

Cisco Smart Call Home

Version 1.1

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General

Q. What is Cisco® Smart Call Home?

A. Cisco Smart Call Home is a proactive, connected service capability of Cisco SMARTnet® Service that is available at no additional cost on Call Home-capable devices, such as the Cisco Catalyst® 6500 Series Switches. Call Home devices can continuously monitor their own health using GOLD diagnostics technology and automatically notify you of potential issues using secure transmissions. If a serious problem arises, Smart Call Home automatically detects it and generates a Cisco Technical Assistance Center (TAC) service request that is routed to the right team for a particular problem. Smart Call Home also provides access to a Smart Call Home Web portal that contains personalized Call Home messages, recommendations, and more for all your Call Home devices. Cisco Smart Call Home provides the following:

- Higher availability through proactive, fast issue resolution
- Increased operational efficiency through less time troubleshooting
- Personalized Web-based access to information quickly and conveniently

Q. What is Cisco SMARTnet Service?

A. Cisco SMARTnet Service is an award-winning technical support service that gives your IT staff direct, anytime access to Cisco engineers and Cisco.com resources to help ensure the fast, expert response and accountability you require to resolve critical network issues. With Cisco SMARTnet Service, you may choose from a broad range of service delivery options for all network devices.

In addition to proactive diagnostics and real-time alerts with Smart Call Home, Cisco SMARTnet Service provides the following:

- Around-the-clock, global access to the Cisco TAC
- Access to the extensive Cisco.com knowledge base and tools

- Next-business-day advance hardware replacement (2-hour and 4-hour replacement, and/or onsite parts replacement and installation also available)
- Ongoing operating system software updates and upgrades

Devices and Cisco IOS Software Supported

Q. What devices support Smart Call Home?

A. Presently, the Cisco Catalyst 6500 Series Switches support Smart Call Home. Other products will be added in the future.

Q. What Cisco IOS® Software release is required to use Smart Call Home?

A. The Cisco IOS Software Release 12.2(33)SXH must be installed on the Cisco Catalyst 6500 switch. You must have a valid Cisco SMARTnet Service contract. The new version of Cisco IOS Software can be accessed from tools.cisco.com/support/downloads in August 2007 after it becomes available.

Q. Where can I find information about the Cisco Catalyst 6500 Series Switches?

A. A broad range of information about these industry-leading switches can be found at www.cisco.com/en/US/products/hw/switches/ps708/index.html.

Detailed documentation about the chassis, modules, and software features supported by the Cisco Catalyst 6500 Series Switches is included in the release notes for Cisco IOS Software Release 12.2SX on the Cisco Catalyst 6500 Series Supervisor Engine 720, Cisco Catalyst 6500 Supervisor Engine 32, and Supervisor Engine. This documentation can be accessed at www.cisco.com/univercd/cc/td/doc/product/lan/cat6000/122sx/ol_4164.htm.

Services Supported

Q. What services support the Smart Call Home capability?

A. Presently, Smart Call Home is available only with a Cisco SMARTnet Service contract.

Q. How does Cisco sell Cisco SMARTnet Service?

A. Cisco SMARTnet Service is mainly sold through Cisco certified partners. SMARTnet can also be sold directly from Cisco to end customers.

Q. How can I purchase a Cisco SMARTnet Service contract to cover my Call Home capable devices?

A. You may contact your local representative or Cisco certified partner to purchase Cisco SMARTnet Service for your Cisco Catalyst 6500 Series Switches. Use the Partner Locator (<http://tools.cisco.com/WWChannels/LOCATR/openBasicSearch.do>) to find a Cisco certified partner near you.

Q. What is the difference between the Call Home feature on a Catalyst 6500 switch and the Smart Call Home service?

A. Call Home is a Cisco IOS Software feature that is available on Cisco Catalyst 6500 Series Switches. If it is configured to do so, Call Home continuously checks for potential problems and sends notifications when a potential issue is detected. Call Home lets the user define how different events and alerts can be routed for action, such as sending an e-mail to specific technical staff when a major diagnostic failure occurs or sending syslog events using HTTPS to a network management station.

In addition to the benefits built into the Call Home IOS feature, Smart Call Home provides service capabilities including problem analysis and recommendations, automatic generation of

service requests to the Cisco TAC, and storage of messages and other notifications in a Web portal for future reference.

Real-Time Alerts

Q. Who receives alerts?

A. When the configuration profile on the device is set up, you specify who receives alerts, how these messages should be transported, and for what types of events to send alerts. You can specify multiple people to be notified and you can also choose whether to notify the Cisco TAC. If the Cisco TAC is included on the notification list and a serious problem arises, Smart Call Home automatically detects it and generates a Cisco TAC service request, which is routed to the right team for a particular problem.

Q. What kinds of events trigger alerts?

A. The types of events that trigger alerts are:

- Diagnostic messages are triggered when a hardware or software failure is detected.
- Environmental messages are triggered when temperature, power, and other types of system-related thresholds are exceeded.
- Syslog messages are triggered when the event severity is major or greater.
- Inventory messages are triggered when inventory changes occur, such as an online insertion and removal (OIR) of a module.
- Configuration messages are triggered when a configuration event occurs, such as exiting configuration mode.

Q. Is a historical record kept of the alerts that are sent?

A. Yes. All messages are stored in a personalized portal that contains reports with all of the Call Home messages and other related information in one convenient location. If you authorize it, this information can be accessed securely anytime, anywhere by the your company's IT staff and Cisco TAC.

Q. Are the alert messages secure?

A. Call Home messages are encrypted and can be sent by secure transport (HTTPS) or e-mail (Simple Mail Transfer Protocol [SMTP]) to the Cisco Smart Call Home backend system. You choose the transport method. In addition, you may choose whether to allow Call Home to include configuration information. If configuration information is transmitted to the Cisco system, all sensitive details such as passwords and IP addresses are removed to protect network privacy. Communication between the backend system and users is accomplished using SMTP for e-mail notifications and HTTPS for all Web portal access.

Security Implementation

Q. Is Smart Call Home enabled by default on my device?

A. No. Smart Call Home must be configured on your device before it is operable.

Q. Can someone connect to my Cisco devices using Smart Call Home?

A. No. Smart Call Home transmissions are one-way only, from your network to Cisco. No sessions can be established to your devices.

Q. Is certificate authentication used for Smart Call Home?

A. Yes. SSL authentication needs to be configured on your Catalyst 6500. The Cisco server certificate used by Smart Call home is accessible at www.cisco.com/go/smartcall.

Q. I do not wish to connect my device directly to the Internet. What provision has been made for proxy support?

A. A Transport Gateway has been provided that also implements one-way transport using HTTPS and certificate-based authentication. This transport gateway acts as a kind of proxy as well as a concentration point for multiple connections from devices in your network.

Q. Is the session and data encrypted?

A. Yes. Smart Call Home supports SMTP and HTTPS transport. Cisco recommends the use of HTTPS transport because of the session encryption it provides. The call-home payload has itself also been encrypted irrespective of the transport.

Q. I do not wish to send sensitive information from my configuration to Cisco. What provision has been made?

A. The switch always removes sensitive information such as passwords, IP addresses and SNMP Community strings in the configuration before sending it over the wire, irrespective of the transport.

Q. Can configuration information not be sent at all?

A. Yes. The information sent using Smart Call Home is configurable. It is possible to restrict the sending of certain information such as configurations if desired.

Proactive Diagnostics

Q. How does Smart Call Home diagnose potential problems?

A. Smart Call Home uses the Cisco GOLD diagnostics capability that is included in Call Home devices. GOLD can detect faults with great accuracy in hardware and provide the triggers to proactively engage high-availability features and actions such as switchover of modules or turning off modules or individual ports. The GOLD test suite also gives support personnel the tools to test the functioning of hardware modules and troubleshoot down to the field-replaceable unit (FRU) level. The diagnostic capabilities of GOLD can be categorized as follows:

- Boot-up diagnostics: Conducted during the boot-up or OIR of a line card or module
- Health monitoring diagnostics: Conducted in the background while the system is in operation
- On-demand diagnostics: Providing the ability to conduct various tests on demand using a CLI
- Scheduled diagnostics: Providing the ability to conduct various tests at a later scheduled date, time, and frequency using a CLI

Q. How do the GOLD diagnostics help reduce troubleshooting time?

A. Because GOLD diagnostics can identify hardware failures and issues with great accuracy, you and the Cisco TAC can identify exactly where a problem has occurred. That eliminates much of the detecting work usually involved in troubleshooting.

Q. Can Smart Call Home identify issues before a failure occurs?

A. In certain circumstances, the Call Home technology can identify potential problems even before a failure occurs. Smart Call Home gives you the option of receiving proactive notifications of problems that are likely to be emerging issues, such as high-temperature alarms independent or any fan failures or accumulating single-bit memory errors.

Q. When does Smart Call Home automatically generate a service request to the Cisco TAC?

A. For a serious event, such as a module or fan failure, an alert is sent to you and a service request is automatically opened with the Cisco TAC and routed to the correct team to handle the problem.

Q. How am I notified that a service request has been opened?

A. You are notified by e-mail when a service request has been opened. When a device is registered for Smart Call Home, a contact e-mail address is provided. This address is used to notify the your company for all events. Multiple addresses are supported and can be changed using the Smart Call Home Web application.

Personalized Web Portal

Q. Are the Call Home messages stored anywhere for future reference?

A. Smart Call Home stores messages with their associated diagnostics and recommendations in the Smart Call Home Web portal (also referred to as the Web application), which can be accessed at <https://tools.cisco.com/sch/>.

Q. What other information is available in the Web portal?

A. This web portal centralizes all of your personalized network information in one convenient location that can be accessed securely anytime, anywhere by staff and the Cisco TAC, as needed. In addition to a history of Call Home messages and recommendation, the portal includes:

- Up-to-date inventory and configuration information for all Call Home devices on the network
- Security advisories, field notices, and end-of-life notices, personalized for your hardware and software configuration

Getting Started with Smart Call Home

Q. How do I get started using Smart Call Home?

A. To start using Smart Call Home on a Cisco Catalyst 6500 device, you must have a Cisco SMARTnet Service contract on that device, as well as Cisco IOS Software Release 12.2(33)SXH or later. The contract should be listed under your CCO user profile which can be checked at tools.cisco.com/RPF/profile/profile_management.do.

If you have a valid service contract on the Cisco Catalyst 6500 switch, but need to upgrade to the new Cisco IOS Software Release 12.2(33)SXH, you can download the appropriate IOS image for your LAN switch when it becomes available in August 2007 at tools.cisco.com/support/downloads.

Register for Smart Call Home:

1. Configure call-home on your device and send a call-home message to Cisco. You will receive an e-mail from Smart Call Home with a link to the Smart Call Home Website.
2. Complete the registration at the Smart Call Home Website.

For more information about how to configure Call Home on Cisco Catalyst 6500 Series Switches, download the Smart Call Home Quick Start Guide at www.cisco.com/go/smartcall.

Q. What does registration enable?

A. After a Cisco Catalyst 6500 switch is registered with the Smart Call Home Web application, Call Home messages can be processed on the Cisco Smart Call Home backend system. The

backend system is where Call Home messages are analyzed, recommendations are made, and Cisco TAC service requests are generated automatically.

Q. What happens if my user profile does not show the Cisco SMARTnet Service contract?

A. If a device is covered by a valid Cisco SMARTnet Service contract, but the contract does not appear in your Cisco.com user profile, the device registration cannot be completed. The Smart Call Home application will send an e-mail to Cisco support to request that the contract be added to your profile to address this issue. After a valid contract that covers the device is added to your Cisco.com user profile, then the device can be registered for Smart Call Home.

Q. How can the contract associated with the Smart Call Home registration be updated?

A. You can use the Central Profile Repository (CPR) Profile Update tool (http://tools.cisco.com/RPF/profile/profile_management.do) to add a contract to the Cisco.com user profile by performing the following steps:

1. Log in with a customer/partner level profile.
2. Click the Additional Access tab.
3. Click Obtain access to additional service contract(s) to add contracts to the profile.

Q. If a device's serial number is missing, how can it be added to the SMARTnet Service contract?

A. If you have a valid Cisco SMARTnet Service contract but the serial number is missing, your Cisco certified partner or service sales manager can help you resolve this issue.

Q. When installing the Cisco IOS Software release that has the Call Home feature, how do you get prompted to register for Smart Call Home?

A. When your device sends a Call Home message to the Cisco backend, Smart Call Home responds with an e-mail notification that includes a token and a link to the Smart Call Home Web application, where you may complete the registration process.

Q. What is a trial period registration for Smart Call Home?

A. If the device you wish to register is not covered by a SMARTnet service contract, but your company does have a SMARTnet service contract for other Catalyst 6500s, you may test drive the Cisco Smart Call Home feature for a 90-day free trial. When a device is entitled for a trial period, it is registered for Smart Call Home for a period of 90 days. During this 90-day period, you have access to the full functionality of Smart Call Home. When the trial period expires, the Smart Call Home system will send an e-mail to request that you properly entitle the device. At this time (or if you are not entitled to a trial period), you must properly entitle the device to use Smart Call Home. You can accomplish this using the following steps:

1. Contact the partner/reseller to purchase a new SMARTnet service contract that covers the device or add the device to an existing contract to properly entitle it.
2. Add the contract to your Cisco.com user profile.
3. Update the contract associated with the device registration in Smart Call Home.

If a device is not properly entitled when the trial period expires, the associated registration will be suspended until device entitlement is resolved.

Q. How does the registration process work?

A. Device registration to Smart Call Home involves the following items and events occurring:

1. You generate a Call Home message from your call-home capable device to the Cisco

backend. This initiates the registration process.

Note: In the Smart Call Home User Guide, go to the Call Home Installation and Configuration chapter, which describes three types of Call Home configurations. Go to the end of any of the three configurations for details on how to send a Call Home inventory message to start the registration process.

2. Sending the first Call Home message to the Cisco backend triggers a pending device registration.
3. The Cisco backend sends an e-mail notification, which informs the user about a pending registration for the device that sent the Call Home message. The e-mail contains a token and a link to the Smart Call Home Web application, where you complete the registration process.
4. You login to Smart Call Home and confirm the device registration.

Installing and Configuring Smart Call Home

Q. Where is there more information about installing and configuring Smart Call Home?

A. For more information about how to configure Call Home on Cisco Catalyst 6500 Series Switches, download the Quickstart Guide link at www.cisco.com/go/smartcall.

Q. How can a mailbox server and backup server be set up?

A. The configuration guide for Call Home has commands for configuring Call Home on the Cisco Catalyst 6500 and for sending messages to e-mail servers. See the "Call Home Configuration: E-Mail to Smart Call Home" chapter. Download document at www.cisco.com/go/smartcall.

Q. What are the important Call Home commands, and when will they be used?

A. Commands will be used during the configuration and verification stages of device operation. The Smart Call Home Technology white paper, which can be accessed at www.cisco.com/go/smartcall, has a section called "Call Home CLI Commands" that contains commonly used commands.

Transport Gateway

Q. What is the transport gateway?

A. The transport gateway securely transports Call Home messages from the customer hardware to the Cisco backend. The transport gateway uses HTTPS, payload encryption, and certificates to forward the Call Home messages to the Cisco backend, which contains the Smart Call Home service.

Q. What platforms does the transport gateway support?

A. The transport gateway is operational on the following operating systems:

- Solaris
- 2000 Windows
- 2003 Windows
- Windows XP

Q. Is the transport gateway going to support Linux?

A. The transport gateway is planning to support Linux; testing needs to be completed. Linux support should be available early 2008.

Q. For Solaris, what are the system requirements for the transport gateway and Smart Call Home connection?

A. The system requirements are:

- Operating system: Solaris 5.8 (5.8 or higher is recommended)
- CDE or Xterm (display supported)
- Netscape Navigator 4.76 or later
- Textedit or dtpad application for viewing log files from the user interface of the transport gateway
- Sun SPARC processor
- PC or laptop with 512 MB of RAM (1 GB recommended)
- Hard disk: 60 MB + (15 KB for every Call Home message)
- Broadband Internet connectivity for faster response to the Cisco servers (recommended)

Q. For Windows, what are the system requirements for the transport gateway and Smart Call Home connection?

A. For Windows, the systems requirements are:

- Operating systems supported:
 - Windows 2000
 - Windows 2003
 - Windows XP
- Pentium 4 or later (Pentium M recommended)
- PC or laptop with 512 MB of RAM (1 GB recommended)
- Hard disk: 60 MB + (15 KB for every Call Home message)
- Broadband Internet connectivity for faster response to the Cisco servers (recommended)

Q. Where can I download the transport gateway?

A. The transport gateway for either a Windows or Solaris platform can be downloaded at www.cisco.com/kobayashi/sw-center/sw-netmgmt.shtml.

Go to the section “Network Analysis and Planning,” then select “Cisco Transport Gateway”; download the file that corresponds to the operating system you are using (see “[What platforms does the transport gateway support?](#)” for a list of supported operating systems).

Q. Where can I find information about how to install/configure the transport gateway?

A. Go to the Smart Call Home User Guide and go to the section “Transport Gateway Installation /Registration/Configuration.” You can access the Smart Call Home User Guide at www.cisco.com/go/smartcall.

**Americas Headquarters**

Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
www.cisco.com
Tel: 408 526-4000
800 553-NETS (6387)
Fax: 408 527-0883

Asia Pacific Headquarters

Cisco Systems, Inc.
168 Robinson Road
#28-01 Capital Tower
Singapore 068912
www.cisco.com
Tel: +65 6317 7777
Fax: +65 6317 7799

Europe Headquarters

Cisco Systems International BV
Haarlerbergpark
Haarlerbergweg 13-19
1101 CH Amsterdam
The Netherlands
www-europe.cisco.com
Tel: +31 0 800 020 0791
Fax: +31 0 20 357 1100

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at www.cisco.com/go/offices.

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