



# CHAPTER 1

## Automatic Shutdown

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Under certain conditions, the Cisco ASR 1000 Series Aggregation Services Router or one of its power supplies can perform an automatic shutdown.

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- [Automatic Power Supply Shutdown, page 1-2](#)
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## Automatic Router Shutdown

When the router detects a condition that could result in physical damage to system components, the router can shut down without operator intervention. When the router shuts down automatically, the system controller disables DC power to all internal components. All DC power remains disabled until you toggle the power switch.

The default for automatic router shutdown is off. To allow automatic router shutdown, the **facility-alarm critical exceed-action shutdown** command must be enabled. If the **facility-alarm critical exceed-action shutdown** command is enabled, the router performs an automatic shutdown under the following conditions:

- [Internal Temperature of Router or Power Supply Exceeds Temperature Threshold, page 1-1](#)
- [Voltage of AC or DC Power Supplies Is Out of Tolerance, page 1-2](#)
- [Automatic Power Supply Shutdown, page 1-2](#)

## Internal Temperature of Router or Power Supply Exceeds Temperature Threshold

A temperature threshold is exceeded if any of the following conditions occur:

- The internal temperature of the router (the ambient air temperature on the active Cisco ASR 1000 Series Route Processor) is over 100° C.
- The internal temperature of the AC power supply is over 100° C.
- The internal temperature of the DC power supply is over 100° C.




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**Note** Temperature threshold values cannot be configured or changed.

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## Voltage of AC or DC Power Supplies Is Out of Tolerance

The voltage of a power supply must be within certain ranges (within tolerance). A power supply is out of tolerance if voltage is outside of the following ranges:

- AC input range: 85 VAC to 264 VAC
- DC input range: -40.5 VDC to -72 VDC




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**Note** Voltage tolerance ranges cannot be configured or changed.

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## Automatic Power Supply Shutdown

Automatic power supply shutdown occurs independently of a router shutdown. If the internal temperature of a power supply exceeds 100° C, the power supply shuts down immediately. The **facility-alarm critical exceed-action shutdown** command does not need to be enabled.

Each power supply fail safe is independent of the other and independent of the router. The fans in the power supplies continue to operate as long as the second power entry module (PEM) is powering the system.

## For More Information

For more information about the topics discussed in this chapter, see the following documents:

Topic	Document
Command descriptions	<a href="#">Cisco IOS Master Command List, All Releases</a> <a href="#">Command Lookup Tool</a> (Requires Cisco.com user ID and password)
Environmental monitoring and reporting	“Environmental Monitoring and Reporting” section in the “Cisco ASR 1000 Series Routers Hardware Overview” chapter in the <i>Cisco ASR 1000 Series Router Hardware Installation Guide</i>