



Configuring Call Home

This chapter includes the following sections:

- [Call Home, page 1](#)
- [Call Home Considerations and Guidelines, page 3](#)
- [Cisco UCS Faults and Call Home Severity Levels, page 4](#)
- [Cisco Smart Call Home, page 5](#)
- [Configuring Call Home, page 6](#)
- [Disabling Call Home, page 9](#)
- [Enabling Call Home, page 9](#)
- [Configuring System Inventory Messages, page 10](#)
- [Configuring Call Home Profiles, page 11](#)
- [Configuring Call Home Policies, page 14](#)
- [Example: Configuring Call Home for Smart Call Home, page 16](#)

Call Home

Call Home provides an email-based notification for critical system policies. A range of message formats are available for compatibility with pager services or XML-based automated parsing applications. You can use this feature to page a network support engineer, email a Network Operations Center, or use Cisco Smart Call Home services to generate a case with the Technical Assistance Center.

The Call Home feature can deliver alert messages containing information about diagnostics and environmental faults and events.

The Call Home feature can deliver alerts to multiple recipients, referred to as Call Home destination profiles. Each profile includes configurable message formats and content categories. A predefined destination profile is provided for sending alerts to the Cisco TAC, but you also can define your own destination profiles.

When you configure Call Home to send messages, Cisco UCS Manager executes the appropriate CLI **show** command and attaches the command output to the message.

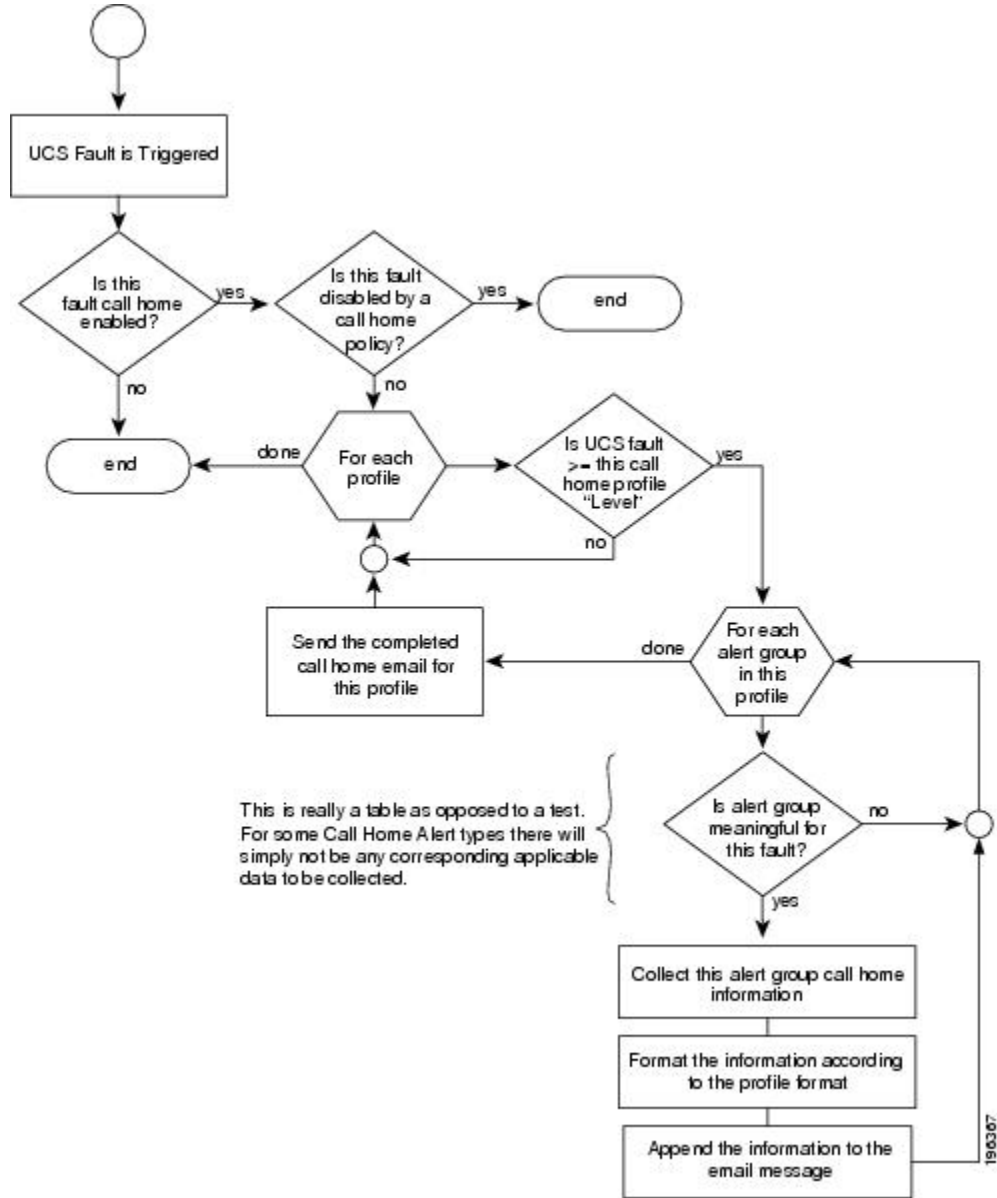
Cisco UCS delivers Call Home messages in the following formats:

- Short text format which provides a one or two line description of the fault that is suitable for pagers or printed reports.
- Full text format which provides fully formatted message with detailed information that is suitable for human reading.
- XML machine readable format that uses Extensible Markup Language (XML) and Adaptive Messaging Language (AML) XML schema definition (XSD). The AML XSD is published on the [Cisco.com website](http://Cisco.com). The XML format enables communication with the Cisco Systems Technical Assistance Center.

For information about the faults that can trigger Call Home email alerts, see the *Cisco UCS Faults and Error Messages Reference*.

The following figure shows the flow of events after a Cisco UCS fault is triggered in a system with Call Home configured:

Figure 1: Flow of Events after a Fault is Triggered



Call Home Considerations and Guidelines

How you configure Call Home depends on how you intend to use the feature. The information you need to consider before you configure Call Home includes the following:

Destination Profile

You must configure at least one destination profile. The destination profile or profiles that you use depend upon whether the receiving entity is a pager, email, or automated service such as Cisco Smart Call Home.

If the destination profile uses email message delivery, you must specify a Simple Mail Transfer Protocol (SMTP) server when you configure Call Home.

Contact Information

The contact email, phone, and street address information should be configured so that the receiver can determine the origin of messages received from the Cisco UCS domain.

Cisco Smart Call Home sends the registration email to this email address after you send a system inventory to begin the registration process.

If an email address includes special characters, such as # (hash), spaces, or & (ampersand), the email server may not be able to deliver email messages to that address. Cisco recommends that you use email addresses which comply with RFC2821 and RFC2822 and include only 7bit ASCII characters.

IP Connectivity to Email Server or HTTP Server

The fabric interconnect must have IP connectivity to an email server or the destination HTTP server. In a cluster configuration, both fabric interconnects must have IP connectivity. This connectivity ensures that the current, active fabric interconnect can send Call Home email messages. The source of these email messages is always the IP address of a fabric interconnect. The virtual IP address assigned Cisco UCS Manager in a cluster configuration is never the source of the email.

Smart Call Home

If Cisco Smart Call Home is used, the following are required:

- An active service contract must cover the device being configured
- The customer ID associated with the Smart Call Home configuration in Cisco UCS must be the CCO (Cisco.com) account name associated with a support contract that includes Smart Call Home

Cisco UCS Faults and Call Home Severity Levels

Because Call Home is present across several Cisco product lines, Call Home has developed its own standardized severity levels. The following table describes how the underlying Cisco UCS fault levels map to the Call Home severity levels. You need to understand this mapping when you configure the Level setting for Call Home profiles.

Table 1: Mapping of Faults and Call Home Severity Levels

Call Home Severity	Cisco UCS Fault	Call Home Meaning
(9) Catastrophic	N/A	Network-wide catastrophic failure.
(8) Disaster	N/A	Significant network impact.
(7) Fatal	N/A	System is unusable.

Call Home Severity	Cisco UCS Fault	Call Home Meaning
(6) Critical	Critical	Critical conditions, immediate attention needed.
(5) Major	Major	Major conditions.
(4) Minor	Minor	Minor conditions.
(3) Warning	Warning	Warning conditions.
(2) Notification	Info	Basic notifications and informational messages. Possibly independently insignificant.
(1) Normal	Clear	Normal event, signifying a return to normal state.
(0) debug	N/A	Debugging messages.

Cisco Smart Call Home

Cisco Smart Call Home is a web application which leverages the Call Home feature of Cisco UCS. Smart Call Home offers proactive diagnostics and real-time email alerts of critical system events, which results in higher network availability and increased operational efficiency. Smart Call Home is a secure connected service offered by Cisco Unified Computing Support Service and Cisco Unified Computing Mission Critical Support Service for Cisco UCS.



Note

Using Smart Call Home requires the following:

- A CCO ID associated with a corresponding Cisco Unified Computing Support Service or Cisco Unified Computing Mission Critical Support Service contract for your company.
- Cisco Unified Computing Support Service or Cisco Unified Computing Mission Critical Support Service for the device to be registered.

You can configure and register Cisco UCS Manager to send Smart Call Home email alerts to either the Smart Call Home System or the secure Transport Gateway. Email alerts sent to the secure Transport Gateway are forwarded to the Smart Call Home System using HTTPS.



Note

For security reasons, we recommend using the Transport Gateway option. The Transport Gateway can be downloaded from Cisco.

To configure Smart Call Home, you must do the following:

- Enable the Smart Call Home feature.

- Configure the contact information.
- Configure the email information.
- Configure the SMTP server information.
- Configure the default CiscoTAC-1 profile.
- Send a Smart Call Home inventory message to start the registration process.
- Ensure that the CCO ID you plan to use as the Call Home Customer ID for the Cisco UCS domain has the contract numbers from the registration added to its entitlements. You can update the ID in the account properties under Additional Access in the Profile Manager on CCO.

Configuring Call Home

Procedure

- Step 1** In the **Navigation** pane, click the **Admin** tab.
- Step 2** On the **Admin** tab, expand **All > Communication Management > Call Home**.
- Step 3** In the **Work** pane, click the **General** tab.
- Step 4** In the **Admin** area, complete the following fields to enable Call Home:

Name	Description
State field	This can be one of the following: <ul style="list-style-type: none"> • Off—Call Home is not used for this Cisco UCS domain. • On—Cisco UCS generates Call Home alerts based on the Call Home policies and profiles defined in the system. <p>Note If this field is set to On, Cisco UCS Manager GUI displays the rest of the fields on this tab.</p>
Switch Priority drop-down list	This can be one of the following: <ul style="list-style-type: none"> • Alerts • Critical • Debugging • Emergencies • Errors • Information • Notifications • Warnings

Name	Description
Throttling field	Whether the system limits the number of duplicate messages received for the same event. This can be one of the following: <ul style="list-style-type: none"> • On—If the number of duplicate messages sent exceeds 30 messages within a 2-hour time frame, then the system discards further messages for that alert type. • Off—The system sends all duplicate messages, regardless of how many are encountered.

- a) In the **State** field, click **on**.
Note If this field is set to **On**, Cisco UCS Manager GUI displays the rest of the fields on this tab.
- b) From the **Switch Priority** drop-down list, select one of the following levels:
- Alerts
 - Critical
 - Debugging
 - Emergencies
 - Errors
 - Information
 - Notifications
 - Warnings

For a large Cisco UCS deployment with several pairs of fabric interconnects, this field enables you to attach significance to messages from one particular Cisco UCS domain, so that message recipients can gauge the priority of the message. This field may not be as useful for a small Cisco UCS deployment, such as a single Cisco UCS domain.

Step 5 In the **Contact Information** area, complete the following fields with the required contact information:

Name	Description
Contact field	The main Call Home contact person. Enter up to 255 ASCII characters.
Phone field	The telephone number for the main contact. Enter the number in international format, starting with a + (plus sign) and a country code. You can use hyphens but not parentheses.

Name	Description
Email field	The email address for the main contact. Cisco Smart Call Home sends the registration email to this email address. Note If an email address includes special characters, such as # (hash), spaces, or & (ampersand), the email server may not be able to deliver email messages to that address. Cisco recommends that you use email addresses which comply with RFC2821 and RFC2822 and include only 7bit ASCII characters.
Address field	The mailing address for the main contact. Enter up to 255 ASCII characters.

- Step 6** In the **Ids** area, complete the following fields with the identification information that Call Home should use:
Tip If you are not configuring Smart Call Home, this step is optional.

Name	Description
Customer Id field	The CCO ID that includes the contract numbers for the support contract in its entitlements. Enter up to 510 ASCII characters.
Contract Id field	The Call Home contract number for the customer. Enter up to 510 ASCII characters.
Site Id field	The unique Call Home identification number for the customer site. Enter up to 510 ASCII characters.

- Step 7** In the **Email Addresses** area, complete the following fields with email information for Call Home alert messages:

Name	Description
From field	The email address that should appear in the From field on Call Home alert messages sent by the system.
Reply To field	The return email address that should appear in the From field on Call Home alert messages sent by the system.

- Step 8** In the **SMTP Server** area, complete the following fields with information about the SMTP server where Call Home should send email messages:

Name	Description
Host field	The IP address or hostname of the SMTP server. Note If you use a hostname rather than an IP address, you must configure a DNS server in Cisco UCS Manager.
Port field	The port number the system should use to talk to the SMTP server. Enter an integer between 1 and 65535. The default is 25.

Step 9 Click **Save Changes**.

Disabling Call Home

Procedure

- Step 1** In the **Navigation** pane, click the **Admin** tab.
 - Step 2** On the **Admin** tab, expand **All > Communication Management > Call Home**.
 - Step 3** In the **Work** pane, click the **General** tab.
 - Step 4** In the **Admin** area, click **off** in the **State** field.
Note If this field is set to **off**, Cisco UCS Manager hides the rest of the fields on this tab.
 - Step 5** Click **Save Changes**.
-

Enabling Call Home

Procedure

- Step 1** In the **Navigation** pane, click the **Admin** tab.
 - Step 2** On the **Admin** tab, expand **All > Communication Management > Call Home**.
 - Step 3** In the **Work** pane, click the **General** tab.
 - Step 4** In the **Admin** area, click **on** in the **State** field.
Note If this field is set to **On**, Cisco UCS Manager GUI displays the rest of the fields on this tab.
 - Step 5** Click **Save Changes**.
-

What to Do Next

Ensure that Call Home is fully configured.

Configuring System Inventory Messages

Configuring System Inventory Messages

Procedure

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- Step 1** In the **Navigation** pane, click the **Admin** tab.
- Step 2** On the **Admin** tab, expand **All > Communication Management > Call Home**.
- Step 3** In the **Work** pane, click the **System Inventory** tab.
- Step 4** In the **Properties** area, complete the following fields:

Name	Description
Send Periodically field	If this field is set to On , Cisco UCS sends the system inventory to the Call Home database. When the information is sent depends on the other fields in this area.
Send Interval field	The number of days that should pass between automatic system inventory data collection. Enter an integer between 1 and 30.
Hour of Day to Send field	The hour that the data should be sent using the 24-hour clock format.
Minute of Hour field	The number of minutes after the hour that the data should be sent.
Time Last Sent field	The date and time the information was last sent. Note This field is displayed after the first inventory has been sent.
Next Scheduled field	The date and time for the upcoming data collection. Note This field is displayed after the first inventory has been sent.

- Step 5** Click **Save Changes**.
-

Sending a System Inventory Message

Use this procedure if you need to manually send a system inventory message outside of the scheduled messages.



Note The system inventory message is sent only to those recipients defined in CiscoTAC-1 profile.

Procedure

- Step 1** In the **Navigation** pane, click the **Admin** tab.
- Step 2** On the **Admin** tab, expand **All > Communication Management > Call Home**.
- Step 3** In the **Work** pane, click the **System Inventory** tab.
- Step 4** In the **Actions** area, click **Send System Inventory Now**.
Cisco UCS Manager immediately sends a system inventory message to the recipient configured for Call Home.
-

Configuring Call Home Profiles

Call Home Profiles

Call Home profiles determine which alerts are sent to designated recipients. You can configure the profiles to send email alerts for events and faults at a desired severity level and for specific alert groups that represent categories of alerts. You can also use these profiles to specify the format of the alert for a specific set of recipients and alert groups.

Each alert that Cisco UCS generates fits into a category represented by an alert group, such as the following:

- Environmental alerts, including fans and power supplies
- Diagnostic alerts, such as POST completion failure on a server

Alert groups and Call Home profiles enable you to filter the alerts and ensure that a specific profile only receives certain categories of alerts. For example, a data center may have a hardware team that handles issues with fans and power supplies. This hardware team does not care about server POST failures or licensing issues. To ensure that the hardware team only receives relevant alerts, create a Call Home profile for the hardware team and check only the "environmental" alert group.

By default, you must configure the Cisco TAC-1 profile. However, you can also create additional profiles to send email alerts to one or more alert groups when events occur at the level that you specify and provide the recipients with the appropriate amount of information about those alerts.

For example, you may want to configure two profiles for faults with a major severity:

- A profile that sends an alert to the Supervisor alert group in the short text format. Members of this group receive a one- or two-line description of the fault that they can use to track the issue.
- A profile that sends an alert to the CiscoTAC alert group in the XML format. Members of this group receive a detailed message in the machine readable format preferred by the Cisco Systems Technical Assistance Center.

Creating a Call Home Profile

By default, you must configure the Cisco TAC-1 profile. However, you can also create additional profiles to send email alerts to one or more specified groups when events occur at the level that you specify.

Procedure

- Step 1** In the **Navigation** pane, click the **Admin** tab.
- Step 2** On the **Admin** tab, expand **All > Communication Management > Call Home**.
- Step 3** In the **Work** pane, click the **Profiles** tab.
- Step 4** On the icon bar to the right of the table, click +.
If the + icon is disabled, click an entry in the table to enable it.
- Step 5** In the **Create Call Home Profile** dialog box, complete the following information fields:

Name	Description
Name field	<p>A user-defined name for this profile.</p> <p>This name can be between 1 and 16 alphanumeric characters. You cannot use spaces or any special characters other than - (hyphen), _ (underscore), : (colon), and . (period), and you cannot change this name after the object has been saved.</p>
Level field	<p>Cisco UCS faults that are greater than or equal to this level trigger the profile. This can be one of the following:</p> <ul style="list-style-type: none"> • Critical • Debug • Disaster • Fatal • Major • Minor • Normal • Notification • Warning

Name	Description
Alert Groups field	<p>The group or groups that are alerted based on this Call Home profile. This can be one or more of the following:</p> <ul style="list-style-type: none"> • Cisco Tac • Diagnostic • Environmental • Inventory • License • Life Cycle • Linecard • Supervisor • Syslog Port • System • Test

Step 6 In the **Email Configuration** area, complete the following fields to configure the email alerts:

Name	Description
Format field	<p>This can be one of the following:</p> <ul style="list-style-type: none"> • Xml—A machine readable format that uses Extensible Markup Language (XML) and Adaptive Messaging Language (AML) XML schema definition (XSD). This format enables communication with the Cisco Systems Technical Assistance Center. • Full Txt—A fully formatted message with detailed information that is suitable for human reading. • Short Txt—A one or two line description of the fault that is suitable for pagers or printed reports.
Max Message Size field	<p>The maximum message size that is sent to the designated Call Home recipients.</p> <p>Enter an integer between 1 and 5000000. The default is 5000000.</p> <p>For full text and XML messages, the maximum recommended size is 5000000. For short text messages, the maximum recommended size is 100000. For the CiscoTAC-1, the maximum message size must be 5000000.</p>

- Step 7** In the **Recipients** area, do the following to add one or more email recipients for the email alerts:
- On the icon bar to the right of the table, click +.
 - In the **Add Email Recipients** dialog box, enter the email address to which Call Home alerts should be sent in the **Email** field.
After you save this email address, it can be deleted but it cannot be changed.
 - Click **OK**.
- Step 8** Click **OK**.
-

Deleting a Call Home Profile

Procedure

- Step 1** In the **Navigation** pane, click the **Admin** tab.
- Step 2** On the **Admin** tab, expand **All > Communication Management > Call Home**.
- Step 3** In the **Work** pane, click the **Profiles** tab.
- Step 4** Right-click the profile you want to delete and choose **Delete**.
- Step 5** Click **Save Changes**.
-

Configuring Call Home Policies

Call Home Policies

Call Home policies determine whether or not Call Home alerts are sent for a specific type of fault or system event. By default, Call Home is enabled to send alerts for certain types of faults and system events. However, you can configure Cisco UCS not to process certain types.

To disable alerts for a type of fault or events, you must create a Call Home policy for that type, and you must first create a policy for that type and then disable the policy.

Configuring a Call Home Policy

**Tip**

By default, all Call Home policies are enabled to ensure that email alerts are sent for all critical system events.

Procedure

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- Step 1** In the **Navigation** pane, click the **Admin** tab.
 - Step 2** On the **Admin** tab, expand **All > Communication Management > Call Home**.
 - Step 3** In the **Work** pane, click the **Policies** tab.
 - Step 4** On the icon bar to the right of the table, click +.
If the + icon is disabled, click an entry in the table to enable it.
 - Step 5** In the **Create Call Home Policy** dialog box, complete the following fields:

Name	Description
State field	If this field is Enabled , the system uses this policy when an error matching the associated cause is encountered. Otherwise, the system ignores this policy even if a matching error occurs. By default, all policies are enabled.
Cause field	The event that triggers the alert. Each policy defines whether an alert is sent for one type of event.

- Step 6** Click **OK**.
 - Step 7** Repeat Steps 6 and 7 if you want to configure a Call Home policy for a different type of fault or event.
-

Disabling a Call Home Policy

Procedure

-
- Step 1** In the **Navigation** pane, click the **Admin** tab.
 - Step 2** On the **Admin** tab, expand **All > Communication Management > Call Home**.
 - Step 3** In the **Work** pane, click the **Policies** tab.
 - Step 4** Click the policy that you want to disable and choose **Show Navigator**.
 - Step 5** In the **State** field, click **Disabled**.
 - Step 6** Click **OK**.
-

Enabling a Call Home Policy

Procedure

- Step 1** In the **Navigation** pane, click the **Admin** tab.
 - Step 2** On the **Admin** tab, expand **All > Communication Management > Call Home**.
 - Step 3** In the **Work** pane, click the **Policies** tab.
 - Step 4** Click the policy that you want to enable and choose **Show Navigator**.
 - Step 5** In the **State** field, click **Enabled**.
 - Step 6** Click **OK**.
-

Deleting a Call Home Policy

Procedure

- Step 1** In the **Navigation** pane, click the **Admin** tab.
 - Step 2** On the **Admin** tab, expand **All > Communication Management > Call Home**.
 - Step 3** In the **Work** pane, click the **Policies** tab.
 - Step 4** Right-click the policy that you want to disable and choose **Delete**.
 - Step 5** Click **Save Changes**.
-

Example: Configuring Call Home for Smart Call Home

Configuring Smart Call Home

Procedure

- Step 1** In the **Navigation** pane, click the **Admin** tab.
- Step 2** On the **Admin** tab, expand **All > Communication Management > Call Home**.
- Step 3** In the **Work** pane, click the **General** tab.
- Step 4** In the **Admin** area, do the following to enable Call Home:
 - a) In the **State** field, click **on**.
 - Note** If this field is set to **On**, Cisco UCS Manager GUI displays the rest of the fields on this tab.

b) From the **Switch Priority** drop-down list, select one of the following urgency levels:

- Alerts
- Critical
- Debugging
- Emergencies
- Errors
- Information
- Notifications
- Warnings

Step 5 In the **Contact Information** area, complete the following fields with the required contact information:

Name	Description
Contact field	The main Call Home contact person. Enter up to 255 ASCII characters.
Phone field	The telephone number for the main contact. Enter the number in international format, starting with a + (plus sign) and a country code. You can use hyphens but not parentheses.
Email field	The email address for the main contact. Cisco Smart Call Home sends the registration email to this email address. Note If an email address includes special characters, such as # (hash), spaces, or & (ampersand), the email server may not be able to deliver email messages to that address. Cisco recommends that you use email addresses which comply with RFC2821 and RFC2822 and include only 7bit ASCII characters.
Address field	The mailing address for the main contact. Enter up to 255 ASCII characters.

Step 6 In the **Ids** area, complete the following fields with the Smart Call Home identification information:

Name	Description
Customer Id field	The CCO ID that includes the contract numbers for the support contract in its entitlements. Enter up to 510 ASCII characters.
Contract Id field	The Call Home contract number for the customer. Enter up to 510 ASCII characters.

Name	Description
Site Id field	The unique Call Home identification number for the customer site. Enter up to 510 ASCII characters.

Step 7 In the **Email Addresses** area, complete the following fields with the email information for Smart Call Home alert messages:

Name	Description
From field	The email address that should appear in the From field on Call Home alert messages sent by the system.
Reply To field	The return email address that should appear in the From field on Call Home alert messages sent by the system.

Step 8 In the **SMTP Server** area, complete the following fields with information about the SMTP server that Call Home should use to send email messages:

Name	Description
Host field	The IP address or hostname of the SMTP server. Note If you use a hostname rather than an IP address, you must configure a DNS server in Cisco UCS Manager.
Port field	The port number the system should use to talk to the SMTP server. Enter an integer between 1 and 65535. The default is 25.

Step 9 Click **Save Changes**.

Configuring the Default Cisco TAC-1 Profile

The following are the default settings for the CiscoTAC-1 profile:

- Level is normal
- Only the CiscoTAC alert group is selected
- Format is xml
- Maximum message size is 5000000

Procedure

-
- Step 1** In the **Navigation** pane, click the **Admin** tab.
- Step 2** On the **Admin** tab, expand **All > Communication Management > Call Home**.
- Step 3** In the **Work** pane, click the **Profiles** tab.
- Step 4** Right-click the Cisco TAC-1 profile and choose **Recipient**.
- Step 5** In the **Add Email Recipients** dialog box, do the following:
- In the **Email** field, enter the email address to which Call Home alerts should be sent. For example, enter `callhome@cisco.com`.
After you save this email address, it can be deleted but it cannot be changed.
 - Click **OK**.
-

Configuring System Inventory Messages for Smart Call Home

Procedure

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- Step 1** In the **Navigation** pane, click the **Admin** tab.
- Step 2** On the **Admin** tab, expand **All > Communication Management > Call Home**.
- Step 3** In the **Work** pane, click the **System Inventory** tab.
- Step 4** In the **Properties** area, complete the following fields to specify how system inventory messages will be sent to Smart Call Home:

Name	Description
Send Periodically field	If this field is set to On , Cisco UCS sends the system inventory to the Call Home database. When the information is sent depends on the other fields in this area.
Send Interval field	The number of days that should pass between automatic system inventory data collection. Enter an integer between 1 and 30.
Hour of Day to Send field	The hour that the data should be sent using the 24-hour clock format.
Minute of Hour field	The number of minutes after the hour that the data should be sent.
Time Last Sent field	The date and time the information was last sent. Note This field is displayed after the first inventory has been sent.

Name	Description
Next Scheduled field	<p>The date and time for the upcoming data collection.</p> <p>Note This field is displayed after the first inventory has been sent.</p>

Step 5 Click **Save Changes**.

Registering Smart Call Home

Procedure

- Step 1** In the **Navigation** pane, click the **Admin** tab.
- Step 2** On the **Admin** tab, expand **All > Communication Management > Call Home**.
- Step 3** In the **Work** pane, click the **System Inventory** tab.
- Step 4** In the **Actions** area, click **Send System Inventory Now** to start the registration process.
When Cisco receives the system inventory, a Smart Call Home registration email is sent to the email address that you configured in the **Contact Information** area on the **General** tab.
- Step 5** When you receive the registration email from Cisco, do the following to complete registration for Smart Call Home:
- Click the link in the email.
The link opens the [Cisco Smart Call Home portal](#) in your web browser.
 - Log into the Cisco Smart Call Home portal.
 - Follow the steps provided by Cisco Smart Call Home.
After you agree to the terms and conditions, the Cisco Smart Call Home registration for the Cisco UCS domain is complete.
-