

Smart Call Home Quick Start Configuration Guide

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 ASR 1000 Series Router.

This document provides information to configure and register a Cisco ASR 1000 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.

1. HTTPS transport from the Cisco ASR 1000 Series Router to Cisco
2. Email transport from the Cisco ASR 1000 Series Router to Cisco
3. Email from the Cisco ASR 1000 Series Router to a Transport Gateway (TG) - HTTPS transport to Cisco
4. HTTP from the Cisco ASR 1000 Series Router to a Transport Gateway (TG) - HTTPS transport to Cisco

Note: For security reasons, Cisco recommends 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.

Requirements for Smart Call Home:

- ✓ Cisco IOS XE release 2.6 or later is required to support Call Home.
- ✓ A CCO ID associated with an appropriate Cisco SMARTnet Service contract for your company.
- ✓ Cisco SMARTnet Service for the device to be registered.

Resources for Smart Call Home:

Different resources are available for Smart Call Home at www.cisco.com/go/smartcall.

Detailed Call Home configuration information for Cisco ASR 1000 Series Routers is available in the *Configuring Call Home for Cisco ASR 1000 Series Routers* document at http://www.cisco.com/en/US/partner/docs/routers/asr1000/configuration/guide/chassis/callhome_asr1k.html#wp1052955

The Smart Call-Home User Guide is available at http://www.cisco.com/c/dam/en/us/td/docs/switches/lan/smart_call_home/user_guides/Book.pdf

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 ASR 1000 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 Management Interface VRF** - The Call Home feature on the Cisco ASR 1000 Series Routers requires use of the Gigabit Ethernet Management interface virtual routing and forwarding (VRF) instance. The Gigabit Ethernet Management interface is automatically part of its own VRF named "Mgmt-intf."

```
ASR1000#configure terminal
ASR1000 (config)#interface GigabitEthernet0
ASR1000 (config-intf)#vrf forwarding Mgmt-intf
ASR1000 (config-intf)#ip address <ip address> <mask>
```

2. **Configure HTTP Source Interface -**

```
ASR1000 (config)#ip http client source-interface <VRF mgmt interface type> <number>
```

3. **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.

```
ASR1000#configure terminal
ASR1000 (config)#service call-home
ASR1000 (config)#call-home
```

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

```
ASR1000 (cfg-call-home)#contact-email-addr username@domain-name
```

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

```
ASR1000 (cfg-call-home)#profile CiscoTAC-1
ASR1000 (cfg-call-home-profile)#destination transport-method http
ASR1000 (cfg-call-home-profile)#active
```

6. **Install a security certificate** - Copy the Cisco server certificate from http://www.cisco.com/c/dam/en/us/td/docs/switches/lan/smart_call_home/user_guides/SCH_Ch6.pdf. The security certificate can be copied from the previous URL, which is from the Smart Call Home User's Guide. Configure a trust-point and prepare to enroll the certificate via the terminal, using copy and paste when prompted.

```
ASR1000 (config)#crypto pki trustpoint cisco
ASR1000 (ca-trustpoint)#enroll terminal
ASR1000 (ca-trustpoint)#revocation-check crl none
ASR1000 (ca-trustpoint)#exit
ASR1000 (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

[paste the certificate here and accept it]

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

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

```
ASR1000 (config)#end
ASR1000#copy running-config startup-config
```

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

```
ASR1000#call-home send alert-group inventory profile CiscoTAC-1
Sending inventory info call-home message ...
Please wait. This may take some time ...
```

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

Call Home Configuration - Email to Smart Call Home

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

1. **Configure Management Interface VRF** - The Call Home feature on the Cisco ASR 1000 Series Routers requires use of the Gigabit Ethernet Management interface virtual routing and forwarding (VRF) instance. The Gigabit Ethernet Management interface is automatically part of its own VRF named "Mgmt-intf."

```
ASR1000#configure terminal
ASR1000 (config)#interface GigabitEthernet0
ASR1000 (config-intf)#vrf forwarding Mgmt-intf
ASR1000 (config-intf)#ip address <ip address> <mask>
```

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.

```
ASR1000#configure terminal
ASR1000 (config)#service call-home
ASR1000 (config)#call-home
```

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

```
ASR1000 (cfg-call-home)#contact-email-addr username@domain-name
```

4. **Associate Management Interface VRF to Call Home** -

```
ASR1000 (cfg-call-home)#vrf mgmt-intf
```

5. **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. If more than one `mail-server` address is configured for redundancy the `mail-server priority` is used to determine which server is the active primary server. Call Home will send messages to the active server with the lowest priority number.

```
ASR1000 (cfg-call-home)#mail-server <address> priority <server_priority_number>
```

6. **Activate the default CiscoTAC-1 Profile and set the transport option to Email** -

```
ASR1000 (cfg-call-home)#profile CiscoTAC-1
ASR1000 (cfg-call-home-profile)#destination transport-method email
ASR1000 (cfg-call-home-profile)#active
```

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

```
ASR1000 (cfg-call-home-profile)#end
ASR1000#copy running-config startup-config
```

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

```
ASR1000#call-home send alert-group inventory profile CiscoTAC-1
Sending inventory info call-home message ...
Please wait. This may take some time ...
```

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

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 ASR 1000 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. **Configure Management Interface VRF** - The Call Home feature on the Cisco ASR 1000 Series Routers requires use of the Gigabit Ethernet Management interface virtual routing and forwarding (VRF) instance. The Gigabit Ethernet Management interface is automatically part of its own VRF named "Mgmt-intf."

```
ASR1000#configure terminal
ASR1000 (config)#interface GigabitEthernet0
ASR1000 (config-intf)#vrf forwarding Mgmt-intf
ASR1000 (config-intf)#ip address <ip address> <mask>
```

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.

```
ASR1000#configure terminal
ASR1000 (config)#service call-home
ASR1000 (config)#call-home
```

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

```
ASR1000 (cfg-call-home)# contact-email-addr username@domain-name
```

4. **Associate Management Interface VRF to Call Home** -

```
ASR1000 (cfg-call-home)#vrf mgmt-intf
```

5. **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.

```
ASR1000 (cfg-call-home)#mail-server <address> priority <server_priority_number>
```

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

```
ASR1000 (cfg-call-home)#profile CiscoTAC-1
ASR1000 (cfg-call-home-profile)#no active
```

7. **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.

```
ASR1000 (cfg-call-home-profile)#profile Your_profile_name
ASR1000 (cfg-call-home-profile)#active
ASR1000 (cfg-call-home-profile)#destination transport-method email
ASR1000 (cfg-call-home-profile)#destination address email <account for TG@yourCompany.com>
ASR1000 (cfg-call-home-profile)#subscribe-to-alert-group diagnostic severity minor
ASR1000 (cfg-call-home-profile)#subscribe-to-alert-group environment severity minor
ASR1000 (cfg-call-home-profile)#subscribe-to-alert-group syslog severity major pattern ".*"
ASR1000 (cfg-call-home-profile)#subscribe-to-alert-group configuration periodic monthly 23 15:00
ASR1000 (cfg-call-home-profile)#subscribe-to-alert-group inventory periodic monthly 23 15:00
```

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

```
ASR1000 (cfg-call-home-profile)#end
ASR1000#copy running-config startup-config
```

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

```
ASR1000#call-home send alert-group inventory profile Your_profile_name
Sending inventory info call-home message ...
Please wait. This may take some time ...
```

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

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 ASR 1000 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 Management Interface VRF** - The Call Home feature on the Cisco ASR 1000 Series Routers requires use of the Gigabit Ethernet Management interface virtual routing and forwarding (VRF) instance. The Gigabit Ethernet Management interface is automatically part of its own VRF named "Mgmt-intf."

```
ASR1000#configure terminal
ASR1000 (config)#interface GigabitEthernet0
ASR1000 (config-intf)#vrf forwarding Mgmt-intf
ASR1000 (config-intf)#ip address <ip address> <mask>
```

2. **Configure HTTP Source Interface** -

```
ASR1000 (config)#ip http client source-interface <VRF mgmt interface type> <number>
```

3. **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.

```
ASR1000#configure terminal
ASR1000 (config)#service call-home
ASR1000 (config)#call-home
```

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

```
ASR1000 (cfg-call-home)#contact-email-addr username@domain-name
```

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

```
ASR1000 (cfg-call-home)#profile CiscoTAC-1
ASR1000 (cfg-call-home-profile)#no active
```

6. **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).

```
ASR1000 (cfg-call-home-profile)#profile Your_profile_name
ASR1000 (cfg-call-home-profile)#active
ASR1000 (cfg-call-home-profile)#destination transport-method http
ASR1000 (cfg-call-home-profile)#destination address http <http://url_from_TG>
ASR1000 (cfg-call-home-profile)#subscribe-to-alert-group diagnostic severity minor
ASR1000 (cfg-call-home-profile)#subscribe-to-alert-group environment severity minor
ASR1000 (cfg-call-home-profile)#subscribe-to-alert-group syslog severity major pattern ".*"
ASR1000 (cfg-call-home-profile)#subscribe-to-alert-group configuration periodic monthly 23 15:00
ASR1000 (cfg-call-home-profile)#subscribe-to-alert-group inventory periodic monthly 23 15:00
```

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

```
ASR1000 (cfg-call-home-profile)#end
ASR1000#copy running-config startup-config
```

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

```
ASR1000#call-home send alert-group inventory profile Your_profile_name
Sending inventory info call-home message ...
Please wait. This may take some time ...
```

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

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.