Oracle Integrated Lights Out Manager (ILOM) 3.x

Supplement for the Sun Blade 6000 Modular
System

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Contents

Using This Documentation

This guide provides information about preparing the site for system installation.

This guide is written for system installers and administrators who are familiar with rackmounting systems and installing computer hardware.

The following topics are covered:

▼ Downloading Chassis Firmware

1. **Navigate to the Sun Blade 6000 modular system product page at:**
    `http://www.oracle.com/technetwork/systems/patches/firmware/release-history-jsp-138416.html`

2. **Click Sun Blade 6000 Chassis.**

3. **Click the software update version that you want to download.**
   The Oracle support login page appears.

4. **Enter a user name and password.**

5. **Click the patch name that is displayed.**

6. **On the main patch page, click Download.**

7. **Click on the file that is displayed to download.**

Documentation and Feedback

TABLE P-1

Documentation	Link
All Oracle Products	http://www.oracle.com/documentation
Sun Blade 6000 modular system	http://download.oracle.com/docs/cd/E19938-01/index.html
Oracle ILOM	http://www.oracle.com/technetwork/documentation/sys-mgmt -networking-190072.html

Provide feedback on this documentation at:
http://www.oracle.com/goto/docfeedback

About This Documentation

This documentation set is available in both PDF and HTML. The information is presented in topic-based format (similar to online help) and therefore does not include chapters, appendices, or section numbering.

A PDF that includes all information on a particular topic subject (such as hardware installation or product notes) can be generated by clicking on the PDF button in the upper left corner of the page.

About Oracle ILOM on the Modular System

The following sections provide information about the Oracle Integrated Lights Out Manager (ILOM) 3.x software and describe the Oracle ILOM features that are specific to the modular system.

- "Oracle ILOM Overview" on page 1
- "Oracle ILOM Features Specific to the Modular System" on page 2
- "Oracle ILOM Documentation" on page 4

Oracle ILOM Overview

Oracle ILOM is firmware that is preinstalled on Oracle's Sun systems. Oracle ILOM enables you to remotely manage your Sun servers regardless of the state of the host system.

You can interact with Oracle ILOM through the Oracle ILOM browser-based web interface or through the Oracle ILOM command-line interface (CLI). You can also configure Oracle ILOM to integrate with other management tools in your data center.

In the modular system, Oracle ILOM is preinstalled on the chassis monitoring module (CMM) and on the service processor (SP) of each server module.

Note – To distinguish between Oracle ILOM on the CMM from Oracle ILOM on the server module SPs, this supplement uses the terms *Oracle ILOM CMM* and *Oracle ILOM SP* (which applies to the server module SP).

You can use Oracle ILOM CMM to do the following:

- Customize your Oracle ILOM CMM configuration by creating users and LDAP, RADIUS, and SNMP services.
- Display and configure settings for chassis components such as power supplies, fans, and NEMs.

- Display and configure server modules that are installed in the chassis.
- Control the power state of modular components.
- Verify the health of the system and sub-level components.
- Configure alert notifications for system events.

For a complete discussion of Oracle ILOM 3.0 and 3.1, refer to the appropriate Oracle ILOM documentation. See "Oracle ILOM Documentation" on page 4.

Related Information

- "Oracle ILOM Features Specific to the Modular System" on page 2
- "Monitoring System Health" on page 5

Oracle ILOM Features Specific to the Modular System

The following Oracle ILOM 3.x features are specific to the modular system. More information about these features can be found in the Oracle documentation library.

- "Modular System Power Usage" on page 2
- "Fan Speed Control" on page 3
- "Modular System Oracle ILOM CLI Targets" on page 3
- "Sun Blade Zone Manager" on page 4

Modular System Power Usage

Oracle ILOM provides SP and CMM configurable properties for limiting and granting power use on a managed system. These power limiting and power granting properties are configurable from the Oracle ILOM CLI and web interface.

For further information about these power usage features in Oracle ILOM, see "Oracle ILOM Documentation" on page 4.

Fan Speed Control

Oracle ILOM CMM uses ambient temperature readings from the power supplies to determine the lowest fan speed that will maintain appropriate temperatures and to ensure that the lowest acoustic levels are attained in a NEBS-compliant environment.

Modular System Oracle ILOM CLI Targets

Oracle ILOM *CLI targets* represent all software and hardware components and services managed by Oracle ILOM. You specify CLI targets when you interact with Oracle ILOM.

CLI targets are identified by a hierarchal path similar to the directories and files of a file system.

The modular system has three top-level Oracle ILOM CMM targets that are referred to as *name spaces*. The following table shows the CLI targets for Oracle ILOM 3.0 and 3.1.

ILOM 3.0 target	ILOM 3.1 target	Description
/CMM	/CMM	Use this target to configure Oracle ILOM CMM attributes for such things as alerts, clients, the Oracle ILOM clock, network addresses, and users.
/CH	/System	Provides component inventory, environmental status, and hardware management at the chassis level. The sub-targets under /CH or /System correspond to names of the installed hardware components.
/STORAGE	/STORAGE	Used to manage chassis storage (storage on storage blades). Chassis storage can be assigned to blade servers in the chassis.

Each target has a set of properties. Properties are the configurable attributes specific to each target.

Note – There are additional targets for server modules. For further information on Oracle ILOM CLI targets, see "Oracle ILOM Documentation" on page 4.

Sun Blade Zone Manager

The Sun Blade Zone Manager handles the SAS-2 storage assignments for the Sun Blade Modular System CPU blades, storage devices, and NEMs. The Zone Manager runs on the CMM and communicates to the storage resources over Ethernet links between it and the SAS-2 expanders on the storage modules and the NEMs.

Zone Manager allows storage devices from a storage module installed in the chassis to be assigned to a server module. Storage devices can be assigned to more than one server module in the case of a cluster.

For more information on the Sun Blade Zone Manager, see "Oracle ILOM Documentation" on page 4.

Related Information

- "Monitoring System Health" on page 5
- "Oracle ILOM Overview" on page 1

Oracle ILOM Documentation

This supplement contains information about Oracle ILOM updates specific to the Sun Blade 6000 modular system Oracle ILOM CMM 3.x. This document also provides information about SNMP traps, PET events, and Oracle ILOM sensors.

For information about Oracle ILOM CMM administration, refer to the Oracle ILOM documentation library. The Oracle ILOM documentation library contains documentation for setting up and using the Oracle ILOM 3.x. It is available in the Oracle ILOM documentation libraries at:

For Oracle ILOM 3.0:

http://www.oracle.com/pls/topic/lookup?ctx=ilom30

For Oracle ILOM 3.1:

http://www.oracle.com/pls/topic/lookup?ctx=ilom31

The Oracle Integrated Lights Out Manager (ILOM) 3.0 CMM Administration for Sun Blade 6000 and Sun Blade 6048 Modular Systems contains information specific to the CMM and is available in the Oracle ILOM 3.0 documentation library. In the Oracle ILOM 3.1 library, the CMM information is integrated into the documentation set, and there is no CMM-specific administration guide.

Monitoring System Health

This section describes how to monitor system health for the Sun Blade 6000 modular system.

- "Chassis Sensors Overview" on page 5
- "Monitoring System Health With ILOM 3.1" on page 5
- "Oracle ILOM 3.0 Sensor Information" on page 6

Chassis Sensors Overview

The modular system is equipped with a number of IPMI-compliant sensors that measure voltages, temperatures, fan speeds, and other attributes. Sensors also detect when components are installed and removed.

If sensors detect a condition that indicates that service might be required, Oracle ILOM illuminates modular system LEDs.

You can view sensor readings from the Oracle ILOM web interface or CLI. Oracle ILOM 3.0 and Oracle ILOM 3.1 differ in the way that sensor information is displayed.

Monitoring System Health With ILOM 3.1

Use one of the following to interpret the system health in Oracle ILOM 3.1:

- From the Oracle ILOM 3.1 web interface, click System Information > Summary.
- From the Oracle ILOM 3.1 CLI, type show under the /System CLI target.

See the Oracle ILOM 3.1 documentation library for more information.

Note – You can still view the legacy sensor targets from Oracle ILOM 3.0 when running Oracle ILOM 3.1. Refer to the Oracle ILOM 3.1 documentation for information on how to display legacy CLI targets.

Oracle ILOM 3.0 Sensor Information

The following topics describe the modular system sensors for ILOM 3.0.

Sensor Types

There are two types of sensors:

Type	Description	Information Displayed
Discrete	Displays a single value from a set of possible values.	Targets – If applicable, subsensors are listed. Properties: • Type – Describes the sensor type. • Class – Indicates if the sensor is discrete or a threshold sensor. • Value – Shows the sensor value.

Type	Description	Information Displayed
Threshold	Displays analog readings, such as temperature or voltage levels, and associated thresholds for that reading.	Targets – If applicable, subsensors are listed. Properties: • Type – Describes the sensor type. • Value – A near real-time analog reading from the sensor. • Units – Specifies the units for the value. • Threshold – A definition of the type of threshold.

Related Information

Display Sensor Readings in Oracle ILOM 3.0

You can display sensor readings with the Oracle ILOM web interface or CLI.

▼ Display Sensor Readings (Web Interface)

1. **Log in to the Oracle ILOM CMM web interface.**

2. **Click System Monitoring --> Sensor Readings.**

   The Sensor Readings page appears.

3. **In the Sensor Readings page, do the following:**

a. **Locate the name of the sensor you want to configure.**

b. **Click the name of the sensor to view the property values associated with that sensor.**

▼ Display Sensor Readings (CLI)

Note – For ILOM 3.1, replace /CH with /SYSTEM.

1. **Log in to Oracle ILOM CMM.**

2. **Use the following syntax to display sensor data:**

   show *target*

   where *target* is the path to the sensor. All chassis sensors are located in the /CH space.

   The properties describing the sensor are displayed.

   Example:

```
-> show /CH/FM3/F0/TACH

/CH/FM3/F0/TACH
    Targets:

    Properties:
        type = Fan
        ipmi_name = FM3/F0/TACH
        class = Threshold Sensor
        value = 3200.000 RPM
        upper_nonrecov_threshold = N/A
        upper_critical_threshold = N/A
        upper_noncritical_threshold = N/A
        lower_noncritical_threshold = N/A
        lower_critical_threshold = N/A
        lower_nonrecov_threshold = N/A
        alarm_status = cleared
```

Note – Alternatively, you can navigate to the target and type the show command without any arguments.

Chassis Sensors in Oracle ILOM 3.0

The following tables list the chassis sensors.

Note – For ILOM 3.1, replace `/CH` with `/SYSTEM`.

Sensor	Reading	State	Event	Description
/CH/HOT	0x0001	State Deasserted	No	Indicates that monitored temperatures do not require full fan speed.
	0x0002	State Asserted	No	Indicates that monitored temperatures require increased fan speed.

Sensor	Threshold	Description
/CH/T_AMB	Value	Reports ambient temperature in the chassis midplane.
	Upper nonrecoverable	
	Upper critical	
	Upper noncritical	
	Lower noncritical	
	Lower critical	
	Lower nonrecoverable	
/CH/VPS	Value	Virtual power sensors that report the total power used by the chassis (the sum of `PS0/IN_POWER` and `PS1/IN_POWER`).
	Upper nonrecoverable	
	Upper critical	
	Upper noncritical	
	Lower noncritical	
	Lower critical	
	Lower nonrecoverable	

Related Information

Fan Sensors in Oracle ILOM 3.0

The modular system chassis contains six fan modules, numbered FM0 to FM5. Each module contains two fans numbered F0 to F1.

Note – For ILOM 3.1, replace `/CH` with `/SYSTEM`.

Sensor	Threshold	Direction	Event	Description
`/CH/FMn/Fn/TACH`	Lower nonrecoverable	Assert	Yes	Fan speed has decreased below lower nonrecoverable threshold. This event indicates that the fan has failed or has been removed.
	Lower noncritical	Deassert	Yes	Fan speed has returned to normal from lower nonrecoverable. This event indicates that the fan has returned to normal or has been replaced.

Sensor	Reading	State	Event	Description
`/CH/FMn/ERR`	`0x0001`	Predictive Failure Deasserted	No	Indicates that the fan module has not failed.
	`0x0002`	Predictive Failure Asserted	Yes	Indicates that the fan module has failed.

Related Information

- "Display Sensor Readings (CLI)" on page 8
- "Chassis Sensors in Oracle ILOM 3.0" on page 9
- "Power Supply Sensors in Oracle ILOM 3.0" on page 12
- "NEM Sensors in Oracle ILOM 3.0" on page 14
- "Server Module Sensors in Oracle ILOM 3.0" on page 15
- "Sensor Types" on page 6

Power Supply Sensors in Oracle ILOM 3.0

The modular system chassis contains two power supply modules, numbered PS0 and PS1. Each power supply module contains two *sides,* numbered S0 and S1.

The power sensors are accurate only when the chassis is drawing a significant amount of power. Under low power conditions, the chassis cannot accurately measure power and reports no reading. Typically, accurate power cannot be reported if the chassis is drawing less than 1500 watts.

Note – For ILOM 3.1, replace /CH with /SYSTEM.

Sensor	Reading	State	Event	Description
/CH/PS*n*/PRSNT	0x0001	Device Absent	Yes	Power supply is absent.
	0x0002	Device Present	Yes	Power supply is present.
/CH/PS*n*/V_3V3_ERR	0x0001	Predictive Failure Deasserted	No	Indicates that a power supply 3_3V fault has not occurred.
	0x0002	Predictive Failure Asserted	Yes	Indicates that a power supply 3_3V fault has occurred.
/CH/PS*n*/TEMP_WRN	0x0001	Predictive Failure Deasserted	No	Indicates that a power supply ambient temperature has not reached the 50°C to 60°C range.
	0x0002	Predictive Failure Asserted	Yes	Indicates that a power supply ambient temperature has reached the 50ºC to 60ºC range.
/CH/PS*n*/TEMP_ERR	0x0001	Predictive Failure Deasserted	No	Indicates that a power supply temperature fault has not occurred.
	0x0002	Predictive Failure Asserted	Yes	Indicates that a power supply temperature fault has occurred.
/CH/PS*n*/FAN_ERR	0x0001	Predictive Failure Deasserted	No	Indicates that a power supply fan fault has not occurred.
	0x0002	Predictive Failure Asserted	Yes	Indicates that a power supply fan fault has occurred.
/CH/PS*n*/S*n*/V_OUT_OK	0x0001	Predictive Failure Deasserted	Yes	Indicates that a power supply side fault has occurred.
	0x0002	Predictive Failure Asserted	No	Indicates that a power supply side fault has not occurred.

Sensor	Reading	State	Event	Description
/CH/PS*n*/S*n*/V_IN_ERR	0x0001	Predictive Failure Deasserted	No	Indicates that a power supply side fault has not occurred.
	0x0002	Predictive Failure Asserted	Yes	Indicates that a power supply side fault has occurred.
/CH/PS*n*/S*n*/V_12V_ERR	0x0001	Predictive Failure Deasserted	No	Indicates that a power supply side 12V voltage fault has not occurred.
	0x0002	Predictive Failure Asserted	Yes	Indicates that a power supply side 12V voltage fault has occurred.
/CH/PS*n*/S*n*/I_12V_ERR	0x0001	Predictive Failure Deasserted	No	Indicates that a power supply side 12V voltage fault has not occurred.
	0x0002	Predictive Failure Asserted	Yes	Indicates that a power supply side 12V voltage fault has occurred.
/CH/PS*n*/S*n*/I_12V_WRN	0x0001	Predictive Failure Deasserted	No	Indicates that a power supply side 12V current does not exceed 240A for 100 msec.
	0x0002	Predictive Failure Asserted	Yes	Indicates that a power supply side 12V current exceeds 240A for 100 msec.

Sensor	Description
/CH/PS*n*/INPUT_POWER	Threshold sensors that report the input (AC) power to the power supplies in watts.
/CH/PS*n*/OUTPUT_POWER	Threshold sensors that report the output (DC) power from the power supplies in watts.
/CH/PS*n*/T_AMB	Threshold sensors that report the ambient temperature of the power supply modules.
/CH/PS*n*/V_12V	Threshold sensors that report the power supply module 12V voltage reading.
/CH/PS*n*/V_3V3	Threshold sensors that report the power supply module 3_3V voltage reading.
/CH/PS*n*/I_3V3	Threshold sensors that report the power supply module 3_3V current rating.
/CH/PS*n*/FAN*n*/TACH	Threshold sensors that report the speed of the two fans in the power supply.
/CH/PS*n*/S*n*/I_12V	Threshold sensors that report the power supply side 12V voltage reading.

NEM Sensors in Oracle ILOM 3.0

The following table lists possible sensors for NEMs (NEM0 and NEM1).

Note – Not all NEMs have all sensors.

Sensor	Reading	State	Event	Description
NEM*n* / PRSNT	0x0001	Device Absent	Yes	NEM is absent.
	0x0002	Device Present	Yes	NEM is present.
NEM*n* / STATE	0x0001	Running	Yes	NEM is running.
	0x0004	Powered Off	Yes	NEM is powered off.
	0x0040	Degraded	Yes	NEM needs to be serviced.
NEM*n* / ERR	0x0001	Predictive Failure Asserted	Yes	NEM has failed.
	0x0002	Predictive Failure Deasserted	Yes	NEM has not failed.

Server Module Sensors in Oracle ILOM 3.0

The following tables lists possible sensors for server modules. Not all server modules have all sensors.

Sensor	Reading	State	Event	Description
BL*n*/PRSNT	0x0001	Device Absent	No	Server module is not present.
	0x0002	State Present	No	Server module is present.
BL*n*/STATE	0x0001	Running	No	Server module is running.
	0x0004	Power Off	No	Server module is not powered off.
	0x0020	Off Duty	No	Server module is ready to remove.
BL*n*/ERR	0x0001	Predictive Failure Asserted	Yes	Server module has failed.
	0x0002	Predictive Failure Deasserted	Yes	Server module has not failed.
BL*n*/VPS	n/a	n/a	n/a	Reports the virtual power for the server modules.

Related Information

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SNMP and PET Reference Information

This section SNMP and PET messages that are generated by devices being monitored by Oracle ILOM. The messages described in this section are for both Sun Blade 6000 modular system and Sun Blade 6048 modular system.

For more information about configuring and using SNMP, refer to *Oracle Integrated Lights Out Manager (ILOM) 3.0 SNMP, IPMI, CIM, WS-MAN Protocol Management Reference*.

SNMP Traps

SNMP Traps are generated by the SNMP agents that are installed on the SNMP devices being managed by Oracle ILOM. Oracle ILOM receives the SNMP Traps and converts them into SNMP event messages that appear in the event log. For more information about the SNMP event messages that might be generated on your system, see the following table.

Note – For ILOM 3.1, replace `/CH` with `/SYSTEM`.

SNMP Event	SNMP Trap Sent	Sensor Name	Severity	Description
Upper critical threshold exceeded	`sunHwTrapTempCri tThresholdExceed ed`	/CH/T_AMB /CH/PSx/T_AMB	Major	A temperature sensor has reported that its value has gone above an upper critical threshold setting or below a lower critical threshold setting. The sunHwTrapThresholdTyp e object indicates whether the threshold was an upper or lower.
Upper critical threshold no longer exceeded	`sunHwTrapTempCri tThresholdDeasse rted`	/CH/T_AMB /CH/PSx/T_AMB	Informational	A temperature sensor has reported that its value has gone below an upper critical threshold setting or above a lower critical threshold setting. The sunHwTrapThresholdTyp e object indicates whether the threshold was an upper or lower.
Upper fatal threshold exceeded	`sunHwTrapTempFat alThresholdExcee ded`	/CH/T_AMB /CH/PSx/T_AMB	Critical	A temperature sensor has reported that its value has gone above an upper fatal threshold setting or below a lower fatal threshold setting. The sunHwTrapThresholdTyp e object indicates whether the threshold was an upper or lower.
Upper fatal threshold no longer exceeded	`sunHwTrapTempFat alThresholdDeass erted`	/CH/T_AMB /CH/PSx/T_AMB	Informational	A temperature sensor has reported that its value has gone below an upper fatal threshold setting or above a lower fatal threshold setting. The sunHwTrapThresholdTyp e object indicates whether the threshold was an upper or lower.

SNMP Event	SNMP Trap Sent	Sensor Name	Severity	Description
Assert	`sunHwTrapCompone ntError`	/CH/HOT /CH/BLx/ERR /CH/BLx/ESM/ERR /CH/NEMx/ERR /CH/PSx/V_3V3_ERR /CH/PSx/TEMP_WRN /CH/PSx/TEMP_ERR /CH/PSx/Sx/V_OUT_OK /CH/PSx/Sx/V_IN_ERR /CH/PSx/Sx/V_12V_ERR /CH/PSx/Sx/I_12V_ERR /CH/PSx/Sx/I_12V_WRN	Major	A sensor has detected an error. This generic 'component' trap is generated when the SNMP agent does not recognize the component type.
Deassert	`sunHwTrapCompone ntOk`	/CH/HOT /CH/BLx/ERR /CH/BLx/ESM/ERR /CH/NEMx/ERR /CH/PSx/V_3V3_ERR /CH/PSx/TEMP_WRN /CH/PSx/TEMP_ERR /CH/PSx/Sx/V_OUT_OK /CH/PSx/Sx/V_IN_ERR /CH/PSx/Sx/V_12V_ERR /CH/PSx/Sx/I_12V_ERR /CH/PSx/Sx/I_12V_WRN	Informational	A sensor has returned to its normal state. This generic 'component' trap is generated when the SNMP agent does not recognize the component type.
Lower fatal threshold exceeded	`sunHwTrapFanSpee dFatalThresholdE xceeded`	/CH/PSx/FANx/TACH	Critical	A fan speed sensor has reported that its value has gone above an upper fatal threshold setting or below a lower fatal threshold setting. The sunHwTrapThresholdType object indicates whether the threshold was an upper or lower.

SNMP Event	SNMP Trap Sent	Sensor Name	Severity	Description
Lower fatal threshold no longer exceeded	`sunHwTrapFanSpee dFatalThresholdD easserted`	/CH/PSx/FANx/TACH	Informational	A fan speed sensor has reported that its value has gone below an upper fatal threshold setting or above a lower fatal threshold setting. The sunHwTrapThresholdTyp e object indicates whether the threshold was an upper or lower.
Remove	`sunHwTrapFruRemo ved`	/CH/BLx /CH/NEMx /CH/PSx	Informational	A field replaceable unit has been removed from the system.
Insert	`sunHwTrapFruInse rted`	/CH/BLx /CH/NEMx /CH/PSx	Informational	A field replaceable unit has been inserted into the system.
Install error	`sunHwTrapCompone ntError`	/CH/BLx/STATE /CH/NEMx/STATE	Major	A sensor has detected an error. This generic 'component' trap is generated when the SNMP agent does not recognize the component type.
Assert	`sunHwTrapFanErro r`	/CH/FMx/ERR /CH/PSx/FAN_ERR	Major	A fan sensor has detected an error.
Deassert	`sunHwTrapFanOk`	/CH/FMx/ERR /CH/PSx/FAN_ERR	Informational	A fan sensor has returned to its normal state.
event fault.chassis. device.fail	`sunHwTrapCompone ntFault`	/CH/FM /CH/BL	Major	A component is suspected of causing a fault. This generic 'component' trap is generated when the SNMP agent does not recognize the component type.
event fault.chassis. device.fail cleared	`sunHwTrapCompone ntFaultCleared`	/CH/FM /CH/BL	Informational	A component fault has been cleared. This generic 'component' trap is generated when the SNMP agent does not recognize the component type.

SNMP Event	SNMP Trap Sent	Sensor Name	Severity	Description
event fault.chassis. env.power.lo ss	sunHwTrapPowerSu pplyFault	/CH/PS	Major	A power supply component is suspected of causing a fault.
event fault.chassis. env.power.lo ss cleared	sunHwTrapPowerSu pplyFaultCleared	/CH/PS	Informational	A power supply component fault has been cleared.
event fault.chassis. power.under voltage	sunHwTrapPowerSu pplyFault	/CH/PS	Major	A power supply component is suspected of causing a fault.
event fault.chassis. power.under voltage cleared	sunHwTrapPowerSu pplyFaultCleared	/CH/PS	Informational	A power supply component fault has been cleared.
event fault.chassis. power.overc urrent	sunHwTrapPowerSu pplyFault	/CH/PS	Major	A power supply component is suspected of causing a fault.
event fault.chassis. power.overc urrent cleared	sunHwTrapPowerSu pplyFaultCleared	/CH/PS	Informational	A power supply component fault has been cleared.
event fault.chassis. power.overte mperature	sunHwTrapPowerSu pplyFault	/CH/PS	Major	A power supply component is suspected of causing a fault.
event fault.chassis. power.overte mperature cleared	sunHwTrapPowerSu pplyFaultCleared	/CH/PS	Informational	A power supply component fault has been cleared.
event fault.chassis. device.fan.fai l	sunHwTrapPowerSu pplyFault	/CH/PS	Major	A power supply component is suspected of causing a fault.
event fault.chassis. device.fan.fai l cleared	sunHwTrapPowerSu pplyFaultCleared	/CH/PS	Informational	A power supply component fault has been cleared.

SNMP Event	SNMP Trap Sent	Sensor Name	Severity	Description
event fault.chassis. device.missi ng	sunHwTrapCompone ntFault	/CH	Major	A component is suspected of causing a fault. This generic 'component' trap is generated when the SNMP agent does not recognize the component type.
event fault.chassis. device.missi ng cleared	sunHwTrapCompone ntFaultCleared	/CH	Informational	A component fault has been cleared. This generic 'component' trap is generated when the SNMP agent does not recognize the component type.
event fault.chassis. env.power.lo ss	sunHwTrapCompone ntFault	/CH/PS/S	Major	A component is suspected of causing a fault. This generic 'component' trap is generated when the SNMP agent does not recognize the component type.
event fault.chassis. env.power.lo ss cleared	sunHwTrapCompone ntFaultCleared	/CH/PS/S	Informational	A component fault has been cleared. This generic 'component' trap is generated when the SNMP agent does not recognize the component type.
event fault.chassis. device.psu.fa il	sunHwTrapPowerSu pplyFault	/CH/PS	Major	A power supply component is suspected of causing a fault.
event fault.chassis. device.psu.fa il cleared	sunHwTrapPowerSu pplyFaultCleared	/CH/PS	Informational	A power supply component fault has been cleared.
event fault.chassis. device.psu.fa il	sunHwTrapCompone ntFault	/CH/PS/S	Major	A component is suspected of causing a fault. This generic 'component' trap is generated when the SNMP agent does not recognize the component type.

SNMP Event	SNMP Trap Sent	Sensor Name	Severity	Description
event fault.chassis. device.psu.fa il cleared	sunHwTrapCompone ntFaultCleared	/CH/PS/S	Informational	A component fault has been cleared. This generic 'component' trap is generated when the SNMP agent does not recognize the component type.
event fault.chassis. power.overc urrent	sunHwTrapCompone ntFault	/CH/PS/S	Major	A component is suspected of causing a fault. This generic 'component' trap is generated when the SNMP agent does not recognize the component type.
event fault.chassis. power.overc urrent cleared	sunHwTrapCompone ntFaultCleared	/CH/PS/S	Informational	A component fault has been cleared. This generic 'component' trap is generated when the SNMP agent does not recognize the component type.
event fault.chassis. device.fan.fai l	sunHwTrapCompone ntFault	/CH/PS/FAN	Major	A component is suspected of causing a fault. This generic 'component' trap is generated when the SNMP agent does not recognize the component type.
event fault.chassis. device.fan.fai l cleared	sunHwTrapCompone ntFaultCleared	/CH/PS/FAN	Informational	A component fault has been cleared. This generic 'component' trap is generated when the SNMP agent does not recognize the component type.
event fault.chassis. env.temp.ove r-warn	sunHwTrapCompone ntFault	/CH	Major	A component is suspected of causing a fault. This generic 'component' trap is generated when the SNMP agent does not recognize the component type.

SNMP Event	SNMP Trap Sent	Sensor Name	Severity	Description
event fault.chassis. env.temp.ove r-warn cleared	sunHwTrapCompone ntFaultCleared	/CH	Informational	A component fault has been cleared. This generic 'component' trap is generated when the SNMP agent does not recognize the component type.
event fault.chassis. env.temp.ove r-fail	sunHwTrapCompone ntFault	/CH	Major	A component is suspected of causing a fault. This generic 'component' trap is generated when the SNMP agent does not recognize the component type.
event fault.chassis. env.temp.ove r-fail cleared	sunHwTrapCompone ntFaultCleared	/CH	Informational	A component fault has been cleared. This generic 'component' trap is generated when the SNMP agent does not recognize the component type.
event fault.chassis. device.fail	sunHwTrapIOFault	/CH/NEM	Major	A component in the IO subsystem is suspected of causing a fault.
event fault.chassis. device.fail cleared	sunHwTrapIOFault Cleared	/CH/NEM	Informational	An IO subsystem component fault has been cleared.
event fault.fruid.co rrupt	sunHwTrapIOFault	/CH/NEM	Major	A component in the IO subsystem is suspected of causing a fault.
event fault.fruid.co rrupt cleared	sunHwTrapIOFault Cleared	/CH/NEM	Informational	An IO subsystem component fault has been cleared.
event fault.chassis. device.popul ation-invalid	sunHwTrapCompone ntFault	/CH	Major	A component is suspected of causing a fault. This generic 'component' trap is generated when the SNMP agent does not recognize the component type.

SNMP Event	SNMP Trap Sent	Sensor Name	Severity	Description
event fault.chassis. device.popul ation-invalid cleared	sunHwTrapCompone ntFaultCleared	/CH	Informational	A component fault has been cleared. This generic 'component' trap is generated when the SNMP agent does not recognize the component type.
event fault.chassis. device.sas-ex pander.fail	sunHwTrapCompone ntFault	/CH/BL	Major	A component is suspected of causing a fault. This generic 'component' trap is generated when the SNMP agent does not recognize the component type.
event fault.chassis. device.sas-ex pander.fail cleared	sunHwTrapCompone ntFaultCleared	/CH/BL	Informational	A component fault has been cleared. This generic 'component' trap is generated when the SNMP agent does not recognize the component type.
event fault.chassis. device.sas-ex pander.fail	sunHwTrapIOFault	/CH/NEM	Major	A component in the IO subsystem is suspected of causing a fault.
event fault.chassis. device.sas-ex pander.fail cleared	sunHwTrapIOFault Cleared	/CH/NEM	Informational	An IO subsystem component fault has been cleared.

SNMP Event	SNMP Trap Sent	Sensor Name	Severity	Description
event fault.fruid.corrupt	sunHwTrapComponentFault	/CH/BL	Major	A component is suspected of causing a fault. This generic 'component' trap is generated when the SNMP agent does not recognize the component type.
event fault.fruid.corrupt cleared	sunHwTrapComponentFaultCleared	/CH/BL	Informational	A component fault has been cleared. This generic 'component' trap is generated when the SNMP agent does not recognize the component type
Multiple events*	sunHwTrapComponentOk	/CH/BLx/STATE /CH/NEMx/STATE	Informational	A sensor has returned to its normal state. This generic 'component' trap is generated when the SNMP agent does not recognize the component type.

* Events include: Transition to Running, Transition to In Test, Transition to Power Off, Transition to On Line, Transition to Off Line, Transition to Off Duty, Transition to Degraded, Transition to Power Save

PET Event Messages

PET events are generated by systems with ASF or an IPMI baseboard management controller. The PET events provide advance warning of possible system failures. For more information about the PET event messages that might occur on your system, see the following table.

Note – For ILOM 3.1, replace /CH with /SYSTEM.

PET Event	PET Sent	Sensor Name	Severity	Description
Temperature Upper critical threshold has been exceeded	`petTrapTemperatureUpperNonCriticalGoingHigh`	/CH/T_AMB /CH/PSx/T_AMB	Major	Temperature has increased above upper critical threshold.
Temperature Upper critical threshold no longer exceeded	`petTrapTemperatureUpperNonCriticalGoingLowDeassert`	/CH/T_AMB /CH/PSx/T_AMB	Warning	Temperature has decreased below upper critical threshold.
Temperature Lower fatal threshold has been exceeded	`petTrapTemperatureUpperNonRecoverableGoingHigh`	/CH/T_AMB /CH/PSx/T_AMB	Critical	Temperature has increased above upper non-recoverable threshold.
Temperature Lower fatal threshold no longer exceeded	`petTrapTemperatureUpperNonRecoverableGoingLowDeassert`	/CH/T_AMB /CH/PSx/T_AMB	Major	Temperature has decreased below upper non-recoverable threshold.
Temperature sensor ASSERT	`petTrapTemperatureStateAssertedAssert`	/CH/HOT	Critical	Temperature event occured. Possible cause: CPU is too hot.
Temperature sensor DEASSERT	`petTrapTemperatureStateDeassertedAssert`	/CH/HOT	Informational	Temperature event occured.
Entity Presence Insert	`petTrapEntityPresenceDeviceInsertedAssert`	/CH/BLx/PRSNT /CH/BLx/HDDx/PRSNT /CH/BLx/FMODx/PRSNT /CH/BLx/ESM/PRSNT /CH/NEMx/PRSNT /CH/PSx/PRSNT	Informational	A device is present or has been inserted.
Entity Presence Remove	`petTrapEntityPresenceDeviceRemovedAssert`	/CH/BLx/PRSNT /CH/BLx/HDDx/PRSNT /CH/BLx/FMODx/PRSNT /CH/BLx/ESM/PRSNT /CH/NEMx/PRSNT /CH/PSx/PRSNT	Informational	A device is absent or has been removed.

PET Event	PET Sent	Sensor Name	Severity	Description
Module Transition to Running assert	`petTrapModuleBoardTr ansitionToRunningAss ert`	/CH/BLx/STATE /CH/NEMx/STATE	Informational	A device has transitioned to the normal running state. For a blade, this indicates that the host has powered on.
Module Transition to In Test assert	`petTrapModuleBoardTr ansitionToInTestAsse rt`	/CH/BLx/STATE /CH/NEMx/STATE	Informational	A device is in a transitional state. (Used only for NEMs.)
Module Transition to Power Off assert	`petTrapModuleBoardTr ansitionToPowerOffAs sert`	/CH/BLx/STATE /CH/NEMx/STATE	Informational	A device has powered off.
Module Transition to On Line assert	`petTrapModuleBoardTr ansitionToOnLineAsse rt`	/CH/BLx/STATE /CH/NEMx/STATE	Informational	A device is online and ready to enter the running state. (Used only for NEMs.)
Module Transition to Off Line assert	`petTrapModuleBoardTr ansitionToOffLineAss ert`	/CH/BLx/STATE /CH/NEMx/STATE	Informational	Unused.
Module Transition to Off Duty assert	`petTrapModuleBoardTr ansitionToOffDutyAss ert`	/CH/BLx/STATE /CH/NEMx/STATE	Informational	A device is no longer in use and is ready to be removed.
Module Transition to Degraded assert	`petTrapModuleBoardTr ansitionToDegradedAs sert`	/CH/BLx/STATE /CH/NEMx/STATE	Informational	A device has entered a state of degraded operation, for example, due to a hardware fault, or an over-temperature condition that caused the device to shut itself down.
Module Transition to Power Save assert	`petTrapModuleBoardTr ansitionToPowerSaveA ssert`	/CH/BLx/STATE /CH/NEMx/STATE	Informational	Unused.
Module Install Error assert	`petTrapModuleBoardIn stallErrorAssert`	/CH/BLx/STATE /CH/NEMx/STATE	Informational	Unused.
OEM Reserved reporting Predictive Failure	`petTrapOEMPredictive FailureAsserted 12583937`	/CH/BLx/ERR /CH/BLx/ESM/ERR /CH/NEMx/ERR	Major	OEM predictive failure asserted.

PET Event	PET Sent	Sensor Name	Severity	Description
OEM Reserved Return to normal	`petTrapOEMPredictive FailureDeasserted`	/CH/BLx/ERR /CH/BLx/ESM/ERR /CH/NEMx/ERR	Informational	OEM predictive failure deasserted.
Fan reporting Predictive Failure	`petTrapFanPredictive FailureAsserted`	/CH/FMx/ERR /CH/PSx/FAN_ERR	Major	Fan predictive failure is detected.
Fan Return to normal	`petTrapFanPredictive FailureDeasserted`	/CH/FMx/ERR /CH/PSx/FAN_ERR	Informational	Fan predictive failure state is cleared.
Voltage reporting Predictive Failure	`petTrapVoltagePredic tiveFailureAssertedA ssert`	/CH/PSx/V_3V3_ERR /CH/PSx/Sx/V_IN_ERR /CH/PSx/Sx/V_12V_ER R	Major	Voltagepredictive failure is detected.
Voltage Return to normal	`petTrapVoltagePredic tiveFailureDeasserte dAssert`	/CH/PSx/V_3V3_ERR /CH/PSx/Sx/V_IN_ERR /CH/PSx/Sx/V_12V_ER R	Informational	Predictive failure state due to voltage event has been cleared.
Temperature reporting Predictive Failure	`petTrapTemperaturePr edictiveFailureAsser ted`	/CH/PSx/TEMP_WRN /CH/PSx/TEMP_ERR	Major	System is reporting a predictive failure as a result of high temperature.
Temperature Return to normal	`petTrapTemperaturePr edictiveFailureDeass erted`	/CH/PSx/TEMP_WRN /CH/PSx/TEMP_ERR	Informational	Predictive failure state due to high temperature has been cleared.
Fan Lower fatal threshold has been exceeded	`petTrapFanLowerNonRe coverableGoingLow`	/CH/PSx/FANx/TACH	Critical	Fan speed has decreased below lower non-recoverable threshold. Fan failed or removed.
Fan Lower fatal threshold no longer exceeded	`petTrapFanLowerNonRe coverableGoingHighDe assert`	/CH/PSx/FANx/TACH	Major	Fan speed has increased above lower non-recoverable threshold.
Voltage sensor ASSERT	`petTrapVoltageStateA ssertedAssert`	/CH/PSx/Sx/V_OUT_O K	Informational	Voltage event has occurred.

PET Event	PET Sent	Sensor Name	Severity	Description
Voltage sensor DEASSERT	`petTrapVoltageStateD easxertedAssert`	/CH/PSx/Sx/V_OUT_O K	Informational	Voltage event has occurred.
Current reporting Predictive Failure	`petTrapCurrentPredic tiveFailureAsserted`	/CH/PSx/Sx/I_12V_ERR /CH/PSx/Sx/I_12V_WR N	Major	Predictive failure due to electric current conditions.
Current Return to normal	`petTrapCurrentPredic tiveFailureDeasserte d`	/CH/PSx/Sx/I_12V_ERR /CH/PSx/Sx/I_12V_WR N	Informational	Predictive failure caused by electric current conditions.

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