



Extreme SLX-OS BMC User Guide, 20.6.3

Supporting ExtremeRouting and ExtremeSwitching
SLX 9740, Extreme 8820, Extreme 8720, and Extreme
8520

9039130-00 Rev AA
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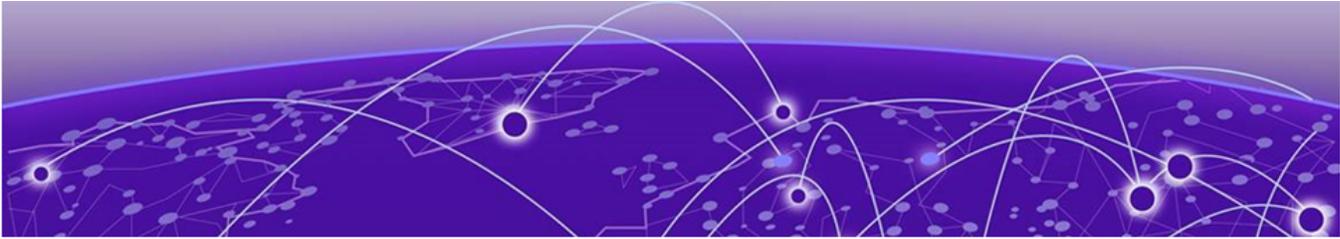
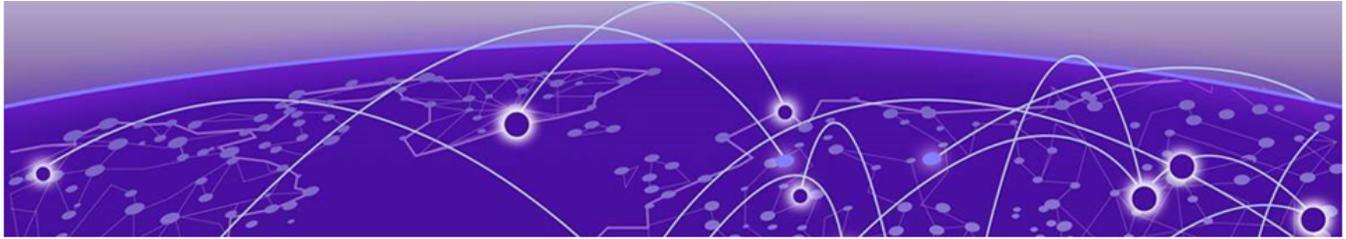


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Preface

Read the following topics to learn about:

- The meanings of text formats used in this document.
- Where you can find additional information and help.
- How to reach us with questions and comments.

Text Conventions

Unless otherwise noted, information in this document applies to all supported environments for the products in question. Exceptions, like command keywords associated with a specific software version, are identified in the text.

When a feature, function, or operation pertains to a specific hardware product, the product name is used. When features, functions, and operations are the same across an entire product family, such as Extreme Networks switches or SLX routers, the product is referred to as *the switch* or *the router*.

Table 1: Notes and warnings

Icon	Notice type	Alerts you to...
	Tip	Helpful tips and notices for using the product
	Note	Useful information or instructions
	Important	Important features or instructions
	Caution	Risk of personal injury, system damage, or loss of data
	Warning	Risk of severe personal injury

Table 2: Text

Convention	Description
screen displays	This typeface indicates command syntax, or represents information as it is displayed on the screen.
The words <i>enter</i> and <i>type</i>	When you see the word <i>enter</i> in this guide, you must type something, and then press the Return or Enter key. Do not press the Return or Enter key when an instruction simply says <i>type</i> .
Key names	Key names are written in boldface, for example Ctrl or Esc . If you must press two or more keys simultaneously, the key names are linked with a plus sign (+). Example: Press Ctrl+Alt+Del
<i>Words in italicized type</i>	Italics emphasize a point or denote new terms at the place where they are defined in the text. Italics are also used when referring to publication titles.
NEW!	New information. In a PDF, this is searchable text.

Table 3: Command syntax

Convention	Description
bold text	Bold text indicates command names, keywords, and command options.
<i>italic text</i>	Italic text indicates variable content.
[]	Syntax components displayed within square brackets are optional. Default responses to system prompts are enclosed in square brackets.
{ x y z }	A choice of required parameters is enclosed in curly brackets separated by vertical bars. You must select one of the options.
x y	A vertical bar separates mutually exclusive elements.
< >	Nonprinting characters, such as passwords, are enclosed in angle brackets.
...	Repeat the previous element, for example, <i>member [member...]</i> .
\	In command examples, the backslash indicates a “soft” line break. When a backslash separates two lines of a command input, enter the entire command at the prompt without the backslash.

Documentation and Training

Find Extreme Networks product information at the following locations:

[Current Product Documentation](#)

[Release Notes](#)

[Hardware and Software Compatibility](#) for Extreme Networks products

[Extreme Optics Compatibility](#)

[Other Resources](#) such as articles, white papers, and case studies

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Training

Extreme Networks offers product training courses, both online and in person, as well as specialized certifications. For details, visit the [Extreme Networks Training](#) page.

Help and Support

If you require assistance, contact Extreme Networks using one of the following methods:

Extreme Portal

Search the GTAC (Global Technical Assistance Center) knowledge base; manage support cases and service contracts; download software; and obtain product licensing, training, and certifications.

The Hub

A forum for Extreme Networks customers to connect with one another, answer questions, and share ideas and feedback. This community is monitored by Extreme Networks employees, but is not intended to replace specific guidance from GTAC.

Call GTAC

For immediate support: (800) 998 2408 (toll-free in U.S. and Canada) or 1 (408) 579 2800. For the support phone number in your country, visit www.extremenetworks.com/support/contact.

Before contacting Extreme Networks for technical support, have the following information ready:

- Your Extreme Networks service contract number, or serial numbers for all involved Extreme Networks products
- A description of the failure
- A description of any actions already taken to resolve the problem
- A description of your network environment (such as layout, cable type, other relevant environmental information)
- Network load at the time of trouble (if known)
- The device history (for example, if you have returned the device before, or if this is a recurring problem)
- Any related RMA (Return Material Authorization) numbers

Subscribe to Product Announcements

You can subscribe to email notifications for product and software release announcements, Field Notices, and Vulnerability Notices.

1. Go to [The Hub](#).
2. In the list of categories, expand the **Product Announcements** list.
3. Select a product for which you would like to receive notifications.
4. Select **Subscribe**.
5. To select additional products, return to the **Product Announcements** list and repeat steps 3 and 4.

You can modify your product selections or unsubscribe at any time.

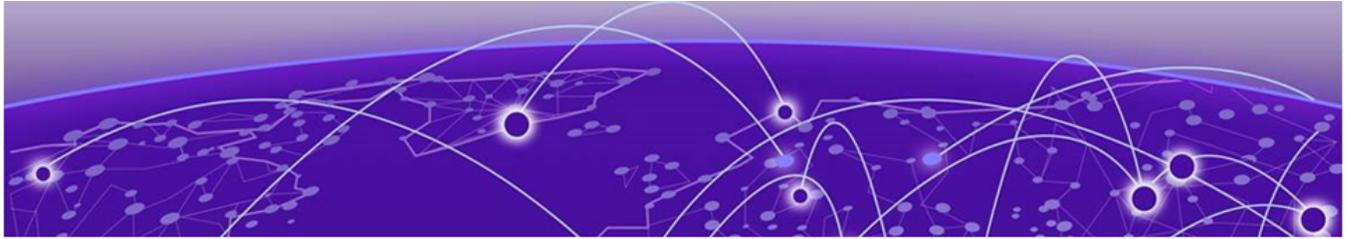
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The User Enablement team at Extreme Networks has made every effort to ensure that this document is accurate, complete, and easy to use. We strive to improve our documentation to help you in your work, so we want to hear from you. We welcome all feedback, but we especially want to know about:

- Content errors, or confusing or conflicting information.
- Improvements that would help you find relevant information.
- Broken links or usability issues.

To send feedback, email us at documentation@extremenetworks.com.

Provide as much detail as possible including the publication title, topic heading, and page number (if applicable), along with your comments and suggestions for improvement.



About This Document

[Supported Hardware](#) on page 8

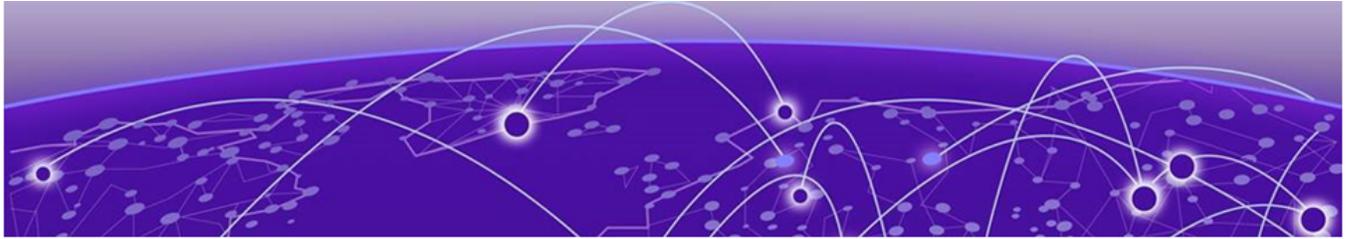
Supported Hardware

SLX-OS 20.6.3 supports BMC on the following hardware platforms.

- ExtremeRouting SLX 9740
- Extreme 8820
- Extreme 8720
- Extreme 8520

For instances in which a topic or part of a topic applies to some devices but not to others, the topic specifically identifies the devices.

For information about other releases, see the documentation for those releases.



Introduction to Baseboard Management Controller

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[ipmitool](#) on page 10

Baseboard Management Controller

The Baseboard Management Controller (BMC) provides the controlling intelligence for the IPMI infrastructure.

BMC periodically monitors the environmental variables such as FAN/PSU status, temperature sensors, power status, and other environmental information. This enables system administrators to remotely monitor the device's health.

The Baseboard Management Controller found in Extreme devices implement a subset of the standard IPMI command set. It is accessible through the standard out-of-band management ports.

The BMC on Extreme devices supports access through IPMI v 1.5/2.0. However, Extreme Networks recommends using IPMI v 2.0 (using the *lanplus* option) for improved security.

You can use the open-source tool, **ipmitool**, installed on a client device on any operating system such as Linux™, Windows™, or MAC-OS™.

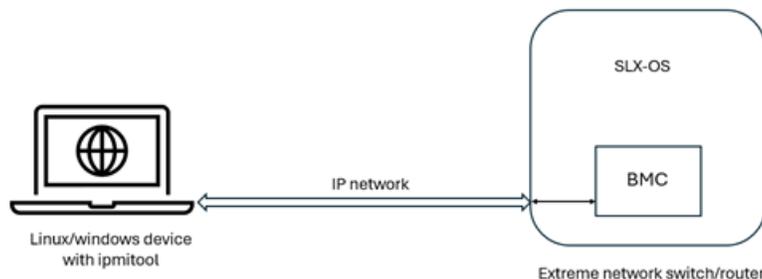


Figure 1: Out of Band Access to Extreme Devices

ipmitool

ipmitool is a command line utility that enables interacting with devices that support IPMI. You can use this tool to monitor and manage such devices.

On Extreme Networks devices that have BMC, the BMC supports a subset of commands that can be executed through the **ipmitool**. The following commands are supported:

Command	Description
power	power is a shortcut for the chassis power set of commands. on , off , cycle , and reset options are supported.
sensor	Prints detailed sensor information. Only list and get options are supported.



Warning

Extreme strongly recommends to use the above listed **ipmitool** options only. Using any other option may cause the switch to become unstable.

Using ipmitool command

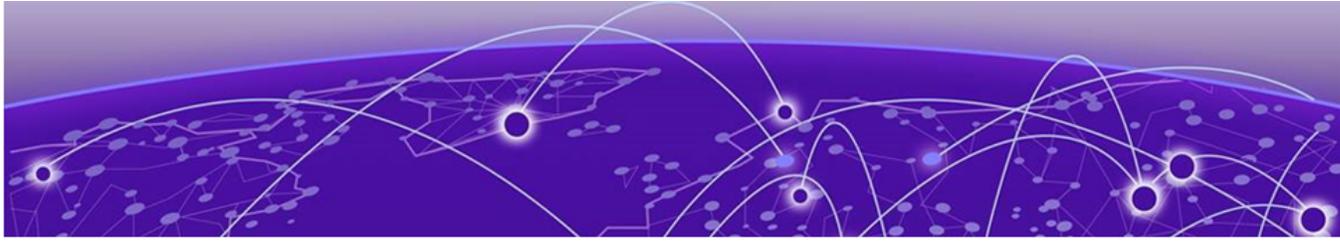
The **ipmitool** is a command line tool. It is available for Linux™, Windows™, and MAC-OS™ operating systems.

This device must be able to reach the device being managed through the BMC Management Interface.

The following is an example of how to use this command from the terminal prompt of your Linux™ system.

```
test@test ~ $ ipmitool -I lanplus -H 10.38.135.188 -U qct.admin -P qctadmin123 mc info
Device ID                : 32
Device Revision          : 1
Firmware Revision       : 3.24
IPMI Version             : 2.0
Manufacturer ID         : 7244
Manufacturer Name       : Quanta
Product ID               : 2567 (0x0a07)
Product Name            : Unknown (0xA07)
Device Available        : yes
Provides Device SDRs    : yes
Additional Device Support :
  Sensor Device
  SDR Repository Device
  SEL Device
  FRU Inventory Device
  IPMB Event Receiver
  IPMB Event Generator
  Chassis Device
Aux Firmware Rev Info   :
  0x00
  0x00
  0x00
  0x00
```

```
test@test ~ $
```



Configuring the BMC Interface

[Configuring SLX-OS to Enable BMC](#) on page 12

[Enable the BMC Management Interface](#) on page 12

[Configure the BMC Management Interface IP Address](#) on page 13

[Change BMC User Password](#) on page 14

Configuring SLX-OS to Enable BMC

Before you can control your devices using IPMI, you must prepare your devices to accept control over out-of-band management interfaces.

By default, BMC management interface is disabled in SLX-OS. It must be enabled manually and the interface configured for enabling out-of-band access.

To enable your device to be accessible from out-of-band management interfaces, the following activities must be performed:

- The BMC interface must be enabled
- The BMC interface must be configured with either DHCP or static IP address
- The User Account used to access the device through IPMI, *qct.admin* with BMC internal User ID 2, must be configured and its password changed. Only this user account is supported.

Enable the BMC Management Interface

To enable the BMC Management Interface:

1. Navigate to the BMC Management Interface context.

```
SLX# configure terminal
SLX (config)# bmc
SLX (config-bmc)#
```



Note

Only the BMC Management Interface with interface ID of 0 (zero) can be configured.

You are now within the BMC configuration mode.

- From within the BMC configuration mode, navigate to the BMC Management Interface configuration mode.

```
SLX (config-bmc)# interface management 0
SLX (config-bmc-mgmt-0)#
```

You are now within the BMC Management Interface configuration mode.

- Enable the interface.

```
SLX (config-bmc-mgmt-0)# no shutdown
SLX (config-bmc-mgmt-0)#
```

The BMC Management Interface is now enabled and ready to be configured for out-of-band access.

- (Optional) Verify if the BMC Management Interface is enabled.

```
SLX (config-bmc-mgmt-0)# do show bmc interface management 0 status
Status: Enabled

SLX (config-bmc-mgmt-0)#
```

Configure the BMC Management Interface IP Address

Keep the IPv4 address, the Netmask, and the Gateway IPv4 address that is required to be configured, ready.



Note

SLX-OS configures the following static IP 192.168.11.1/24 and default gateway 0.0.0.0 by default.

To configure the BMC Management Interface:

- Navigate into the BMC Management Interface context.

```
SLX # configure terminal
SLX (config)# bmc
SLX (config-bmc)#
```



Note

Only the BMC Management Interface with interface ID of 0 can be configured.

You are now within the BMC configuration mode.

- From within the BMC configuration mode, navigate into the BMC Management Interface configuration mode.

```
SLX (config-bmc)# interface management 0
SLX (config-bmc-mgmt-0)#
```

You are now within the BMC Management Interface configuration mode.

3. Configure the IPv4 address for the BMC Management Interface.

- To configure the BMC Management Interface to receive the IPv4 address from a remote DHCP server, use the following command.

```
SLX (config-bmc-mgmt-0)# ip dhcp
SLX (config-bmc-mgmt-0)#
```

- To configure the BMC Management Interface's IPv4 address manually, execute the following command:

```
SLX (config-bmc-mgmt-0)# ip address 10.9.9.23/24 gw 10.9.9.2
SLX (config-bmc-mgmt-0)#
```

The IPv4 address for the BMC Management Interface is either automatically assigned or manually configured.

4. (Optional) Verify by issuing the **do show bmc interface management 0 ip** command.

```
SLX (config-bmc)# do show bmc interface management 0 ip
IP Address Source : Static Address
IP Address       : 10.9.9.23
Subnet Mask      : 255.255.255.0
MAC Address      : 00:04:96:b8:41:b8
Default Gateway IP : 10.9.9.2
SLX (config-bmc-mgmt-0)#
```

Change BMC User Password

To change the default password for the BMC User Account:

1. Navigate into the BMC configuration mode.

```
SLX # configure terminal
SLX (config)# bmc
SLX (config-bmc)#
```

You are now within the BMC configuration mode.

2. From the BMC mode prompt, execute the **user-id** command to navigate to its configuration mode.

```
SLX (config-bmc)# user-id 2
SLX (config-bmc-user-2)#
```

You are now within the configuration mode for the specific User ID.

3. Execute the **password** command along with the password to be set for the user.

```
SLX (config-bmc-user-2)# password testing123
SLX (config-bmc-user-2)#
```

Passwords must meet certain pre-defined criteria before it is configured for the User ID.

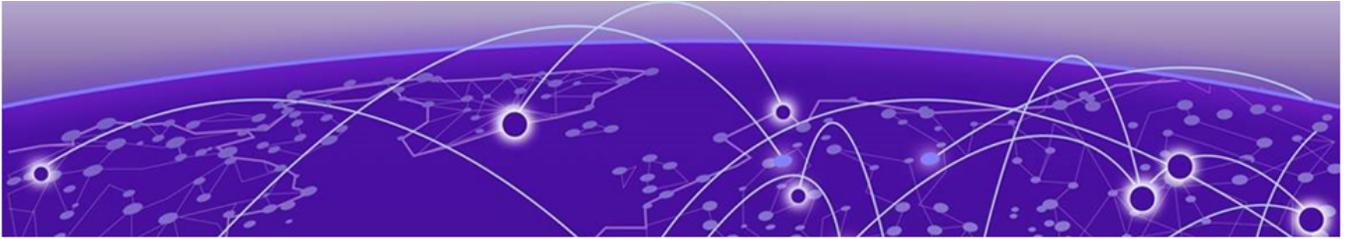
The password for the User ID is modified.

4. To verify the password has changed successfully, use the **show bmc password-status** command.

```
SLX (config-bmc-user-2)# do show bmc password-status 2
Status: Set
SLX (config-bmc-user-2)#
```

You can also use the **do show running-config bmc user-id** command to view the encrypted form of the password.

```
SLX (config-bmc-user-2)# do show running-config bmc user-id
bmc
  user-id 2
    password $9$VaXhc9WCy+1IwRU2ZaS2vQ==
  !
!
SLX (config-bmc-user-2)#
```



Using ipmitool

[ipmitool](#) on page 17

ipmitool

Syntax

```
ipmitool -I lanplus -H <ip-address> -U <user-name> -P <user-password>
  [ mc info | power status | power off | power on | power cycle | power
  reset ]

ipmitool -I lanplus -H <ip-address> -U <user-name> -P <user-password>
  [ sensor list | sensor get <sensor-name> ]

ipmitool -I lanplus -H <ip-address> -U <user-name> -P <user-password>
  [ sdr list | sdr elist ]
```

Parameters

-I lanplus

Use **lanplus** to enforce support for IPMI v 2.0.



Note

Extreme recommends using IPMI v 2.0 for security.

-H <ip-address>

The IPv4 address of the BMC Management Interface which can be accessed from out-of-band interfaces.

-U <user-name>

The BMC User Name. This is always **qct.admin**.

-P <user-password>

The password set for the **qct.admin** user account.

mc info

Displays the management controller information.

power status

Displays the power status for the managed device.

power off

Powers off the managed device.

power on

Powers on a shutdown managed device.

power cycle

Powers off the managed device, waits for a second, and then powers on. If the device is already powered off, no action is taken.

power reset

Performs a hard reset on the managed device. If the device is already powered off, no action is taken.

sensor list

Displays all the sensors present on the device and lists their current status.



Note

The sensors in this list are different from those reported from within the SLX-OS Command line interface.

sensor get <sensor-name>

Fetches information for the sensor provided in the <sensor-name> parameter.



Note

The sensors in this list are different from those reported from within the SLX-OS Command line interface.

sdr list

Lists all the information from the Sensor Data Repository (SDR). This is a brief version of the list.

sdr elist

This is the extended version of the **sdr list** command. Lists all the information from the Sensor Data Repository (SDR) along with additional information.

Modes

None

Usage Guidelines



Note

Both IPMI v 1.5 and IPMI v 2.0 can be used to communicate with BMC. Extreme recommends using IPMI v 2.0 for enhanced security.

The **ipmitool** must be executed on a remote device running any version of the Linux™ OS or Windows™ OS or MAC™ OS. This client device must be connected to a network and must be able to reach the BMC Management Interface on the SLX-OS device(s) being managed.



Warning

Extreme strongly recommends to use the above listed **ipmitool** options only. Using any other option may cause the switch to become unstable.

Examples

This example shows the output of the **mc info** command.

```
test@test ~ $ ipmitool -I lanplus -H 10.9.9.32 -U qct.admin -P testing123 mc info
Device ID           : 32
```

```

Device Revision      : 1
Firmware Revision   : 3.24
IPMI Version        : 2.0
Manufacturer ID     : 7244
Manufacturer Name   : Quanta
Product ID          : 2567 (0x0a07)
Product Name        : Unknown (0xA07)
Device Available    : yes
Provides Device SDRs : yes
Additional Device Support :
  Sensor Device
  SDR Repository Device
  SEL Device
  FRU Inventory Device
  IPMB Event Receiver
  IPMB Event Generator
  Chassis Device
Aux Firmware Rev Info :
  0x00
  0x00
  0x00
  0x00
test@test ~ $

```

This example lists the sensors and gets information on one of the sensors.

```

test@test ~ $ ipmitool -I lanplus -H 10.9.9.32 -U qct.admin -P testing123 sensor list

[root@LNXMC]# ipmitool -I lanplus -H 10.38.135.188 -U qct.admin -P qctadmin123 sensor list
SEL Status      | 0x0          | discrete | 0x0080| na          | na          | na          | na          |
na              | na
Chassis Pwr Sts | 0x0          | discrete | 0x2080| na          | na          | na          | na          |
na              | na
DCMI Watchdog   | 0x0          | discrete | 0x0080| na          | na          | na          | na          |
na              | na
.
.
Temp_Ambient_0  | 46.000      | degrees C | ok    | na          | na          | na          | 71.000     |
73.000          | 77.000
Temp_Ambient_1  | 46.000      | degrees C | ok    | na          | na          | na          | 74.000     |
76.000          | 80.000
Temp_Ambient_2  | 27.000      | degrees C | ok    | na          | na          | na          | 54.000     |
55.000          | 59.000
Temp_Ambient_3  | 44.000      | degrees C | ok    | na          | na          | na          | 71.000     |
73.000          | 77.000
Temp_Ambient_4  | 47.000      | degrees C | ok    | na          | na          | na          | 76.000     |
78.000          | 82.000
Temp_Ambient_5  | 36.000      | degrees C | ok    | na          | na          | na          | 72.000     |
75.000          | 79.000
Temp_Ambient_6  | 37.000      | degrees C | ok    | na          | na          | na          | 67.000     |
69.000          | 73.000
Temp_Ambient_7  | 42.000      | degrees C | ok    | na          | na          | na          | 69.000     |
71.000          | 75.000
Temp_Ambient_8  | 32.000      | degrees C | ok    | na          | na          | na          | 61.000     |
63.000          | 67.000
.
.
Fan_SYS_1_1     | 6560.000    | RPM       | ok    | na          | 480.000    | 960.000    | na          |
na              | na
Fan_SYS_1_2     | 5600.000    | RPM       | ok    | na          | 480.000    | 960.000    | na          |
na              | na
Fan_SYS_2_1     | 6560.000    | RPM       | ok    | na          | 480.000    | 960.000    | na          |
na              | na

```

```

.
.
PSU2_POWER_IN | 296.000 | Watts | ok | na | 0.000 | 0.000 | 1544.000 |
1824.000 | na
PSU3_POWER_IN | 0.000 | Watts | cr | na | 0.000 | 0.000 | 1040.000 |
1224.000 | na
PSU4_POWER_IN | 344.000 | Watts | ok | na | 0.000 | 0.000 | 1544.000 |
1824.000 | na
PSU1_POWER_OUT | 0.000 | Watts | cr | na | 0.000 | 0.000 | 847.000 |
994.000 | na
PSU2_POWER_OUT | 245.000 | Watts | ok | na | 0.000 | 0.000 | 1358.000 |
1596.000 | na
PSU3_POWER_OUT | 0.000 | Watts | cr | na | 0.000 | 0.000 | 847.000 |
994.000 | na
.
.
PSU1_STATUS | 3.000 | byte | ok | na | na | na | na | na |
na | na
PSU2_STATUS | 3.000 | byte | ok | na | na | na | na | na |
na | na
PSU3_STATUS | 3.000 | byte | ok | na | na | na | na | na |
na | na
PSU4_STATUS | 3.000 | byte | ok | na | na | na | na | na |
na | na
BCM_HBM_1_1 | na | degrees C | na | na | na | na | 95.000 |
100.000 | na
BCM_HBM_2_1 | na | degrees C | na | na | na | na | 95.000 |
100.000 | na
BCM_HBM_1_2 | na | degrees C | na | na | na | na | 95.000 |
100.000 | na
BCM_HBM_2_2 | na | degrees C | na | na | na | na | 95.000 |
100.000 | na
VBAT_Scaled | 3.136 | Volts | ok | na | 2.144 | na | na |
3.776 | na
Event Log | 0x0 | discrete | 0x0080 | na | na | na | na |
na | na

test@test ~ $ ipmitool -I lanplus -H 10.9.9.32 -U qct.admin -P testing123 sensor get "Temp_Ambient_0"

Locating sensor record...
Sensor ID : Temp_Ambient_0 (0x1)
Entity ID : 7.1
Sensor Type (Threshold) : Temperature
Sensor Reading : 49 (+/- 0) degrees C
Status : ok
Lower Non-Recoverable : na
Lower Critical : na
Lower Non-Critical : na
Upper Non-Critical : 71.000
Upper Critical : 73.000
Upper Non-Recoverable : 77.000
Positive Hysteresis : Unspecified
Negative Hysteresis : Unspecified
Assertion Events :
Assertions Enabled : ucr+
Deassertions Enabled : ucr+

test@test ~ $

```

This example shows the output of the `sdr elist` command. This command shows all the information from the Sensor Data Repository (SDR) along with additional information.

```
test@test ~ $ ipmitool -I lanplus -H 10.9.9.32 -U qct.admin -P testing123 sdr list
```

```
sdr elist
SEL Status          | 5Fh | ok | 46.2 |
Chassis Pwr Sts    | 70h | ok | 19.1 |
DCMI Watchdog      | 60h | ok | 46.2 |
NTP Status         | EDh | ok | 53.1 |
System Status      | 10h | ok | 7.1 |
Processor Fail     | 65h | ok | 3.1 |
Sys booting sts    | 7Eh | ok | 21.1 |
CPU_DIMM HOT       | B3h | ok | 208.1 |
VR HOT             | B2h | ok | 7.1 |
CB_PEX8725 Temp    | 08h | ns | 7.1 | No Reading
CB_PVNN VR Temp    | 80h | ok | 7.1 | 75 degrees C
CB_PVCCP VR Temp   | 81h | ok | 7.1 | 74 degrees C
CB_SOC Temp        | 05h | ok | 65.1 | 52 degrees C
CB_SOCDIMMA0Temp   | B4h | ok | 32.1 | 52 degrees C
CB_SOCDIMMA1Temp   | B5h | ns | 32.2 | No Reading
CB_SOCDIMMB0Temp   | B6h | ok | 32.3 | 53 degrees C
CB_SOCDIMMB1Temp   | B7h | ns | 32.4 | No Reading
CB_PVNN VR Pout    | 86h | ok | 7.1 | 1 Watts
CB_P1V05 VR Pout   | 87h | ok | 7.1 | 4 Watts
CB_PVCCP VR Pout   | 8Ch | ok | 7.1 | 2 Watts
CB_PVCCS VR Pout   | 8Dh | ok | 7.1 | 1 Watts
CB_P3V3_MB         | D0h | ok | 7.1 | 3.30 Volts
CB_P12V_MB         | D2h | ok | 7.1 | 12.17 Volts
CB_P1V05_PCH       | D3h | ok | 7.1 | 1.05 Volts
CB_P3V3_STBY_MB    | D5h | ok | 7.1 | 3.30 Volts
CB_P5V_STBY_MB     | D6h | ok | 7.1 | 5.02 Volts
CB_PV_BAT          | D7h | ok | 7.1 | 3.16 Volts
.
Temp_Ambient_0     | 01h | ok | 7.1 | 48 degrees C
Temp_Ambient_1     | 07h | ok | 55.1 | 49 degrees C
Temp_Ambient_2     | 92h | ok | 7.1 | 27 degrees C
Temp_Ambient_3     | 93h | ok | 7.1 | 45 degrees C
Temp_Ambient_4     | 94h | ok | 7.1 | 49 degrees C
Temp_Ambient_5     | 95h | ok | 7.1 | 38 degrees C
Temp_Ambient_6     | 96h | ok | 7.1 | 39 degrees C
Temp_Ambient_7     | 97h | ok | 7.1 | 44 degrees C
Temp_Ambient_8     | 98h | ok | 7.1 | 32 degrees C
Temp_Ambient_9     | 99h | ok | 7.1 | 36 degrees C
Temp_Ambient_10    | 9Ah | ok | 7.1 | 47 degrees C
Temp_Ambient_11    | 9Bh | ns | 7.1 | No Reading
Temp_Ambient_12    | 9Ch | ok | 7.1 | 47 degrees C
Temp_Ambient_13    | 9Dh | ok | 7.1 | 50 degrees C
Temp_Ambient_14    | 9Eh | ok | 7.1 | 37 degrees C
Temp_Ambient_15    | 9Fh | ok | 7.1 | 39 degrees C
Temp_Ambient_16    | A0h | ok | 7.1 | 38 degrees C
Temp_Ambient_17    | A1h | ok | 7.1 | 31 degrees C
Temp_Ambient_18    | A2h | ok | 7.1 | 38 degrees C
Temp_Ambient_19    | A3h | ok | 7.1 | 48 degrees C
Temp_mac_1         | A4h | ok | 7.1 | 61 degrees C
Temp_mac_2         | A5h | ok | 7.1 | 60 degrees C
Temp_mac_3         | A6h | ok | 7.1 | 63 degrees C
Temp_mac_4         | A7h | ok | 7.1 | 64 degrees C
Fan_SYS_1_1        | F0h | ok | 29.1 | 6560 RPM
Fan_SYS_1_2        | F1h | ok | 29.1 | 5600 RPM
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Fan_SYS_2_1      | F2h | ok | 29.1 | 6720 RPM
Fan_SYS_2_2      | F3h | ok | 29.1 | 5760 RPM
.
.
PSU1_POWER_IN    | 15h | lcr | 10.1 | 0 Watts
PSU2_POWER_IN    | 1Fh | ok | 10.1 | 296 Watts
PSU3_POWER_IN    | 6Ah | lcr | 10.1 | 0 Watts
PSU4_POWER_IN    | 75h | ok | 10.1 | 344 Watts
PSU1_POWER_OUT   | 16h | lcr | 10.1 | 0 Watts
PSU2_POWER_OUT   | 21h | ok | 10.1 | 245 Watts
PSU3_POWER_OUT   | 6Bh | lcr | 10.1 | 0 Watts
PSU4_POWER_OUT   | 76h | ok | 10.1 | 301 Watts
PSU1_VOLTAGE_IN  | 18h | lcr | 10.1 | 0 Volts
PSU2_VOLTAGE_IN  | 23h | ok | 10.1 | 206 Volts
PSU3_VOLTAGE_IN  | 6Dh | lcr | 10.1 | 0 Volts
PSU4_VOLTAGE_IN  | 78h | ok | 10.1 | 204 Volts
PSU1_VOLTAGE_OUT | 1Ah | lcr | 10.1 | 0 Volts
PSU2_VOLTAGE_OUT | 25h | ok | 10.1 | 12.18 Volts
PSU3_VOLTAGE_OUT | 6Fh | lcr | 10.1 | 0 Volts
PSU4_VOLTAGE_OUT | 7Ah | ok | 10.1 | 12.24 Volts
PSU1_CURRENT_IN  | 0Eh | ok | 10.1 | 0 Amps
PSU2_CURRENT_IN  | 22h | ok | 10.1 | 1.26 Amps
PSU3_CURRENT_IN  | 6Ch | ok | 10.1 | 0 Amps
PSU4_CURRENT_IN  | 77h | ok | 10.1 | 1.68 Amps
PSU1_CURRENT_OUT | 19h | ok | 10.1 | 0 Amps
PSU2_CURRENT_OUT | 24h | ok | 10.1 | 20.52 Amps
PSU3_CURRENT_OUT | 6Eh | ok | 10.1 | 0 Amps
PSU4_CURRENT_OUT | 79h | ok | 10.1 | 24.51 Amps
PSU1_Fan         | 14h | lcr | 10.1 | 0 RPM
.
.
Event Log        | ECh | ok | 6.1 |
test@test ~ $
```