN C2
Info	Info	Power Off FAN C3
Info	Info	Power On FAN C1
Info	Info	Power On FAN C2
Info	Info	Power On FAN C3
Critcal	Info	Input AC Lost on FAN C1 - Asserted
Info	Info	Input AC Lost on FAN C1 - Dessserted
Critcal	Info	Input AC Lost on FAN C2- Asserted
Info	Info	Input AC Lost on FAN C2 - Dessserted
Critcal	Info	Input AC Lost on FAN C3- Asserted
Info	Info	Input AC Lost on FAN C3 - Dessserted
Critcal	Info	FAN Failure detected on FAN C1 - Asserted

Sensor Type and Name		
Assert Severity	**Deassert Severity**	**Description**
Info	Info	FAN Failure detected on FAN C1 - Deasserted
Critcal	Info	FANFailure detected on FAN C2 - Asserted
Info	Info	FAN Failure detected on FAN C2 - Deasserted
Critcal	Info	FAN Failure detected on FAN C3 - Asserted
Info	Info	FAN Failure detected on FAN C3 - Deasserted
Critcal	Info	Power Supply Redundancy Lost - Asserted
Info	Info	Power Supply Redundancy Lost - Deasserted
CMM		
Info	Info	DHCP failover
Info	Info	DHCP success

OEM Sensor CMM

OEM Sensor CMM		
Assert Severity	**Deassert Severity**	**Description**
Voltage		
Info	Info	Voltage Protection (Force Shutdown)
Power Supply		
Info	Info	Presence detected
Critical	Info	Power Supply Failure detected
Warning	Info	Predictive Failure
Critical	Info	Power Supply input lost (AC/DC)
Warning	Info	Power Supply input lost or out-of-range
Warning	Info	Power Supply input out-of-range, but present
Warning	Info	Configuration error - Vendor mismatch
Warning	Info	Configuration error - Revision mismatch
Warning	Info	Configuration error - Processor missing
Warning	Info	Configuration error - Power Supply rating mismatch
Warning	Info	Configuration error - Voltage rating mismatch

OEM Sensor CMM		
Assert Severity	**Deassert Severity**	**Description**
Battery		
Warning	Info	battery low
Critical	Info	battery failed
Info	Info	battery presence detected
OS Boot		
Info	Info	A: Boot Completed
Info	Info	C: Boot Completed
Info	Info	PXE Boot Completed
Info	Info	Diagnostic Boot Completed
Info	Info	CD-ROM Boot Completed
Info	Info	ROM Boot Completed
Info	Info	Boot completed -boot device not specified
Info	Info	Base OS/Hypervisor Installation started
Info	Info	Base OS/Hypervisor Installation completed
Info	Info	Base OS/Hypervisor Installation aborted
Info	Info	Base OS/Hypervisor Installation failed
OS Critical Stop		
Critical	Info	critical stop during OS load or initialization
Critical	Info	runtime critical stop (a.k.a. core dump, blue screen)
Warning	Info	OS graceful stop
Warning	Info	OS graceful shutdown
Warning	Info	soft shutdown initiated by PEF
Warning	Info	agent not responding. Graceful shutdown request to agent via BMC did not occur due to missing or malfunctioning local agent
Drive Slot		
Info	Info	Drive Presence
Critical	Info	Drive Fault
Warning	Info	Predictive Failure
Info	Info	Hot Spare

OEM Sensor CMM		
Assert Severity	**Deassert Severity**	**Description**
Info	Info	Consistency Check / Parity Check in progress
Critical	Info	In Critical Array
Critical	Info	In Failed Array
Info	Info	Rebuild/Remap in progress
Warning	Info	Rebuild/Remap Aborted
Info	Info	Drive Fault @ PDSlot%DATA2
Warning	Info	PDSlot%DATA2 (Enclosure%DATA3[5:0], StorageController%DATA3[7:6]) not present
Critical	Info	PDSlot%DATA2 (Enclosure%DATA3[5:0], StorageController%DATA3[7:6]) Err:(Media: %num Other: %num Pred: %num LastPred: %num)
Critical	Info	PDSlot%DATA2 (Enclosure%DATA3[5:0], StorageController%DATA3[7:6]) in Critical Array
Info	Info	PDSlot%DATA2 (Enclosure%DATA3[5:0], StorageController%DATA3[7:6]) is Rebuilding
Info	Info	Drive Presence @physical slot%DATA2[3:0]
Critical	Info	Drive Fault @physical slot%DATA2[3:0]
Warning	Info	Predictive Failure @physical slot%DATA2[3:0]
Info	Info	Hot Spare @logical slot%DATA2[7:4] @physical slot%DATA2[3:0]
Info	Info	Consistency Check / Parity Check in progress @physical slot%DATA2[3:0] @ logical slot%DATA2[7:4]
Critical	Info	In Critical Array @physical slot%DATA2[3:0] @logical slot%DATA2[7:4]
Critical	Info	In Failed Array @physical slot%DATA2[3:0] @logical slot%DATA2[7:4]
Info	Info	Rebuild/Remap in progress @physical slot%DATA2[3:0] @logical slot%DATA2[7:4]
Warning	Info	Rebuild/Remap Aborted (was not completed normally) @physical slot%DATA2[3:0] @logical slot%DATA2[7:4]
HDD Degraded		
Info	Info	Logical Drive data2 is Degraded
ME PSU Status		
Info	Info	[ME]PSU Status Change

Appendix D

SNMP

SNMP is an application-layer protocol that provides a OID value for communication between SNMP managers and agents. It provides a standardized framework and collected series of system traps that are used for monitoring and managing devices in a network.

System Overview			
CMM SNMP V1/2 Read	**OID**	**Value**	**Comments**
CMM Model name	1.3.6.1.4.1.10876.1.8.1.1.20.0	STRING: "MBM-CMM-FIO"	Same as IPMI FRU “Product Part Number”
InLet Temp	NOT Supported	NOT Supported	
Chassis Power Consumed	1.3.6.1.4.1.10876.1.6.15	INTEGER: 154	same as WebGui→ Power Supply→Power consumption
Chassis AvailablePower	1.3.6.1.4.1.10876.1.6.6	INTEGER: 255	same as WebGui→ Power Supply→ Available Power
Power Supply Redundancy	1.3.6.1.4.1.10876.1.6.10	Hex-STRING: 80	N+1: 40 Disable: 80 N+N: 20
Power Supply Voltages	1.3.6.1.4.1.10876.1.6.1.1.6	INTEGER: 118	
Power Supply Modelname	1.3.6.1.4.1.10876.1.6.1.1.2	STRING: "PWS-2K21A-BR"	
Power Supply Serial Number	1.3.6.1.4.1.10876.1.8.1.1.22	STRING: "P2K21CI52QT0785"	Same as IPMI PSU FRU “Product Serial Number”
Power Supply input/ output currents	1.3.6.1.4.1.10876.1.6.1.1.8	STRING: "1.25"	
PowerCapacityWatts	1.3.6.1.4.1.10876.1.6.1.1.7	INTEGER: 1200	same as WebGui→ Power Supply→ Max Watt
Fans Status	NOT Support	NOT Support	
Fan Speed	1.3.6.1.4.1.10876.1.6.1.1.5	INTEGER: 6984	same as WebGui→ Power Supply→ FAN Speed
FanControlOption	1.3.6.1.4.1.10876.1.6.12	Hex-STRING: 80	AUTO: 40 USERControl: 80
Blade MAC address	1.3.6.1.4.1.10876.1.4.1.1.15	Hex-STRING: 00 25 90 5F 96 CA	
Blade BMC/IPMI address	1.3.6.1.4.1.10876.1.4.1.1.13 (ipv4)	IpAddress: 172.31.48.37	
	1.3.6.1.4.1.10876.1.4.1.1.14 (ipv6)	STRING: "2022:4860:4860:0000: 0000:0000:0000:8888/100"	

System Overview			
CMM SNMP V1/2 Read	**OID**	**Value**	**Comments**
CMM Logs	1.3.6.1.4.1.10876.1.10.1		Only ACPowerOnEventLog Enable:40 Disable:80
BMC /IPMI SNMP v1/2 read			
Blade Power Status	1.3.6.1.4.1.10876.1.4.1.1.6	Hex-STRING: 80	PowerOn: 40 Poweroff: 80
Blade Firmware	1.3.6.1.4.1.10876.1.4.1.1.16	STRING: "55.07.01"	
Blade Inlet Temperature	NOT Support	NOT Support	
Blade Power Used	1.3.6.1.4.1.10876.1.4.1.1.7	INTEGER: 217	same as WebGui→Blade Status→ Max Power
Blade MAC address	1.3.6.1.4.1.10876.1.4.1.1.15	Hex-STRING: 00 25 90 5F 96 CA	
Blade Health	1.3.6.1.4.1.10876.1.4.1.1.10	Hex-STRING: 80	Normal: 80 Warning:40 Error:20 Flashing: 10
Blade Hardware Logs	NOT Support	NOT Support	
Blade Components Inventory	NOT Support	NOT Support	
Blade CPU Temp	NOT Support	NOT Support	
Blade Memory	NOT Support	NOT Support	
Blade Serial Number	1.3.6.1.4.1.10876.1.8.1.1.14	STRING: "BS_202204261127"	
Blade ModelName	1.3.6.1.4.1.10876.1.4.1.1.4	STRING: "BPN_202204261127"	