

How to change sensor threshold on server with BMC

V1.0

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Version

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Purpose

This guide is to provide a simple step-by-step guidance for users to follow on How to change sensor threshold on server with BMC.

Applicable model list

All products with BMC functional

Description

This guide should also be helpful for user with sensor threshold problems to learn how to change sensor threshold using IPMI.

Procedures

- a. To list the system's sensors, current readings and current thresholds, as exemplified below

```
[root@server] ~# ipmitool sensor list
```

Hot Swap	0x0	discrete	0x1080 na	na	na	na	na	na	na
IPMB Physical	0x88	discrete	0x0880 na	na	na	na	na	na	na
BMC Watchdog	0x0	discrete	0x0000 na	na	na	na	na	na	na
+5.0V	5.073	Volts	ok 4.313	4.509	4.656	5.367	5.514	5.710	
+1.8V CPU 1	1.804	Volts	ok 1.559	1.608	1.657	1.951	2.010	2.058	
+3.3V	3.333	Volts	ok 2.917	3.015	3.162	3.456	3.603	3.701	
+1.5V ICH	1.510	Volts	ok 1.255	1.304	1.353	1.657	1.706	1.755	
+1.2V	1.206	Volts	ok 1.000	1.059	1.108	1.304	1.353	1.402	
+1.1V CPU 1	1.147	Volts	ok 0.902	0.951	1.000	1.304	1.353	1.402	
+1.5V DDR3 P1	1.510	Volts	ok 1.255	1.304	1.353	1.657	1.706	1.755	
Temp Air Intake	28.000	degrees C	ok -5.000	1.000	5.000	45.000	55.000	70.000	
Temp Air Outlet	35.000	degrees C	ok -5.000	1.000	5.000	65.000	75.000	90.000	
Temp CPU0 DIMM	31.000	degrees C	ok -5.000	1.000	5.000	65.000	75.000	90.000	
Version change	0x0	discrete	0x0000 na	na	na	na	na	na	na
+Vcore CPU 1	0.912	Volts	ok 0.656	0.704	0.752	1.352	1.400	1.456	
+1.0V LAN	1.000	Volts	ok 0.800	0.856	0.904	1.104	1.152	1.200	

+0.75V DDR3 P0	0.736	Volts	ok	0.600	0.640	0.680	0.824	0.864	0.904
+1.8V LAN	1.801	Volts	ok	1.553	1.600	1.659	1.954	2.002	2.061
+1.8V IOH	1.789	Volts	ok	1.553	1.600	1.659	1.954	2.002	2.061
+5V SB MAN	4.978	Volts	ok	4.303	4.503	4.652	5.353	5.503	5.703
+12V	12.059	Volts	ok	10.412	10.656	11.023	13.036	13.402	13.646
+0.75V DDR3 P1	0.744	Volts	ok	0.600	0.640	0.680	0.824	0.864	0.904
+3.3V SB MAN	3.240	Volts	ok	2.904	3.000	3.168	3.456	3.600	3.720
+3V BAT	3.288	Volts	ok	2.616	2.712	2.856	3.456	3.600	3.720
+1.1V IOH	1.104	Volts	ok	0.904	0.952	1.000	1.304	1.352	1.400
+1.1V CPU 0	1.200	Volts	ok	0.904	0.952	1.000	1.304	1.352	1.400
+1.8V CPU 0	1.813	Volts	ok	1.553	1.600	1.659	1.954	2.002	2.061
+1.5V DDR3 P0	1.520	Volts	ok	1.256	1.304	1.352	1.656	1.704	1.752
+Vcore CPU 0	0.920	Volts	ok	0.656	0.704	0.752	1.352	1.400	1.456
Temp CPU1 DIMM	28.000	degrees C	ok	-5.000	1.000	5.000	65.000	75.000	90.000
Temp Power Brick	30.000	degrees C	ok	-5.000	1.000	5.000	70.000	80.000	95.000
Temp Air IOH	36.000	degrees C	ok	-5.000	1.000	5.000	75.000	85.000	100.000
CPU 0 PECCI	41.000	degrees C	ok	-5.000	1.000	5.000	85.000	95.000	115.000
CPU 1 PECCI	38.000	degrees C	ok	-5.000	1.000	5.000	85.000	95.000	115.000
DDR THERM CPU0	0x0	discrete	0x0100	na	na	na	na	na	na
DDR THERM CPU1	0x0	discrete	0x0100	na	na	na	na	na	na
CPU0 PROCHOT	0x0	discrete	0x0100	na	na	na	na	na	na
CPU1 PROCHOT	0x0	discrete	0x0100	na	na	na	na	na	na
CPU0 THERMTRIP	0x0	discrete	0x0100	na	na	na	na	na	na
CPU1 THERMTRIP	0x0	discrete	0x0100	na	na	na	na	na	na
CPU0 VR HOT	0x0	discrete	0x0100	na	na	na	na	na	na
CPU1 VR HOT	0x0	discrete	0x0200	na	na	na	na	na	na
IOH THERM ALERT	0x0	discrete	0x0100	na	na	na	na	na	na
IOH THERM TRIP	0x0	discrete	0x0100	na	na	na	na	na	na
-48V_A	47.450	Volts	ok	35.100	39.000	42.250	70.200	72.150	76.050

-48V_B	47.450	Volts	ok	35.100	39.000	42.250	70.200	72.150	76.050
-48V Current	2.162	Amps	ok	na	na	na	na	na	na
-48V Unit Temp	26.730	degrees C	ok	-4.790	1.120	5.060	81.890	91.740	105.530
-48V HU_CAP	66.073	Volts	ok	na	na	na	na	na	na
Integrity	na	discrete	na	na	na	na	na	na	na
OEM Command	na	discrete	na	na	na	na	na	na	na

b. The thresholds listed are: lnr, lcr, lnc, unc, ucr, unr

These means for:

Lower **Non-Recoverable**

Lower **Critical**

Lower **Non-Critical**

Upper **Non-Critical**

Upper **Critical**

Upper **Non-Recoverable**

c. To set the lower thresholds as following,

```
ipmitool sensor thresh "$sensor_name" lower $lnr $lcr $lnc
```

d. For example, To set the lower thresholds for "**Temp Air Intake**"

```
ipmitool sensor thresh "Temp Air Intake" lower -10 -5 0
```

e. To set the upper thresholds as following,

```
ipmitool sensor thresh "$sensor_name" upper $lnr $lcr $lnc
```

f. For example, To set the lower thresholds for "**Temp CPU0 DIMM**"

```
ipmitool sensor thresh "Temp CPU0 DIMM" lower 80 90 100
```