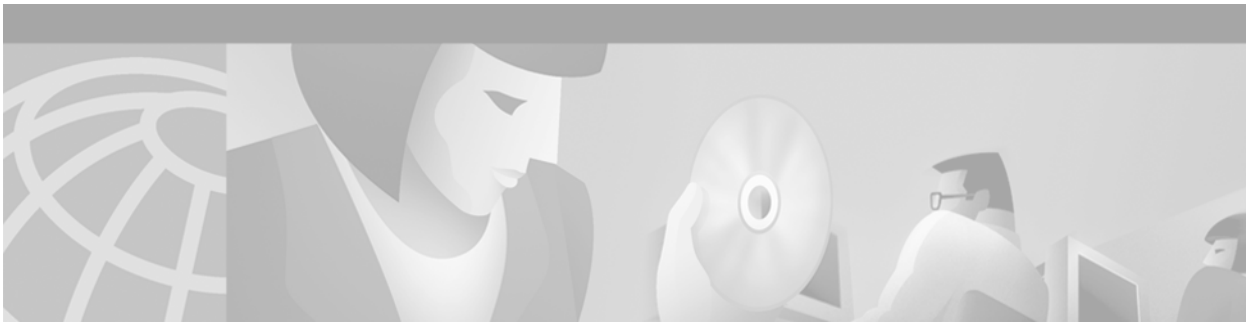

NAT—Support of IP Phone to Cisco CallManager

This feature module describes the Cisco IOS Network Address Translation (NAT) support of IP Phone to Cisco CallManager and includes the following sections:

Feature Overview

Cisco IP phones use the Selsius Skinny Station Protocol to connect with and register to the Cisco CallManager (CCM). Messages flow back and forth that include IP address and port information used to identify other IP phone users with which a call can be placed.

To be able to deploy Cisco IOS NAT between the IP phone and CCM in a scalable environment, NAT needs to be able to detect the Selsius Skinny Station Protocol and understand the information passed within the messages.

When an IP phone attempts to connect to the CCM and it matches the configured NAT translation rules, NAT will translate the original source IP address and replace it with one from the configured pool. This new address will be reflected in the CCM and be visible to other IP phone users.

Benefits

- Allows NAT to “dynamically” perform IP address translation instead of manually configuring an IP address within NAT for each IP phone.
- Enables service providers and enterprise customers to deploy IP phones to remote offices and to maintain centralized CCMs back at the head office or a major regional center, while making use of NAT for address translation between the IP phone and CCM.

Related Documents

- *Cisco IOS IP and IP Routing Configuration Guide,* Release 12.1
- *Cisco IOS IP and IP Routing Command Reference,* Release 12.1

Supported Platforms

- Catalyst 2900 series
- Catalyst 2900 XL series
- Catalyst 4000 series
- Catalyst 5000 family switches with an installed Route Switch Module
- Catalyst 6000 family switches
- Catalyst 8500 series
- Lightsteam 1010 switch
- Cisco 2500 series
- Cisco 2600 series
- Cisco 3600 series
- Cisco MC3800 multiservice access concentrator
- Cisco 4000 series
- Cisco AS5300 access server
- Cisco AS5400 universal access server
- Cisco AS5800 universal access server
- Cisco 6400 series
- Cisco 7000 series
- Cisco 8500 series
- Cisco 12000
- Cisco uBR900
- Cisco uBR7200

Supported Standards, MIBs, and RFCs

Standards

No new or modified standards are supported by this feature.

MIBs

No new or modified MIBs are supported by this feature.

To obtain lists of supported MIBs by platform and Cisco IOS release, and to download MIB modules, go to the Cisco MIB web site on Cisco Connection Online (CCO) at http://www.cisco.com/public/sw-center/netmgmt/cmtk/mibs.shtml.

RFCs

No new or modified RFCs are supported by this feature.

Configuration Tasks

None

Configuration Examples

None

Command Reference

This section documents the modified **ip nat service** command. All other commands used with this feature are documented in the Cisco IOS Release 12.1 command reference publications.

ip nat service

To specify a port other than the default port, use the **ip nat service** command in global configuration mode. To disable the port, use the **no** form of this command.

ip nat service {**H225** | **list** {*access-list-number* | *access-list-name*} **ftp tcp port** *port-number* | **skinny tcp port** *port-number*}

no ip nat service {**H225** | **list** {*access-list-number* | *access-list-name*} **ftp tcp port** *port-number* | **skinny tcp port** *port-number*}

Syntax Description

H225	H323-H225 protocol.
list *access-list-number*	Standard access list number in the range from 1 to 199.
access-list-name	Name of a standard IP access list.
ftp	FTP protocol.
tcp	TCP protocol.
port *port-number*	Port other than the default port in the range from 1 to 65533.
skinny	Skinny protocol.

Defaults

Disabled

Command Modes

Global configuration

Command History

Release	Modification
11.3	This command was introduced.
12.1(5)T	The **skinny** keyword was added.

Usage Guidelines

A host with an FTP server using a port other than the default port can have an FTP client using the default FTP control port. When a port other than the default port is configured for an FTP server, Network Address Translation (NAT) prevents FTP control sessions that are using port 21 for that particular server. If an FTP server uses the default port and a port other than the default port, both ports need to be configured using the **ip nat service** command.

NAT listens on the default port of the Cisco CallManager to translate the skinny messages. If the call manager uses a port other than the default port, that port needs to be configured using the **ip nat service** command.

Use the **no ip nat service H225** command to disable support of H.225 packets by NAT.

Examples

The following example configures the nonstandard port 2021:

```
ip nat service list 10 ftp tcp port 2021
access-list 10 permit 10.1.1.1
```

The following example configures the standard FTP port 21 and the nonstandard port 2021:

```
ip nat service list 10 ftp tcp port 21
ip nat service list 10 ftp tcp port 2021
access-list 10 permit 10.1.1.1
```

The following example configures the 20002 port of the call manager:

```
ip nat service skinny tcp port 20002
```