



# CHAPTER 65

## Configuring Call Home

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This chapter describes how to configure the Call Home feature in Cisco IOS Release 12.2SX. Release 12.2(33)SXH and later releases support the Call Home feature.



### Note

For complete syntax and usage information for the commands used in this chapter, see the Cisco IOS Master Command List, Release 12.2SX, at this URL:

[http://www.cisco.com/en/US/docs/ios/mcl/122sxmcl/12\\_2sx\\_mcl\\_book.html](http://www.cisco.com/en/US/docs/ios/mcl/122sxmcl/12_2sx_mcl_book.html)

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### Tip

For additional information about Cisco Catalyst 6500 Series Switches (including configuration examples and troubleshooting information), see the documents listed on this page:

[http://www.cisco.com/en/US/products/hw/switches/ps708/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/hw/switches/ps708/tsd_products_support_series_home.html)

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# Understanding Call Home

Call Home provides email-based and web-based notification of critical system events. A versatile range of message formats are available for optimal compatibility with pager services, standard email, or XML-based automated parsing applications. Common uses of this feature may include direct paging of a network support engineer, email 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 (CiscoTAC-1) is provided, and you also can define your own destination profiles. The CiscoTAC-1 profile is used to send alerts to the backend server of the Smart Call Home service, which can be used to create service requests to the Cisco TAC (depending on the Smart Call Home service support in place for your device and the severity of the alert).

Flexible message delivery and format options make it easy to integrate specific support requirements. If multiple destination profiles are configured, and one fails, the system will try every configured profile before sending a failure message.

The Call Home feature provides these functions:

- Multiple message-format options:
  - Short Text—Suitable for pagers or printed reports.
  - Plain Text—Full formatted message information suitable for human reading.
  - XML—Machine readable format using Extensible Markup Language (XML) and Adaptive Markup Language (AML) document type definitions (DTDs). The XML format enables communication with the Cisco Smart Call Home server.
- 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.
- Continuous device health monitoring and real-time diagnostics alerts.
- Analysis of Call Home messages from your device and, where supported, 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 that provides access to associated Field Notices, Security Advisories and End-of-Life Information.

## Obtaining Smart Call Home

If you have a service contract directly with Cisco Systems, you can register your Call Home devices for the Cisco 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, depending on the Smart Call Home service support in place for your device and the severity of the alert, Automatic Service Requests will be generated with the Cisco TAC.

You need the following items to register:

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

For detailed information on Smart Call Home, see the Smart Call Home page at this location:

[http://www.cisco.com/en/US/products/ps7334/serv\\_home.html](http://www.cisco.com/en/US/products/ps7334/serv_home.html)

## Default Settings

Table 65-1 lists the default Call Home settings.

**Table 65-1**      **Default Call Home Settings**

| Parameters  | Default       |
|---|---------------|
| Call Home feature status  | Disabled      |
| User-defined profile status   | Active        |
| Predefined Cisco TAC profile status   | Inactive      |
| Transport method  | Email         |
| 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  | 0 (debugging) |
| Message rate limit for messages per minute  | 20            |

## Configuring Call Home

These sections provide an overview of Call Home configuration:

- [Configuration Overview, page 65-4](#)
- [Configuring Customer Contact Information, page 65-4](#)
- [Configuring Destination Profiles, page 65-5](#)
- [Subscribing to Alert Groups, page 65-13](#)
- [Enabling Call Home, page 65-16](#)

- [Testing Call Home Communications](#), page 65-16
- [Configuring and Enabling Smart Call Home](#), page 65-19

## Configuration Overview

Consider these items before you configure Call Home:

- Obtain customer email, phone, and street address information for the Call Home contact to be configured so that the receiver can determine the origin of messages received.
- If using email message delivery, identify the name or IPv4 address of a primary Simple Mail Transfer Protocol (SMTP) server and any backup servers.
- If using secure HTTP (HTTPS) message delivery, configure a trustpoint certificate authority (CA). For example, this procedure is required if you are using the HTTPS server for Cisco Smart Call Home Service in the CiscoTAC-1 profile for Call Home.
- Verify IP connectivity from the router to the email server(s) or the destination HTTP server.
- If servers are specified by name, the switch must have [IP connectivity to a domain name server](#).
- If using Cisco Smart Call Home, verify that an active service contract exists for the device being configured.



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://www.cisco.com/en/US/products/ps7334/serv\\_home.html](http://www.cisco.com/en/US/products/ps7334/serv_home.html)

## Configuring Customer Contact Information

These are customer contact information items:

- Email address (required)
- Phone number (optional)
- Street address (optional)
- Contract ID (optional)
- Customer ID (optional)
- Site ID (optional)

To configure the customer contact information, perform this task:

|        | Command  | Purpose  |
|--------|--|--|
| Step 1 | Router# <b>configure terminal</b>                              | Enters configuration mode.   |
| Step 2 | Router(config)# <b>call-home</b>                               | Enters Call Home configuration mode.   |
| Step 3 | Router(cfg-call-home)# <b>contact-email-addr email-address</b> | Assigns the customer's email address. Enter up to 200 characters in email address format with no spaces. |

|        | Command  | Purpose   |
|--------|--|---|
| Step 4 | Router(cfg-call-home) # <b>phone-number</b> <i>+phone-number</i>       | (Optional) Assigns the customer's phone number.<br><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 (""). |
| Step 5 | Router(cfg-call-home) # <b>street-address</b><br><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 ("").   |
| Step 6 | Router(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 ("").  |
| Step 7 | Router(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 ("").  |
| Step 8 | Router(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:

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

## Configuring Destination Profiles

These sections describe destination profiles:

- [Destination Profile Overview, page 65-6](#)
- [Configuring Call Home to Use VRF, page 65-6](#)
- [Configuring a Destination Profile to Send Email Messages, page 65-7](#)
- [Configuring a Destination Profile to Send HTTP Messages, page 65-9](#)
- [Configuring Call Home Traffic Rate Limiting, page 65-11](#)
- [Destination Profile Management, page 65-11](#)

## Destination Profile Overview

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.

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 email or HTTP (including HTTPS), for delivery of alerts.
  - For user-defined destination profiles, email is the default, and you can enable either or both transport mechanisms. If you disable both methods, email 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.



### Note

- The Call Home feature provides a predefined profile named CiscoTAC-1 that is inactive by default. The CiscoTAC-1 profile is intended for use with the Smart Call Home service, which requires certain additional configuration steps to enable the service with the Call Home feature. For more information about this profile, see the [“Using the Predefined CiscoTAC-1 Destination Profile”](#) section on page 65-13.
- If you use the Cisco Smart Call Home service, the destination profile must use the XML message format.

## Configuring Call Home to Use VRF

To configure Call Home to use a VRF interface for Call Home email or for HTTP messages, perform this task:

|        | Command or Action   | Purpose   |
|--------|---|---|
| Step 1 | Router# <b>configure terminal</b>                           | Enters configuration mode.                              |
| Step 1 | Router(config)# <b>interface</b> <i>type</i>                | Selects an interface to configure.                      |
| Step 2 | Router(config-if)# <b>ip address</b> <i>ip_address mask</i> | Assigns an IP address and subnet mask to the interface. |

|        | Command or Action   | Purpose  |
|--------|---|--|
| Step 3 | Router(config-if)# <b>vrf forwarding</b><br><i>call_home_vrf_name</i> | Associates the <i>call_home_vrf_name</i> VRF with the interface. |
| Step 4 | Router(config-if)# <b>exit</b>  | Exits interface configuration mode.                              |

This example shows how to configure Call Home to use a VRF interface:

```
Router# configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)# interface gigabitethernet 1/1
Router(config-if)# ip address 10.10.10.10 0.0.0.0
Router(config-if)# vrf forwarding call_home_vrf
Router(config-if)# exit
Router(config)#
```

## Configuring a Destination Profile to Send Email Messages

To configure Call Home to send email messages, complete the following tasks:

- [Configuring Call Home to Use VRF for Email Messages, page 65-7](#) (optional)
- [Configuring the Mail Server, page 65-8](#) (required)
- [Configuring a Destination Profile for Email, page 65-8](#) (required)
- [Configuring Other Email Options, page 65-9](#) (optional)



### Note

To send Call Home email messages through a VRF interface, configure Call Home to use VRF (see [“Configuring Call Home to Use VRF” section on page 65-6](#)).

## Configuring Call Home to Use VRF for Email Messages

To configure Call Home to use a VRF instance for Call Home email messages, perform this task:

|        | Command or Action   | Purpose   |
|--------|---|---|
| Step 1 | Router# <b>configure terminal</b>                           | Enters configuration mode.  |
| Step 2 | Router(config)# <b>call-home</b>                            | Enters Call Home configuration submode.   |
| Step 3 | Router(cfg-call-home)# <b>vrf</b> <i>call_home_vrf_name</i> | Specifies the VRF instance to use for Call Home email messages.   |
|        |   | <b>Note</b> Release 12.2(33)SX11 and later releases support VRF configuration for Call Home email messages. |

This example shows how to configure Call Home to use a VRF interface:

```
Router# configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)# call-home
Router(cfg-call-home)# vrf call_home_vrf
Router(cfg-call-home)# exit
Router(config)#
```

## Configuring the Mail Server

To use the email message transport, perform this task:

|               | Command or Action   | Purpose  |
|---------------|---|--|
| <b>Step 1</b> | Router# <b>configure terminal</b>   | Enters global configuration mode.  |
| <b>Step 2</b> | Router(config)# <b>call-home</b>  | Enters call home configuration mode.   |
| <b>Step 3</b> | Router(cfg-call-home)# <b>mail-server</b><br>{ <i>ipv4-address</i>   <i>name</i> } <b>priority number</b> | Specifies an email server and its relative priority among configured email servers, where: <ul style="list-style-type: none"> <li>• <i>ipv4-address</i>—Specifies the IPv4 address of the mail server.</li> <li>• <i>name</i>—Specifies the mail server’s fully qualified domain name (FQDN) of 64 characters or less.</li> <li>• <i>number</i>—Assigns a number between 1 (highest priority) and 100 (lowest priority). Higher priority (lower priority numbers) are tried first.</li> <li>• Repeat to define backup email servers (maximum four backup email servers, for a total of five email servers).</li> </ul> |

The following example shows the configuration of a primary mail server (named “smtp.example.com”) and secondary mail server at IP address 192.168.0.1:

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

## Configuring a Destination Profile for Email

To configure a destination profile for email transport, complete this task:

|               | Command or Action   | Purpose   |
|---------------|---|---|
| <b>Step 1</b> | Router# <b>configure terminal</b>   | Enters global configuration mode.   |
| <b>Step 2</b> | Router(config)# <b>call-home</b>  | Enters call home configuration mode.  |
| <b>Step 3</b> | Router(config-call-home)# <b>profile name</b>   | Enters call home destination profile configuration mode for the specified destination profile name. If the specified destination profile does not exist, it is created. |
| <b>Step 4</b> | Router(cfg-call-home-profile)# <b>destination transport-method email</b>                              | Configures the message transport method for email. (This is the default.)   |
| <b>Step 5</b> | Router(cfg-call-home-profile)# <b>destination address email email_address</b>                         | Configures the destination email address to which Call Home messages are sent.  |
| <b>Step 6</b> | Router(cfg-call-home-profile)# <b>destination preferred-msg-format {long-text   short-text   xml}</b> | (Optional) Configures a preferred message format. The default is XML.   |

|         | Command or Action   | Purpose  |
|---------|---|--|
| Step 7  | Router(cfg-call-home-profile)# <b>destination message-size</b> <i>bytes</i> | (Optional) Configures a maximum destination message size (from 50 to 3145728 bytes) for the destination profile. The default is 3145728 bytes. |
| Step 8  | Router(cfg-call-home-profile)# <b>active</b>                                | (Optional) Enables the destination profile. By default, a user-defined profile is enabled when it is created.                                  |
| Step 9  | Router(cfg-call-home-profile)# <b>exit</b>                                  | Exits call home destination profile configuration mode and returns to call home configuration mode.  |
| Step 10 | Router(cfg-call-home)# <b>end</b>   | Returns to privileged EXEC mode.   |

### Configuring Other Email Options

To configure other email options, perform this task:

|        | Command or Action  | Purpose   |
|--------|--|---|
| Step 1 | Router# <b>configure terminal</b>                                  | Enters global configuration mode.   |
| Step 2 | Router(config)# <b>call-home</b>                                   | Enters call home configuration mode.  |
| Step 3 | Router(cfg-call-home)# <b>sender from</b> <i>email-address</i>     | (Optional) Assigns the email address that will appear in the from field in Call Home email messages. If no address is specified, the contact email address is used. |
| Step 4 | Router(cfg-call-home)# <b>sender reply-to</b> <i>email-address</i> | (Optional) Assigns the email address that will appear in the reply-to field in Call Home email messages.  |
| Step 5 | Router(cfg-call-home)# <b>source-ip-address</b> <i>ip_address</i>  | (Optional; supported in Release 12.2(33)SXI and later releases) Assigns the source IP address that will be used for Call Home email messages.                       |

This example shows how to configure the email options:

```
Router(cfg-call-home)# sender from username@example.com
Router(cfg-call-home)# sender reply-to username@example.com
Router(cfg-call-home)# source-ip-address 10.10.10.10
```

### Configuring a Destination Profile to Send HTTP Messages

To configure Call Home to send HTTP (or HTTPS) messages, complete the following tasks:

- [Configuring the HTTP Source Interface, page 65-10](#)
- [Configuring a Destination Profile for HTTP, page 65-10](#)
- [Configuring a Trustpoint Certificate Authority, page 65-11](#) (required for HTTPS)

## Configuring the HTTP Source Interface

To configure an HTTP client source interface, perform this task:

|        | Command or Action  | Purpose  |
|--------|--|--|
| Step 1 | Router# <b>configure terminal</b>  | Enters global configuration mode.  |
| Step 2 | Router(config)# <b>ip http client source-interface</b><br><i>type number</i> | Configures the source interface for the HTTP client. If the interface is associated with a VRF instance, the HTTP messages use the VRF instance. |

## Configuring a Destination Profile for HTTP

To configure a destination profile for HTTP transport, perform this task:

|         | Command or Action  | Purpose   |
|---------|--|---|
| Step 1  | Router# <b>configure terminal</b>  | Enters global configuration mode.   |
| Step 2  | Router(config)# <b>call-home</b>   | Enters call home configuration mode.  |
| Step 3  | Router(config-call-home)# <b>profile</b> <i>name</i>   | Enters call home destination profile configuration mode for the specified destination profile. If the specified destination profile does not exist, it is created.  |
| Step 4  | Router(cfg-call-home-profile)#<br><b>destination transport-method</b> <b>http</b>  | Enables the HTTP message transport method.  |
| Step 5  | Router(cfg-call-home-profile)# <b>destination</b><br><b>address</b> <b>http</b> <i>url</i>   | Configures the destination URL to which Call Home messages are sent.<br><br><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  | Router(cfg-call-home-profile)#<br><b>destination preferred-msg-format</b><br>{ <b>long-text</b>   <b>short-text</b>   <b>xml</b> } | (Optional) Configures a preferred message format. The default is XML.   |
| Step 7  | Router(cfg-call-home-profile)#<br><b>destination message-size</b> <i>bytes</i>   | (Optional) Configures a maximum destination message size for the destination profile.   |
| Step 8  | Router(cfg-call-home-profile)# <b>active</b>   | Enables the destination profile. By default, a profile is enabled when it is created.   |
| Step 9  | Router(cfg-call-home-profile)# <b>exit</b>   | Exits call home destination profile configuration mode and returns to call home configuration mode.   |
| Step 10 | Router(cfg-call-home)# <b>end</b>  | Returns to privileged EXEC mode.  |

This example shows how to configure a destination profile for HTTP transport:

```
Router# configure terminal
Router(config)# call-home
Router(config-call-home)# profile test
Router(cfg-call-home-profile)# destination transport-method http
Router(cfg-call-home-profile)# destination address http https://example.url.com
Router(cfg-call-home-profile)# destination preferred-msg-format xml
Router(cfg-call-home-profile)# destination message-size 3,145,728
Router(cfg-call-home-profile)# active
```

```
Router(cfg-call-home-profile)# exit
Router(cfg-call-home)# end
```

### Configuring a Trustpoint Certificate Authority

If you are using the HTTP transport method and specifying an HTTPS destination URL, then you will also need to configure a trustpoint certificate authority (CA). See the [“Declare and Authenticate a CA Trustpoint”](#) section on page 65-21.

## Configuring Call Home Traffic Rate Limiting

To configure Call Home traffic rate limiting, perform this task:

|               | Command   | Purpose  |
|---------------|---|--|
| <b>Step 1</b> | Router# <b>configure terminal</b>               | Enters configuration mode.   |
| <b>Step 2</b> | Router(config)# <b>call-home</b>                | Enters Call Home configuration submode.  |
| <b>Step 3</b> | Router(cfg-call-home)# <b>rate-limit number</b> | (Optional) Specifies a limit on the number of messages sent per minute, from 1 to 60. The default is 20. |

This example shows how to configure Call Home traffic rate limiting:

```
Router# configure terminal
Router(config)# call-home
Router(config-call-home)# profile test
Router(cfg-call-home-profile)# rate-limit 20
```

## Destination Profile Management

These sections describe destination profile management:

- [Activating and Deactivating a Destination Profile, page 65-11](#)
- [Copying a Destination Profile, page 65-12](#)
- [Renaming a Destination Profile, page 65-13](#)
- [Using the Predefined CiscoTAC-1 Destination Profile, page 65-13](#)
- [Verifying the Call Home Profile Configuration, page 65-13](#)

### Activating and Deactivating a Destination Profile

Except for the predefined CiscoTAC-1 profile, all Call Home destination profiles are automatically activated when you create them. If you do not want to use a profile right way, you can deactivate the profile. The CiscoTAC-1 profile is inactive by default and must be activated to be used.

To activate or deactivate a destination profile, perform this task:

|               | Command or Action                 | Purpose                              |
|---------------|-----------------------------------|--------------------------------------|
| <b>Step 1</b> | Router# <b>configure terminal</b> | Enters global configuration mode.    |
| <b>Step 2</b> | Router(config)# <b>call-home</b>  | Enters call home configuration mode. |

|        | Command or Action                               | Purpose  |
|--------|---|--|
| Step 3 | Router(config-call-home)# <b>profile name</b>   | Enters call home destination profile configuration mode for the specified destination profile. If the specified destination profile does not exist, it is created. |
| Step 4 | Router(cfg-call-home-profile)# <b>active</b>    | Enables the destination profile. By default, a new profile is enabled when it is created.  |
| Step 5 | Router(cfg-call-home-profile)# <b>no active</b> | Disables the destination profile.  |
| Step 6 | Router(cfg-call-home)# <b>end</b>               | Exits call home destination profile configuration mode and returns to privileged EXEC mode.  |

This example shows how to activate a destination profile:

```
Router# configure terminal
Router(config)# call-home
Router(config-call-home)# profile test
Router(cfg-call-home-profile)# active
Router(cfg-call-home)# end
```

This example shows how to deactivate a destination profile:

```
Router# configure terminal
Router(config)# call-home
Router(config-call-home)# profile test
Router(cfg-call-home-profile)# no active
Router(cfg-call-home)# end
```

## Copying a Destination Profile

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

|        | Command or Action  | Purpose   |
|--------|--|---|
| Step 1 | Router# <b>configure terminal</b>  | Enters global configuration mode.   |
| Step 2 | Router(config)# <b>call-home</b>   | Enters call home configuration mode.  |
| Step 3 | Router(cfg-call-home)# <b>copy profile source_profile target_profile</b> | Creates a new destination profile with the same configuration settings as the existing destination profile, where: <ul style="list-style-type: none"> <li><i>source_profile</i>—Specifies the existing name of the profile.</li> <li><i>target_profile</i>—Specifies a name for the new copy of the profile.</li> </ul> |

This example shows how to activate a destination profile:

```
Router# configure terminal
Router(config)# call-home
Router(config-call-home)# profile test
Router(cfg-call-home-profile)# copy profile profile1 profile2
```

## Renaming a Destination Profile

To change the name of an existing profile, perform this task:

|        | Command or Action  | Purpose   |
|--------|--|---|
| Step 1 | Router# <b>configure terminal</b>  | Enters global configuration mode.   |
| Step 2 | Router(config)# <b>call-home</b>   | Enters call home configuration mode.  |
| Step 3 | Router(cfg-call-home)# <b>rename profile</b><br><i>source_profile target_profile</i> | Renames an existing source file, where: <ul style="list-style-type: none"> <li>• <i>source_profile</i>—Specifies the existing name of the profile.</li> <li>• <i>target_profile</i>—Specifies a new name for the existing profile.</li> </ul> |

This example shows how to activate a destination profile:

```
Router# configure terminal
Router(config)# call-home
Router(config-call-home)# profile test
Router(cfg-call-home-profile)# rename profile profile1 profile2
```

## Using the Predefined CiscoTAC-1 Destination Profile

The CiscoTAC-1 profile is automatically configured in the Call Home feature for your use with the Cisco Smart Call Home service. This profile includes certain information, such as the destination email address and HTTPS URL, and default alert groups for communication with the Smart Call Home service. Some of these attributes, such as the destination email address, HTTPS URL, and message format cannot be modified.

You can use either email or http transport to communicate with the Smart Call Home service backend server. By default, the CiscoTAC-1 profile is inactive and uses email as the default transport method. To use email transport, you only need to enable the profile. However, to use this profile with the Cisco Smart Call Home service secure server (via HTTPS), you not only must enable the profile, but you must also change the transport method to HTTP as shown in the following example:

```
Router# configure terminal
Router(config)# call-home
Router(config-call-home)# profile CiscoTAC-1
Router(cfg-call-home-profile)# destination transport-method http
Router(cfg-call-home-profile)# active
```

For more information about additional requirements for Configuring the Smart Call Home service, see the [“Configuring and Enabling Smart Call Home”](#) section on page 65-19.

## Verifying the Call Home Profile Configuration

To verify the profile configuration for Call Home, use the **show call-home profile** command. See the [“Displaying Call Home Configuration Information”](#) section on page 65-23 for more information and examples.

## Subscribing to Alert Groups

These sections describe subscribing to alert groups:

- [Overview of Alert Group Subscription, page 65-14](#)
- [Configuring Alert Group Subscription, page 65-14](#)
- [Configuring Periodic Notification, page 65-15](#)
- [Configuring Message Severity Threshold, page 65-15](#)
- [Configuring Syslog Pattern Matching, page 65-16](#)

## Overview of Alert Group Subscription

An alert group is a predefined subset of Call Home alerts supported in all switches. 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 65-26](#), and the contents of the alert group messages are listed in the [“Message Contents” section on page 65-33](#).

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.

## Configuring Alert Group Subscription

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

|        | Command   | Purpose  |
|--------|---|--|
| Step 1 | Router# <b>configure terminal</b>   | Enters configuration mode.   |
| Step 2 | Router(config)# <b>call-home</b>  | Enters Call Home configuration submode.  |
| Step 3 | Router(cfg-call-home)# <b>alert-group {all   configuration   diagnostic   environment   inventory   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.  |
| Step 4 | Router(cfg-call-home)# <b>profile name</b>  | Enters the Call Home destination profile configuration submode for the specified destination profile.  |
| Step 5 | Router(cfg-call-home-profile)# <b>subscribe-to-alert-group configuration [periodic {daily hh:mm   monthly date hh:mm   weekly day hh:mm}]</b> | 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” section on page 65-15</a> . |
| Step 6 | Router(cfg-call-home-profile)# <b>subscribe-to-alert-group all</b>  | Subscribes to all available alert groups.  |

|         | Command   | Purpose   |
|---------|---|---|
| Step 7  | Router(cfg-call-home-profile)#<br><b>subscribe-to-alert-group diagnostic</b> [severity {catastrophic   critical   debugging   disaster   fatal   major   minor   normal   notification   warning}]              | 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 65-15.   |
| Step 8  | Router(cfg-call-home-profile)#<br><b>subscribe-to-alert-group environment</b> [severity {catastrophic   critical   debugging   disaster   fatal   major   minor   normal   notification   warning}]             | 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 65-15.   |
| Step 9  | Router(cfg-call-home-profile)#<br><b>subscribe-to-alert-group inventory</b> [periodic {daily hh:mm   monthly date hh:mm   weekly day hh:mm}]  | 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 65-15.   |
| Step 10 | Router(cfg-call-home-profile)#<br><b>subscribe-to-alert-group syslog</b> [severity {catastrophic   disaster   fatal   critical   major   minor   warning   notification   normal   debugging} [pattern string]] | 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 <a href="#">“Configuring Message Severity Threshold”</a> section on page 65-15. You can specify a pattern to be matched in the syslog message, as described in the <a href="#">“Configuring Syslog Pattern Matching”</a> section on page 65-16. If the pattern contains spaces, you must enclose it in quotes (“”). |
| Step 11 | Router(cfg-call-home-profile)# <b>exit</b>  | Exits the Call Home destination profile configuration submode.  |

## Configuring Periodic Notification

When you subscribe a destination profile to either the Configuration or the Inventory alert group (see the [“Configuring Alert Group Subscription”](#) section on page 65-14), 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 (see the [“Configuring Alert Group Subscription”](#) section on page 65-14), you can set a threshold for the sending of alert group messages based on the message’s level of severity. Any message with a value lower than the destination profile’s specified threshold is not sent to the destination.

The severity threshold is configured using the keywords in [Table 65-2](#), 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 debugging (level 0).

**Note**

Call Home severity levels are not the same as system message logging severity levels.

**Table 65-2 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 is 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.  |
| 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 (see the [“Configuring Alert Group Subscription”](#) section on page 65-14), 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.

## Enabling Call Home

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

|        | Command                                  | Purpose                        |
|--------|--|--------------------------------|
| Step 1 | Router# <b>configure terminal</b>        | Enters configuration mode.     |
| Step 2 | Router(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.

These sections describe Call Home communication:

- [Sending a Call Home Test Message Manually, page 65-17](#)
- [Sending a Call Home Alert Group Message Manually, page 65-17](#)

- [Sending a Request for an Analysis and Report, page 65-18](#)
- [Sending the Output of a Command, page 65-19](#)

## Sending a Call Home Test Message Manually

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

| Command   | Purpose   |
|---|---|
| Router# <b>call-home test</b> [" <i>test-message</i> "] <b>profile name</b> | 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. |

## Sending a Call Home Alert Group Message Manually

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

|               | Command  | Purpose   |
|---------------|--|---|
| <b>Step 1</b> | Router# <b>call-home send alert-group configuration</b> [ <b>profile name</b> ]  | Sends a configuration alert group message to one destination profile if specified, or to all subscribed destination profiles.   |
| <b>Step 2</b> | Router# <b>call-home send alert-group diagnostic</b> { <b>module number</b>   <i>slot/subslot</i>   <i>slot/bay_number</i>   <b>switch x module number</b> } [ <b>profile name</b> ] | 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. If a virtual switching system (VSS) is used, you must specify the switch and module. |
| <b>Step 3</b> | Router# <b>call-home send alert-group inventory</b> [ <b>profile name</b> ]  | 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:

- Only the configuration, diagnostic, and inventory alert groups can be sent manually.
- 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.

## Sending a Request for an Analysis and Report

Release 12.2(33)SXI and later releases support Call Home requests. 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 this task:

|        | Command  | Purpose   |
|--------|--|---|
| Step 1 | Router# <b>call-home request output-analysis</b><br>"show-command" [ <b>profile name</b> ] [ <b>ccoid user-id</b> ]  | Sends the output of the specified show command for analysis. The show command must be contained in quotes ("").   |
| Step 2 | Router# <b>call-home request</b> { <b>config-sanity</b>  <br><b>bugs-list</b>   <b>command-reference</b>   <b>product-advisory</b> }<br>[ <b>profile name</b> ] [ <b>ccoid user-id</b> ] | Sends the output of a predetermined set of commands such as the <b>show running-config all</b> , <b>show version</b> , and <b>show module</b> (standalone) or <b>show module switch all</b> (VS system) commands, for analysis. Specifies the type of report requested. |

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

- If a **profile name** is specified, the request will be sent to the profile. If no profile is specified, the request will be 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 email address where the transport gateway is configured so that the request message can be forwarded to the Cisco TAC and the user can receive the reply from the Smart Call Home service.
- The **ccoid user-id** is the registered identifier of the Smart Call Home user. If the **user-id** is specified, the response will be sent to the email address of the registered user. If no **user-id** is specified, the response will be sent to the contact email address of the device.
- Based on the keyword specifying the type of report requested, the following information will be 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:

```
Router# 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 email the command output to Cisco or to an email address that you specify.

To execute a CLI command and email the command output, perform this task:

| Command  | Purpose   |
|--|---|
| Router# <b>call-home send</b> "command" [email email-addr]<br>[tac-service-request SR] | Executes the specified CLI command and emails 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 email address is specified, the command output will be sent to that address. If no email address is specified, the output will be sent to the Cisco TAC (attach@cisco.com). The email 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 email address is specified, or if a Cisco TAC email address is specified.

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

```
Router# 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 “Quick Start for Smart Call Home” section in Chapter 1 of the *Smart Call Home User Guide*:

[http://www.cisco.com/en/US/docs/switches/lan/smart\\_call\\_home/book.html](http://www.cisco.com/en/US/docs/switches/lan/smart_call_home/book.html)

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*.

# Configuring the Smart Call Home Service



## Tip

From the Smart Call Home website, you can download a basic configuration script to assist you in the configuration of the Call Home feature for use with Smart Call Home service and the Cisco TAC. The script also assists 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 a link under the “Smart Call Home Resources” heading at: [http://www.cisco.com/en/US/products/ps7334/serv\\_home.html](http://www.cisco.com/en/US/products/ps7334/serv_home.html)

This section provides an overview of the minimum steps required to configure the Call Home feature on a Cisco device, and other required supporting configuration to communicate securely with the Smart Call Home service using HTTPS:

- [Enabling the Smart Call Home Service, page 65-20](#)
- [Declare and Authenticate a CA Trustpoint, page 65-21](#)
- [Start Smart Call Home Registration, page 65-22](#)

## Enabling the Smart Call Home Service



## Note

Before you start to configure the Smart Call Home Service, be sure that you have completed the following prerequisites:

- Verify that you have an active Cisco Systems service contract for the device being configured.
- Verify that you have IP connectivity to the Cisco HTTPS server.
- Obtain the latest Cisco Systems server security certificate.

The CiscoTAC-1 profile is predefined in the Call Home feature to communicate using email to the backend server for the Smart Call Home service. The URL to the Cisco HTTPS backend server is also predefined. This profile is inactive by default.

Unlike other profiles that you can configure in Call Home to support both transport methods, the CiscoTAC-1 profile can only use one transport method at a time. To use this profile with the Cisco Smart Call Home HTTPS server, you must change the transport method from email to HTTP and enable the profile. In addition, you must minimally specify a contact email address and enable the Call Home feature.

To enable the Smart Call Home service, perform this task:

|        | Command or Action   | Purpose   |
|--------|---|---|
| Step 1 | Router# <b>configure terminal</b>                                       | Enters global configuration mode.   |
| Step 2 | Router(config)# <b>call-home</b>  | Enters call home configuration mode.  |
| Step 3 | Router(config-call-home)# <b>profile CiscoTAC-1</b>                     | Enters call home destination profile configuration mode for the CiscoTAC-1 destination profile. |
| Step 4 | Router(cfg-call-home-profile)# <b>destination transport-method http</b> | (Required for HTTPS) Configures the message transport method for http.                          |
| Step 5 | Router(cfg-call-home-profile)# <b>active</b>                            | Enables the destination profile.  |

|         | Command or Action   | Purpose  |
|---------|---|--|
| Step 6  | Router(cfg-call-home-profile)# <b>exit</b>  | Exits call home destination profile configuration mode and returns to call home configuration mode.      |
| Step 7  | Router(cfg-call-home)# <b>contact-email-addr</b><br><i>customer_email_address</i> | Assigns the customer's email address. Enter up to 200 characters in email address format with no spaces. |
| Step 8  | Router(cfg-call-home)# <b>exit</b>  | Exits call home configuration mode and returns to global configuration mode.                             |
| Step 9  | Router(config)# <b>service call-home</b>  | Enables the Call Home feature.   |
| Step 10 | Router(config)# <b>exit</b>   | Exits global configuration mode and returns to privileged EXEC mode.                                     |
| Step 11 | Router# <b>copy running-config startup-config</b>                                 | Saves the configuration.   |

This example shows how to enable the Smart Call Home service:

```
Router(cfg-call-home-profile)# destination transport-method http
Router(cfg-call-home-profile)# active
Router(cfg-call-home-profile)# exit
Router(cfg-call-home)# contact-email-addr username@example.com
Router(cfg-call-home)# exit
Router(config)# service call-home
Router(config)# exit
Router# copy running-config startup-config
```

## Declare and Authenticate a CA Trustpoint

To declare and authenticate the Cisco server security certificate and establish communication with the Cisco HTTPS server for Smart Call Home service, perform this task:

|        | Command or Action   | Purpose  |
|--------|---|--|
| Step 1 | Router# <b>configure terminal</b>   | Enters global configuration mode.  |
| Step 2 | Router(config)# <b>crypto pki trustpoint</b><br><i>trustpoint_name</i>  | Declares a CA trustpoint on your router and enters CA trustpoint configuration mode.   |
| Step 3 | Router(ca-trustpoint)# <b>enrollment terminal</b>   | Specifies a manual cut-and-paste method of certificate enrollment.   |
| Step 4 | Router(ca-trustpoint)# <b>exit</b>  | Exits CA trustpoint configuration mode and returns to global configuration mode.   |
| Step 5 | Router(config)# <b>crypto pki authenticate</b><br><i>trustpoint_name</i><br>Enter the base 64 encoded CA certificate.<br>End with a blank line or the word "quit" on a line by itself | Authenticates the named CA. The CA name should match the <i>trustpoint_name</i> specified in the <b>crypto pki trustpoint</b> command. At the prompt, paste the security certificate text. |
| Step 6 | <b>quit</b><br>% Do you accept this certificate? [yes/no]:  | Specifies the end of the security certificate text.  |
| Step 7 | <b>yes</b>  | Confirms acceptance of the entered security certificate.   |
| Step 8 | Router(config)# <b>end</b>  | Exits global configuration mode and returns to privileged EXEC mode.   |
| Step 9 | Router# <b>copy running-config startup-config</b>   | Saves the configuration.   |

The example shows how to declare and authenticate the Cisco server security certificate and establish communication with the Cisco HTTPS server for Smart Call Home service:

```
Router# configure terminal
Router(config)# crypto pki trustpoint cisco
Router(ca-trustpoint)# enrollment terminal
Router(ca-trustpoint)# exit
Router(config)# crypto pki authenticate cisco

Enter the base 64 encoded CA certificate.
End with a blank line or the word "quit" on a line by itself
```

(CA certificate text not shown)

```
quit
Certificate has the following attributes:
    Fingerprint MD5: A2339B4C 747873D4 6CE7C1F3 8DCB5CE9
    Fingerprint SHA1: 85371CA6 E550143D CE280347 1BDE3A09 E8F8770F

% Do you accept this certificate? [yes/no]: yes
Trustpoint CA certificate accepted.
% Certificate successfully imported

Router(config)# end
Router# copy running-config startup-config
```

## Start Smart Call Home Registration

To start the Smart Call Home registration process, perform this task:

| Command or Action  | Purpose  |
|--|--|
| Router# <b>call-home send alert-group inventory profile CiscoTAC-1</b> | Manually sends an inventory alert group message to the CiscoTAC-1 destination profile. |

After the Smart Call Home service is registered, you will receive an email from Cisco Systems. Follow the instructions in the email. The instructions include these procedures:

- To complete the device registration, launch the Smart Call Home web application at the following URL:  
<http://tools.cisco.com/sch/>
- Accept the Legal Agreement.
- Confirm device registration for Call Home devices with pending registration.

For more information about using the Smart Call Home web application, see the [Smart Call Home User Guide](#). This user guide also 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 must not be connected directly to the Internet.

# Displaying Call Home Configuration Information

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

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

Examples 65-1 to 65-7 show the results when using different options of the **show call-home** command.

## Example 65-1 Configured Call Home Information

```
Router# show call-home
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

  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
  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

Router#
```

**Example 65-2 Configured Call Home Information in Detail**

```

Router# 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

  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
  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           minor

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

Router#

```

**Example 65-3 Available Call Home Alert Groups**

```
Router# 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

Router#
```

**Example 65-4 Email Server Status Information**

```
Router# 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]

Router#
```

**Example 65-5 Information for All Destination Profiles (Predefined and User-Defined)**

```
Router# 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                  minor

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

Router#
```

**Example 65-6 Information for a User-Defined Destination Profile**

```
Router# show call-home profile campus-noc
```

```
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      |

```
Router#
```

**Example 65-7 Call Home Statistics**

```
Router# show call-home statistics
Successful Call-Home Events: 1
Dropped Call-Home Events due to Rate Limiting: 0
Last call-home message sent time: 2007-04-25 11:07:04 GMT+00:00
```

## 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. These tables list the trigger events included in each alert group, including the severity level of each event and the executed CLI commands for the alert group:

- [Call Home Syslog Alert Group Events and Actions, Table 65-3 on page 65-27](#)
- [Call Home Environmental Alert Group Events and Actions, Table 65-4 on page 65-27](#)
- [Call Home Inventory Alert Group Events and Actions, Table 65-5 on page 65-30](#)
- [Call Home Diagnostic Failure Alert Group Events and Actions, Table 65-6 on page 65-31](#)
- [Call Home Test Alert Group Events and Actions, Table 65-7 on page 65-32](#)
- [Call Home License Alert Group Events and Actions, Table 65-8 on page 65-32](#)
- [Call Home Configuration Alert Group Events and Actions, Table 65-9 on page 65-33](#)

Table 65-3 Call Home Syslog Alert Group Events and Actions

|                                 |                              |            |                                    |
|---------------------------------|------------------------------|------------|------------------------------------|
| <b>Alert Group Description:</b> | Event logged to syslog       |            |                                    |
| <b>Send to TAC:</b>             | No                           |            |                                    |
| <b>Executed Commands:</b>       | show logging, show inventory |            |                                    |
| <b>Call Home Trigger Event</b>  | <b>Syslog Event</b>          | <b>Sev</b> | <b>Description</b>                 |
| SYSLOG                          | LOG_EMERG                    | 0          | system is unusable                 |
|                                 | LOG_ALERT                    | 1          | action must be taken immediately   |
|                                 | LOG_CRIT                     | 2          | critical conditions                |
|                                 | LOG_ERR                      | 3          | error conditions                   |
|                                 | LOG_WARNING                  | 4          | warning conditions                 |
|                                 | LOG_NOTICE                   | 5          | normal but signification condition |
|                                 | LOG_INFO                     | 6          | informational                      |
|                                 | LOG_DEBUG                    | 7          | debug-level messages               |

Table 65-4 Call Home Environmental Alert Group Events and Actions

|                                 |  |            |  |
|---------------------------------|--|------------|--|
| <b>Alert Group Description:</b> | Events related to power, fan and environment sensing elements such as temperature alarms |            |  |
| <b>Send to TAC:</b>             | Yes  |            |  |
| <b>Executed Commands:</b>       | show module, show environment, show logging, show inventory, show power                  |            |  |
| <b>Call Home Trigger Event</b>  | <b>Syslog Event</b>  | <b>Sev</b> | <b>Description</b>   |
| FAN_FAILURE                     | FANPSINCOMPAT  | 4          | Fan tray and power supply %d are incompatible                                    |
|                                 | ALARMCLR   | 4          | The specified alarm condition has been cleared, and shutdown has been cancelled. |
|                                 | FANHIOUTPUT  | 4          | Version %d high-output fan-tray is in effect                                     |
|                                 | FANLOOUTPUT  | 4          | Version %d low-output fan-tray is in effect                                      |
|                                 | FANVERCHK  | 4          | Power-supply %d inserted is only compatible with Version %d fan-tray.            |
|                                 | FANTRAYFAILED  | 4          | fan tray failed  |
|                                 | FANTRAYOK  | 4          | fan tray OK  |
|                                 | FANCOUNTFAILED   | 4          | Required number of fan trays is not present                                      |
|                                 | FANCOUNTOK   | 4          | Required number of fan trays is present  |
|                                 | PSFANFAIL  | 4          | the fan in power supply has failed   |
|                                 | PSFANOK  | 4          | the fan in power supply is OK  |

Table 65-4 Call Home Environmental Alert Group Events and Actions (continued)

|                                 |  |                                   |   |
|---------------------------------|--|-----------------------------------|---|
| <b>Alert Group Description:</b> | Events related to power, fan and environment sensing elements such as temperature alarms |                                   |   |
| <b>Send to TAC:</b>             | Yes  |                                   |   |
| <b>Executed Commands:</b>       | show module, show environment, show logging, show inventory, show power                  |                                   |   |
| <b>Call Home Trigger Event</b>  | <b>Syslog Event</b>  | <b>Sev</b>                        | <b>Description</b>  |
| TEMPERATURE_ALARM               | MAJORTEMPALARM   | 2                                 | It has exceeded allowed operating temperature range.          |
|                                 | MAJORTEMPALARMRECOVER  | 4                                 | It has returned to allowed operating temperature range.       |
|                                 | MINORTEMPALARM   | 4                                 | It has exceeded normal operating temperature range.           |
|                                 | MINORTEMPALARMRECOVER  | 4                                 | It has returned to normal operating temperature range.        |
| VTT_FAILED                      | VTTFAILED  | 4                                 | VTT %d failed.  |
|                                 | VT TOK   | 4                                 | VTT %d operational.   |
|                                 | VTTMAJFAILED   | 0                                 | Too many VTT failures to continue system operation.           |
|                                 | VTTMAJRECOVERED  | 2                                 | Enough VTTs operational to continue system operation.         |
| CLOCK_FAILED                    | CLOCKFAILED  | 4                                 | clock failed  |
|                                 | CLOCKOK  | 4                                 | clock operational   |
|                                 | CLOCKMAJFAILED   | 0                                 | too many clocks failed to continue system operation           |
|                                 | CLOCKMAJRECOVERED  | 2                                 | enough clocks operational to continue system operation        |
|                                 | SHUTDOWN-SCHEDULED   | 2                                 | shutdown for %s scheduled in %d seconds                       |
|                                 | SHUTDOWN_NOT_SCHEDULED   | 2                                 | Major sensor alarm for %s is ignored, %s will not be shutdown |
|                                 | SHUTDOWN-CANCELLED   | 2                                 | shutdown for cancelled  |
|                                 | SHUTDOWN   | 2                                 | shutdown %s now because of %s                                 |
|                                 | SHUTDOWN-DISABLED  | 1                                 | need to shutdown %s now but shutdown action is disabled!      |
|                                 | RESET_SCHEDULED  | 2                                 | System reset scheduled in seconds                             |
|                                 | CLOCK_SWITCHOVER   | 2                                 | changing system switching clock                               |
|                                 | CLOCK_A_MISSING  | 4                                 | cannot detect clock A in the system                           |
|                                 | CLOCK_B_MISSING  | 4                                 | cannot detect clock B in the system                           |
|                                 | USE_RED_CLOCK  | 4                                 | system is using the redundant clock (clock B).                |
|                                 | ENABLED  | 4                                 | power to module in slot %d set on                             |
| DISABLED                        | 4  | power to module in slot %d set %s |   |
| PSOK                            | 4  | power supply %d turned on.        |   |

Table 65-4 Call Home Environmental Alert Group Events and Actions (continued)

|                                 |  |                                  |  |
|---------------------------------|--|----------------------------------|--|
| <b>Alert Group Description:</b> | Events related to power, fan and environment sensing elements such as temperature alarms |                                  |  |
| <b>Send to TAC:</b>             | Yes  |                                  |  |
| <b>Executed Commands:</b>       | show module, show environment, show logging, show inventory, show power                  |                                  |  |
| <b>Call Home Trigger Event</b>  | <b>Syslog Event</b>  | <b>Sev</b>                       | <b>Description</b>   |
| POWER_SUPPLY_FAILURE            | PSFAIL   | 4                                | power supply %d output failed.   |
|                                 | PSREDUNDANTMODE  | 4                                | power supplies set to redundant mode.  |
|                                 | PSCOMBINEDMODE   | 4                                | power supplies set to combined mode.   |
|                                 | PSREDUNDANTMISMATCH  | 4                                | power supplies rated outputs do not match.   |
|                                 | PSMISMATCH   | 4                                | power supplies rated outputs do not match.   |
|                                 | PSNOREDUNDANCY   | 4                                | Power supplies are not in full redundancy, power usage exceed lower capacity supply    |
|                                 | PSOCPSHUTDOWN  | 2                                | Power usage exceeds power supply %d allowable capacity.                                |
|                                 | PSREDUNDANTONESUPPLY   | 4                                | in power-redundancy mode, system is operating on one power supply                      |
|                                 | PSREDUNDANTBOTHSUPPLY  | 4                                | in power-redundancy mode, system is operating on both power supplies                   |
|                                 | UNDERPOWERED   | 4                                | insufficient power to operate all FRUs in system.                                      |
|                                 | COULDNOTREPOWER  | 4                                | wanted to re-power FRU (slot %d) but could not.  |
|                                 | POWERDENIED  | 4                                | insufficient power, module in slot %d power denied.                                    |
|                                 | UNSUPPORTED  | 4                                | unsupported module in slot %d, power not allowed: %s.                                  |
|                                 | INSUFFICIENTPOWER  | 2                                | Powering down all linecards as there is not enough power to operate all critical cards |
|                                 | INPUTCHANGE  | 4                                | Power supply %d input has changed. Power capacity adjusted to %sW                      |
| PSINPUTDROP                     | 4  | Power supply %d input has droppe |  |

Table 65-5 Call Home Inventory Alert Group Events and Actions

|                                 |  |            |  |
|---------------------------------|--|------------|--|
| <b>Alert Group Description:</b> | Inventory status should be provided whenever a unit is cold-booted, or when FRUs are inserted or removed. This is considered a non-critical event, and the information is used for status and entitlement. |            |  |
| <b>Send to TAC:</b>             | Yes  |            |  |
| <b>Executed Commands:</b>       | <b>show module, show version, show install running</b> (software modularity images only), <b>show inventory oid, show idprom all, remote command switch show version, show diagbus, show power</b>         |            |  |
| <b>Call Home Trigger Event</b>  | <b>Syslog Event</b>  | <b>Sev</b> | <b>Description</b>   |
| HARDWARE_INSERTION              | INSPS  | 6          | Power supply inserted in slot %d   |
| HARDWARE_REMOVAL                | REMPs  | 6          | Power supply removed from slot %d  |
|                                 | REMCARD  | 6          | Card removed from slot %d, interfaces disabled   |
|                                 | STDBY_REMCARD  | 6          | The OIR facility on Standby Supervisor was notified by the Active that a processor from slot[n] has been removed |
| HARDWARE_INSERTION              | INSCAR   | 6          | Card inserted in slot %d, interfaces are now online  |
|                                 | STDBY_INSCARD  | 6          | Standby was notified, card online in slot %d   |
|                                 | SEQ_MISMATCH   | 6          | SCP seq mismatch for card in slot %d : %s  |
| HARDWARE_REMOVAL                | UNKNOWN  | 3          | Unknown card in slot %d, card is being disabled  |
|                                 | STDBY_UNKNOWN  | 3          | Standby was notified, Unknown card in slot %d  |
|                                 | UNSUPPORTED  | 3          | Card in slot %d is unsupported. %s   |
|                                 | PWRCYCLE   | 3          | Card in module %d, is being power-cycled %s  |
|                                 | STDBY_PWRCYCLE   | 3          | Standby was notified, Card in module %d is being power-cycled %s   |
|                                 | CONSOLE  | 6          | Changing console ownership to %s processor   |
|                                 | RUNNING_CONFIG   | 6          | During switchover, the OIR facility is unable to clean up running-config processor.                              |
|                                 | DISALLOW   | 6          | Supervisor attempting to come up as secondary in EHSA mode, will not be allowed                                  |
|                                 | REMFAN   | 6          | Fan %d removed   |
| HARDWARE_INSERTION              | INSFAN   | 6          | Fan %d inserted  |
|                                 | PSINSERTED   | 4          | power supply inserted in slot %d.  |

Table 65-6 Call Home Diagnostic Failure Alert Group Events and Actions

|                                 |  |  |
|---------------------------------|--|--|
| <b>Alert Group Description:</b> | Events related to standard or intelligent line cards   |  |
| <b>Send to TAC:</b>             | Yes  |  |
| <b>Executed Commands:</b>       | <b>show module, show diagnostic result Module &lt;#&gt; detail, show version, show install running</b> (software modularity images only), <b>show inventory, show buffers, show logging, show diagnostic result module all, remote command switch show version, show logging system last 100</b> |  |
| <b>Call Home Trigger Event:</b> | DIAGNOSTICS_FAILURE  |  |
| <b>Syslog Event</b>             | <b>Sev</b>   | <b>Description</b>   |
| C2PLUSWITHNO DB                 | 2  | The constellation 2 plus module in slot %d has no forwarding daughter board. Power denied                    |
| DFCMISMATCH                     | 2  | Module %d DFC incompatible with Supervisor DFC. Power denied   |
| BADFLOWCTRL                     | 2  | Module %d not at an appropriate hardware revision level to support DFC. Power denied                         |
| BADFLOWCTRL_WARN                | 2  | WARNING: Module %d not at an appropriate hardware revision level to support DFC3                             |
| BADPINN1                        | 2  | Module %d not at an appropriate hardware revision level to coexist with PFC3 system. Power denied            |
| FANUPGREQ                       | 2  | Module %d not supported without fan upgrade  |
| INSUFFCOO                       | 4  | Module %d cannot be adequately cooled  |
| PROVISION                       | 6  | Module %d does not meet the provisioning requirements, power denied  |
| PWRFAILURE                      | 6  | Module %d is being disabled due to power convertor failure   |
| LC_FAILURE                      | 3  | Module %d has Major online diagnostic failure, %s  |
| HARD_RESET                      | 3  | Module %d is being hard reset as a part of swichover error recovery  |
| SOFT_RESET                      | 3  | Module %d is being soft reset as a part of swichover error recovery  |
| DOWNGRADE                       | 6  | Fabric capable module %d not at an appropriate hardware revision level, and can only run in flowthrough mode |
| DIAG_OK                         |  |  |
| DIAG_BYPASS                     |  |  |
| DIAG_ERROR                      |  |  |
| DIAG_MINOR_ERROR                |  |  |
| DIAG_MAJOR_ERROR                |  |  |
| DIAG_LINE_CARD_NOT_PRESENT      |  |  |
| DIAG_LINE_CARD_REMOVED          |  |  |
| DIAG_INVALID_TEST_ID_RANGE      |  |  |
| DIAG_INVALID_PORT_RANGE         |  |  |
| DIAG_IS_BUSY                    |  |  |
| DIAG_IS_IDLE                    |  |  |
| DIAG_NO_SCHEDULE                |  |  |
| DIAG_SCHEDULE_EXIST             |  |  |

**Table 65-6** Call Home Diagnostic Failure Alert Group Events and Actions (continued)

|                                 |   |                    |
|---------------------------------|---|--------------------|
| <b>Alert Group Description:</b> | Events related to standard or intelligent line cards  |                    |
| <b>Send to TAC:</b>             | Yes   |                    |
| <b>Executed Commands:</b>       | <b>show module, show diagnostic result Module &lt;#&gt; detail, show version, show install running (software modularity images only), show inventory, show buffers, show logging, show diagnostic result module all, remote command switch show version, show logging system last 100</b> |                    |
| <b>Call Home Trigger Event:</b> | DIAGNOSTICS_FAILURE   |                    |
| <b>Syslog Event</b>             | <b>Sev</b>  | <b>Description</b> |
| DIAG_NO_TEST                    |   |                    |
| DIAG_UNKNOWN                    |   |                    |
| DIAG_NOT_AVAILABLE              |   |                    |
| DIAG_EXIT_ON_ERROR              |   |                    |
| DIAG_EXIT_ON_FAIL_LIMIT_REACHED |   |                    |
| DIAG_INVALID_SCHEDULE           |   |                    |
| DIAG_PF_DIAG_NOT_SUPPORTED      |   |                    |
| DIAG_IS_STOPPED                 |   |                    |
| DIAG_INVALID_DEVICE_RANGE       |   |                    |

**Table 65-7** Call Home Test Alert Group Events and Actions

|                                 |  |                              |
|---------------------------------|--|------------------------------|
| <b>Alert Group Description:</b> | —  |                              |
| <b>Send to TAC:</b>             | Yes  |                              |
| <b>Executed Commands:</b>       | <b>show version, show module, show inventory, test message</b> |                              |
| <b>Call Home Trigger Event:</b> | —  |                              |
| <b>Syslog Event</b>             | <b>Sev</b>   | <b>Description</b>           |
| TEST                            | 2  | User-generated test message. |

**Table 65-8** Call Home License Alert Group Events and Actions

|                                 |  |   |
|---------------------------------|--|---|
| <b>Alert Group Description:</b> | For future use.                              |   |
| <b>Send to TAC:</b>             | Yes  |   |
| <b>Executed Commands:</b>       | <b>show license all, show running-config</b> |   |
| <b>Call Home Trigger Event:</b> | —  |   |
| <b>Syslog Event</b>             | <b>Sev</b>                                   | <b>Description</b>  |
| —                               | —  | Events related to unlicensed use of licensed features, or inconsistent license information. |

**Table 65-9 Call Home Configuration Alert Group Events and Actions**

|                                 |   |                    |
|---------------------------------|---|--------------------|
| <b>Alert Group Description:</b> | User generated request for configuration.   |                    |
| <b>Send to TAC:</b>             | Yes   |                    |
| <b>Executed Commands:</b>       | show module, show version, show install running (software modularity images only), show running-config all, show startup-config, show inventory, remote command switch show version |                    |
| <b>Call Home Trigger Event:</b> | —   |                    |
| <b>Syslog Event</b>             | <b>Sev</b>  | <b>Description</b> |
| —                               | —   | —                  |

## Message Contents

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

- [Table 65-10](#) describes the content fields of a short text message.
- [Table 65-11](#) 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 after the common fields.
- [Table 65-12](#) describes the content fields for reactive messages (system failures that require a TAC case) and proactive messages (issues that might result in degraded system performance).
- [Table 65-13](#) describes the content fields for an inventory message.

**Table 65-10 Format for a Short Text Message**

| Data Item               | Description  |
|-------------------------|--|
| Device identification   | Configured device name                               |
| Date/time stamp         | Time stamp of the triggering event                   |
| Error isolation message | Plain English description of triggering event        |
| Alarm urgency level     | Error level such as that applied to a system message |

**Table 65-11 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 and time stamp of event in ISO time notation:<br><i>YYYY-MM-DDTHH:MM:SS</i>  | CallHome/EventTime            |
| Message name                   | Name of message. Specific event names are listed in the <a href="#">“Alert Group Trigger Events and Commands”</a> section on <a href="#">page 65-26</a> . | (for short text message only) |
| Message type                   | Specifically Call Home.   | CallHome/Event/Type           |
| Message subtype                | Specific type of message: full, delta, or test.   | CallHome/Event/SubType        |

Table 65-11 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)                            |
|--------------------------------|---|---|
| Message group                  | Specifically reactive or proactive.   | (for long text message only)                  |
| Severity level                 | Severity level of message (see <a href="#">Table 65-2 on page 65-16</a> ).  | Body/Block/Severity                           |
| Source ID                      | Product type for routing. Specifically Catalyst 6500.   | (for long text message only)                  |
| Device ID                      | <p>Unique device identifier (UDI) for end device generating message. This field should be empty if the message is nonspecific to a fabric switch. The format is <i>type@Sid@serial</i>.</p> <ul style="list-style-type: none"> <li><i>type</i> is the product model number from backplane IDPROM.</li> <li>@ is a separator character.</li> <li><i>Sid</i> is C, identifying the serial ID as a chassis serial number.</li> <li><i>serial</i> is the number identified by the Sid field.</li> </ul> <p>Example: WS-C6509@C@12345678</p> | CallHome/CustomerData/ContractData/DeviceId   |
| Customer ID                    | Optional user-configurable field used for contract information or other ID by any support service.  | CallHome/CustomerData/ContractData/CustomerId |
| Contract ID                    | Optional user-configurable field used for contract information or other ID by any support service.  | CallHome/CustomerData/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     |
| Server ID                      | <p>If the message is generated from the fabric switch, this is the unique device identifier (UDI) of the switch.</p> <p>The format is <i>type@Sid@serial</i>.</p> <ul style="list-style-type: none"> <li><i>type</i> is the product model number from backplane IDPROM.</li> <li>@ is a separator character.</li> <li><i>Sid</i> is C, identifying the serial ID as a chassis serial number.</li> <li><i>serial</i> is the number identified by the Sid field.</li> </ul> <p>Example: WS-C6509@C@12345678</p>                           | (for long text message only)                  |
| Message description            | Short text describing the error.  | CallHome/MessageDescription                   |

**Table 65-11 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)  |
|--|---|---|
| Device name  | Node that experienced the event. This 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/SystemInfo/Contact                                  |
| Contact email  | Email address of person identified as contact for this unit.  | CallHome/CustomerData/SystemInfo/ContactEmail                             |
| Contact phone number   | Phone number of the person identified as the contact for this unit.   | CallHome/CustomerData/SystemInfo/ContactPhoneNumber                       |
| Street address   | Optional field containing street address for RMA part shipments associated with this unit.  | CallHome/CustomerData/SystemInfo/StreetAddress                            |
| Model name   | Model name of the switch. This 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.   | CallHome/Device/Cisco_Chassis/AdditionalInformation/AD@name="PartNumber"/ |
| System Object ID   | The System ObjectID that uniquely identifies the system.  | CallHome/Device/Cisco_Chassis/AdditionalInformation/AD@name="sysObjectID" |
| SysDesc  | System description for the managed element.   | CallHome/Device/Cisco_Chassis/AdditionalInformation/AD@name="sysDescr"    |
| The following fields may be repeated if multiple CLI commands are executed for this alert group. |   |   |
| Command output name  | The exact name of the issued CLI command.   | /aml/Attachments/Attachment/Name  |
| Attachment type  | Type (usually inline).  | /aml/Attachments/Attachment@type  |
| MIME type  | Normally text/plain or encoding type.   | /aml/attachments/attachment/Data@encoding                                 |
| Command output text  | Output of command automatically executed (see the <a href="#">“Alert Group Trigger Events and Commands”</a> section on page 65-26). | /aml/attachments/attachment/atdata  |

**Table 65-12 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" |

**Table 65-12** Fields for a Reactive or Proactive Event Message (continued)

| Data Item (Plain Text and XML) | Description (Plain Text and XML)                       | XML Tag (XML Only)  |
|--------------------------------|--|---|
| 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/<br>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 |
| Process name                   | Name of process.                                       | /aml/body/process/name  |
| Process ID                     | Unique process ID.                                     | /aml/body/process/id  |
| Process state                  | State of process (for example, running or halted).     | /aml/body/process/processState  |
| Process exception              | Exception or reason code.                              | /aml/body/process/exception   |

**Table 65-13** 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" |
| FRU name                           | Name of the affected FRU generating the event message. | CallHome/Device/Cisco_Chassis/Cisco_Card/Model                                |
| FRU s/n                            | Serial number of FRU.                                  | CallHome/Device/Cisco_Chassis/Cisco_Card/SerialNumber                         |
| FRU part number                    | Part number of FRU.                                    | CallHome/Device/Cisco_Chassis/Cisco_Card/PartNumber                           |
| FRU slot                           | Slot number of FRU.                                    | CallHome/Device/Cisco_Chassis/Cisco_Card/LocationWithinContainer              |

**Table 65-13** Fields for an Inventory Event Message (continued)

| Data Item<br>(Plain Text and XML) | Description<br>(Plain Text and XML) | XML Tag<br>(XML Only)   |
|-----------------------------------|-------------------------------------|---|
| FRU hardware version              | Hardware version of FRU.            | CallHome/Device/Cisco_Chassis/Cisco_Card/HardwareVersion                |
| FRU software version              | Software version(s) running on FRU. | CallHome/Device/Cisco_Chassis/Cisco_Card/SoftwareIdentity/VersionString |

## Sample Syslog Alert Notification in Long-Text Format

```

source:MDS9000
Switch Priority:7
Device Id:WS-C6509@CFG@07120011
Customer Id:Example.com
Contract Id:123
Site Id:San Jose
Server Id:WS-C6509@CFG@07120011
Time of Event:2004-10-08T11:10:44
Message Name:SYSLOG_ALERT
Message Type:Syslog
Severity Level:2
System Name:10.76.100.177
Contact Name:User Name
Contact Email:admin@yourcompany.com
Contact Phone:+1 408 555-1212
Street Address:#1234 Picaboo Street, Any city, Any state, 12345
Event Description:2006 Oct 8 11:10:44 10.76.100.177 %PORT-5-IF_TRUNK_UP: %$VSAN 1%$
Interface fc2/5, vsan 1 is up

syslog_facility:PORT
start chassis information:
Affected Chassis:WS-C6509
Affected Chassis Serial Number:FG@07120011
Affected Chassis Hardware Version:0.104
Affected Chassis Software Version:3.1(1)
Affected Chassis Part No:73-8607-01
end chassis information:

```

## Sample Syslog Alert Notification in XML Format

```

From: example
Sent: Wednesday, April 25, 2007 7:20 AM
To: User (user)
Subject: System Notification From Router - syslog - 2007-04-25 14:19:55
GMT+00:00

<?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.example.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.example.com/services/DDCEService</aml-session:To>
<aml-session:Path>
<aml-session:Via>http://www.example.com/appliance/uri</aml-session:Via>

```

```

</aml-session:Path>
<aml-session:From>http://www.example.com/appliance/uri</aml-session:From>
<aml-session:MessageId>M2:69000101:C9D9E20B</aml-session:MessageId>
</aml-session:Session>
</soap-env:Header>
<soap-env:Body>
<aml-block:Block xmlns:aml-block="http://www.example.com/2004/01/aml-block">
<aml-block:Header>
<aml-block:Type>http://www.example.com/2005/05/callhome/syslog</aml-block:Type>
<aml-block:CreationDate>2007-04-25 14:19:55 GMT+00:00</aml-block:CreationDate>
<aml-block:Builder>
<aml-block:Name>Cat6500</aml-block:Name>
<aml-block:Version>2.0</aml-block:Version>
</aml-block:Builder>
<aml-block:BlockGroup>
<aml-block:GroupId>G3:69000101:C9F9E20C</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.example.com/2005/05/callhome" version="1.0">
<ch:EventTime>2007-04-25 14:19:55 GMT+00:00</ch:EventTime>
<ch:MessageDescription>03:29:29: %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>Catalyst 6500 Series Switches</ch:Series>
</ch:Event>
<ch:CustomerData>
<ch:UserData>
<ch:Email>user@example.com</ch:Email>
</ch:UserData>
<ch:ContractData>
<ch:CustomerId>12345</ch:CustomerId>
<ch:SiteId>building 1</ch:SiteId>
<ch:ContractId>abcdefg12345</ch:ContractId>
<ch:DeviceId>WS-C6509@C@69000101</ch:DeviceId>
</ch:ContractData>
<ch:SystemInfo>
<ch:Name>Router</ch:Name>
<ch>Contact></ch>Contact>
<ch>ContactEmail>user@example.com</ch>ContactEmail>
<ch>ContactPhoneNumber>+1 408 555-1212</ch>ContactPhoneNumber>
<ch:StreetAddress>270 E. Tasman Drive, San Jose, CA</ch:StreetAddress>
</ch:SystemInfo>
</ch:CustomerData>
<ch:Device>
<rme:Chassis xmlns:rme="http://www.example.com/rme/4.0">
<rme:Model>WS-C6509</rme:Model>
<rme:HardwareVersion>1.0</rme:HardwareVersion>
<rme:SerialNumber>69000101</rme:SerialNumber>
<rme:AdditionalInformation>
<rme:AD name="PartNumber" value="73-3438-03 01" />
<rme:AD name="SoftwareVersion" value="12.2(20070421:012711)" />
</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, 0 messages rate-limited, 0 flushes, 0
overruns, xml disabled, filtering disabled)
  Console logging: level debugging, 53 messages logged, xml disabled,
  filtering disabled
  Monitor logging: level debugging, 0 messages logged, xml disabled,
  filtering disabled
  Buffer logging: level debugging, 53 messages logged, xml disabled,
  filtering disabled
  Exception Logging: size (4096 bytes)
  Count and timestamp logging messages: disabled
  Trap logging: level informational, 72 message lines logged

Log Buffer (8192 bytes):

00:00:54: curr is 0x20000

00:00:54: RP: Currently running ROMMON from F2 region
00:01:05: %SYS-5-CONFIG_I: Configured from memory by console
00:01:09: %SYS-5-RESTART: System restarted --
Cisco IOS Software, s72033_rp Software (s72033_rp-ADVENTERPRISEK9_DBG-VM), Experimental
Version 12.2(20070421:012711)
Copyright (c) 1986-2007 by Cisco Systems, Inc.
Compiled Thu 26-Apr-07 15:54 by xxx

Firmware compiled 11-Apr-07 03:34 by integ Build [100]

00:01:01: %PFREDUN-6-ACTIVE: Initializing as ACTIVE processor for this switch

00:01:01: %SYS-3-LOGGER_FLUSHED: System was paused for 00:00:00 to ensure console
debugging output.

00:03:00: SP: SP: Currently running ROMMON from F1 region
00:03:07: %C6K_PLATFORM-SP-4-CONFREG_BREAK_ENABLED: The default factory setting for config
register is 0x2102.It is advisable to retain 1 in 0x2102 as it prevents returning to
ROMMON when break is issued.

00:03:18: %SYS-SP-5-RESTART: System restarted --
Cisco IOS Software, s72033_sp Software (s72033_sp-ADVENTERPRISEK9_DBG-VM), Experimental
Version 12.2(20070421:012711)
Copyright (c) 1986-2007 by Cisco Systems, Inc.
Compiled Thu 26-Apr-07 18:00 by xxx
00:03:18: %SYS-SP-6-BOOTTIME: Time taken to reboot after reload = 339 seconds
00:03:18: %OIR-SP-6-INSPTS: Power supply inserted in slot 1
00:03:18: %C6KPWR-SP-4-PSOK: power supply 1 turned on.
00:03:18: %OIR-SP-6-INSPTS: Power supply inserted in slot 2
00:01:09: %SSH-5-ENABLED: SSH 1.99 has been enabled
00:03:18: %C6KPWR-SP-4-PSOK: power supply 2 turned on.
00:03:18: %C6KPWR-SP-4-PSREDUNDANTMISMATCH: power supplies rated outputs do not match.
00:03:18: %C6KPWR-SP-4-PSREDUNDANTBOTHSUPPLY: in power-redundancy mode, system is
operating on both power supplies.
00:01:10: %CRYPTO-6-ISAKMP_ON_OFF: ISAKMP is OFF
00:01:10: %CRYPTO-6-ISAKMP_ON_OFF: ISAKMP is OFF
00:03:20: %C6KENV-SP-4-FANHIOUTPUT: Version 2 high-output fan-tray is in effect
00:03:22: %C6KPWR-SP-4-PSNOREDUNDANCY: Power supplies are not in full redundancy, power
usage exceeds lower capacity supply
00:03:26: %FABRIC-SP-5-FABRIC_MODULE_ACTIVE: The Switch Fabric Module in slot 6 became
active.

```

```

00:03:28: %DIAG-SP-6-RUN_MINIMUM: Module 6: Running Minimal Diagnostics...
00:03:50: %DIAG-SP-6-DIAG_OK: Module 6: Passed Online Diagnostics
00:03:50: %OIR-SP-6-INSCARD: Card inserted in slot 6, interfaces are now online
00:03:51: %DIAG-SP-6-RUN_MINIMUM: Module 3: Running Minimal Diagnostics...
00:03:51: %DIAG-SP-6-RUN_MINIMUM: Module 7: Running Minimal Diagnostics...
00:03:51: %DIAG-SP-6-RUN_MINIMUM: Module 9: Running Minimal Diagnostics...
00:01:51: %MFIB_CONST_RP-6-REPLICATION_MODE_CHANGE: Replication Mode Change Detected.
Current system replication mode is Ingress
00:04:01: %DIAG-SP-6-DIAG_OK: Module 3: Passed Online Diagnostics
00:04:01: %OIR-SP-6-DOWNGRADE: Fabric capable module 3 not at an appropriate hardware
revision level, and can only run in flowthrough mode
00:04:02: %OIR-SP-6-INSCARD: Card inserted in slot 3, interfaces are now online
00:04:11: %DIAG-SP-6-DIAG_OK: Module 7: Passed Online Diagnostics
00:04:14: %OIR-SP-6-INSCARD: Card inserted in slot 7, interfaces are now online
00:04:35: %DIAG-SP-6-DIAG_OK: Module 9: Passed Online Diagnostics
00:04:37: %OIR-SP-6-INSCARD: Card inserted in slot 9, interfaces are now online
00:00:09: DaughterBoard (Distributed Forwarding Card 3)

```

Firmware compiled 11-Apr-07 03:34 by integ Build [100]

```

00:00:22: %SYS-DFC4-5-RESTART: System restarted --
Cisco IOS Software, c6lc2 Software (c6lc2-SPDBG-VM), Experimental Version
12.2(20070421:012711)
Copyright (c) 1986-2007 by Cisco Systems, Inc.
Compiled Thu 26-Apr-07 17:20 by xxx
00:00:23: DFC4: Currently running ROMMON from F2 region
00:00:25: %SYS-DFC2-5-RESTART: System restarted --
Cisco IOS Software, c6slc Software (c6slc-SPDBG-VM), Experimental Version
12.2(20070421:012711)
Copyright (c) 1986-2007 by Cisco Systems, Inc.
Compiled Thu 26-Apr-07 16:40 by username1
00:00:26: DFC2: Currently running ROMMON from F2 region
00:04:56: %DIAG-SP-6-RUN_MINIMUM: Module 4: Running Minimal Diagnostics...
00:00:09: DaughterBoard (Distributed Forwarding Card 3)

```

Firmware compiled 11-Apr-07 03:34 by integ Build [100]

slot\_id is 8

```

00:00:31: %FLASHFS_HES-DFC8-3-BADCARD: /bootflash:: The flash card seems to be corrupted
00:00:31: %SYS-DFC8-5-RESTART: System restarted --
Cisco IOS Software, c6lc2 Software (c6lc2-SPDBG-VM), Experimental Version
12.2(20070421:012711)
Copyright (c) 1986-2007 by Cisco Systems, Inc.
Compiled Thu 26-Apr-07 17:20 by username1
00:00:31: DFC8: Currently running ROMMON from S (Gold) region
00:04:59: %DIAG-SP-6-RUN_MINIMUM: Module 2: Running Minimal Diagnostics...
00:05:12: %DIAG-SP-6-RUN_MINIMUM: Module 8: Running Minimal Diagnostics...
00:05:13: %DIAG-SP-6-RUN_MINIMUM: Module 1: Running Minimal Diagnostics...
00:00:24: %SYS-DFC1-5-RESTART: System restarted --
Cisco IOS Software, c6slc Software (c6slc-SPDBG-VM), Experimental Version
12.2(20070421:012711)
Copyright (c) 1986-2007 by Cisco Systems, Inc.
Compiled Thu 26-Apr-07 16:40 by username1
00:00:25: DFC1: Currently running ROMMON from F2 region
00:05:30: %DIAG-SP-6-DIAG_OK: Module 4: Passed Online Diagnostics
00:05:31: %SPAN-SP-6-SPAN_EGRESS_REPLICATION_MODE_CHANGE: Span Egress HW Replication Mode
Change Detected. Current replication mode for unused asic session 0 is Centralized
00:05:31: %SPAN-SP-6-SPAN_EGRESS_REPLICATION_MODE_CHANGE: Span Egress HW Replication Mode
Change Detected. Current replication mode for unused asic session 1 is Centralized
00:05:31: %OIR-SP-6-INSCARD: Card inserted in slot 4, interfaces are now online
00:06:02: %DIAG-SP-6-DIAG_OK: Module 1: Passed Online Diagnostics
00:06:03: %OIR-SP-6-INSCARD: Card inserted in slot 1, interfaces are now online

```

```
00:06:31: %DIAG-SP-6-DIAG_OK: Module 2: Passed Online Diagnostics
00:06:33: %OIR-SP-6-INSCARD: Card inserted in slot 2, interfaces are now online
00:04:30: %XDR-6-XDRIPCNOTIFY: Message not sent to slot 4/0 (4) because of IPC error
timeout. Disabling linecard. (Expected during linecard OIR)
00:06:59: %DIAG-SP-6-DIAG_OK: Module 8: Passed Online Diagnostics
00:06:59: %OIR-SP-6-DOWNGRADE_EARL: Module 8 DFC installed is not identical to system PFC
and will perform at current system operating mode.
00:07:06: %OIR-SP-6-INSCARD: Card inserted in slot 8, interfaces are now online

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



---

For additional information about Cisco Catalyst 6500 Series Switches (including configuration examples and troubleshooting information), see the documents listed on this page:

[http://www.cisco.com/en/US/products/hw/switches/ps708/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/hw/switches/ps708/tsd_products_support_series_home.html)

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