CNS Event Agent

Finding Feature Information

Your software release may not support all the features documented in this module. For the latest caveats and feature information, see Bug Search Tool and the release notes for your platform and software release. To find information about the features documented in this module, and to see a list of the releases in which each feature is supported, see the feature information table at the end of this module.

Use Cisco Feature Navigator to find information about platform support and Cisco software image support. To access Cisco Feature Navigator, go to www.cisco.com/go/cfn. An account on Cisco.com is not required.

Information About CNS Event Agent

Cisco Networking Services Event Agent

Although other Cisco Networking Services agents may be configured, no other Cisco Networking Services agents are operational until the **cns event**command is entered because the Cisco Networking Services event agent provides a transport connection to the Cisco Networking Services event bus for all other Cisco Networking Services agents. The other Cisco Networking Services agents use the connection to the Cisco Networking Services event bus to send and receive messages. The Cisco Networking Services event agent does not read or modify the messages.

How to Configure CNS Event Agent

Configuring the Cisco Networking Services Event and EXEC Agents

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **cns config partial** {*host-name* | *ip-address*} [**encrypt**] [*port-number*] [**source** *interface name*] [**inventory**]
4. **logging cns-events** [*severity-level*]
5. **cns exec** [**encrypt**] [*port-number*] [**source** {*ip-address* | *interface-type-number*}]
6. **cns event** {*hostname* | *ip-address*} [**encrypt**] [*port-number*] [**backup**] [**failover-time** *seconds*] [**keepalive** *seconds retry-count*] [**source** *ip-address* | *interface-name*][**clock-timeout** *time*] [**reconnect-time** *time*]
7. **exit**

DETAILED STEPS

	Command or Action	Purpose
Step 1	**enable** **Example:** `Device> enable`	Enables privileged EXEC mode. • Enter your password if prompted.
Step 2	**configure terminal** **Example:** `Device# configure terminal`	Enters global configuration mode.
Step 3	**cns config partial** {*host-name*	*ip-address*} [**encrypt**] [*port-number*] [**source** *interface name*] [**inventory**] **Example:** `Device(config)# cns config partial 172.28.129.22 80`	(Optional) Starts the Cisco Networking Services configuration agent, which provides Cisco Networking Services configuration services to Cisco clients, and initiates an incremental (partial) configuration. • Use the optional *port-number* argument to specify the port number for the configuration server. The default is 80. • Use the optional **source** keyword and *ip-address* argument to specify the use of an IP address as the source for Cisco Networking Services configuration agent communications. • Use the optional **inventory** keyword to send an inventory of the linecards and modules in the device to the Cisco Networking Services configuration engine as part of the HTTP request. **Note** The optional **encrypt** keyword is available only in images that support SSL.

	Command or Action	**Purpose**
Step 4	**logging cns-events** [*severity-level*] **Example:** `Device(config)# logging cns-events 2`	(Optional) Enables XML-formatted system event message logging to be sent through the Cisco Networking Services event bus. • Use the optional *severity-level* argument to specify the number or name of the desired severity level at which messages should be logged. The default is level 7 (debugging).
Step 5	**cns exec** [**encrypt**] [*port-number*] [**source** {*ip-address* | *interface-type-number*}] **Example:** `Device(config)# cns exec source 172.17.2.2`	(Optional) Enables and configures the Cisco Networking Services EXEC agent, which provides Cisco Networking Services EXEC services to Cisco clients. • Use the optional *port-number* argument to specify the port number for the EXEC server. The default is 80. • Use the optional **source** keyword and *ip-address*/*interface-type number* argument to specify the use of an IP address as the source for Cisco Networking Services EXEC agent communications. **Note** The optional **encrypt keyword** is available only in images that support SSL.
Step 6	**cns event** {*hostname* | *ip-address*} [**encrypt**] [*port-number*] [**backup**] [**failover-time** *seconds*] [**keepalive** *seconds retry-count*] [**source** *ip-address* | *interface-name*][**clock-timeout** *time*] [**reconnect-time** *time*] **Example:** `Device(config)# cns event 172.28.129.22 source 172.22.2.1`	Configures the Cisco Networking Services event gateway, which provides Cisco Networking Services event services to Cisco clients. • The optional **encrypt** keyword is available only in images that support SSL. • Use the optional *port-number* argument to specify the port number for the event server. The default is 11011 with no encryption and 11012 with encryption. • Use the optional **backup** keyword to indicate that this is the backup gateway. Before configuring a backup gateway, ensure that a primary gateway is configured. • Use the optional **failover-time** keyword and *seconds* argument to specify a time interval in seconds to wait for the primary gateway route after the route to the backup gateway is established. • Use the optional **keepalive** keyword with the *seconds* and *retry-count* arguments to specify the keepalive timeout in seconds and the retry count. • Use the optional **source** keyword and *ip-address*/*interface-name* argument to specify the use of an IP address as the source for Cisco Networking Services event agent communications. • Use the optional **clock-timeout** keyword to specify the maximum time, in minutes, that the Cisco Networking Services event agent will wait for the clock to be set for transports (such as SSL) that require an accurate clock. • Use the optional **reconnect-time** keyword to specify the configurable upper limit of the maximum retry timeout. **Note** Until the **cns event** command is entered, no transport connections to the Cisco Networking Services event bus are made and therefore no other Cisco Networking Services agents are operational.

	Command or Action	Purpose
Step 7	**exit** **Example:** `Device(config)# exit`	Exits global configuration mode and returns to privileged EXEC mode.

Troubleshooting Tips

- Use the **show cns event connections** command to check that the Cisco Networking Services event agent is connected to the Cisco Networking Services event gateway.

- Use the **show cns event subject** command to check that the image agent subject names are registered. Subject names for the Cisco Networking Services image agent begin with cisco.mgmt.cns.image.

Configuration Examples for CNS Event Agent

Example: Enabling and Configuring Cisco Networking Services Agents

The following example shows various Cisco Networking Services agents being enabled and configured starting with the configuration agent being enabled with the **cns config partial** command to configure an incremental (partial) configuration on a remote device. The Cisco Networking Services configuration engine IP address is 172.28.129.22, and the port number is 80. The Cisco Networking Services exec agent is enabled with an IP address of 172.28.129.23, and the Cisco Networking Services event agent is enabled with an IP address of 172.28.129.24. Until the Cisco Networking Services event agent is enabled, no other Cisco Networking Services agents are operational.

```
cns config partial 172.28.129.22 80
cns exec 172.28.129.23 source 172.22.2.2
cns event 172.28.129.24 source 172.22.2.1
exit
```

In the following example, the Cisco Networking Services image agent parameters are configured using the CLI. An image ID is specified to use the IP address of the GigabitEthernet interface 0/1/1, a password is configured for the Cisco Networking Services image agent services, the Cisco Networking Services image upgrade retry interval is set to four minutes, and image management and status servers are configured.

```
cns id GigabitEthernet0/1/1 ipaddress image
cns image retry 240
cns image password abctext
cns image server https://10.21.2.3/cns/imgsvr status https://10.21.2.3/cns/status/
```

In the following example, the Cisco Networking Services image agent is configured to use the Cisco Networking Services Event Bus. An image ID is specified as the hardware serial number of the networking device, the Cisco Networking Services event agent is enabled with a number of parameters, and the Cisco Networking

Services image agent is enabled without any keywords or options. The Cisco Networking Services image agent will listen for events on the Cisco Networking Services Event Bus.

```
cns id hardware-serial image
cns event 10.21.9.7 11011 keepalive 240 120 failover-time 5
cns image
cns image password abctext
```

Additional References

Related Documents

Related Topic	Document Title
Cisco IOS commands	Cisco IOS Master Commands List, All Releases
Cisco Networking Services commands: complete command syntax, command mode, command history, defaults, usage guidelines, and examples.	Cisco IOS Cisco Networking Services Command Reference
Cisco Networking Services Configuration Engine	Cisco CNS Configuration Engine Administrator Guide, 1.3

Standards and RFCs

Standard/RFC	Title
No new or modified standards/RFCs are supported by this feature, and support for existing standards/RFCs has not been modified by this feature.	--

MIBs

MIB	MIBs Link
No new or modified MIBs are supported by this feature, and support for existing MIBs has not been modified by this feature.	To locate and download MIBs for selected platforms, Cisco software releases, and feature sets, use Cisco MIB Locator found at the following URL: http://www.cisco.com/go/mibs

Technical Assistance

Description	Link
The Cisco Support and Documentation website provides online resources to download documentation, software, and tools. Use these resources to install and configure the software and to troubleshoot and resolve technical issues with Cisco products and technologies. Access to most tools on the Cisco Support and Documentation website requires a Cisco.com user ID and password.	http://www.cisco.com/cisco/web/support/index.html

Feature Information for CNS Event Agent

The following table provides release information about the feature or features described in this module. This table lists only the software release that introduced support for a given feature in a given software release train. Unless noted otherwise, subsequent releases of that software release train also support that feature.

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Table 1: Feature Information for Cisco Networking Services Event Agent

Feature Name	Releases	Feature Information
Cisco Networking Services Event Agent	12.0(18)ST 12.0(22)S 12.2(2)T 12.2(33)SRA 12.2(33)SB 12.2(33)SXI	The Cisco Networking Services Event Agent is part of the Cisco IOS infrastructure that allows Cisco IOS applications to publish and subscribe to events on a Cisco Networking Services Event Bus. Cisco Networking Services Event Agent works in conjunction with the Cisco Networking Services Configuration Agent feature. The following commands were introduced or modified by this feature: **cns event**, **show cns event connections**, **show cns event stats**, **show cns event subject**.