IPMI Email Alert translation

Email Alert Example

- PEF EMail alert
- System IP: 192.168.1.34
- System GUID: 02 30 48 ff fe d9 7a fe 08 09 0a 0b 0c 0d 0e 0f

- Sensor Type: 05  For more information, refer to slide-3
- Sensor No.: 44  For more information, refer to slide-4
- Event Type: 6f  For more information, refer to slide-5
- Data: 00 00 00  For more information, refer to slide-7

Slides: 3Slides: 3 4Slides: 3 4 5Slides: 3 4 5 6Slides: 3 4 5 6 7

Sensor Type

- 01: Temperature
- 02: Voltage
- 03: Current
- 04: Fan
- 05: Chassis Intrusion
- 06: Platform Security Breach
- 07: Processor
- 08: Power Supply
- 09: Power Unit
- 0A: Cooling Device
- 0C: Memory
- 0D: Drive Slot
- 0F: POST Error

Slides: 2Slides: 2 4Slides: 2 4 5Slides: 2 4 5 6Slides: 2 4 5 6 7

Sensor Number

Sensor Type	Sensor #	
CPU1 Temp	00h	
CPU2 Temp	01h	
Sys Temp	02h	Temperature = Data
CPU1 Vcore	03h	Voltage = Data* 0.008
CPU2 Vcore	04h	Voltage = Data* 0.008
3.3V	05h	Voltage = Data* 0.016
5V	06h	Voltage = Data* 0.024
12V	07h	Voltage = Data* 0.096
-12V	08h	Voltage = Data*0.148 - 16.92
1.5V	09h	Voltage = Data* 0.016
5VSB	0Ah	Voltage = Data* 0.024
VBAT	0Bh	Voltage = Data* 0.016
Fan1	0Ch	RPM = 1350000/Data
Fan2	0Dh	RPM = 1350000/Data
Fan3	0Eh	RPM = 1350000/Data
Fan4	0Fh	RPM = 1350000/Data
Fan5	10h	RPM = 1350000/Data
Fan6	11h	RPM = 1350000/Data
Fan7/CPU1	12h	RPM = 1350000/Data
Fan8/CPU2	13h	RPM = 1350000/Data
Intrusion	44h	
Power Supply	14h	

Data: is the second value in the data field
Example: 54 00 02. 00 is the data field here.

Event Type

Event/Reading Type Code category	7-bit Event/Reading Type Code Range	Sensor Class	Description
unspecified	00h	n/a	Event/Reading Type unspecified.
Threshold	01h	threshold	Threshold-based. Indicates a sensor that utilizes values that represent discrete threshold states in sensor access and/or events. The Event/Reading event offsets for the different threshold states are given in *Table 42-2, Generic Event/Reading Type Codes*, below.
Generic	02h-0Ch	discrete	Generic Discrete. Indicates a sensor that utilizes an Event/Reading Type code & State bit positions / event offsets from one of the sets specified for Discrete or 'digital' Discrete Event/Reading class in *Table 42-2, Generic Event/Reading Type Codes*, below.
Sensor-specific	6Fh	discrete	Sensor-specific Discrete. Indicates that the discrete state information is specific to the sensor type. State bit positions / event offsets for a particular sensor type are specified in the 'sensor-specific offset' column in *Table 42-3, Sensor Type Codes*, below.
OEM	70h-7Fh	OEM	OEM Discrete. Indicates that the discrete state information is specific to the OEM identified by the Manufacturer ID for the IPM device that is providing access to the sensor.

Event/Reading Type Codes that are not explicitly specified in this table are *reserved*.

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Data Field

Generic Event/Reading Type Code	Event/Reading Class	Generic Offset	Description
			THRESHOLD BASED STATES
01h	Threshold	00h	Lower Non-critical - going low
		01h	Lower Non-critical - going high
		02h	Lower Critical - going low
		03h	Lower Critical - going high
		04h	Lower Non-recoverable - going low
		05h	Lower Non-recoverable - going high
		06h	Upper Non-critical - going low
		07h	Upper Non-critical - going high
		08h	Upper Critical - going low
		09h	Upper Critical - going high
		0Ah	Upper Non-recoverable - going low
		0Bh	Upper Non-recoverable - going high

Threshold Description

Here are the several conditions,

- Higher Non-Recoverable
- Higher Critical
- Higher Non-Critical
- Normal
- Lower Non-Critical
- Lower Critical
- Lower Non-Recoverable

So, if it is lower critical going low then the reading is lower than lower critical but higher than Lower Non-Recoverable. Simply put, it is between Lower Critical and Lower Non-recoverable.

Slides: 2Slides: 2 3Slides: 2 3 4Slides: 2 3 4 5Slides: 2 3 4 5 6Slides: 2 3 4 5 6 8

Data Field

Here is what data 1 and data 3 means. For both the data-fields, we consider only the last 4 bits (bit 0~3).

Data-1:

Let us consider the following email alert as an example,

Sensor Type: 04
Sensor No.: 0d
Event Type: 01
Data: 54 00 02

Here we see 0x54 in the data-field 1. Since we consider only the last 4 bits, which in this case is 4. The value corresponds to "*non-recoverable*" when mapped using the table on slide-6.

We have also seen 0x50, 0x52. In all the cases we consider only the last 4 bits, that is either 0 or 2. By mapping these values to the table on slide-6, we obtain

0-non-critical

2-critical

Data-3 is the threshold value. We have our minimum RPM value set to 100. From this data we can find out the value that triggered the event.

- For example: 54 00 02 that means, non-recoverable, 04 value (trigger value), and the threshold is 2 (200 rpm). The fan is triggered by non-recoverable value with threshold 200 rpm.