



## CHAPTER 7

# Environmental and Power Management

The Cisco 819 integrated services routers are equipped with sensors in the router body for monitoring the environment temperature and logging the temperature every 30 seconds. There are four sensors located on the four corners of the router chassis. There is an additional System Ambient sensor and a 3G sensor.

The corner sensors display the following message:

- Error message on the console—When the temperature ranges are outside the set temperature thresholds, the monitor displays an error message. Different temperature ranges are set for different SKUs of the router:
  - Cisco 819G (non-hardened): 0 to 60 degrees celsius
  - Cisco 819HG (hardened): –25 to 75 degrees celsius
- SNMP Traps—syslog messages are created when the temperature is outside the specified range.
- Server “call home” feature—The server callhome feature is already enabled to call Cisco TAC in the event of very high or low temperatures.

In addition to the corner sensors, the System Ambient and 3G sensors also log the temperature every 30 seconds onto bootflash memory.

Any time the temperature is above the high threshold, or lower than the low threshold, the temperature information will be saved in non-volatile memory region and is also displayed as part of this output.

Use the **show environment** command to check the temperature of the router. You can also use this command to display the power usage and the power consumption of the unit at the end.

The following is a sample output for the **show environment** command:

```
router# show environment
```

```
SYSTEM WATTAGE
=====
Board Power consumption is: 4.851 W
Power Supply Loss: 1.149 W
Total System Power consumption is: 6.000 W
```

```
REAL TIME CLOCK BATTERY STATUS
=====
Battery OK (checked at power up)
```

```
TEMPERATURE STATUS
=====
Sensor          Current          High/Low
Name            Temperature     Status          Threshold
-----
```

Sensor 1	36	Normal	60/0
Sensor 2	34	Normal	60/0
Sensor 3	40	Normal	60/0
Sensor 4	38	Normal	60/0
System Ambient Sensor	35	Normal	60/0
3G Modem Sensor	33	Normal	85/0

Environmental information last updated 00:00:26 ago


**Note**

If the modem temperature goes up to 85 degrees for non-hardened or 90 degrees for hardened version, a warning message appears. The router automatically shuts down if the temperature goes higher than 108 degrees.

## Cisco EnergyWise Support

The Cisco 819 ISRs have hardware and software features for reducing power consumption. The hardware features include high-efficiency AC power supplies and electrical components with built-in power saving features, such as RAM select and clock gating. For more information, see [Cisco 819 Integrated Services Router Hardware Installation Guide](#).

The software features include Cisco EnergyWise, a power efficiency management feature that powers down unused modules and disable unused clocks to the modules and peripherals on the router.

The Cisco 819 ISRs must be running Cisco IOS Release 15.0(1)M or later to support EnergyWise.

Detailed configuration procedures are included in [Cisco EnergyWise Configuration Guide, EnergyWise Phase 1](#) and [Cisco EnergyWise Configuration Guide, EnergyWise Phase 2](#).