

How To Get the Environment Temperature on a Catalyst 6500/6000 Using SNMP

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Introduction

This document explains the process to obtain the temperature values of the Cisco Catalyst 6500/6000. The **show environment temperature** command-line interface (CLI) command, with use of Simple Network Management Protocol (SNMP), displays these values.

Prerequisites

Requirements

There are no specific requirements for this document.

Components Used

The information in this document is based on these software and hardware versions:

- Catalyst 6500/6000 series switches:
 - ◆ That run Catalyst OS (CatOS) Support CISCO-ENTITY-SENSOR-MIB as of the initial Supervisor Engine module software version.
- ◆ That run Cisco IOS® Software Support CISCO-ENTITY-SENSOR-MIB as of Cisco IOS Software Release 12.1(8a)EX.

Refer to the Catalyst 6000 and 7600 Cisco IOS MIB Support List for verification.

Note: Device 1 and Device 2 sensors have support as of Cisco IOS Software Release 12.1(14)E. See the Output of the show environment temperature Command Through the CLI section of this document.

- CatOS release 5.5.7
- SNMPWalk from HP OpenView Network Node Manager, installed on Sun Solaris 2.7

You can also use SNMP Utilities from Net-SNMP for this purpose.

Note: This document uses these MIBs:

- CISCO-ENTITY-SENSOR-MIB
- ENTITY-MIB-V1SMI

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Conventions

Refer to Cisco Technical Tips Conventions for more information on document conventions.

Procedure

Complete these steps:

1. Use the object identifier (OID) **entSensorValue (1.3.6.1.4.1.9.9.91.1.1.1.1.4)** to obtain the temperature values.

This OID comes from the CISCO-ENTITY-SENSOR-MIB. For all other OIDs that relate to this MIB, see the Overview of the OIDs in CISCO-ENTITY-SENSOR-MIB section of this document. The MIB provides this description:

```
entSensorValue OBJECT-TYPE
    SYNTAX SensorValue
    --      Rsyntax INTEGER(-1000000000..1000000000)
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "This variable reports the most recent measurement seen
        by the sensor.

        To correctly display or interpret this variable's value,
        you must also know entSensorType, entSensorScale, and
        entSensorPrecision.

        However, you can compare entSensorValue with the threshold
        values given in entSensorThresholdTable without any semantic
        knowledge."
    ::= { entSensorValueEntry 4 }
```

Query the device for the **entSensorValue (1.3.6.1.4.1.9.9.91.1.1.1.1.4)**. In this example, the device host name is **zatar**:

```
#snmpwalk -c public zatar 1.3.6.1.4.1.9.9.91.1.1.1.1.4
9.9.91.1.1.1.1.4.15 : INTEGER: 1
9.9.91.1.1.1.1.4.16 : INTEGER: 1
9.9.91.1.1.1.1.4.17 : INTEGER: 2
9.9.91.1.1.1.1.4.18 : INTEGER: 1
9.9.91.1.1.1.1.4.19 : INTEGER: 20
9.9.91.1.1.1.1.4.20 : INTEGER: 1
9.9.91.1.1.1.1.4.21 : INTEGER: 21
9.9.91.1.1.1.1.4.22 : INTEGER: 1
9.9.91.1.1.1.1.4.23 : INTEGER: 20
9.9.91.1.1.1.1.4.1001 : INTEGER: 19
9.9.91.1.1.1.1.4.1002 : INTEGER: 28
```

```

9.9.91.1.1.1.1.4.1003 : INTEGER: 22
9.9.91.1.1.1.1.4.1004 : INTEGER: 28
9.9.91.1.1.1.1.4.1007 : INTEGER: 19
9.9.91.1.1.1.1.4.1008 : INTEGER: 23
9.9.91.1.1.1.1.4.1009 : INTEGER: 0
9.9.91.1.1.1.1.4.1010 : INTEGER: 0
9.9.91.1.1.1.1.4.2001 : INTEGER: 16
9.9.91.1.1.1.1.4.2002 : INTEGER: 25
9.9.91.1.1.1.1.4.2003 : INTEGER: 26
9.9.91.1.1.1.1.4.2004 : INTEGER: 0
9.9.91.1.1.1.1.4.3001 : INTEGER: 17
9.9.91.1.1.1.1.4.3002 : INTEGER: 20
9.9.91.1.1.1.1.4.3003 : INTEGER: 19
9.9.91.1.1.1.1.4.3004 : INTEGER: 24
9.9.91.1.1.1.1.4.4001 : INTEGER: 25
9.9.91.1.1.1.1.4.4002 : INTEGER: 29
9.9.91.1.1.1.1.4.4003 : INTEGER: 0
9.9.91.1.1.1.1.4.4004 : INTEGER: 0
9.9.91.1.1.1.1.4.5001 : INTEGER: 20
9.9.91.1.1.1.1.4.5002 : INTEGER: 20
9.9.91.1.1.1.1.4.5003 : INTEGER: 0
9.9.91.1.1.1.1.4.5004 : INTEGER: 0
#

```

2. Determine how to link all the temperature values to the correct module in the Catalyst.

For example, what does the index 9.9.91.1.1.1.1.4.1001 : INTEGER: 19 stand for? In order to find out, you must go up one level in the tree. Jump one level from 1.3.6.1.4.1.9.91.1.1.1.1.4 back to 1.3.6.1.4.1.9.91.1.1.1.1; drop the **4** at the end. This brings you to the **entSensorValueEntry (1.3.6.1.4.1.9.91.1.1.1.1)**. The MIB provides this description:

```

entSensorValueEntry OBJECT-TYPE
    SYNTAX EntSensorValueEntry
    ACCESS not-accessible
    STATUS mandatory
    DESCRIPTION
        "An entSensorValueTable entry describes the
        present reading of a sensor, the measurement units
        and scale, and sensor operational status."
    INDEX { entPhysicalIndex }
    ::= { entSensorValueTable 1 }

```

The description shows that this OID uses indexes, as you see in the **snmpwalk** 1001, 1002, and so on. The **entSensorValueEntry** description shows another OID, **entPhysicalIndex**, which provides another MIB, the ENTITY-MIB.

```

IMPORTS
    Integer32
        FROM SNMPv2-SMI-v1
    OBJECT-TYPE
        FROM RFC-1212
    TRAP-TYPE
        FROM RFC-1215
    TimeStamp, TruthValue
        FROM SNMPv2-TC-v1
    entPhysicalIndex
        FROM ENTITY-MIB
    ciscoMgmt

```

The **entPhysicalIndex** comes from the ENTITY-MIB. The ENTITY-MIB provides this description of **entPhysicalIndex**:

```

entPhysicalEntry ::= SEQUENCE {
    entPhysicalIndex PhysicalIndex,

```

```

entPhysicalDescr SnmpAdminString,
entPhysicalVendorType AutonomousType,
entPhysicalContainedIn INTEGER,
entPhysicalClass PhysicalClass,
entPhysicalParentRelPos INTEGER,
entPhysicalName SnmpAdminString,
entPhysicalHardwareRev SnmpAdminString,
entPhysicalFirmwareRev SnmpAdminString,
entPhysicalSoftwareRev SnmpAdminString,
entPhysicalSerialNum SnmpAdminString,
entPhysicalMfgName SnmpAdminString,
entPhysicalModelName SnmpAdminString,
entPhysicalAlias SnmpAdminString,
entPhysicalAssetID SnmpAdminString,
entPhysicalIsFRU TruthValue
}

entPhysicalIndex OBJECT-TYPE
SYNTAX PhysicalIndex
-- Rsyntax INTEGER(1..2147483647)
ACCESS not-accessible
STATUS mandatory
DESCRIPTION
    "The index for this entry."
 ::= { entPhysicalEntry 1 }

```

From this description, you can again go one step back in the tree and conclude that the **entPhysicalIndex** comes from the **entPhysicalEntry**.

3. Query for the **entPhysicalIndex (1.3.6.1.2.1.47.1.1.1.1.1)** and then the **entPhysicalDescr (1.3.6.1.2.1.47.1.1.1.1.2)**.

This command gives you the description of 1001, 1002, 1003, 1004, and so on:

```

#snmpwalk -c public zatar 1.3.6.1.2.1.47.1.1.1.1.2
47.1.1.1.1.2.1 : OCTET STRING- (ascii): Cisco Systems WS-C6506 6 slot switch
47.1.1.1.1.2.2 : OCTET STRING- (ascii): WS-C6506 6 slot switch chassis slot
47.1.1.1.1.2.3 : OCTET STRING- (ascii): WS-C6506 6 slot switch chassis slot
47.1.1.1.1.2.4 : OCTET STRING- (ascii): WS-C6506 6 slot switch chassis slot
47.1.1.1.1.2.5 : OCTET STRING- (ascii): WS-C6506 6 slot switch chassis slot
47.1.1.1.1.2.6 : OCTET STRING- (ascii): WS-C6506 6 slot switch chassis slot
47.1.1.1.1.2.7 : OCTET STRING- (ascii): WS-C6506 6 slot switch chassis slot
47.1.1.1.1.2.8 : OCTET STRING- (ascii): WS-C6506 6 slot switch backplane
47.1.1.1.1.2.9 : OCTET STRING- (ascii): Container of power supply group
47.1.1.1.1.2.10 : OCTET STRING- (ascii): Container of power supply
47.1.1.1.1.2.11 : OCTET STRING- (ascii): power supply
47.1.1.1.1.2.12 : OCTET STRING- (ascii): Container of power supply
47.1.1.1.1.2.14 : OCTET STRING- (ascii): Container of Fan
47.1.1.1.1.2.15 : OCTET STRING- (ascii): Fan
47.1.1.1.1.2.16 : OCTET STRING- (ascii): Clock
47.1.1.1.1.2.17 : OCTET STRING- (ascii): Clock
47.1.1.1.1.2.18 : OCTET STRING- (ascii): VTT
47.1.1.1.1.2.19 : OCTET STRING- (ascii): VTT Temp Sensor
47.1.1.1.1.2.20 : OCTET STRING- (ascii): VTT
47.1.1.1.1.2.21 : OCTET STRING- (ascii): VTT Temp Sensor
47.1.1.1.1.2.22 : OCTET STRING- (ascii): VTT
47.1.1.1.1.2.23 : OCTET STRING- (ascii): VTT Temp Sensor
47.1.1.1.1.2.1000 : OCTET STRING- (ascii): WS-X6K-SUP1A-2GE 1000BaseX
Supervisor Rev. 3.1
47.1.1.1.1.2.1001 : OCTET STRING- (ascii): Module Intake Temp Sensor
47.1.1.1.1.2.1002 : OCTET STRING- (ascii): Module Exhaust Temp Sensor
47.1.1.1.1.2.1003 : OCTET STRING- (ascii): Module Device 1 Temp Sensor
47.1.1.1.1.2.1004 : OCTET STRING- (ascii): Module Device 2 Temp Sensor
47.1.1.1.1.2.1005 : OCTET STRING- (ascii): L3 Switching Engine Container
47.1.1.1.1.2.1006 : OCTET STRING- (ascii): L3 Switching Engine
47.1.1.1.1.2.1007 : OCTET STRING- (ascii): L3 SE Intake Temp Sensor

```

47.1.1.1.1.2.1008	:	OCTET STRING-	(ascii):	L3 SE Exhaust Temp Sensor
47.1.1.1.1.2.1009	:	OCTET STRING-	(ascii):	L3 SE device1 Temp Sensor
47.1.1.1.1.2.1010	:	OCTET STRING-	(ascii):	L3 SE device2 Temp Sensor
47.1.1.1.1.2.1011	:	OCTET STRING-	(ascii):	CPU of supervisor
47.1.1.1.1.2.1012	:	OCTET STRING-	(ascii):	Ethernet Gigabit port interface
47.1.1.1.1.2.1013	:	OCTET STRING-	(ascii):	Ethernet Gigabit port interface
47.1.1.1.1.2.1014	:	OCTET STRING-	(ascii):	Container of Router Switch
Feature Card				
47.1.1.1.1.2.2000	:	OCTET STRING-	(ascii):	WS-X6182-2PA FlexWAN Module Rev. 1.3
47.1.1.1.1.2.2001	:	OCTET STRING-	(ascii):	Module Intake Temp Sensor
47.1.1.1.1.2.2002	:	OCTET STRING-	(ascii):	Module Exhaust Temp Sensor
47.1.1.1.1.2.2003	:	OCTET STRING-	(ascii):	Module Device 1 Temp Sensor
47.1.1.1.1.2.2004	:	OCTET STRING-	(ascii):	Module Device 2 Temp Sensor
47.1.1.1.1.2.3000	:	OCTET STRING-	(ascii):	WS-X6248-RJ-45 10/100BaseTX Ethernet Rev. 1.1
47.1.1.1.1.2.3001	:	OCTET STRING-	(ascii):	Module Intake Temp Sensor
47.1.1.1.1.2.3002	:	OCTET STRING-	(ascii):	Module Exhaust Temp Sensor
47.1.1.1.1.2.3003	:	OCTET STRING-	(ascii):	Module Device 1 Temp Sensor
47.1.1.1.1.2.3004	:	OCTET STRING-	(ascii):	Module Device 2 Temp Sensor
47.1.1.1.1.2.3005	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3006	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3007	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3008	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3009	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3010	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3011	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3012	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3013	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3014	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3015	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3016	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3017	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3018	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3019	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3020	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3021	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3022	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3023	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3024	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3025	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3026	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3027	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3028	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3029	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3030	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3031	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3032	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3033	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3034	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3035	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3036	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3037	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3038	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3039	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3040	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3041	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3042	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3043	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3044	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3045	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3046	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3047	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3048	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3049	:	OCTET STRING-	(ascii):	10/100BaseTX
47.1.1.1.1.2.3050	:	OCTET STRING-	(ascii):	10/100BaseTX

```

47.1.1.1.1.2.3051 : OCTET STRING- (ascii): 10/100BaseTX
47.1.1.1.1.2.3052 : OCTET STRING- (ascii): 10/100BaseTX
47.1.1.1.1.2.4000 : OCTET STRING- (ascii): Router Switch feature Card
47.1.1.1.1.2.4001 : OCTET STRING- (ascii): RSFC Intake Temp Sensor
47.1.1.1.1.2.4002 : OCTET STRING- (ascii): RSFC Temp Sensor
47.1.1.1.1.2.4003 : OCTET STRING- (ascii): RSFC device1 Temp Sensor
47.1.1.1.1.2.4004 : OCTET STRING- (ascii): RSFC device2 Temp Sensor
47.1.1.1.1.2.4005 : OCTET STRING- (ascii): Route Switch
47.1.1.1.1.2.5000 : OCTET STRING- (ascii): WS-X6380-NAM Network Analysis
Module Rev. 1.1
47.1.1.1.1.2.5001 : OCTET STRING- (ascii): Module Intake Temp Sensor
47.1.1.1.1.2.5002 : OCTET STRING- (ascii): Module Exhaust Temp Sensor
47.1.1.1.1.2.5003 : OCTET STRING- (ascii): Module Device 1 Temp Sensor
47.1.1.1.1.2.5004 : OCTET STRING- (ascii): Module Device 2 Temp Sensor
47.1.1.1.1.2.5005 : OCTET STRING- (ascii): Net Analysis
47.1.1.1.1.2.5006 : OCTET STRING- (ascii): Net Analysis
#

```

Now, you have linked the indexes to the description and linked the indexes to the temperature values.
4. Make the link between the temperature values and the description.

Extract this information from Step 3:

```

47.1.1.1.1.2.1001 : OCTET STRING- (ascii): Module Intake Temp Sensor
47.1.1.1.1.2.1002 : OCTET STRING- (ascii): Module Exhaust Temp Sensor
47.1.1.1.1.2.1003 : OCTET STRING- (ascii): Module Device 1 Temp Sensor
47.1.1.1.1.2.1004 : OCTET STRING- (ascii): Module Device 2 Temp Sensor

```

And extract this information from Step 1:

```

9.9.91.1.1.1.1.4.1001 : INTEGER: 19
9.9.91.1.1.1.1.4.1002 : INTEGER: 28
9.9.91.1.1.1.1.4.1003 : INTEGER: 22
9.9.91.1.1.1.1.4.1004 : INTEGER: 28

```

The result gives you:

- ◆ Module Intake Temp Sensor = 19C
- ◆ Module Exhaust Temp Sensor = 28C
- ◆ Module Device 1 Temp Sensor = 22C
- ◆ Module Device 2 Temp Sensor = 28C

Overview of the OIDs in CISCO-ENTITY-SENSOR-MIB

```

"org" "1.3"
"dod" "1.3.6"
"internet" "1.3.6.1"
"directory" "1.3.6.1.1"
"mgmt" "1.3.6.1.2"
"experimental" "1.3.6.1.3"
"private" "1.3.6.1.4"
"enterprises" "1.3.6.1.4.1"
"cisco" "1.3.6.1.4.1.9"
"ciscoMgmt" "1.3.6.1.4.1.9.9"
"entitySensorMIB" "1.3.6.1.4.1.9.9.91"
"entitySensorMIBObjects" "1.3.6.1.4.1.9.9.91.1"
"entitySensorMIBNotificationPrefix" "1.3.6.1.4.1.9.9.91.2"
"entitySensorMIBConformance" "1.3.6.1.4.1.9.9.91.3"
"entSensorValues" "1.3.6.1.4.1.9.9.91.1.1"
"entSensorThresholds" "1.3.6.1.4.1.9.9.91.1.2"
"entSensorValueTable" "1.3.6.1.4.1.9.9.91.1.1.1"
"entSensorValueEntry" "1.3.6.1.4.1.9.9.91.1.1.1.1"

```

"entSensorType"	"1.3.6.1.4.1.9.9.91.1.1.1.1.1"
"entSensorScale"	"1.3.6.1.4.1.9.9.91.1.1.1.1.2"
"entSensorPrecision"	"1.3.6.1.4.1.9.9.91.1.1.1.1.3"
"entSensorValue"	"1.3.6.1.4.1.9.9.91.1.1.1.1.4"
"entSensorStatus"	"1.3.6.1.4.1.9.9.91.1.1.1.1.5"
"entSensorValueTimeStamp"	"1.3.6.1.4.1.9.9.91.1.1.1.1.6"
"entSensorValueUpdateRate"	"1.3.6.1.4.1.9.9.91.1.1.1.1.7"
"entSensorThresholdTable"	"1.3.6.1.4.1.9.9.91.1.2.1"
"entSensorThresholdEntry"	"1.3.6.1.4.1.9.9.91.1.2.1.1"
"entSensorThresholdIndex"	"1.3.6.1.4.1.9.9.91.1.2.1.1.1"
"entSensorThresholdSeverity"	"1.3.6.1.4.1.9.9.91.1.2.1.1.2"
"entSensorThresholdRelation"	"1.3.6.1.4.1.9.9.91.1.2.1.1.3"
"entSensorThresholdValue"	"1.3.6.1.4.1.9.9.91.1.2.1.1.4"
"entSensorThresholdEvaluation"	"1.3.6.1.4.1.9.9.91.1.2.1.1.5"
"entSensorThresholdNotificationEnable"	"1.3.6.1.4.1.9.9.91.1.2.1.1.6"
"entitySensorMIBNotifications"	"1.3.6.1.4.1.9.9.91.2"
"entitySensorMIBCompliances"	"1.3.6.1.4.1.9.9.91.3.1"
"entitySensorMIBGroups"	"1.3.6.1.4.1.9.9.91.3.2"
"entitySensorMIBComplianceV01"	"1.3.6.1.4.1.9.9.91.3.1.1"
"entitySensorValueGroup"	"1.3.6.1.4.1.9.9.91.3.2.1"
"entitySensorThresholdGroup"	"1.3.6.1.4.1.9.9.91.3.2.2"

Overview of the OIDs in ENTITY-MIB

"org"	"1.3"
"dod"	"1.3.6"
"internet"	"1.3.6.1"
"directory"	"1.3.6.1.1"
"mgmt"	"1.3.6.1.2"
"experimental"	"1.3.6.1.4.1"
"private"	"1.3.6.1.4"
"enterprises"	"1.3.6.1.4.1"
"mib-2"	"1.3.6.1.2.1"
"entityMIB"	"1.3.6.1.2.1.47"
"entityMIBObjects"	"1.3.6.1.2.1.47.1"
"entityMIBTraps"	"1.3.6.1.2.1.47.2"
"entityConformance"	"1.3.6.1.2.1.47.3"
"entityPhysical"	"1.3.6.1.2.1.47.1.1"
"entityLogical"	"1.3.6.1.2.1.47.1.2"
"entityMapping"	"1.3.6.1.2.1.47.1.3"
"entityGeneral"	"1.3.6.1.2.1.47.1.4"
"entPhysicalTable"	"1.3.6.1.2.1.47.1.1.1"
"entPhysicalEntry"	"1.3.6.1.2.1.47.1.1.1.1"
"entPhysicalIndex"	"1.3.6.1.2.1.47.1.1.1.1.1"
"entPhysicalDescr"	"1.3.6.1.2.1.47.1.1.1.1.2"
"entPhysicalVendorType"	"1.3.6.1.2.1.47.1.1.1.1.3"
"entPhysicalContainedIn"	"1.3.6.1.2.1.47.1.1.1.1.4"
"entPhysicalClass"	"1.3.6.1.2.1.47.1.1.1.1.5"
"entPhysicalParentRelPos"	"1.3.6.1.2.1.47.1.1.1.1.6"
"entPhysicalName"	"1.3.6.1.2.1.47.1.1.1.1.7"
"entPhysicalHardwareRev"	"1.3.6.1.2.1.47.1.1.1.1.8"
"entPhysicalFirmwareRev"	"1.3.6.1.2.1.47.1.1.1.1.9"
"entPhysicalSoftwareRev"	"1.3.6.1.2.1.47.1.1.1.1.10"
"entPhysicalSerialNum"	"1.3.6.1.2.1.47.1.1.1.1.11"
"entPhysicalMfgName"	"1.3.6.1.2.1.47.1.1.1.1.12"
"entPhysicalModelName"	"1.3.6.1.2.1.47.1.1.1.1.13"
"entPhysicalAlias"	"1.3.6.1.2.1.47.1.1.1.1.14"
"entPhysicalAssetID"	"1.3.6.1.2.1.47.1.1.1.1.15"
"entPhysicalIsFRU"	"1.3.6.1.2.1.47.1.1.1.1.16"
"entLogicalTable"	"1.3.6.1.2.1.47.1.2.1"
"entLogicalEntry"	"1.3.6.1.2.1.47.1.2.1.1"
"entLogicalIndex"	"1.3.6.1.2.1.47.1.2.1.1.1"
"entLogicalDescr"	"1.3.6.1.2.1.47.1.2.1.1.2"
"entLogicalType"	"1.3.6.1.2.1.47.1.2.1.1.3"
"entLogicalCommunity"	"1.3.6.1.2.1.47.1.2.1.1.4"

```

"entLogicalTAddress"          "1.3.6.1.2.1.47.1.2.1.1.5"
"entLogicalTDomain"          "1.3.6.1.2.1.47.1.2.1.1.6"
"entLogicalContextEngineID"  "1.3.6.1.2.1.47.1.2.1.1.7"
"entLogicalContextName"     "1.3.6.1.2.1.47.1.2.1.1.8"
"entLPMappingTable"          "1.3.6.1.2.1.47.1.3.1"
"entAliasMappingTable"       "1.3.6.1.2.1.47.1.3.2"
"entPhysicalContainsTable"   "1.3.6.1.2.1.47.1.3.3"
"entLPMappingEntry"          "1.3.6.1.2.1.47.1.3.1.1"
"entLPPhysicalIndex"         "1.3.6.1.2.1.47.1.3.1.1.1"
"entAliasMappingEntry"       "1.3.6.1.2.1.47.1.3.2.1"
"entAliasLogicalIndexOrZero" "1.3.6.1.2.1.47.1.3.2.1.1"
"entAliasMappingIdentifier"   "1.3.6.1.2.1.47.1.3.2.1.2"
"entPhysicalContainsEntry"    "1.3.6.1.2.1.47.1.3.3.1"
"entPhysicalChildIndex"      "1.3.6.1.2.1.47.1.3.3.1.1"
"entLastChangeTime"          "1.3.6.1.2.1.47.1.4.1"
"entityMIBTrapPrefix"        "1.3.6.1.2.1.47.2"
"entityCompliances"          "1.3.6.1.2.1.47.3.1"
"entityGroups"                "1.3.6.1.2.1.47.3.2"
"entityCompliance"           "1.3.6.1.2.1.47.3.1.1"
"entity2Compliance"          "1.3.6.1.2.1.47.3.1.2"
"entityPhysicalGroup"         "1.3.6.1.2.1.47.3.2.1"
"entityLogicalGroup"         "1.3.6.1.2.1.47.3.2.2"
"entityMappingGroup"         "1.3.6.1.2.1.47.3.2.3"
"entityGeneralGroup"         "1.3.6.1.2.1.47.3.2.4"
"entityPhysical2Group"       "1.3.6.1.2.1.47.3.2.6"
"entityLogical2Group"        "1.3.6.1.2.1.47.3.2.7"
"entityNotificationsGroup"   "1.3.6.1.2.1.47.3.2.5"

```

Output of the show environment temperature Command Through the CLI

Note: You must be in enable mode in order to issue the **show environment temperature** command.

```

zatar> (enable)#show environment temperature

Slot                Intake           Exhaust           Device 1          Device 2
Temperature         Temperature      Temperature      Temperature      Temperature
-----
1                   19C(50C,65C)    28C(60C,75C)    21C               27C
2                   20C(50C,65C)    20C(60C,75C)    N/A               N/A
3                   16C(50C,65C)    25C(60C,75C)    26C(70C,85C)     N/A
4                   17C(50C,65C)    20C(60C,75C)    19C               24C
1 (Switch-Eng)     19C(50C,65C)    23C(60C,75C)    N/A               N/A
1 (MSFC)           24C(50C,65C)    29C(60C,75C)    N/A               N/A

Chassis Modules
-----
VTT1: 20C(85C,100C)
VTT2: 21C(85C,100C)
VTT3: 19C(85C,100C)
zatar> (enable)

```

Troubleshooting

Switch Sends ciscoEnvMonTemperatureStatusDescr=module[no]

The switch sends the SNMP ciscoEnvMonTemperatureStatusDescr=Module [no] message as a notification that the temperature that is measured at a given test point is outside the normal range for the test point. The range can be in one of these stages:

- Warning
- Critical

- **Shutdown**

The current status range option in the SNMP notification trap specifies in which of these three ranges of temperature the module lies. The check duration option in the SNMP notification trap specifies the time duration for which the temperature of the switch is above the normal range.

If the current status of the temperature at the test point of the module is at the shutdown stage, the switch automatically shuts down the module. The `ciscoEnvMonTemperatureStatusDescr = module[no]` messages are informational messages.

The suggested workaround to avoid unexpected issues is to ensure that the temperature around the switch is kept within the operational standards that the Module Specifications specify. See the Output of the show environment temperature Command Through the CLI section of this document in order to make this temperature determination. Also, be sure that the internal fans in the switch work normally.

Related Information

- **IP Application Services Design TechNotes**
- ***Environmental Monitoring* section of *Administering the Switch***
- **Technical Support & Documentation – Cisco Systems**

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