



# SNMP Inform Request

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The Simple Network Management Protocol (SNMP) Inform Requests feature allows devices to send inform requests to SNMP managers.

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## Finding Feature Information

Your software release may not support all the features documented in this module. For the latest caveats and feature information, see [Bug Search Tool](#) and the release notes for your platform and software release. To find information about the features documented in this module, and to see a list of the releases in which each feature is supported, see the feature information table.

Use Cisco Feature Navigator to find information about platform support and Cisco software image support. To access Cisco Feature Navigator, go to [www.cisco.com/go/cfn](http://www.cisco.com/go/cfn). An account on Cisco.com is not required.

## Information About SNMP Inform Requests

### SNMP Inform Request

The SNMP Inform Request feature supports sending inform requests. SNMP asynchronous notifications are usually sent as SNMP traps.

Traps are less reliable than informs because an acknowledgment is not sent from the receiving end when a trap is received; however, an SNMP manager that receives an inform acknowledges the message with an SNMP response PDU. If the sender does not receive a response for an inform, the inform can be sent again.

# How to Configure SNMP Inform Requests

## Configuring Devices to Send Traps

Perform the following task to configure the device to send traps to a host in global configuration mode:

### SUMMARY STEPS

1. `enable`
2. `configure terminal`
3. `snmp-server host host[version {1|2c}]community-string[udp-port port][notification-type]`
4. `snmp-server enable traps[ notification-type] [notification-option]`
5. `end`

### DETAILED STEPS

	Command or Action	Purpose
<b>Step 1</b>	<code>enable</code>  <b>Example:</b> Device> <code>enable</code>	Enables privileged EXEC mode.  <ul style="list-style-type: none"> <li>• Enter your password if prompted.</li> </ul>
<b>Step 2</b>	<code>configure terminal</code>  <b>Example:</b> Device# <code>configure terminal</code>	Enters global configuration mode.
<b>Step 3</b>	<code>snmp-server host host[version {1 2c}]community-string[udp-port port][notification-type]</code>  <b>Example:</b> Device(config)# <code>snmp-server host 10.10.10.10 version 1 public udp-port 2012</code>	Specifies the recipient of the trap message.
<b>Step 4</b>	<code>snmp-server enable traps[ notification-type] [notification-option]</code>  <b>Example:</b> Device(config)# <code>snmp-server enable traps alarms 3</code>	Globally enables the trap production mechanism for the specified traps. <b>Note</b> Some traps are not controlled by the <code>snmp-server enable traps</code> command. These traps are either enabled by default or controlled through other commands. For example, by default, SNMP link traps are sent when an interface goes up or down. For interfaces expected to go up and down during normal usage, such as ISDN interfaces, the output generated by

	Command or Action	Purpose
		these traps may not be useful. Use the <b>nosnmptrapslink-status</b> interface configuration command to disable these traps. In order for a host to receive a trap, an <b>snmp-serverhost</b> command must be configured for that host, and the trap must be enabled globally through the <b>snmp-serverenabletraps</b> command, through a different command, such as <b>snmptrapslink-status</b> , or by default.
<b>Step 5</b>	<b>end</b>  <b>Example:</b> Device(config)# <b>end</b>	Exits global configuration mode.

## Changing Inform Operation Values

Perform the following optional task in global configuration mode to change inform operation values:

### SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **snmp-server informs** [retries *retries*] [timeout *seconds*] [**pending** *pending*]
4. **snmp-server trap-source** *interface*
5. **end**

### DETAILED STEPS

	Command or Action	Purpose
<b>Step 1</b>	<b>enable</b>  <b>Example:</b> Device> <b>enable</b>	Enables privileged EXEC mode.  • Enter your password if prompted.
<b>Step 2</b>	<b>configure terminal</b>  <b>Example:</b> Device# <b>configure terminal</b>	Enters global configuration mode.
<b>Step 3</b>	<b>snmp-server informs</b> [retries <i>retries</i> ] [timeout <i>seconds</i> ] [ <b>pending</b> <i>pending</i> ]	Configures inform-specific operation values.  • This example sets the maximum number of times to resend an inform, the number of seconds to wait for an

	Command or Action	Purpose
	<b>Example:</b> Device(config)# <b>snmp-server informs retries 10 timeout 30 pending 100</b>	acknowledgment before resending, and the maximum number of informs waiting for acknowledgments at any one time.
<b>Step 4</b>	<b>snmp-server trap-source</b> <i>interface</i>  <b>Example:</b> Device(config)# <b>snmp-server trap-source GigabitEthernet 1/2/1</b>	This example sets the IP address for the Fast Ethernet interface in slot2, port 1 as the source for all SNMP notifications.
<b>Step 5</b>	<b>end</b>  <b>Example:</b> Device(config)# <b>end</b>	Exits global configuration mode.

## Configuration Examples for SNMP Inform Request

### Example: Configuring SNMP Inform Request

The following configuration example shows how to configure the SNMP Inform Request feature for SNMPv1 or SNMPv2:

The following example sends the SNMP and Cisco environmental monitor enterprise-specific traps to address 172.30.2.160:

```
Device(config)# snmp-server enable traps
Device(config)# snmp-server host 172.30.2.160 public snmp envmon
```

The following example enables the device to send all traps to the host myhost.example.com using the community string public:

```
Device(config)# snmp-server enable traps
Device(config)# snmp-server host myhost.example.com public
```

The following example will not send traps to any host. The BGP traps are enabled for all hosts, but only the ISDN traps are enabled to be sent to a host.

```
Device(config)# snmp-server enable traps bgp
Device(config)# snmp-server host bob public isdn
```

The following example enables the device to send all inform requests to the host myhost.example.com using the community string public:

```
Device(config)# snmp-server enable traps
Device(config)# snmp-server host myhost.example.com informs version 2c public
```

# Additional References

## Related Documents

Related Topic	Document Title
Cisco IOS commands	<a href="#">Cisco IOS Master Command List, All Releases</a>
SNMP commands: complete command syntax, command mode, command history, defaults, usage guidelines, and examples	<a href="#">Cisco IOS SNMP Command Reference</a>
Cisco implementation of RFC 1724, RIP Version 2 MIB Extensions	<a href="#">RIPv2 Monitoring with SNMP Using the RFC 1724 MIB Extensions</a> feature module
DSP Operational State Notifications for notifications to be generated when a digital signaling processor (DSP) is used	<a href="#">DSP Operational State Notifications</a> feature module

## Standards and RFCs

Standard/RFC	Title
CBC-DES (DES-56) standard	<i>Symmetric Encryption Protocol</i>
STD: 58	<i>Structure of Management Information Version 2 (SMIv2)</i>
RFC 1067	<i>A Simple Network Management Protocol</i>
RFC 1091	<i>Telnet terminal-type option</i>
RFC 1098	<i>Simple Network Management Protocol (SNMP)</i>
RFC 1157	<i>Simple Network Management Protocol (SNMP)</i>
RFC 1213	<i>Management Information Base for Network Management of TCP/IP-based internets:MIB-II</i>
RFC 1215	<i>Convention for defining traps for use with the SNMP</i>
RFC 1901	<i>Introduction to Community-based SNMPv2</i>
RFC 1905	<i>Common Management Information Services and Protocol over TCP/IP (CMOT)</i>
RFC 1906	<i>Telnet X Display Location Option</i>
RFC 1908	<i>Simple Network Management Protocol (SNMP)</i>

<b>Standard/RFC</b>	<b>Title</b>
RFC 2104	<i>HMAC: Keyed-Hashing for Message Authentication</i>
RFC 2206	<i>RSVP Management Information Base using SMIPv2</i>
RFC 2213	<i>Integrated Services Management Information Base using SMIPv2</i>
RFC 2214	<i>Integrated Services Management Information Base Guaranteed Service Extensions using SMIPv2</i>
RFC 2271	<i>An Architecture for Describing SNMP Management Frameworks</i>
RFC 2570	<i>Introduction to Version 3 of the Internet-standard Network Management Framework</i>
RFC 2578	<i>Structure of Management Information Version 2 (SMIPv2)</i>
RFC 2579	<i>Textual Conventions for SMIPv2</i>
RFC 2580	<i>Conformance Statements for SMIPv2</i>
RFC 2981	<i>Event MIB</i>
RFC 2982	<i>Distributed Management Expression MIB</i>
RFC 3413	<i>SNMPv3 Applications</i>
RFC 3415	<i>View-based Access Control Model (VACM) for the Simple Network Management Protocol (SNMP)</i>
RFC 3418	<i>Management Information Base (MIB) for the Simple Network Management Protocol (SNMP)</i>

**MIBs**

MIB	MIBs Link
<ul style="list-style-type: none"> <li>• Circuit Interface Identification MIB</li> <li>• Cisco SNMPv2</li> <li>• Ethernet-like Interfaces MIB</li> <li>• Event MIB</li> <li>• Expression MIB Support for Delta, Wildcarding, and Aggregation</li> <li>• Interfaces Group MIB (IF-MIB)</li> <li>• Interfaces Group MIB Enhancements</li> <li>• MIB Enhancements for Universal Gateways and Access Servers</li> <li>• MSDP MIB</li> <li>• NTP MIB</li> <li>• Response Time Monitor MIB</li> <li>• Virtual Switch MIB</li> </ul>	<p>To locate and download MIBs for selected platforms, releases, and feature sets, use Cisco MIB Locator found at the following URL:</p> <p><a href="http://www.cisco.com/go/mibs">http://www.cisco.com/go/mibs</a></p>

**Technical Assistance**

Description	Link
<p>The Cisco Support and Documentation website provides online resources to download documentation, software, and tools. Use these resources to install and configure the software and to troubleshoot and resolve technical issues with Cisco products and technologies. Access to most tools on the Cisco Support and Documentation website requires a Cisco.com user ID and password.</p>	<p><a href="http://www.cisco.com/cisco/web/support/index.html">http://www.cisco.com/cisco/web/support/index.html</a></p>

## Feature Information for SNMP Inform Request

The following table provides release information about the feature or features described in this module. This table lists only the software release that introduced support for a given feature in a given software release train. Unless noted otherwise, subsequent releases of that software release train also support that feature.

Use Cisco Feature Navigator to find information about platform support and Cisco software image support. To access Cisco Feature Navigator, go to [http://www.cisco.com/go/featurenavigator](#). An account on Cisco.com is not required.

**Table 1: Feature Information for SNMP Inform Request**

Feature Name	Releases	Feature Information
SNMP Inform Request		The SNMP Inform Request feature supports sending inform requests. SNMP asynchronous notifications are usually sent as SNMP traps. Traps are less reliable than informs because an acknowledgment is not sent from the receiving end when a trap is received; however, an SNMP manager that receives an inform acknowledges the message with an SNMP response PDU. If the sender does not receive a response for an inform, the inform can be sent again.