Smart Call Home Quick Start Configuration Guide for Cisco Cloud Services Router®

Smart Call Home offers proactive diagnostics and real-time alerts on select Cisco devices, which provides higher network availability and increased operational efficiency. Smart Call is a secure connected service of Cisco SMARTnet™ for the Cisco Cloud Services Router 1000V Router.

This document provides information to configure and register a Cisco CSR 1000V Series Router for Smart Call Home using four transport options. It is assumed that the device has the necessary DNS configuration (ip domain-name and ip name-server for DNS look-ups or ip host for static entries) in order to resolve host-names that may appear in destination addresses. If the transport-method used is HTTP then ensure that the host 'tools.cisco.com' is reachable (Use the 'ping tools.cisco.com' command to verify the network connectivity).

1. [HTTPS transport from the Cisco CSR 1000V Series Router to Cisco](#)
2. [Email from the Cisco CSR 1000V Series Router to a Transport Gateway (TG) - HTTPS transport to Cisco](#)
3. [HTTP from the Cisco CSR 1000V Series Router to a Transport Gateway (TG) - HTTPS transport to Cisco](#)
4. [Single Command configuration](#)

Note: For security reasons, Cisco recommends that customers make use of one of the HTTPS transport options, due to the additional payload encryption that HTTPS offers. The Transport Gateway software is downloadable from Cisco and is available for customers that require an aggregation point or a proxy for connection to the internet. For more information refer to Smart Call Home Security – White Paper and also Enabling Smart Licensing section.

Requirements for Smart Call Home:

- Cisco IOS XE release 3.12S or greater
- Device serial number covered by an active Cisco service contract.
- A Cisco.com ID with the device's contract mapped to it. (To create or edit your Cisco.com profile refer to Cisco Account Profile)

Additional Smart Call Home resources are available on Cisco.com and the SCH Support Forum.

Configuring Call Home for the Cisco CSR 1000V

Call Home Configuration - HTTP

The following is a sample configuration that shows the minimum steps that are required to configure Call Home on a Cisco CSR 1000V Series Router so that it can communicate securely with the Smart Call Home System. The sample uses HTTPS and a command to start the registration process. All commands are in blue.

1. **Configure HTTP Source Interface –**

   CSR1000V(config)#ip http client source-interface <interface type> <number>

2. **Enable Call Home** - In global configuration mode enter the service call-home command to activate the call-home feature and enter the call-home configuration command to enter call-home configuration mode.

   CSR1000V#configure terminal
   CSR1000V(config)#service call-home
   CSR1000V(config)#call-home

3. **Configure the mandatory contact email address** -

   CSR1000V(cfg-call-home)#contact-email-addr username@domain-name

4. **Activate the default CiscoTAC-1 Profile and set the transport option to HTTP**-

   CSR1000V(cfg-call-home)#profile CiscoTAC-1
   CSR1000V(cfg-call-home-profile)#destination transport-method http
   CSR1000V(cfg-call-home-profile)#active

5. **Exit and Save the configuration** -

   CSR1000V(config)#end
   CSR1000V#copy running-config startup-config

6. **Send a Call Home Inventory message to start the registration process** -

   CSR1000V#call-home send alert-group inventory profile CiscoTAC-1
   Sending inventory info call-home message ...
   Please wait. This may take some time ...

7. **Receive an email from Cisco and follow the link to complete registration for Smart Call home**

From: call-home-notify@cisco.com [mailto:call-home-notify@cisco.com]
Sent: Monday, April 18, 2011 1:34 PM
To:
Subject: Pending Device Registration waiting to be confirmed

Dear Customer,

We have received a INVENTORY Call Home message from device tspm-7010-1.

To ensure that Call Home messages sent by this device will be processed, please confirm the device registration within 3 months via the Smart Call Home application available at https://tools.cisco.com/sch/pendingDevices.do?step=2&securityToken=54ccfda7-7bff-4a73-b2d7-3b87e8ea208a

To complete the device registration, please use the following security token:
54ccfda7-7bff-4a73-b2d7-3b87e8ea208a

Regards,
Cisco

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http://www.cisco.com/web/about/doing_business/legal/cri/index.html

Call Home Configuration - Email to Transport Gateway and HTTPS to Cisco

The following is a sample configuration that shows the minimum steps that are required to configure Call Home on a Cisco CSR 1000V Series Router to send Email to a Transport Gateway, which will use HTTPS to securely communicate with the Smart Call Home System. The sample uses a command to start the registration process, and assumes that the Transport Gateway software has been installed, configured and registered with Smart Call Home. All commands are in blue.

1. **Enable Call Home** - In global configuration mode enter the service call-home command to activate the call-home feature and enter the call-home configuration command to enter call-home configuration mode.

   CSR1000V#configure terminal
   CSR1000V(config)#service call-home
   CSR1000V(config)#call-home

2. **Configure the mandatory contact email address** -

   CSR1000V(cfg-call-home)# contact-email-addr username@domain-name

3. **Configure the mandatory email server information -** The mail-server address is an IP address or domain-name of a SMTP server that Call Home will send email messages to.

   CSR1000V(cfg-call-home)#mail-server <address> priority <server_priority_number>

4. **De-activate the default CiscoTAC-1 Profile if it is active** -

   CSR1000V(cfg-call-home)#profile CiscoTAC-1
   CSR1000V(cfg-call-home-profile)#no active

5. **Configure a user profile** - The profile's alert-group subscriptions will be similar to the default CiscoTAC-1 profile with the destination email transport-method and with a destination email address which is for the email account used by the Transport Gateway.

   CSR1000V(cfg-call-home-profile)#profile Your_profile_name
   CSR1000V(cfg-call-home-profile)#active
   CSR1000V(cfg-call-home-profile)#destination transport-method email

   CSR1000V(cfg-call-home-profile)#destination address email <account_for_TG@yourCompany.com>
   CSR1000V(cfg-call-home-profile)#subscribe-to-alert-group diagnostic severity minor
   CSR1000V(cfg-call-home-profile)#subscribe-to-alert-group environment severity minor
   CSR1000V(cfg-call-home-profile)#subscribe-to-alert-group syslog severity major pattern ".*"
   CSR1000V(cfg-call-home-profile)#subscribe-to-alert-group configuration periodic monthly 23 15:00
   CSR1000V(cfg-call-home-profile)#subscribe-to-alert-group inventory periodic monthly 23 15:00

6. **Exit and Save the configuration** -

   CSR1000V(cfg-call-home-profile)#end
   CSR1000V#copy running-config startup-config

7. **Send a Call Home Inventory message to start the registration process** -

   CSR1000V#call-home send alert-group inventory profile Your_profile_name
   Sending inventory info call-home message ...
   Please wait. This may take some time ...

8. **Receive the email from Cisco and follow the link to complete registration for Smart Call home.**

From: call-home-notify@cisco.com [mailto:call-home-notify@cisco.com]
Sent: Monday, April 18, 2011 1:34 PM
To: ███████████████████████
Subject: Pending Device Registration waiting to be confirmed

Dear Customer,

We have received a INVENTORY Call Home message from device tspm-7010-1.

To ensure that Call Home messages sent by this device will be processed, please confirm the device registration within 3 months via the Smart Call Home application available at https://tools.cisco.com/sch/pendingDevices.do?step=2&securityToken=54ccfda7-7bff-4a73-b2d7-3b87e8ea208a

To complete the device registration, please use the following security token:
54ccfda7-7bff-4a73-b2d7-3b87e8ea208a

Regards,
Cisco

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Call Home Configuration - HTTP to Transport Gateway and HTTPS to Cisco

The following is a sample configuration that shows the minimum steps that are required to configure Call Home on a Cisco CSR 1000V Series Router so that it can use HTTP to communicate with the Transport Gateway, which will use HTTPS to communicate with the Smart Call Home System. This sample uses a command to start the registration process, and assumes that the Transport Gateway software has been installed, configured and registered with Smart Call Home. All commands are in blue.

1. **Configure HTTP Source Interface –**

   CSR1000V(config)#ip http client source-interface <interface type> <number>

2. **Enable Call Home** - In global configuration mode enter the service call-home command to activate the call-home feature and enter the call-home configuration command to enter call-home configuration mode.

   CSR1000V#configure terminal
   CSR1000V(config)#service call-home
   CSR1000V(config)#call-home

3. **Configure the mandatory contact email address** -

   CSR1000V(cfg-call-home)#contact-email-addr username@domain-name

4. **De-activate the default CiscoTAC-1 Profile if it is active** -

   CSR1000V(cfg-call-home)#profile CiscoTAC-1
   CSR1000V(cfg-call-home-profile)#no active

5. **Configure a user profile** - The profile's alert-group subscriptions will be similar to the default CiscoTAC-1 profile with the destination HTTP transport-method and with a destination HTTP address provided by the Transport Gateway (Refer to Configure the HTTP Server section).

   CSR1000V(cfg-call-home)#copy profile CiscoTAC-1 <userprofilename>
   CSR1000V(cfg-call-home)#profile <userprofilename>
   CSR1000V(cfg-call-home-profile)#destination transport-method http
   CSR1000V(cfg-call-home-profile)#no destination transport-method email
   CSR1000V(cfg-call-home-profile)#no destination address http all
   CSR1000V(cfg-call-home-profile)#destination address http <http://url_from_TG>
   CSR1000V(cfg-call-home-profile)#active

6. **Exit and Save the configuration** -

   CSR1000V(cfg-call-home-profile)#end
   CSR1000V#copy running-config startup-config

7. **Send a Call Home Inventory message to start the registration process** -

   CSR1000V#call-home send alert-group inventory profile Your_profile_name
   Sending inventory info call-home message ...
   Please wait. This may take some time ...

8. **Receive the email from Cisco and follow the link to complete registration for Smart Call home**.

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Sent: Monday, April 18, 2011 1:34 PM
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To complete the device registration, please use the following security token:
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Regards,
Cisco

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Call Home Configuration - HTTP with Single command

The following is a sample configuration that shows the single command that is required to configure Call Home on a Cisco CSR 1000V Series Router so that it can communicate securely with the Smart Call Home System. All commands are in blue.

Enable Call Home - In global configuration mode enter the call-home reporting command, mentioning the contact email address, http proxy server and port number to activate the call-home feature so that it can use email to communicate with the Smart Call Home System.

```
CSR1000V#configure terminal
CSR1000V(config)# call-home reporting contact-email-addr <username@domain-name> http-proxy <proxy_server_name> port <port_number>
```

Note: After successfully enabling Call Home using the **call-home reporting** command, an inventory message for full registration mode is sent out.

Downloading Cisco Transport Gateway Software

To download Cisco Transport Gateway software, go to the Download Software web page. On that page the Related Information section on the right lists the different OS versions (Linux, Solaris, Windows) of Transport Gateway software. Find the correct OS version of Transport Gateway software in the list and then click either **Download Now** or **Add to cart**. After you have downloaded the correct OS version of Transport Gateway software, then refer to the Transport Gateway Installation/Configuration/Registration sections of the Smart Call Home Users' Guide for information on how to install the downloaded code then configure and register the Transport Gateway.

Enabling Smart Licensing

Case 1: Device communicating directly with Cisco backend

To enable smart licensing, you should execute the command "license smart enable" in config mode as shown below. This will do the below changes in config:

    a. Set the contact email address to: sch-smart-licensing@cisco.com
    b. Make "CiscoTAC-1" profile active
    c. Destination transport method is set to http
       You can verify this by looking at the running config as shown below:

```
RP/0/RSP0/CPU0:vkg1#admin
RP/0/RSP0/CPU0:vkg1(admin)#conf t
RP/0/RSP0/CPU0:vkg1(admin-config)#license smart enable
RP/0/RSP0/CPU0:vkg1(admin-config)#commit
RP/0/RSP0/CPU0:vkg1(admin-config)#end
RP/0/RSP0/CPU0:vkg1(admin)#exit
RP/0/RSP0/CPU0:vkg1#show running-config call-home
call-home
 service active
 contact-email-addr sch-smart-licensing@cisco.com
 profile CiscoTAC-1
  active
  destination transport-method http
 !
!
```

Case 2: Device communicating via Transport Gateway to Cisco backend

To use transport gateway, after enabling smart license, change HTTP destination address of CiscoTAC-1 profile to TG service URL as shown below:

```
RP/0/RSP0/CPU0:vkg1#conf t
RP/0/RSP0/CPU0:vkg1(config)#call-home
RP/0/RSP0/CPU0:vkg1(config-call-home)#profile CiscoTAC-1
RP/0/RSP0/CPU0:vkg1(config-call-home-profile)#no destination address http
https://tools.cisco.com/its/service/oddce/services/DDCEService
RP/0/RSP0/CPU0:vkg1(config-call-home-profile)#destination address http http://tg-server
RP/0/RSP0/CPU0:vkg1(config-call-home-profile)#commit
P/0/RSP0/CPU0:vkg1(config-call-home-profile)#end
RP/0/RSP0/CPU0:vkg1#
RP/0/RSP0/CPU0:vkg1#show running-config call-home
call-home
 service active
 contact-email-addr sch-smart-licensing@cisco.com
 profile CiscoTAC-1
  active
  destination address http http://tg-server
  destination transport-method http
 !
!
```

Note: Replace the http://tg-server with actual TG service URL. You can get it from "HTTP Settings" section of TG config UI.

Registering Smart License with ID token

Once the smart licensing is enabled and correct HTTP destination URL is set on the device, then you can register the smart license with ID token as shown below:

```
RP/0/RSP0/CPU0:vkg1#admin license smart register idtoken xxxxxxx
license smart register: Registration process is in progress. Please check the syslog for the registra-
tion status and result
```

Note: To get the ID token, Click Creating a Product Instance Registration Token and refer the guide.