



# CHAPTER 1

## Configuring Call Home

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This chapter describes how to configure the Call Home feature in Catalyst 4500 Series Switch.

This chapter includes the following sections:

- [About Call Home, page 1-2](#)
- [Obtaining Smart Call Home, page 1-2](#)
- [Configuring Call Home, page 1-3](#)
- [Configuring Contact Information, page 1-4](#)
- [Configuring Destination Profiles, page 1-5](#)
- [Subscribing to Alert Groups, page 1-6](#)
- [Configuring General E-Mail Options, page 1-9](#)
- [Enabling Call Home, page 1-10](#)
- [Testing Call Home Communications, page 1-10](#)
- [Configuring and Enabling Smart Call Home, page 1-13](#)
- [Displaying Call Home Configuration Information, page 1-14](#)
- [Call Home Default Settings, page 1-18](#)
- [Alert Group Trigger Events and Commands, page 1-18](#)
- [Message Contents, page 1-21](#)



### Note

For complete syntax and usage information for the switch commands used in this chapter, see the *Cisco Catalyst 4500 Series Switch Command Reference* and related publications at this location:

<http://www.cisco.com/en/US/products/hw/switches/ps4324/index.html>

If a command is not in the *Catalyst 4500 Series Switch Command Reference*, you can locate it in the Cisco IOS library. See the *Cisco IOS Command Reference* and related publications at this location:

<http://www.cisco.com/en/US/products/ps6350/index.html>

# About Call Home

Call Home provides e-mail-based and web-based notification of critical system events. A versatile range of message formats are available for optimal compatibility with pager services, standard e-mail, or XML-based automated parsing applications. Common uses of this feature may include direct paging of a network support engineer, e-mail notification to a Network Operations Center, XML delivery to a support website, and utilization of Cisco Smart Call Home services for direct case generation with the Cisco Systems Technical Assistance Center (TAC).

The Call Home feature can deliver alert messages containing information on configuration, diagnostics, environmental conditions, inventory, and syslog events.

The Call Home feature can deliver alerts to multiple recipients, referred to as *Call Home destination profiles*, each with configurable message formats and content categories. A predefined destination profile is provided for sending alerts to the Cisco TAC (callhome@cisco.com), and you also can define your own destination profiles.

Flexible message delivery and format options make it easy to integrate specific support requirements.

The Call Home feature offers the following advantages:

- Multiple message-format options:
  - Short Text—Suitable for pagers or printed reports.
  - Plain Text—Full formatted message information suitable for human reading.
  - XML—Matching readable format using Extensible Markup Language (XML) and Adaptive Markup Language (AML) document type definitions (DTDs). The XML format enables communication with the Cisco TAC.
- Multiple concurrent message destinations.
- Multiple message categories including configuration, diagnostics, environmental conditions, inventory, and syslog events.
- Filtering of messages by severity and pattern matching.
- Scheduling of periodic message sending.

## Obtaining Smart Call Home

If you have a service contract directly with Cisco Systems, you can register your devices for the Smart Call Home service. Smart Call Home provides fast resolution of system problems by analyzing Call Home messages sent from your devices and providing background information and recommendations. For issues that can be identified as known, particularly GOLD diagnostics failures, Automatic Service Requests will be generated with the Cisco TAC.

Smart Call Home offers the following features:

- Boot-up diagnostics alerts for line cards and supervisor engines in the chassis.
- Analysis of Call Home messages from your device, and where appropriate Automatic Service Request generation, routed to the appropriate TAC team, including detailed diagnostic information to speed problem resolution.
- Secure message transport directly from your device or through a downloadable Transport Gateway (TG) aggregation point. You can use a TG aggregation point in cases requiring support for multiple devices or in cases where security requirements mandate that your devices may not be connected directly to the Internet.

- Web-based access to Call Home messages and recommendations, inventory and configuration information for all Call Home devices. Provides access to associated field notices, Security Advisories, and End-of-Life information.

You need to register the following items:

- The SMARTnet contract number for your switch
- Your e-mail address
- Your Cisco.com ID

For detailed information on Smart Call Home, refer to the Smart Call Home page at this URL:

[http://supportforums.cisco.com/community/netpro/solutions/smart\\_services/smartcallhome](http://supportforums.cisco.com/community/netpro/solutions/smart_services/smartcallhome)

## Configuring Call Home

How you configure Call Home depends on how you intend to use the feature. Consider the following information before you configure Call Home:

- At least one destination profile (predefined or user-defined) must be configured. The destination profile(s) used depends on whether the receiving entity is a pager, e-mail, or automated service such as Cisco Smart Call Home.
  - If the destination profile uses e-mail message delivery, you must specify a Simple Mail Transfer Protocol (SMTP) server.
  - If the destination profile uses secure HTTP (HTTPS) message transport, you must configure a trustpoint certificate authority (CA).
- The contact e-mail, phone, and street address information should be configured so that the receiver can determine the origin of messages received.
- The switch must have IP connectivity to an e-mail server or the destination HTTP server using the **ip domain name** command.
- If Cisco Smart Call Home is used, an active service contract must cover the device being configured.

To configure Call Home, follow these steps:

- 
- Step 1** Configure your site's contact information.
  - Step 2** Configure destination profiles for each of your intended recipients.
  - Step 3** Subscribe each destination profile to one or more alert groups, and set alert options.
  - Step 4** Configure e-mail settings or HTTPS settings (including CA certificate), depending on the transport method.
  - Step 5** Enable the Call Home feature.
  - Step 6** Test Call Home messages.
- 



### Tip

From the Smart Call Home web application, you can download a basic configuration script to assist you in the configuration of the Call Home feature for use with Smart Call Home and the Cisco TAC. The script will also assist in configuring the trustpoint CA for secure communications with the Smart Call

Home service. The script, provided on an as-is basis, can be downloaded from this URL:

[http://supportforums.cisco.com/community/netpro/solutions/smart\\_services/smartcallhome](http://supportforums.cisco.com/community/netpro/solutions/smart_services/smartcallhome)

## Configuring Contact Information

Each switch must include a contact e-mail address. You can optionally include a phone number, street address, contract ID, customer ID, and site ID.

To assign the contact information, perform this task:

	Command	Purpose
<b>Step 1</b>	Switch# <b>configure terminal</b>	Enters configuration mode.
<b>Step 2</b>	Switch(config)# <b>call-home</b>	Enters the Call Home configuration submode.
<b>Step 3</b>	Switch(cfg-call-home)# <b>contact-email-addr</b> <i>email-address</i>	Assigns the customer's e-mail address. Enter up to 200 characters in e-mail address format with no spaces.
<b>Step 4</b>	Switch(cfg-call-home)# <b>phone-number</b> <i>+phone-number</i>	(Optional) Assigns the customer's phone number.  <b>Note</b> The number must begin with a plus (+) prefix, and may contain only dashes (-) and numbers. Enter up to 16 characters. If you include spaces, you must enclose your entry in quotes ("").
<b>Step 5</b>	Switch(cfg-call-home)# <b>street-address</b> <i>street-address</i>	(Optional) Assigns the customer's street address where RMA equipment can be shipped. Enter up to 200 characters. If you include spaces, you must enclose your entry in quotes ("").
<b>Step 6</b>	Switch(cfg-call-home)# <b>customer-id</b> <i>text</i>	(Optional) Identifies the customer ID. Enter up to 64 characters. If you include spaces, you must enclose your entry in quotes ("").
<b>Step 7</b>	Switch(cfg-call-home)# <b>site-id</b> <i>text</i>	(Optional) Identifies the customer site ID. Enter up to 200 characters. If you include spaces, you must enclose your entry in quotes ("").
<b>Step 8</b>	Switch(cfg-call-home)# <b>contract-id</b> <i>text</i>	(Optional) Identifies the customer's contract ID for the switch. Enter up to 64 characters. If you include spaces, you must enclose your entry in quotes ("").

This example shows the configuration of contact information:

```
Switch# configure terminal
```

```

Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)# call-home
Switch(cfg-call-home)# contact-email-addr username@example.com
Switch(cfg-call-home)# phone-number +1-800-555-4567
Switch(cfg-call-home)# street-address "1234 Picaboo Street, Any city, Any state, 12345"
Switch(cfg-call-home)# customer-id Customer1234
Switch(cfg-call-home)# site-id Site1ManhattanNY
Switch(cfg-call-home)# contract-id Company1234
Switch(cfg-call-home)# exit
Switch(config)#

```

## Configuring Destination Profiles

A destination profile contains the required delivery information for an alert notification. At least one destination profile is required. You can configure multiple destination profiles of one or more types.

You can use the predefined destination profile or define a desired profile. If you define a new destination profile, you must assign a profile name.



### Note

If you use the Cisco Smart Call Home service, the destination profile must use the XML message format.

You can configure the following attributes for a destination profile:

- Profile name—A string that uniquely identifies each user-defined destination profile. The profile name is limited to 31 characters and is not case-sensitive. You cannot use **all** as a profile name.
- Transport method—The transport mechanism, either e-mail or HTTP (including HTTPS), for delivery of alerts.
  - For user-defined destination profiles, e-mail is the default, and you can enable either or both transport mechanisms. If you disable both methods, e-mail will be enabled.
  - For the predefined Cisco TAC profile, you can enable either transport mechanism, but not both.
- Destination address—The actual address related to the transport method to which the alert should be sent.
- Message formatting—The message format used for sending the alert.
  - For user-defined destination profiles, the format options are long-text, short-text, or XML. The default is XML.
  - For the predefined Cisco TAC profile, only XML is allowed.
- Message size—The maximum destination message size. The valid range is 50 to 3,145,728 bytes and the default is 3,145,728 bytes.

To create and configure a destination profile, perform this task:

	Command	Purpose
Step 1	Switch# <b>configure terminal</b>	Enters configuration mode.
Step 2	Switch(config)# <b>call-home</b>	Enters the Call Home configuration submode.
Step 3	Switch(cfg-call-home)# <b>profile</b> <i>name</i>	Enters the Call Home destination profile configuration submode for the specified destination profile. If the specified destination profile does not exist, it is created.
Step 4	Switch(cfg-call-home-profile)# [ <b>no</b> ] <b>destination transport-method</b> { <b>email</b>   <b>http</b> }	(Optional) Enables the message transport method. The <b>no</b> option disables the method.

	Command	Purpose
Step 5	Switch(cfg-call-home-profile)# <b>destination address</b> { <b>email</b> <i>email-address</i>   <b>http</b> <i>url</i> }	Configures the destination e-mail address or URL to which Call Home messages will be sent.  <b>Note</b> When entering a destination URL, include either <b>http://</b> or <b>https://</b> , depending on whether the server is a secure server. If the destination is a secure server, you must also configure a trustpoint CA.
Step 6	Switch(cfg-call-home-profile)# <b>destination preferred-msg-format</b> { <b>long-text</b>   <b>short-text</b>   <b>xml</b> }	(Optional) Configures a preferred message format. The default is XML.
Step 7	Switch(cfg-call-home-profile)# <b>destination message-size-limit</b> <i>bytes</i>	(Optional) Configures a maximum destination message size for the destination profile.
Step 8	Switch(cfg-call-home-profile)# <b>active</b>	Enables the destination profile. By default, the profile is enabled when it is created.
Step 9	Switch(cfg-call-home-profile)# <b>exit</b>	Exits the Call Home destination profile configuration submode and returns to the Call Home configuration submode.
Step 10	Switch(cfg-call-home)# <b>end</b>	Returns to privileged EXEC mode.
Step 11	Switch# <b>show call-home profile</b> { <i>name</i>   <b>all</b> }	Displays the destination profile configuration for a specified profile or all configured profiles.

## Copying a Destination Profile

To create a new destination profile by copying an existing profile, perform this task:

	Command	Purpose
Step 1	Switch# <b>configure terminal</b>	Enters configuration mode.
Step 2	Switch(config)# <b>call-home</b>	Enters the Call Home configuration submode.
Step 3	Switch(cfg-call-home)# <b>copy profile</b> <i>source-profile target-profile</i>	Creates a new destination profile with the same configuration settings as the existing destination profile.

## Subscribing to Alert Groups

An alert group is a predefined subset of Call Home alerts supported on the switch. Different types of Call Home alerts are grouped into different alert groups depending on their type. These alert groups are available:

- Configuration
- Diagnostic
- Environment
- Inventory
- Syslog

The triggering events for each alert group are listed in the [“Alert Group Trigger Events and Commands” section on page 1-18](#), and the contents of the alert group messages are listed in the [“Message Contents” section on page 1-21](#).

You can select one or more alert groups to be received by a destination profile.

**Note**

A Call Home alert is only sent to destination profiles that have subscribed to the alert group containing that Call Home alert. In addition, the alert group must be enabled.

To subscribe a destination profile to an alert group, perform this task:

	<b>Command</b>	<b>Purpose</b>
<b>Step 1</b>	Switch# <b>configure terminal</b>	Enters configuration mode.
<b>Step 2</b>	Switch(config)# <b>call-home</b>	Enters Call Home configuration submode.
<b>Step 3</b>	Switch(cfg-call-home)# <b>alert-group</b> { <b>all</b>   <b>configuration</b>   <b>diagnostic</b>   <b>environment</b>   <b>inventory</b>   <b>syslog</b> }	Enables the specified alert group. Use the keyword <b>all</b> to enable all alert groups. By default, all alert groups are enabled.
<b>Step 4</b>	Switch(cfg-call-home)# <b>profile name</b>	Enters the Call Home destination profile configuration submode for the specified destination profile.
<b>Step 5</b>	Switch(cfg-call-home-profile)# <b>subscribe-to-alert-group configuration</b> [ <b>periodic</b> { <b>daily</b> <i>hh:mm</i>   <b>monthly</b> <i>date hh:mm</i>   <b>weekly</b> <i>day hh:mm</i> }]	Subscribes this destination profile to the Configuration alert group. The Configuration alert group can be configured for periodic notification, as described in the “ <a href="#">Configuring Periodic Notification</a> ” section on page 1-8.
	Switch(cfg-call-home-profile)# <b>subscribe-to-alert-group all</b>	Subscribes to all available alert groups.
<b>Step 6</b>	Switch(cfg-call-home-profile)# <b>subscribe-to-alert-group diagnostic</b> [ <b>severity catastrophic</b>   <b>disaster</b>   <b>fatal</b>   <b>critical</b>   <b>major</b>   <b>minor</b>   <b>warning</b>   <b>notification</b>   <b>normal</b>   <b>debugging</b> ]	Subscribes this destination profile to the Diagnostic alert group. The Diagnostic alert group can be configured to filter messages based on severity, as described in the “ <a href="#">Configuring Message Severity Threshold</a> ” section on page 1-8.
<b>Step 7</b>	Switch(cfg-call-home-profile)# <b>subscribe-to-alert-group environment</b> [ <b>severity catastrophic</b>   <b>disaster</b>   <b>fatal</b>   <b>critical</b>   <b>major</b>   <b>minor</b>   <b>warning</b>   <b>notification</b>   <b>normal</b>   <b>debugging</b> ]	Subscribes this destination profile to the Environment alert group. The Environment alert group can be configured to filter messages based on severity, as described in the “ <a href="#">Configuring Message Severity Threshold</a> ” section on page 1-8.
<b>Step 8</b>	Switch(cfg-call-home-profile)# <b>subscribe-to-alert-group inventory</b> [ <b>periodic</b> { <b>daily</b> <i>hh:mm</i>   <b>monthly</b> <i>date hh:mm</i>   <b>weekly</b> <i>day hh:mm</i> }]	Subscribes this destination profile to the Inventory alert group. The Inventory alert group can be configured for periodic notification, as described in the “ <a href="#">Configuring Periodic Notification</a> ” section on page 1-8.

	Command	Purpose
Step 9	<pre>Switch(cfg-call-home-profile)# <b>subscribe-to-alert-group</b> <b>syslog</b> [<b>severity catastrophic disaster  fatal critical major minor warning  notification normal debugging</b>] [<b>pattern string</b>]</pre>	Subscribes this destination profile to the Syslog alert group. The Syslog alert group can be configured to filter messages based on severity, as described in the “Configuring Message Severity Threshold” section on page 1-8. You can specify a pattern to be matched in the syslog message. If the pattern contains spaces, you must enclose it in quotes (“”).
Step 10	<pre>Switch(cfg-call-home-profile)# <b>exit</b></pre>	Exits the Call Home destination profile configuration submenu.

## Configuring Periodic Notification

When you subscribe a destination profile to either the Configuration or the Inventory alert group, you can choose to receive the alert group messages asynchronously or periodically at a specified time. The sending period can be one of the following:

- Daily—Specify the time of day to send, using an hour:minute format *hh:mm*, with a 24-hour clock (for example, 14:30).
- Weekly—Specify the day of the week and time of day in the format *day hh:mm*, where the day of the week is spelled out (for example, monday).
- Monthly—Specify the numeric date, from 1 to 31, and the time of day, in the format *date hh:mm*.

## Configuring Message Severity Threshold

When you subscribe a destination profile to the Diagnostic, Environment, or Syslog alert group, you can set a threshold for sending alert group messages based on the message’s level of severity. Any message with a value lower than the threshold is not sent to the destination.

The severity threshold is configured using the keywords in [Table 1-1](#), and ranges from catastrophic (level 9, highest level of urgency) to debugging (level 0, lowest level of urgency). If no severity threshold is configured, the default is normal (level 1).



### Note

Call Home severity levels differ from the system message logging severity levels.

**Table 1-1** Severity and Syslog Level Mapping

Level	Keyword	Syslog Level	Description
9	<b>catastrophic</b>	N/A	Network-wide catastrophic failure
8	<b>disaster</b>	N/A	Significant network impact
7	<b>fatal</b>	Emergency (0)	System unusable
6	<b>critical</b>	Alert (1)	Critical conditions, immediate attention needed
5	<b>major</b>	Critical (2)	Major conditions
4	<b>minor</b>	Error (3)	Minor conditions
3	<b>warning</b>	Warning (4)	Warning conditions



Table 1-1 Severity and Syslog Level Mapping (continued)

Level	Keyword	Syslog Level	Description
2	<b>notification</b>	Notice (5)	Basic notification and informational messages; possibly independently insignificant
1	<b>normal</b>	Information (6)	Normal event signifying return to normal state
0	<b>debugging</b>	Debug (7)	Debugging messages

## Configuring Syslog Pattern Matching

When you subscribe a destination profile to the Syslog alert group, you can optionally specify a text pattern to be matched within each syslog message. If you configure a pattern, a Syslog alert group message will be sent only if it contains the specified pattern and meets the severity threshold. If the pattern contains spaces, you must enclose it in quotes (“”) when configuring it. You can specify up to five patterns for each destination profile.

## Configuring General E-Mail Options

To use the e-mail message transport, you must configure at least one Simple Mail Transfer Protocol (SMTP) e-mail server address. You can configure the from and reply-to e-mail addresses, and you can specify up to four backup e-mail servers. You can also set a rate limit on e-mail or HTTP messages.

Starting with Cisco IOS Release 15.0(2)SG, you can configure the vrf and source interface or source IP address to send the e-mail messages. If you want to configure similar options to send http messages, you must enter the **ip http client source-interface** *interface-name* command where the source-interface can be associated with the vrf you want to set.

To configure general e-mail options, perform this task:

	Command	Purpose
<b>Step 1</b>	Switch# <b>configure terminal</b>	Enters configuration mode.
<b>Step 2</b>	Switch(config)# <b>call-home</b>	Enters Call Home configuration submode.
<b>Step 3</b>	Switch(cfg-call-home)# <b>mail-server</b> { <i>ipv4-address</i>   <i>name</i> } <b>priority number</b>	Assigns an e-mail server address and its relative priority among configured e-mail servers.  Provide either of these: <ul style="list-style-type: none"> <li>The e-mail server’s IP address</li> <li>The e-mail server’s fully qualified domain <i>name</i> (FQDN) of 64 characters or less.</li> </ul> Assign a priority <i>number</i> between 1 (highest priority) and 100 (lowest priority).
<b>Step 4</b>	Switch(cfg-call-home)# <b>sender from</b> <i>email-address</i>	(Optional) Assigns the e-mail address that will appear in the from field in Call Home e-mail messages. If no address is specified, the contact e-mail address is used.
<b>Step 5</b>	Switch(cfg-call-home)# <b>sender reply-to</b> <i>email-address</i>	(Optional) Assigns the e-mail address that will appear in the reply-to field in Call Home e-mail messages.
<b>Step 6</b>	Switch(cfg-call-home)# <b>rate-limit</b> <i>number</i>	(Optional) Specifies a limit on the number of messages sent per minute, from 1 to 60. The default is 20.

	Command	Purpose
Step 7	Switch(cfg-call-home)# <b>vrf</b> <i>vrf-name</i>	(Optional) Specifies the VRF instance to send Call Home e-mail messages. If no VRF is specified, the global routing table is used.
Step 8	Switch(cfg-call-home)# <b>source-interface</b> <i>interface-name</i>	(Optional) Specifies the source interface name to send Call Home e-mail messages. If no source interface name or source ip address is specified, an interface in the routing table is used.
Step 9	Switch(cfg-call-home)# <b>source-ip-address</b> <i>ip-address</i>	(Optional) Specifies the source IP address to send Call Home e-mail messages. If no source IP address or source interface name is specified, an interface in the routing table is used.  <b>Note</b> At one time, you can specify the source-interface name or the source-ip-address, but not both.

The following notes apply when configuring general e-mail options:

- Backup e-mail servers can be defined by repeating the **mail-server** command using different priority numbers.
- The **mail-server priority number** parameter can be configured from 1 to 100. The server with the highest priority (lowest priority number) will be tried first.

This example shows the configuration of general e-mail parameters, including a primary and secondary e-mail server:

```
Switch# configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)# call-home
Switch(cfg-call-home)# mail-server smtp.example.com priority 1
Switch(cfg-call-home)# mail-server 192.168.0.1 priority 2
Switch(cfg-call-home)# sender from username@example.com
Switch(cfg-call-home)# sender reply-to username@example.com
Switch(cfg-call-home)# exit
Switch(config)#
```

## Enabling Call Home

To enable or disable the Call Home feature, perform this task:

	Command	Purpose
Step 1	Switch# <b>configure terminal</b>	Enters configuration mode.
Step 2	Switch(config)# <b>service call-home</b>	Enables the Call Home feature.

## Testing Call Home Communications

You can test Call Home communications by sending messages manually using two command types.

- To send a user-defined Call Home test message, use the **call-home test** command.
- To send a specific alert group message, use the **call-home send** command.

## Sending a Call Home Test Message Manually

To manually send a Call Home test message, perform this task:

	Command	Purpose
Step 1	Switch# <b>call-home test</b> [ <i>test-message</i> ] <b>profile</b> <i>name</i>	Sends a test message to the specified destination profile. The user-defined test message text is optional, but must be enclosed in quotes (“”) if it contains spaces. If no user-defined message is configured, a default message will be sent.

This example shows how to manually send a Call Home test message:

```
Switch# call-home test "test of the day" profile Ciscotacl
```

## Sending a Call Home Alert Group Message Manually

To manually trigger a Call Home alert group message, perform this task:

	Command	Purpose
Step 1	Switch# <b>call-home send alert-group</b> <b>configuration</b> [ <b>profile</b> <i>name</i> ]	Sends a configuration alert group message to one destination profile if specified, or to all subscribed destination profiles.
	Switch# <b>call-home send alert-group</b> <b>diagnostic</b> { <b>module</b> <i>number</i>   <i>slot/subslot</i>   <i>slot/bay</i> } [ <b>profile</b> <i>name</i> ]	Sends a diagnostic alert group message to the configured destination profile if specified, or to all subscribed destination profiles. You must specify the module or port whose diagnostic information should be sent.
	Switch# <b>call-home send alert-group</b> <b>inventory</b> [ <b>profile</b> <i>name</i> ]	Sends an inventory alert group message to one destination profile if specified, or to all subscribed destination profiles.

When manually sending Call Home alert group messages, note the following guidelines:

- You can only manually send the configuration, diagnostic, and inventory alert groups.
- When you manually trigger a configuration, diagnostic, or inventory alert group message and you specify a destination profile name, a message is sent to the destination profile regardless of the profile's active status, subscription status, or severity setting.
- When you manually trigger a configuration or inventory alert group message and do not specify a destination profile name, a message is sent to all active profiles that have either a normal or periodic subscription to the specified alert group.
- When you manually trigger a diagnostic alert group message and do not specify a destination profile name, the command will cause the following actions:
  - For any active profile that subscribes to diagnostic events with a severity level of less than minor, a message is sent regardless of whether the module or interface has observed a diagnostic event.

- For any active profile that subscribes to diagnostic events with a severity level of minor or higher, a message is sent only if the specified module or interface has observed a diagnostic event of at least the subscribed severity level; otherwise, no diagnostic message is sent to the destination profile.

This example shows how to send the configuration alert-group message to the destination profile:

```
Switch# call-home send alert-group configuration
```

This example shows how to send the diagnostic alert-group message to the destination profile for a specific module, slot/subslot, or slot/bay number.

```
Switch# call-home send alert-group diagnostic module 3 5/2
```

This example shows how to send the diagnostic alert-group message to all destination profiles for a specific module, slot/subslot, or slot/bay number.

```
Switch# call-home send alert-group diagnostic module 3 5/2 profile Ciscotacl
```

This example shows how to send the inventory call-home message:

```
Switch# call-home send alert-group inventory
```

## Sending a Request for an Analysis and Report

You can use the **call-home request** command to submit information about your system to Cisco in order to receive helpful information specific to your system. You can request a variety of reports, including security alerts, known bugs, best practices, and command references.

To submit a request for report and analysis information from the Cisco Output Interpreter tool, perform one of these tasks:

Command	Purpose
Switch# <b>call-home request</b> <b>output-analysis</b> " <i>show-command</i> " [ <i>profile name</i> ] [ <i>ccoid user-id</i> ]	Sends the output of the specified <b>show</b> command for analysis. The <b>show</b> command must be contained in quotes ("").
Switch# <b>call-home request</b> { <b>config-sanity</b>   <b>bugs-list</b>   <b>command-reference</b>   <b>product-advisory</b> } [ <i>profile name</i> ] [ <i>ccoid user-id</i> ]	Sends the output of a predetermined set of commands for analysis such as <b>show running-config all</b> , <b>show version</b> , or <b>show module</b> commands. In addition, the <b>call-home request product-advisory</b> command includes all inventory alert group commands.  The keyword specified after the <b>call home request</b> command specifies the type of report required.

When manually sending a Call Home report and analysis request, note the following guidelines:

- If you specify a **profile name** value, the request is sent to the profile. If you do not specify a profile name, the request is sent to the Cisco TAC profile. The recipient profile does not need to be enabled for the Call Home request. The profile should specify the e-mail address where the transport gateway is configured so that the request message can be forwarded to the Cisco TAC and you can receive the reply from the Smart Call Home service.
- The **ccoid user-id** value is the registered identifier of the Smart Call Home user. If you specify a user-id, the response is sent to the e-mail address of the registered user. If do not specify a user-id, the response is sent to the contact e-mail address of the device.

- Based on the keyword specifying the type of report requested, the following information is returned:
  - **config-sanity**—Information on best practices as related to the current running configuration
  - **bugs-list**—Known bugs in the running version and in the currently applied features
  - **command-reference**—Reference links to all commands in the running configuration
  - **product-advisory**—Product Security Incident Response Team (PSIRT) notices, End of Life (EOL) or End of Sales (EOS) notices, or field notices (FN) that may affect devices in your network

This example shows a request for analysis of a user-specified **show** command:

```
Switch# call-home request output-analysis "show diagnostic result module all" profile TG
```

## Sending the Output of a Command

You can use the **call-home send** command to execute a CLI command and e-mail the command output to Cisco or to an e-mail address that you specify.

To execute a CLI command and e-mail the command output, perform this task:

Command	Purpose
Switch# <b>call-home send</b> "command" [ <b>email</b> email-addr] [ <b>service-number</b> SR]	Executes the specified CLI command and e-mails the output.

When sending the output of a command, note the following guidelines:

- The specified CLI command can be any run command, including commands for all modules. The command must be contained in quotes (“”).
- If an e-mail address is specified, the command output will be sent to that address. If no e-mail address is specified, the output will be sent to the Cisco TAC (attach@cisco.com). The e-mail will be sent in long text format with the service number, if specified, in the subject line.
- The service number is required only if no e-mail address is specified, or if a Cisco TAC e-mail address is specified.

This example shows how to send the output of a CLI command to a user-specified e-mail address:

```
Switch# call-home send "show diagnostic result module all" email support@example.com
```

## Configuring and Enabling Smart Call Home

For application and configuration information of the Cisco Smart Call Home service, see the “FastStart” section of the *Smart Call Home User Guide* at this location:

<http://www.cisco.com/go/smartcall/>

The user guide includes configuration examples for sending Smart Call Home messages directly from your device or through a transport gateway (TG) aggregation point. You can use a TG aggregation point in cases requiring support for multiple devices or in cases where security requirements mandate that your devices may not be connected directly to the Internet.

Because the Smart Call Home service uses HTTPS as the transport method, you must also configure its CA as a trustpoint, as described in the *Smart Call Home User Guide*.

# Displaying Call Home Configuration Information

To display the configured Call Home information, perform these tasks:

Command	Purpose
Switch# <b>show call-home</b>	Displays the Call Home configuration in summary.
Switch# <b>show call-home detail</b>	Displays the Call Home configuration in detail.
Switch# <b>show call-home alert-group</b>	Displays the available alert groups and their status.
Switch# <b>show call-home mail-server status</b>	Checks and displays the availability of the configured e-mail server(s).
Switch# <b>show call-home profile</b> {all   name}	Displays the configuration of the specified destination profile. Use the keyword <b>all</b> to display the configuration of all destination profiles.
Switch# <b>show call-home statistics</b>	Displays the statistics of Call Home events.

Examples 1-1 to 1-7 show the results when using different options of the **show call-home** command.

## Example 1-1 Configured Call Home Information

```
Switch# show call-home
call home feature : disable
call home message's from address: switch@example.com
call home message's reply-to address: support@example.com

vrf for call-home messages: Not yet set up

contact person's email address: technical@example.com

contact person's phone number: +1-408-555-1234
street address: 1234 Picaboo Street, Any city, Any state, 12345
customer ID: ExampleCorp
contract ID: X123456789
site ID: SantaClara
source ip address: Not yet set up
source interface: Not yet set up
Mail-server[1]: Address: smtp.example.com Priority: 1
Mail-server[2]: Address: 192.168.0.1 Priority: 2
Rate-limit: 20 message(s) per minute

Available alert groups:
  Keyword          State  Description
  -----
  configuration    Disable configuration info
  diagnostic       Disable diagnostic info
  environment      Disable environmental info
  inventory        Enable  inventory info
  syslog           Disable syslog info

Profiles:
  Profile Name: campus-noc
  Profile Name: CiscoTAC-1

Switch#
```

**Example 1-2 Configured Call Home Information in Detail**

```
Switch# show call-home detail
Current call home settings:
call home feature : disable
  call home message's from address: switch@example.com
  call home message's reply-to address: support@example.com

vrf for call-home messages: Not yet set up

contact person's email address: technical@example.com

contact person's phone number: +1-408-555-1234
street address: 1234 Picaboo Street, Any city, Any state, 12345
customer ID: ExampleCorp
contract ID: X123456789
site ID: SantaClara
source ip address: Not yet set up
source interface: Not yet set up
Mail-server[1]: Address: smtp.example.com Priority: 1
Mail-server[2]: Address: 192.168.0.1 Priority: 2
Rate-limit: 20 message(s) per minute

Available alert groups:
Keyword                State   Description
-----
configuration          Disable configuration info
diagnostic             Disable diagnostic info
environment            Disable environmental info
inventory              Enable  inventory info
syslog                 Disable syslog info

Profiles:

Profile Name: campus-noc
Profile status: ACTIVE
Preferred Message Format: long-text
Message Size Limit: 3145728 Bytes
Transport Method: email
Email address(es): noc@example.com
HTTP  address(es): Not yet set up

Alert-group            Severity
-----
inventory              normal

Syslog-Pattern        Severity
-----
N/A                    N/A

Profile Name: CiscoTAC-1
Profile status: ACTIVE
Preferred Message Format: xml
Message Size Limit: 3145728 Bytes
Transport Method: email
Email address(es): callhome@cisco.com
HTTP  address(es): https://tools.cisco.com/its/service/oddce/services/DDCEService

Periodic configuration info message is scheduled every 1 day of the month at 09:27

Periodic inventory info message is scheduled every 1 day of the month at 09: 12

Alert-group            Severity
-----
diagnostic             minor
environment            warning
inventory              normal
```

```

Syslog-Pattern          Severity
-----
.*                      major
Switch#

```

### Example 1-3 Available Call Home Alert Groups

```

Switch# show call-home alert-group
Available alert groups:
  Keyword          State  Description
-----
configuration     Disable configuration info
diagnostic         Disable diagnostic info
environment        Disable environmental info
inventory          Enable  inventory info
syslog             Disable syslog info

Switch#

```

### Example 1-4 E-Mail Server Status Information

```

Switch# show call-home mail-server status
Please wait. Checking for mail server status ...

Translating "smtp.example.com"
  Mail-server[1]: Address: smtp.example.com Priority: 1 [Not Available]
  Mail-server[2]: Address: 192.168.0.1 Priority: 2 [Not Available]

Switch#

```

### Example 1-5 Information for All Destination Profiles (Predefined and User-Defined)

```

Switch# show call-home profile all

Profile Name: campus-noc
  Profile status: ACTIVE
  Preferred Message Format: long-text
  Message Size Limit: 3145728 Bytes
  Transport Method: email
  Email address(es): noc@example.com
  HTTP address(es): Not yet set up

  Alert-group          Severity
  -----
  inventory            normal

  Syslog-Pattern      Severity
  -----
  N/A                  N/A

Profile Name: CiscoTAC-1
  Profile status: ACTIVE
  Preferred Message Format: xml
  Message Size Limit: 3145728 Bytes
  Transport Method: email
  Email address(es): callhome@cisco.com
  HTTP address(es): https://tools.cisco.com/its/service/oddce/services/DDCEService

  Periodic configuration info message is scheduled every 1 day of the month at 09:27

  Periodic inventory info message is scheduled every 1 day of the month at 09:12

```



```

Alert-group          Severity
-----
diagnostic           minor
environment          warning
inventory            normal

Syslog-Pattern       Severity
-----
.*                  major

```

Switch#

### Example 1-6 Information for a User-Defined Destination Profile

```

Switch# show call-home profile CiscoTAC-1
Profile Name: CiscoTAC-1
Profile status: INACTIVE
Preferred Message Format: xml
Message Size Limit: 3145728 Bytes
Transport Method: email
Email address(es): callhome@cisco.com
HTTP address(es): https://tools.cisco.com/its/service/oddce/services/DDCEService

Periodic configuration info message is scheduled every 11 day of the month at 11:25

Periodic inventory info message is scheduled every 11 day of the month at 11:10

Alert-group          Severity
-----
diagnostic           minor
environment          warning
inventory            normal

Syslog-Pattern       Severity
-----
.*                  major

```

### Example 1-7 Call Home Statistics

```

Switch# show call-home statistics
Message Types      Total      Email      HTTP
-----
Total Success     0          0          0
  Config          0          0          0
  Diagnostic      0          0          0
  Environment     0          0          0
  Inventory       0          0          0
  SysLog          0          0          0
  Test           0          0          0
  Request         0          0          0
  Send-CLI       0          0          0

Total In-Queue    0          0          0
  Config          0          0          0
  Diagnostic      0          0          0
  Environment     0          0          0
  Inventory       0          0          0
  SysLog          0          0          0
  Test           0          0          0
  Request         0          0          0
  Send-CLI       0          0          0

```

```

Total Failed      0          0          0
  Config          0          0          0
  Diagnostic      0          0          0
  Environment     0          0          0
  Inventory       0          0          0
  SysLog          0          0          0
  Test            0          0          0
  Request         0          0          0
  Send-CLI       0          0          0

Total Ratelimit
  -dropped       0          0          0
  Config         0          0          0
  Diagnostic      0          0          0
  Environment     0          0          0
  Inventory       0          0          0
  SysLog          0          0          0
  Test            0          0          0
  Request         0          0          0
  Send-CLI       0          0          0

```

Last call-home message sent time: n/a

## Call Home Default Settings

Table 1-2 lists the default Call Home settings.

**Table 1-2** Default Call Home Settings

Parameters	Default
Call Home feature status	Disabled
User-defined profile status	Active
Predefined Cisco TAC profile status	Inactive
Transport method	E-mail
Message format type	XML
Destination message size for a message sent in long text, short text, or XML format	3,145,728
Alert group status	Enabled
Call Home message severity threshold	1 (normal)
Message rate limit for messages per minute	20

## Alert Group Trigger Events and Commands

Call Home trigger events are grouped into alert groups, with each alert group assigned CLI commands to execute when an event occurs. The CLI command output is included in the transmitted message.

Table 1-3 lists the trigger events included in each alert group, including the severity level of each event and the executed CLI commands for the alert group.

Table 1-3 Call Home Alert Groups, Events, and Actions

Alert Group	Call Home Trigger Event	Syslog Event	Severity	Description and CLI Commands Executed
Syslog				Event logged to syslog. (Only sent to TAC if syslog level 0, 1, or 2) CLI commands executed: <b>show logging</b> <b>show inventory</b>
	SYSLOG	LOG_EMERG	7	System is unusable.
	SYSLOG	LOG_ALERT	6	Action must be taken immediately.
	SYSLOG	LOG_CRIT	5	Critical conditions.
	SYSLOG	LOG_ERR	4	Error conditions.
	SYSLOG	LOG_WARNING	3	Warning conditions.
	SYSLOG	LOG_NOTICE	2	Normal but signification condition.
	SYSLOG	LOG_INFO	1	Informational.
	SYSLOG	LOG_DEBUG	0	Debug-level messages.
Environmental				Events related to power, fan, and environment sensing elements, such as temperature alarms. (Sent to TAC.) CLI commands executed: <b>show module</b> <b>show environment</b> <b>show logging</b> <b>show power</b> <b>show inventory</b>
	TEMP_FAILURE	TempHigh	5	The temperature of the chassis is above the normal threshold.
	TEMP_FAILURE	Critical Temp	5	The temperature of the chassis has risen above the critical threshold.
	TEMP_FAILURE	Shutdown Temp	5	The temperature of the chassis is very high and the system will be shut down.
	TEMP_FAILURE	Some Temp Sensors Failed	3	Some of the temperature sensors have failed.
	TEMP_FAILURE	All Temp Sensors Failed	5	All temperature sensors have failed.
	TEMP_RECOVER	TempOk	5	The temperature of the chassis is normal.
	POWER_FAILURE	PowerSupplyBad	5	A power supply has failed or has been turned off.
	POWER_RECOVERY	PowerSupplyGood	5	A failed power supply has been fixed.
	POWER_FAILURE	PowerSupplyFanBad	3	A power supply fan has failed.

Table 1-3 Call Home Alert Groups, Events, and Actions (continued)

Alert Group	Call Home Trigger Event	Syslog Event	Severity	Description and CLI Commands Executed
	POWER_RECOVERY	PowerSupplyFanGood	3	A failed power supply fan has been fixed.
	POWER_RECOVERY	PowerSupplyOutputIncreased	3	A power supply output has increased.
	POWER_FAILURE	PowerSupplyOutputDecreased	3	A power supply output has decreased.
	POWER_FAILURE	InlinePowerSupplyBad	3	Inline power source from a power supply has failed or turned off.
	POWER_FAILURE	MixedPowerSupplyInChassis	3	Mixed power supplies have been detected in the chassis.
	POWER_FAILURE	NotEnoughPowerChassis	6	There is insufficient power to support the system. The system might shut down.
	POWER_RECOVERY	InlinePowerSupplyGood	3	A failed source for inline power has been fixed.
	FANTRAY_FAILURE	FanTrayPartialFailure	3	Either a fan or thermistors in system fan tray has failed.
	FANTRAY_FAILURE	FanTrayMismatch	3	The fantray, supervisor, chassis combination is disallowed.
	FANTRAY_FAILURE	FanTrayBad	5	Fan tray has failed.
	FANTRAY_RECOVERY	FanTrayGood	3/5	Failed fan tray has been fixed. The severity of the notification depends on the failure which has been recovered from.
	FANTRAY_FAILURE	InsufficientFantray	6	There are not enough FanTray to support the system. This may be followed by a system shut down.
	CLOCK_ALARM	ClockSwitchover	2	Clock module has switched over to another clock.
	CLOCK_ALARM	Clock Faulty	3	The clock module has been found to be faulty.
Inventory				Inventory status should be provided whenever a unit is cold-booted, or when FRUs are inserted or removed. It is considered a noncritical event, and the information is used for status and entitlement.  CLI commands executed:  <b>show module</b> <b>show version</b> <b>show inventory oid</b> <b>show idprom all</b> <b>show power</b>
	INSERTION	Module	1	A line card or supervisor engine has been inserted into a slot.

**Table 1-3** Call Home Alert Groups, Events, and Actions (continued)

Alert Group	Call Home Trigger Event	Syslog Event	Severity	Description and CLI Commands Executed
	REMOVAL	Module	1	A line card or supervisor engine has been removed from a slot.
Diagnostic Failure			1/3/4/5	Events related to standard or intelligent line cards. CLI commands executed: <b>show module</b> <b>show version</b> <b>show inventory</b> <b>show buffers</b> <b>show logging</b> <b>show diagnostic result module x detail</b> <b>show diagnostic result module all</b>
Test	TEST		1	User-generated test message. CLI commands executed: <b>show module</b> <b>show version</b> <b>show inventory</b>
Configuration			1	User-generated request for configuration. CLI commands executed: <b>show module</b> <b>show inventory</b> <b>show version</b> <b>show running-config all</b> <b>show startup-config</b>

## Message Contents

The following tables display the content formats of alert group messages:

- [Table 1-4](#) describes the content fields of a short text message.
- [Table 1-5](#) describes the content fields that are common to all long text and XML messages. The fields specific to a particular alert group message are inserted at a point between the common fields. The insertion point is identified in the table.
- [Table 1-6](#) describes the inserted content fields for reactive messages (system failures that require a TAC case) and proactive messages (issues that might result in degraded system performance).
- [Table 1-7](#) describes the inserted content fields for an inventory message.

**Table 1-4** Format for a Short Text Message

Data Item	Description
Device identification	Configured device name
Date/time stamp	Time stamp of the triggering event

**Table 1-4** *Format for a Short Text Message (continued)*

Data Item	Description
Error isolation message	Plain English description of triggering event
Alarm urgency level	Error level such as that applied to a system message

**Table 1-5** *Common Fields for All Long Text and XML Messages*

Data Item (Plain Text and XML)	Description (Plain Text and XML)	XML Tag (XML Only)
Time stamp	Date/timestamp of event in ISO time notation: YYYY-MM-DDTHH:MM:SS  Note the T in between date and time, and note that the timezone/dst offset from UTC has already been added or subtracted.	CallHome/EventTime
Message name	Name of message.	For short text message only
Message type	Specifically "Call Home".	CallHome/Event/Type
Message group	Specifically "reactive". Optional in this case because default is "reactive".	CallHome/Event/SubType
Severity level	Severity level of message.	Body/Block/Severity
Source ID	This field is used to identify the product type for routing using the workflow engine. it is typically the product family name.	For long test mmessage only
Device ID	Unique Device Identifier (UDI) for end device generating message. This field should empty if the message is nonspecific to a fabric switch. Format: type@Sid@serial Where @:Separator character <ul style="list-style-type: none"> <li>Type: If WS-C4503-E, product model number from backplane SEEPROM.</li> <li>Sid: "C" identifying serial ID as a chassis serial number.</li> <li>Serial: The serial number as identified by the Sid field.</li> </ul> Example: "WS-C4503-E@C@SPE4465329F"	CallHome/Customer Data/ ContractData/ DeviceId
Customer ID	Optional user-configurable field used for contract information or other ID by any support service.	CallHome/Customer Data/ ContractData/ CustomerId
Contract ID	Optional user-configurable field used for contract information or other ID by any support service.	/CallHome/ Customer Data/ ContractData/ ContractId
Site ID	Optional user-configurable field used for Cisco-supplied site ID or other data meaningful to alternate support service.	CallHome/ CustomerData/ ContractData/ SiteId

Table 1-5 Common Fields for All Long Text and XML Messages (continued)

Data Item (Plain Text and XML)	Description (Plain Text and XML)	XML Tag (XML Only)
Server ID	If message is generated from fabric switch, UDI of switch. If message is proxied or originated by MA, the MA should overwrite this field with the MA UDI.  Format is type@Sid@serial  Where @: Separator character <ul style="list-style-type: none"> <li>Type: If WS-C4510R, product model number from backplane SEEPROM.</li> <li>Sid: "C" identifying serial ID as a chassis serial number</li> <li>Serial: The serial number as identified by the Sid field.</li> </ul> Example: "WS-C4510R@C@CAT234765XR"	For long text message only
Message description	Short text describing the error.	CallHome/ MessageDescription
Device name	Node that experienced the event. it is the host name of the device.	CallHome/ CustomerData/ SystemInfo/ Name
Contact name	Name of person to contact for issues associated with the node experiencing the event.	CallHome/CustomerData/Syst emInfo/Contact
Contact e-mail	E-mail address of person identified as contact for this unit.	CallHome/CustomerData/Syst emInfo/ContactEmail
Contact phone number	Phone number of the person identified as the contact for this unit.	CallHome/CustomerData/Syst emInfo/ContactPhoneNumber
Street address	Optional field containing street address for RMA part shipments associated with this unit.	CallHome/CustomerData/Syst emInfo/StreetAddress
Model name	Model name of the unit (such as WS-C4503). it is the specific model as part of a product family name.	CallHome/ Device/ Cisco_Chassis/Model
Serial number	Chassis serial number of the unit.	CallHome/ Device/ Cisco_Chassis/ SerialNumber
Chassis part number	Top assembly number of the chassis as read from SEEPROM (such as WS-C4503 = 73-10558).	CallHome/Device/Cisco_Chassis/AdditionalInformation/ AD@name="PartNumber"

Fields specific to a particular alert group message are inserted here.

The following fields may be repeated if multiple CLI commands are executed for this alert group.

Command output name	The exact command that was run (such as the <b>show running-config</b> command).	/aml/attachments/attachment/ name
---------------------	--	--------------------------------------

**Table 1-5 Common Fields for All Long Text and XML Messages (continued)**

Data Item (Plain Text and XML)	Description (Plain Text and XML)	XML Tag (XML Only)
Attachment type	Specifically command output.	/aml/Attachments/attachment@type
MIME type	Normally text/plain or encoding type.	/aml/Attachments/Attachment/Data@encoding

**Table 1-6 Inserted Fields for a Reactive or Proactive Event Message**

Data Item (Plain Text and XML)	Description (Plain Text and XML)	XML Tag (XML Only)
Chassis hardware version	Hardware version of chassis	CallHome/Device/Cisco_Chassis/HardwareVersion
Supervisor module software version	Top-level software version	CallHome/Device/Cisco_Chassis/AdditionalInformation/AD@name="SoftwareVersion"
Affected FRU name	Name of the affected FRU generating the event message	CallHome/Device/Cisco_Chassis/Cisco_Card/Model
Affected FRU serial number	Serial number of affected FRU	CallHome/Device/Cisco_Chassis/Cisco_Card/SerialNumber
Affected FRU part number	Part number of affected FRU	CallHome/Device/Cisco_Chassis/Cisco_Card/PartNumber
FRU slot	Slot number of FRU generating the event message	CallHome/Device/Cisco_Chassis/Cisco_Card/LocationWithinContainer
FRU hardware version	Hardware version of affected FRU	CallHome/Device/Cisco_Chassis/Cisco_Card/HardwareVersion
FRU software version	Software version(s) running on affected FRU	CallHome/Device/Cisco_Chassis/Cisco_Card/SoftwareIdentity/VersionString

**Table 1-7 Inserted Fields for an Inventory Event Message**

Data Item (Plain Text and XML)	Description (Plain Text and XML)	XML Tag (XML Only)
Chassis hardware version	Hardware version of chassis	CallHome/Device/Cisco_Chassis/HardwareVersion
Supervisor module software version	Top-level software version	CallHome/Device/Cisco_Chassis/AdditionalInformation/AD@name="SoftwareVersion"
Affected FRU name	Name of the affected FRU generating the event message	CallHome/Device/Cisco_Chassis/Cisco_Card/Model



**Table 1-7** *Inserted Fields for an Inventory Event Message (continued)*

<b>Data Item (Plain Text and XML)</b>	<b>Description (Plain Text and XML)</b>	<b>XML Tag (XML Only)</b>
Affected FRU s/n	Serial number of affected FRU	CallHome/Device/Cisco_Chassis/Cisco_Card/SerialNumber
Affected FRU part number	Part number of affected FRU	CallHome/Device/Cisco_Chassis/Cisco_Card/PartNumber
FRU slot	Slot number of FRU generating the event message	CallHome/Device/Cisco_Chassis/Cisco_Card/LocationWithinContainer
FRU hardware version	Hardware version of affected FRU	CallHome/Device/Cisco_Chassis/Cisco_Card/HardwareVersion
FRU software version	Software version(s) running on affected FRU	CallHome/Device/Cisco_Chassis/Cisco_Card/SoftwareIdentity/VersionString

## Syslog Alert Notification in Long-Text Format Example

```

TimeStamp : 2009-02-06 12:57 GMT+00:00
Message Name : syslog
Message Type : Call Home
Message Group : reactive
Severity Level : 2
Source ID : Cat4500/4900
Device ID : WS-C4510R@C@1234567
Customer ID :
Contract ID :
Site ID :
Server ID : WS-C4510R@C@1234567
Event Description : *Feb 6 12:57:54.121: %CLEAR-5-COUNTERS: Clear counter on all
interfaces by console
System Name : Router
Contact Email : abc@example.com
Contact Phone :
Street Address :
Affected Chassis : WS-C4510R
Affected Chassis Serial Number : 1234567
Affected Chassis Part No : 12-3456-78
Affected Chassis Hardware Version : 1.1
Supervisor Software Version : 12.2(20090204:112419)
Command Output Name : show logging
Attachment Type : command output
MIME Type : text/plain
Command Output Text :
Syslog logging: enabled (0 messages dropped, 1 messages rate-limited, 0 flushes, 0
overruns, xml disabled, filtering disabled)

No Active Message Discriminator.

No Inactive Message Discriminator.

```

```

Console logging: level debugging, 95 messages logged, xml disabled,
                  filtering disabled
Monitor logging: level debugging, 0 messages logged, xml disabled,
                  filtering disabled
Buffer logging:  level debugging, 95 messages logged, xml disabled,
                  filtering disabled
Exception Logging: size (8192 bytes)
Count and timestamp logging messages: disabled
Persistent logging: disabled

```

No active filter modules.

```
Trap logging: level informational, 118 message lines logged
```

Log Buffer (4096 bytes):

```

00:59:54.379: %CALL_HOME-3-HTTP_REQUEST_FAILED: failed to send HTTP request to :
              https://172.17.46.17/its/service/oddce/services/DDCEService
              (ERR 107 : Bad parameters)
*Feb  6 00:59:55.379: %CALL_HOME-3-HTTP_REQUEST_FAILED: failed to send HTTP request to :
              https://172.17.46.17/its/service/oddce/services/DDCEService
              (ERR 107 : Bad parameters)
*Feb  6 01:04:37.903: %SYS-5-CONFIG_I: Configured from console by console
*Feb  6 01:04:51.783: %C4K_IOSMODPORTMAN-4-POWERSUPPLYREMOVED: Power supply 1 has been
removed
*Feb  6 01:04:56.047: %CALL_HOME-3-SMTP_SEND_FAILED: Unable to send notification using all
SMTP servers (ERR 6, error in reply from SMTP server)
*Feb  6 01:05:01.823: %C4K_IOSMODPORTMAN-6-POWERSUPPLYINSERTEDDETAILED: Power supply 1
(PWR-C45-1300ACV S/N: DTM123900VH Hw: 5.2) has been inserted
*Feb  6 01:05:01.823: %C4K_IOSMODPORTMAN-4-POWERSUPPLYBAD: Power supply 1 has failed or
been turned off
*Feb  6 01:05:01.823: %C4K_CHASSIS-3-MIXINPOWERDETECTED: Power supplies in the chassis are
of different types (AC/DC) or wattage
*Feb  6 01:05:51.827: %C4K_IOSMODPORTMAN-4-POWERSUPPLYREMOVED: Power supply 1 has been
removed
*Feb  6 01:05:56.087: %CALL_HOME-3-SMTP_SEND_FAILED: Unable to send notification using all
SMTP servers (ERR 6, error in reply from SMTP server)
*Feb  6 01:05:56.867: %C4K_IOSMODPORTMAN-6-POWERSUPPLYINSERTEDDETAILED: Power supply 1
(PWR-C45-1300ACV S/N: DTM123900VH Hw: 5.2) has been inserted
*Feb  6 01:05:56.867: %C4K_IOSMODPORTMAN-4-POWERSUPPLYBAD: Power supply 1 has failed or
been turned off
*Feb  6 01:05:56.867: %C4K_CHASSIS-3-MIXINPOWERDETECTED: Power supplies in the chassis are
of different types (AC/DC) or wattage
*Feb  6 01:06:31.871: %C4K_IOSMODPORTMAN-4-POWERSUPPLYREMOVED: Power supply 2 has been
removed
*Feb  6 01:06:31.871: %C4K_CHASSIS-3-INSUFFICIENTPOWERSUPPLIESDETECTED: Insufficient power
supplies present for specified configuration
*Feb  6 01:06:31.871: %C4K_CHASSIS-2-INSUFFICIENTPOWERDETECTED: Insufficient power
available for the current chassis configuration
*Feb  6 01:06:36.907: %C4K_IOSMODPORTMAN-6-POWERSUPPLYINSERTEDDETAILED: Power supply 2
(PWR-C45-1400AC S/N: AZS11260B3M Hw: 2.3) has been inserted
*Feb  6 01:08:06.911: %C4K_IOSMODPORTMAN-4-POWERSUPPLYREMOVED: Power supply 1 has been
removed
*Feb  6 01:08:11.171: %CALL_HOME-3-SMTP_SEND_FAILED: Unable to send notification using all
SMTP servers (ERR 6, error in reply from SMTP server)
*Feb  6 01:08:11.951: %C4K_IOSMODPORTMAN-6-POWERSUPPLYINSERTEDDETAILED: Power supply 1
(PWR-C45-1300ACV S/N: DTM123900VH Hw: 5.2) has been inserted
*Feb  6 01:08:11.951: %C4K_IOSMODPORTMAN-4-POWERSUPPLYBAD: Power supply 1 has failed or
been turned off
*Feb  6 01:08:11.951: %C4K_CHASSIS-3-MIXINPOWERDETECTED: Power supplies in the chassis are
of different types (AC/DC) or wattage
*Feb  6 01:10:35.371: %SYS-5-CONFIG_I: Configured from console by console
*Feb  6 01:12:06.955: %C4K_IOSMODPORTMAN-4-POWERSUPPLYREMOVED: Power supply 1 has been
removed

```

```

*Feb 6 01:12:11.995: %C4K_IOSMODPORTMAN-6-POWERSUPPLYINSERTEDDETAILED: Power supply 1
(PWR-C45-1300ACV S/N: DTM123900VH Hw: 5.2) has been inserted
*Feb 6 01:12:11.995: %C4K_IOSMODPORTMAN-4-POWERSUPPLYBAD: Power supply 1 has failed or
been turned off
*Feb 6 01:12:11.995: %C4K_CHASSIS-3-MIXINPOWERDETECTED: Power supplies in the chassis are
of different types (AC/DC) or wattage
*Feb 6 01:13:06.999: %C4K_IOSMODPORTMAN-4-POWERSUPPLYREMOVED: Power supply 2 has been
removed
*Feb 6 01:13:06.999: %C4K_CHASSIS-3-INSUFFICIENTPOWERSUPPLIESDETECTED: Insufficient power
supplies present for specified configuration
*Feb 6 01:13:06.999: %C4K_CHASSIS-2-INSUFFICIENTPOWERDETECTED: Insufficient power
available for the current chassis configuration
*Feb 6 01:13:12.035: %C4K_IOSMODPORTMAN-6-POWERSUPPLYINSERTEDDETAILED: Power supply 2
(PWR-C45-1400AC S/N: AZS11260B3M Hw: 2.3) has been inserted
*Feb 6 01:36:04.079: %SYS-5-CONFIG_I: Configured from console by console
*Feb 6 12:51:46.001: %SYS-5-CONFIG_I: Configured from console by console
*Feb 6 12:54:15.905: %SYS-5-CONFIG_I: Configured from console by console
Switch#
Command Output Name : show inventory
Attachment Type : command output
MIME Type : text/plain
Command Output Text : NAME: "Switch System", DESCR: "Cisco Systems, Inc. WS-C4510R 10 slot
switch "
PID: WS-C4510R          , VID: V06  , SN: 1234567

NAME: "Clock Module", DESCR: "Clock Module"
PID: WS-X4K-CLOCK      , VID: V04  , SN: 12345671

NAME: "Mux Buffer 3 ", DESCR: "Mux Buffers for Redundancy Logic"
PID: WS-X4590         , VID: V04  , SN: 12345672

NAME: "Mux Buffer 4 ", DESCR: "Mux Buffers for Redundancy Logic"
PID: WS-X4590         , VID: V04  , SN: 12345673

NAME: "Mux Buffer 5 ", DESCR: "Mux Buffers for Redundancy Logic"
PID: WS-X4590         , VID: V04  , SN: 12345674

NAME: "Mux Buffer 6 ", DESCR: "Mux Buffers for Redundancy Logic"
PID: WS-X4590         , VID: V04  , SN: 12345675

NAME: "Mux Buffer 7 ", DESCR: "Mux Buffers for Redundancy Logic"
PID: WS-X4590         , VID: V04  , SN: 12345676

NAME: "Mux Buffer 8 ", DESCR: "Mux Buffers for Redundancy Logic"
PID: WS-X4590         , VID: V04  , SN: 12345677

NAME: "Mux Buffer 9 ", DESCR: "Mux Buffers for Redundancy Logic"
PID: WS-X4590         , VID: V04  , SN: 12345678

NAME: "Mux Buffer 10 ", DESCR: "Mux Buffers for Redundancy Logic"
PID: WS-X4590         , VID: V04  , SN: 12345679

NAME: "Linecard(slot 2)", DESCR: "Supervisor V-10GE with 2 10GE X2 ports, and 4 1000BaseX
SFP ports"
PID: WS-X4516-10GE    , VID: V07  , SN: 1234567A

NAME: "Linecard(slot 3)", DESCR: "10/100/1000BaseT (RJ45)V with 48 10/100/1000 baseT voice
power ports (Cisco/IEEE)"
PID: WS-X4548-GB-RJ45V , VID: V08  , SN: 1234567B

NAME: "Linecard(slot 4)", DESCR: "10/100/1000BaseT (RJ45)V with 48 10/100/1000 baseT voice
power ports (Cisco/IEEE)"
PID: WS-X4548-GB-RJ45V , VID: V08  , SN: 1234567C

```

NAME: "Linecard(slot 5)", DESCR: "10/100BaseTX (RJ45) with 32 10/100 baseT and 4 100FX daughtercard ports"  
 PID: WS-X4232-RJ-XX , VID: V05 , SN: 1234567D

NAME: "Fan", DESCR: "FanTray"  
 PID: WS-X4582 , VID: V03 , SN: 1234567E

NAME: "Power Supply 1", DESCR: "Power Supply ( AC 1300W )"  
 PID: PWR-C45-1300ACV , VID: V05 , SN: 1234567F

NAME: "Power Supply 2", DESCR: "Power Supply ( AC 1400W )"  
 PID: PWR-C45-1400AC , VID: V04 , SN: 1234567G

## Syslog Alert Notification in XML Format Example

```
<?xml version="1.0" encoding="UTF-8"?>
<soap-env:Envelope xmlns:soap-env="http://www.w3.org/2003/05/soap-envelope">
<soap-env:Header>
<aml-session:Session xmlns:aml-session="http://www.cisco.com/2004/01/aml-session"
soap-env:mustUnderstand="true"
soap-env:role="http://www.w3.org/2003/05/soap-envelope/role/next">
<aml-session:To>http://tools.cisco.com/neddce/services/DDCEService</aml-session:To>
<aml-session:Path>
<aml-session:Via>http://www.cisco.com/appliance/uri</aml-session:Via>
</aml-session:Path>
<aml-session:From>http://www.cisco.com/appliance/uri</aml-session:From>
<aml-session:MessageId>M44:1234567:abcd</aml-session:MessageId>
</aml-session:Session>
</soap-env:Header>
<soap-env:Body>
<aml-block:Block xmlns:aml-block="http://www.cisco.com/2004/01/aml-block">
<aml-block:Header>
<aml-block:Type>http://www.cisco.com/2005/05/callhome/syslog</aml-block:Type>
<aml-block:CreationDate>2009-02-06 12:58:31 GMT+00:00</aml-block:CreationDate>
<aml-block:Builder>
<aml-block:Name>Cat4500/4900</aml-block:Name>
<aml-block:Version>2.0</aml-block:Version>
</aml-block:Builder>
<aml-block:BlockGroup>
<aml-block:GroupId>G45:1234567:abcd</aml-block:GroupId>
<aml-block:Number>0</aml-block:Number>
<aml-block:IsLast>true</aml-block:IsLast>
<aml-block:IsPrimary>true</aml-block:IsPrimary>
<aml-block:WaitForPrimary>false</aml-block:WaitForPrimary>
</aml-block:BlockGroup>
<aml-block:Severity>2</aml-block:Severity>
</aml-block:Header>
<aml-block:Content>
<ch:CallHome xmlns:ch="http://www.cisco.com/2005/05/callhome" version="1.0">
<ch:EventTime>2009-02-06 12:58:30 GMT+00:00</ch:EventTime>
<ch:MessageDescription>*Feb 6 12:58:30.293: %CLEAR-5-COUNTERS: Clear counter on all
interfaces by console</ch:MessageDescription>
<ch:Event>
<ch:Type>syslog</ch:Type>
<ch:SubType></ch:SubType>
<ch:Brand>Cisco Systems</ch:Brand>
<ch:Series>Cat4k Series Switches</ch:Series>
</ch:Event>
<ch:CustomerData>
<ch:UserData>
<ch:Email>abc@example.com</ch:Email>
</ch:UserData>
```

```

<ch:ContractData>
<ch:CustomerId></ch:CustomerId>
<ch:SiteId></ch:SiteId>
<ch:ContractId></ch:ContractId>
<ch:DeviceId>WS-C4510R@C@1234567</ch:DeviceId>
</ch:ContractData>
<ch:SystemInfo>
<ch>Name>Switch</ch>Name>
<ch>Contact></ch>Contact>
<ch>ContactEmail>abc@example.com</ch>ContactEmail>
<ch>ContactPhoneNumber></ch>ContactPhoneNumber>
<ch:StreetAddress></ch:StreetAddress>
</ch:SystemInfo>
<ch:CCOID></ch:CCOID>
</ch:CustomerData>
<ch:Device>
<rme:Chassis xmlns:rme="http://www.cisco.com/rme/4.0">
<rme:Model>WS-C4510R</rme:Model>
<rme:HardwareVersion>1.1</rme:HardwareVersion>
<rme:SerialNumber>1234567</rme:SerialNumber>
<rme:AdditionalInformation>
<rme:AD name="PartNumber" value="12-3456-05" />
<rme:AD name="SoftwareVersion" value="12.2(20090204:112419)" />
<rme:AD name="SystemObjectId" value="1.2.3.4.5.6.7.537" />
<rme:AD name="SystemDescription" value="Cisco IOS Software, Catalyst 4500 L3 Switch
Software (cat4500-ENTSERVICES-M), Experimental Version 12.2(20090204:112419) Copyright (c)
1986-2009 by Cisco Systems, Inc.
Compiled Fri 06-Feb-09 15:22 by abc" />
</rme:AdditionalInformation>
</rme:Chassis>
</ch:Device>
</ch:CallHome>
</aml-block:Content>
<aml-block:Attachments>
<aml-block:Attachment type="inline">
<aml-block:Name>show logging</aml-block:Name>
<aml-block:Data encoding="plain">
<![CDATA[
Syslog logging: enabled (0 messages dropped, 1 messages rate-limited, 0 flushes, 0
overruns, xml disabled, filtering disabled)

No Active Message Discriminator.

No Inactive Message Discriminator.

Console logging: level debugging, 97 messages logged, xml disabled,
filtering disabled
Monitor logging: level debugging, 0 messages logged, xml disabled,
filtering disabled
Buffer logging: level debugging, 97 messages logged, xml disabled,
filtering disabled
Exception Logging: size (8192 bytes)
Count and timestamp logging messages: disabled
Persistent logging: disabled

No active filter modules.

Trap logging: level informational, 120 message lines logged

Log Buffer (4096 bytes):
107 : Bad parameters)

```

```

*Feb 6 00:59:55.379: %CALL_HOME-3-HTTP_REQUEST_FAILED: failed to send HTTP request to :
    https://172.17.46.17/its/service/oddce/services/DDCEService
    (ERR 107 : Bad parameters)
*Feb 6 01:04:37.903: %SYS-5-CONFIG_I: Configured from console by console
*Feb 6 01:04:51.783: %C4K_IOSMODPORTMAN-4-POWERSUPPLYREMOVED: Power supply 1 has been
removed
*Feb 6 01:04:56.047: %CALL_HOME-3-SMTP_SEND_FAILED: Unable to send notification using all
SMTP servers (ERR 6, error in reply from SMTP server)
*Feb 6 01:05:01.823: %C4K_IOSMODPORTMAN-6-POWERSUPPLYINSERTEDDETAILED: Power supply 1
(PWR-C45-1300ACV S/N: DTM123900VH Hw: 5.2) has been inserted
*Feb 6 01:05:01.823: %C4K_IOSMODPORTMAN-4-POWERSUPPLYBAD: Power supply 1 has failed or
been turned off
*Feb 6 01:05:01.823: %C4K_CHASSIS-3-MIXINPOWERDETECTED: Power supplies in the chassis are
of different types (AC/DC) or wattage
*Feb 6 01:05:51.827: %C4K_IOSMODPORTMAN-4-POWERSUPPLYREMOVED: Power supply 1 has been
removed
*Feb 6 01:05:56.087: %CALL_HOME-3-SMTP_SEND_FAILED: Unable to send notification using all
SMTP servers (ERR 6, error in reply from SMTP server)
*Feb 6 01:05:56.867: %C4K_IOSMODPORTMAN-6-POWERSUPPLYINSERTEDDETAILED: Power supply 1
(PWR-C45-1300ACV S/N: DTM123900VH Hw: 5.2) has been inserted
*Feb 6 01:05:56.867: %C4K_IOSMODPORTMAN-4-POWERSUPPLYBAD: Power supply 1 has failed or
been turned off
*Feb 6 01:05:56.867: %C4K_CHASSIS-3-MIXINPOWERDETECTED: Power supplies in the chassis are
of different types (AC/DC) or wattage
*Feb 6 01:06:31.871: %C4K_IOSMODPORTMAN-4-POWERSUPPLYREMOVED: Power supply 2 has been
removed
*Feb 6 01:06:31.871: %C4K_CHASSIS-3-INSUFFICIENTPOWERSUPPLIESDETECTED: Insufficient power
supplies present for specified configuration
*Feb 6 01:06:31.871: %C4K_CHASSIS-2-INSUFFICIENTPOWERDETECTED: Insufficient power
available for the current chassis configuration
*Feb 6 01:06:36.907: %C4K_IOSMODPORTMAN-6-POWERSUPPLYINSERTEDDETAILED: Power supply 2
(PWR-C45-1400AC S/N: AZS11260B3M Hw: 2.3) has been inserted
*Feb 6 01:08:06.911: %C4K_IOSMODPORTMAN-4-POWERSUPPLYREMOVED: Power supply 1 has been
removed
*Feb 6 01:08:11.171: %CALL_HOME-3-SMTP_SEND_FAILED: Unable to send notification using all
SMTP servers (ERR 6, error in reply from SMTP server)
*Feb 6 01:08:11.951: %C4K_IOSMODPORTMAN-6-POWERSUPPLYINSERTEDDETAILED: Power supply 1
(PWR-C45-1300ACV S/N: DTM123900VH Hw: 5.2) has been inserted
*Feb 6 01:08:11.951: %C4K_IOSMODPORTMAN-4-POWERSUPPLYBAD: Power supply 1 has failed or
been turned off
*Feb 6 01:08:11.951: %C4K_CHASSIS-3-MIXINPOWERDETECTED: Power supplies in the chassis are
of different types (AC/DC) or wattage
*Feb 6 01:10:35.371: %SYS-5-CONFIG_I: Configured from console by console
*Feb 6 01:12:06.955: %C4K_IOSMODPORTMAN-4-POWERSUPPLYREMOVED: Power supply 1 has been
removed
*Feb 6 01:12:11.995: %C4K_IOSMODPORTMAN-6-POWERSUPPLYINSERTEDDETAILED: Power supply 1
(PWR-C45-1300ACV S/N: DTM123900VH Hw: 5.2) has been inserted
*Feb 6 01:12:11.995: %C4K_IOSMODPORTMAN-4-POWERSUPPLYBAD: Power supply 1 has failed or
been turned off
*Feb 6 01:12:11.995: %C4K_CHASSIS-3-MIXINPOWERDETECTED: Power supplies in the chassis are
of different types (AC/DC) or wattage
*Feb 6 01:13:06.999: %C4K_IOSMODPORTMAN-4-POWERSUPPLYREMOVED: Power supply 2 has been
removed
*Feb 6 01:13:06.999: %C4K_CHASSIS-3-INSUFFICIENTPOWERSUPPLIESDETECTED: Insufficient power
supplies present for specified configuration
*Feb 6 01:13:06.999: %C4K_CHASSIS-2-INSUFFICIENTPOWERDETECTED: Insufficient power
available for the current chassis configuration
*Feb 6 01:13:12.035: %C4K_IOSMODPORTMAN-6-POWERSUPPLYINSERTEDDETAILED: Power supply 2
(PWR-C45-1400AC S/N: AZS11260B3M Hw: 2.3) has been inserted
*Feb 6 01:36:04.079: %SYS-5-CONFIG_I: Configured from console by console
*Feb 6 12:51:46.001: %SYS-5-CONFIG_I: Configured from console by console
*Feb 6 12:54:15.905: %SYS-5-CONFIG_I: Configured from console by console
*Feb 6 12:57:54.121: %CLEAR-5-COUNTERS: Clear counter on all interfaces by console
*Feb 6 12:58:24.093: %SYS-5-CONFIG_I: Configured from console by console

```

```

Switch#]]></aml-block:Data>
</aml-block:Attachment>
<aml-block:Attachment type="inline">
<aml-block:Name>show inventory</aml-block:Name>
<aml-block:Data encoding="plain">
<![CDATA[NAME: "Switch System", DESCR: "Cisco Systems, Inc. WS-C4510R 10 slot switch "
PID: WS-C4510R          , VID: V06  , SN: 1234567

NAME: "Clock Module", DESCR: "Clock Module"
PID: WS-X4K-CLOCK      , VID: V04  , SN: 12345671

NAME: "Mux Buffer 3 ", DESCR: "Mux Buffers for Redundancy Logic"
PID: WS-X4590         , VID: V04  , SN: 12345672

NAME: "Mux Buffer 4 ", DESCR: "Mux Buffers for Redundancy Logic"
PID: WS-X4590         , VID: V04  , SN: 12345673

NAME: "Linecard(slot 2)", DESCR: "Supervisor V-10GE with 2 10GE X2 ports, and 4 1000BaseX
SFP ports"
PID: WS-X4516-10GE    , VID: V07  , SN: 12345674

NAME: "Linecard(slot 3)", DESCR: "10/100/1000BaseT (RJ45)V with 48 10/100/1000 baseT voice
power ports (Cisco/IEEE)"
PID: WS-X4548-GB-RJ45V , VID: V08  , SN: 12345675

NAME: "Linecard(slot 4)", DESCR: "10/100/1000BaseT (RJ45)V with 48 10/100/1000 baseT voice
power ports (Cisco/IEEE)"
PID: WS-X4548-GB-RJ45V , VID: V08  , SN: 12345676

NAME: "Linecard(slot 5)", DESCR: "10/100BaseTX (RJ45) with 32 10/100 baseT and 4 100FX
daughtercard ports"
PID: WS-X4232-RJ-XX   , VID: V05  , SN: 12345677

NAME: "Fan", DESCR: "FanTray"
PID: WS-X4582        , VID: V03  , SN: 12345678

NAME: "Power Supply 1", DESCR: "Power Supply ( AC 1300W )"
PID: PWR-C45-1300ACV  , VID: V05  , SN: 12345679

NAME: "Power Supply 2", DESCR: "Power Supply ( AC 1400W )"
PID: PWR-C45-1400AC   , VID: V04  , SN: 1234567A

Switch#]]></aml-block:Data>
</aml-block:Attachment>
</aml-block:Attachments>
</aml-block:Block>
</soap-env:Body>
</soap-env:Envelope>

```

