Internet Telephony Gateway

VIP-110/VIP-210

Command Reference

Release 1.00

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Command line interface in PLANET VIP-110/VIP-210

This manual is a command-by-command description for the PLANET VIP-110/VIP-210 CLI administration mode.

Table of Contents

About This Manual

This section discusses the objectives, audience, organization, and conventions associated with this document.

Document Objectives

This document provides an in-depth description of the commands necessary for configuring and maintaining the ITG.

Audience

This publication is intended as a standalone document for experienced system administrators or engineers who will be configuring and maintaining the ITG and would like to reference commands.

Document Organization

This document is organized as follows:

- ***Introduction*, gives an overview about this document.**
- ***Utility Commands* describes general-purpose utility commands.**
- ***IP Configuration Commands* describes commands for configuring the network interfaces and displaying the configuration.**
- ***Telephony Interface Port Configuration Commands* describe commands for configuring the telephony interface ports.**
- ***Voice and Fax Coder Configuration Commands*, describe commands for configuring the voice and fax coders supported by the ITG.**
- ***Call Progress Tone Configuration Commands* describe commands for configuring the call progress detector and generator.**
- ***H323 Configuration Commands* describe commands for configuring the H.323 call control and signaling protocol stack.**
- ***Configuration Management Commands* describe the command for managing the configuration parameters.**
- ***Dial Plan Management Commands* describe commands for setting up and viewing the dial plan.**

Notation Conventions

This document uses the following conventions:

- **Examples that contain system prompts denote interactive sessions, indicating that the user enters commands at the prompt.**
- **Different type styles and characters are used. These serve a variety of purposes as described below:**

Convention	Description
boldface	Commands and keywords are in **boldface.**
Bold Courier	User input (anything you are expected to type in) is set in **Bold Courier**.
italic	Arguments for which you supply values.
courier	Messages that the ITG CLI displays are in plain courier font.
[ ]	Elements in square brackets are optional.
{ x | y | z }	Alternative but required elements are grouped in braces ({ }) and separated by vertical bars (|).
[x | y | z]	Optional alternative keywords are grouped in brackets ([ ]) and separated by vertical bars (|).
"string"	A non-quoted set of characters. Do not use quotation marks around the string or the string will include the quotation marks.
<key>	A key on the VT-100 terminal or terminal emulator. For example <Enter> denotes the Enter key.

Designating IP Address

Some commands require an IP address, which must be designated in a standard format. The IP address format is 32 bits, written as four octets separated by periods (dotted decimal format) that are made up of a network section, an optional subnet section, and a host section, as shown in the following example:

192.168.0.1

Designating Port ID

Each telephony port of the ITG is assigned with an ID. Some commands require a telephony port ID. The ITG assigned ID 0 to the first telephony port, ID 1 to the 2nd port, and so on.

Documentation Abbreviations

Throughout this document, the user will come across a number of abbreviations, some of them are commonly used in the industry and some are unique to the ITG. The user should be familiar with the following abbreviations:

ATPM	**Address Translation and Parsing Manager**
CLI	**Command Line Interface**
DHCP	**Dynamic Host Configuration Protocol**
DIS	**Digital Identification Signal**
DNS	**Domain Name System**
DSP	**Digital Signal Processor**

DTMF	**Dual Tone Multi-Frequency**
EIA	**Electronic Industry Association**
FXS	**Foreign Exchange Station**
GK	**Gatekeeper**
H.323	**ITU specification for multimedia transmission over IP networks**
ICMP	**Internet Control Message Protocol**
IFP	**Internet Facsimile Protocol**
IMTC	**International Multimedia Telecommunications Consortium**
IP	**Internet Protocol**
ISP	**Internet Service Provider**
ITG	**Internet Telephony Gateway**
KTS	**Key Telephone System**
LAN	**Local Area Network**
PPP	**Point-to-Point Protocol**
PPPoE	**PPP Over Ethernet**
NAT	**Network Address Translation**
NAPT	**Network Address Port Translation**
NVS	**Non-Volatile Storage**
PBX	**Private Branch Exchange**
PSTN	**Public Switched Telephone Network**
RAM	**Read-Write Memory**
RAS	**Registration, Admission and Status**
RCF	**Registration Confirmation**
RRQ	**Registration Request**
RTP	**Real-Time Transport Protocol**
TFTP	**Trivial File Transfer Protocol**
UDP	**User Datagram Protocol**
UUIE	**User-to-User Information Element**
VAD	**Voice Activity Detection**
WAN	**Wide Area Network**

1. Introduction

The ITG is a VoIP gateway integrated with a Network Address Translation (NAT) router. It is equipped with two IP interfaces, one for connecting to internal network (hereafter called LAN), the other for connecting to external network (hereafter called WAN). The ITG performs NAPT for host in LAN interface, allowing multiple hosts in the LAN interface to share a single IP address.

The ITG has a built-in command line interpreter and provides users a Command Line Interface (CLI). You can configure ITG by entering commands from the CLI.

You can access the CLI from a VT-100 terminal or terminal emulator connected through a Telnet session.

Command Help

Help for commands is provided by the CLI. Type help to see a list of the top-level commands. On most cases, if you enter a command using the wrong number of arguments or inappropriate arguments, the CLI will give further usage.

2. Utility Commands

This chapter describes the general-purpose utility commands.

get

The ITG implements TFTP client software. This command is used to download new revision software from a remote TFTP server, or import dial plan and system configuration parameters from a remote gateway.

get [ip_addr | host_name] [file]

Syntax Description

ip_addr	**IP address of the TFTP server.**
host_name	**Host of the TFTP server**
file	**Name of the file to be downloaded**

help

The help command lists the top-level commands.

help

Syntax Description

This command has no arguments or keywords

reset

Use the reset command to reset the ITG. The CLI will prompt you to confirm the command before resetting the ITG.

net reset

Syntax Description

This command has no arguments or keywords

ping

The ping command sends ICMP echo request packets to another host on the network.

ping host [count]

Syntax description

host	**The IP address or IP alias of the host.**
count	**Number of echo request packets to send.**

tel erase_ivr

This command erases the greeting message that was recorded previously.

tel erase_ivr

Syntax Description

This command has no arguments or keywords

tel set ring_freq

The ITG rings FXS port for signaling an incoming call, and provide 4 types of ringing signal, each having a unique frequency. This command is for selecting the frequency of the ringing signal that the ITG sends to FXS ports.

tel set ring_freq {1 | 2 | 3 | 4}

Syntax description

1 **Setting ring frequency to 17 Hz**

2 **Setting ring frequency to 20 Hz**

3 **Setting ring frequency to 25 Hz**

4 **Setting ring frequency to 50 Hz**

Factory default

1- 17 Hz

Related Command

tel show ring_freq

tel show port

This command displays the hook status of a telephony port.

tel show port [*port*]

Syntax description

port **ID of the telephony port. If not specified, hook status for all telephony ports available will be displayed.**

tel show ring_freq

This command displays the ringing frequency that was configured by the tel set ring_freq command.

tel show ring_freq

Syntax description

This command has no arguments or keywords

Related Command

tel set ring_freq

show version

This command is used to display information that identifies the versions of various software components that are implemented in the ITG.

show version

Syntax Description

This command has no arguments or keywords

Example

The following example shows how to use the show version command

```
ITG>show version

Internet Telephony Gateway Ver 1.00
Boot Loader Version: 1.00
DSP image Version:   8.1.2.1.
TSG Version:        R8.0 Gateway (Build 4)
ITG>
```

3. IP Configuration Commands

This chapter describes the commands for configuring and displaying the IP interface parameters. The configured parameter will not take effect until the configured parameter is store in NVS and the ITG is reset.

This chapter is organized as follows:

- Commands for configuring and displaying LAN interface parameters
- Commands for configuring and displaying WAN interface parameters
- Commands for configuring and displaying DHCP server and client
- Commands for configuring TFTP server
- Commands for configuring and displaying PPPoE options
- Commands for configuring and displaying dynamic DNS related parameters
- Commands for configuring and displaying management options
- Command for storing IP interface parameters to NVS

Configuring LAN Interface

The section describes commands for setting and displaying LAN interface parameters.

net set lan ip

This command is used to assign a static IP address for the LAN interface

net set lan ip *ip_addr*

Syntax description

ip_addr **IP address for the LAN interface.**

Factory default

192.168.0.1

Related Commands

net set lan mask

net set lan mask

This command is used to assign the subnet mask for the LAN interface

net set lan mask *mask*

Syntax description

mask **Subnet mask for the LAN interface.**

Factory default

255.255.255.0

Related Commands

net set lan ip

ë **Note** **The LAN interface only supports Class C network. That is, the subnet mask for the LAN interface must be greater than or equal 255.255.255.0.**

---

net show lan

This command displays the LAN interface parameters

net show lan

Syntax description

This command has no arguments or keywords

Configuring WAN Interface

The section describes commands for setting and displaying WAN interface parameters.

net set wan dns

This command is used to specify the DNS servers for the WAN interface. Up to two DNS servers can be specified.

net set wan dns *pri_server* [sec_*server*]

Syntax description

pri_server	**Primary DNS server for the WAN interface**
sec_server	**Secondary DNS server for the WAN interface. Optional.**

Factory default

Primary DNS server: 0.0.0.0

Secondary DNS server: 0.0.0.0

net set wan gateway

This command is used to specify the default gateway for the WAN interface.

net set wan gateway *ip_addr*

Syntax description

ip_addr	**IP address of the default gateway for the WAN interface**

Factory default

0.0.0.0

Related Commands

net set wan ip

net set wan mask

net set wan ip

This command is used to assign a static IP address for the WAN interface

net set wan ip *ip_addr*

Syntax description

ip_addr	**IP address for the WAN interface**

Factory default

172.16.0.1

Related Commands

net set wan gateway

net set wan mask

net set wan ip_tos

The ITG allows users to set the 8-bit *Service Type* field in the IP header for all the packets it sends across the WAN interface. The *Service Type* field is broken down into five subfields, among which four subfileds are user configurable. This command is used to set these subfields.

net set wan ip_tos *ip_preced* [*d*] [*t*] [*r*]

Syntax description

ip_preced	**The 3-bit PRECEDENCE subfiled ranging from 0 through 7.**
d	**The *D* bit subfield, either 0 or 1.**
t	**The *T* bit subfield, either 0 or 1.**
r	**The *R* bit subfield, either 0 or 1.**

Factory default

***ip_preced*: 0**
***d*: 0**
***t*: 0**
***r*: 0**

net set wan mask

This command is used to assign the subnet mask for the WAN interface

net set wan mask *mask*

Syntax description

mask	**Subnet mask for the WAN interface.**

Factory default

255.255.0.0

Related Commands

net set wan ip

net show wan

This command displays the WAN interface parameters

net show wan

Syntax description

This command has no arguments or keywords

Configuring DHCP Server and Client

The ITG implements a DHCP server over its LAN interface and a DHCP client over its WAN interface. This section describes commands for setting and displaying parameters for DHCP server and client.

net set dhcp client

The ITG supports DHCP client over its WAN interface for obtaining IP configuration from a remote DHCP server.

The net set dhcp client command allows you to configure the DHCP client.

net set dhcp client {on | off}

Syntax description

on	**Enable DHCP client over WAN interface**
off	**Disable DHCP client**

Factory default

off

net set dhcp mac_addr

Certain DHCP server allows DHCP client to request IP configuration only if predefined hardware address is specified by the client.

The net set dhcp mac_addr command allows you to specify the hardware address for the DHCP client. If not specified, the ITG will use the MAC address of the WAN interface.

net set dhcp mac_addr *mac_addr*

Syntax description

mac_addr	**The 6-byte, in hexadecimal format, hardware address for the DHCP client. Each byte, except the least significant one, should be delimited by a hyphen ("-"). If not specified, the ITG will use the**

MAC address of the WAN interface.

net set dhcp server

The ITG supports DHCP server over its LAN interface, allowing hosts in the LAN interface to dynamically obtain IP configuration from the ITG.

The net set dhcp server command allows you to configure the DHCP server.

net set dhcp server *no_of_client base_address*

Syntax description

no_of_client	**Number of DHCP clients the ITG would support over the LAN interface.**
base_addr	**Starting address of the DHCP clients**

Factory default

Number of DHCP clients is 0

Configuring TFTP Server

The ITG implements a TFTP server over its WAN and LAN interfaces which allows the export of system configuration parameters and dial plan to other ITGs or IP hosts. The TFTP server maintains the following file on its root directory:

File Name	Description
dialplan.ITG	Dial plan
config.ITG	System configuration parameters

If the TFTP server is enabled, other ITGs can import the above files using the built-in TFTP client software. IP hosts with TFTP client software may download these files too. This section described command for configuring the TFTP server.

net set tftpsrv

This command is used to enable of disable the built-in TFTP server.

net set tftpsrv {on | off}

Syntax description

on	Enable TFTP server
off	Disable TFTP server

Factory default

off

Configuring PPPoE

The ITG implements PPPoE client over its WAN interface. PPPoE client provides the ITG the ability to connect to Internet over a bridging access device (such as an ADSL modem) to a remote access concentrator, typically located at the ISP site. This section describes commands for setting and displaying parameters for PPPoE client.

net set pppoe auth_proto

The PPPoE client implements two types of authentication protocol. This command is used for specifying which authentication protocol the ITG uses to send authentication message to the server.

net set pppoe auth_proto {chap | pap}

Syntax description

chap	**Challenge Handshake Authentication Protocol**
pap	**Password Authentication Protocol**

Factory default

pap

net set pppoe fixed_ip

Certain ISP provides a fixed IP address to each of its subscriber. This command allows users to set the IP address for the PPPoE connection.

net set pppoe fixed_ip *ip_addr*

Syntax description

ip_addr	**IP address for the PPPoE client**

Factory default

0.0.0.0

net set pppoe idle_timeout

The ITG monitors packet sent/received across the PPPoE connection and maintains a timer. If no packet is detected within a predefined duration, the PPPoE connection will be disconnected automatically. Once being disconnected, the PPPoE client will connect to the server automatically when there is any packet needs to be sent across the WAN connection.

net set pppoe idle_timeout *seconds*

Syntax description

seconds	**Duration in seconds. A value of 0 stands for forever.**

Factory default

0

net set pppoe {on | off}

This commands enables or disables the PPPoE client.

net set pppoe {on | off}

Syntax description

on	**Enable PPPoE client**
off	**Disable PPPoE client**

Factory default

off

net set pppoe service_name

This commend is used to specify the service name the PPPoE client encapsulates in the PPPoE Discovery packet it broadcast across the WAN interface.

net set pppoe service_name "*service_name*"

Syntax description

service_name	**PPPoE service name, up to 23 characters. If not specified, the original service name is deleted.**

Factory default

""

net set pppoe tx_bw

The ITG implement a bandwidth regulator over its PPPoE interface. The bandwidth regulator is enabled, when PPPoE client is enabled, for guaranteeing enough bandwidth is reserved for voice packets sent across the PPPoE connection. The ITG has to be aware of the maximum transmission bandwidth the PPPoE link provides for reserving bandwidth for voice packets.

net set pppoe tx_bw *kbps*

Syntax description

kbps	**Maximum transmit bandwidth the PPPoE link provides in kbps. If 0 is specified, the bandwidth regulation algorithm is disabled.**

Factory default

0

net set pppoe user

This commend is used to specify the user name and password for the PPPoE client.

net set pppoe user "*name*" "*password*"

Syntax description

name	**PPPoE client user name. Up to 63 characters.**

password **PPPoE client user password. Up to 23 characters.**

Factory default

User name: ""

User password: ""

net show ppp

This command displays PPP configuration parameters.

net show ppp

Syntax description

This command has no arguments or keywords

Configuring Dynamic DNS

The ITG implement a dynamic DNS client which allows a remote dynamic DNS server to alias the IP address of the ITG to a static host name. Enabling dynamic DNS allows other gateways to call the ITG using static host names the ITG registers to the dynamic DNS server. The dynamic DNS feature is especially useful when the ITG operates under dynamic IP environment (that is, in stead of using the static IP address user configured via CLI command net set wan ip, the ITG obtains a dynamic IP address either via DHCP or PPPoE). There are plenty of organizations providing dynamic DNS service. The ITG currently supports the following dynamic DNS service providers:

- **dyndns.org**
- **dtdns.com**

To be able to obtain dynamic DNS services from these service providers, the ITG must have obtained a dynamic DNS account, which is comprised of a host name, a user name and a password from them.

The following sections describe commands for enabling/disabling the dynamic DNS client and for configuring dynamic DNS related options.

net set ddns {on | off}

This command enables or disables the dynamic DNS client.

net set ddns {on | off }

Syntax description

on	**Enable dynamic DNS client**
off	**Disable dynamic DNS client**

Factory default

off

net set ddns add

For the dynamic DNS server to be able to translate a static host name to an IP address, the ITG has to register to it upon reset. To register to the dynamic DNS server, the ITG needs to convey to the server the following information:

- **Name of the dynamic DNS server**
- **Host name of the ITG**
- **User name of the account the ITG uses to login to the dynamic DNS server**
- **Password of the account the ITG uses to login to the dynamic DNS server**

This command sets the above parameters for the ITG to register to the dynamic DNS server.

net set ddns add *server_name host_name user_name password*

Syntax description

server_name	**Dynamic DNS server's name. Servers currently supported by the ITG include:** **Ÿ dyddns.org** **Ÿ dtdns.com**
host_name	**Host name of the ITG**
user_name	**User name of the account the ITG users to login to the dynamic DNS server**
password	**Password of the account the ITG users to login to the dynamic DNS server**

Once registered to the dynamic DNS server, the ITG may be address by other gateways by host name *host_name.server_name.* For example, if the ITG has registered to dynamic DNS server dyndns.org with a host name abc, the ITG may be addressed by host name abc.dyndns.org.

net set ddns del

This command is user to delete a previously added dynamic DNS server, so that the ITG will not register to it again.

set ddns del {*server_name* | all}

Syntax description

server_name	**Domain name of the dynamic DNS server to be deleted.**
all	**Delete all the configured dynamic DNS information.**

net show ddns

This command displays dynamic DNS client configuration parameters.

net show ddns

Syntax description

This command has no arguments or keywords

Configuring Management Options

The ITG has built-in HTTP server and Telnet server, allowing the configuration from web browser or Telnet client. This section describes commands for setting and displaying the management options.

net set http

The ITG allows users to enable or disable its built-in HTTP server. This command is used to enable or disable the HTTP server.

net set http {on | off}

Syntax description

on	**Enable HTTP server. This allows users to manage the ITG from web browser.**
off	**Disable HTTP server.**

Factory default

on

net set manager ip

The built-in Telnet server allows the ITG to be configured from remote Telnet clients. Telnet clients in internal network are always allowed to connect to the ITG's Telnet server. Clients in external network are allowed to connect to the Telnet server only if they are among the list of trusted clients. This command, along with command net set manager mask, is used to specify the Telnet clients that are allowed to connect to the ITG's Telnet server from WAN interface.

net set manager ip *ip_address*

Syntax description

ip_addr	**IP address of the Telnet client that is allowed to connect to the ITG's Telnet server from WAN interface. If 0 is specified, clients with whatever address are allowed to connect to the Telnet server.**

Factory default

0.0.0.0

Related Commands

net set manager mask

net set manager mask

This command, along with command net set manager ip, is used to specified the Telnet clients that are allowed to connect to the Telnet server from WAN interface.

net set manager mask *subnet_mask*

Syntax description

subnet_mask	**Subnet mask. Telnet clients in the same subnet as the one specified by command net set manager ip are allowed to connect**

specified by command net set manager ip are allowed to connect to ITG's Telnet server via WAN interface.

Factory default

0.0.0.0

Related Commands

net set manager ip

net set manager password

This command is used to change the password for logging into ITG interface, web server or Telnet server for configuring the ITG.

net set manager password *password1 password2*

Syntax description

password1	New password
password2	New password for ensuring the password is entered correctly. *password2* must be identical to *password1*, otherwise, the original password remains unchanged.

Factory default

123

net set telnet

The ITG allows you to enable or disable its built-in Telnet server. This command is used to enable or disable the Telnet server.

net set telnet {on | off}

Syntax description

on	Enable Telnet server. This allows users to access the ITG from Telnet client.
off	Disable Telnet server.

Factory default

on

net show management

This command displays management options.

net show management

Syntax description

This command has no arguments or keywords

Storing IP Interface Parameters

Configuration parameters changed by command net set are stored in dynamic memory, which would lose when the ITG is powered off. The save the configuration parameter you've changed, the parameters have to be stored into NVS before powering off the ITG. This section describes command for storing IP interface parameters into NVS.

net store

This command stores IP interface parameters into NVS.

net store

Syntax description

This command has no arguments or keywords

4. Telephony Interface Port Configuration Commands

Each telephony interface port equipped by the ITG, regardless of its interface type, is characterized by two sets of configuration parameters. One set is unique to each port, hereafter referred to as port-unique parameters. The other set is common to all the telephony interface ports, hereafter referred to as port-common parameters. The ITG maintains two sets of port-common parameters, primary and secondary. One of the port-unique parameters is used to select which of the port-common parameters the port will use.

This chapter describes commands for configuring the port-unique and port-common configuration parameters.

This chapter is organized as follows:

- Port-Unique configuration commands
- Port-Common configuration commands

Configuring Port-Unique Parameters

The following sections describe commands for configuring port-unique parameters.

set port port# cid name

This command is used to set the Caller ID Name for a telephony port.

set port *port#* cid name {*name* | O}

Syntax description

port#	**Zero-based number of the telephony port.**
name	**Caller ID name, 1 to 10 characters. Use hyphen (`-`) to represent spaces in the name.**
O	**Caller ID is name is not available**

Factory default

No caller ID name

set port port# cid number

This command is used to set the Caller ID Number for a telephony port.

set port *port#* cid number {*number* | O}

Syntax description

port#	Zero-based number of the telephony port.
number	Caller ID number, 1 to 15 digits.
O	Call ID is number is not available

Factory default

No caller ID number

set port port# default

This command sets all the port-unique parameters to factory default values.

set port *port#* default

Syntax description

port#	Zero-based number of the telephony port.

set port port# dial_in plar

This command is used to configure the number to be dialed in automatically (automatic ring-down) when a telephony port goes off-hook. If no number is entered, operation will be as normal.

set port *port#* dial_in plar *number*

Syntax description

port#	Zero-based number of the telephony port.
number	The phone number to be dialed automatically upon detecting off-hook.

Factory default

None

set port port# port_cfg

The ITG maintains two sets of port-common parameter. This command is used to select which set of the port-common parameters is to be used by a telephony interface port.

set port *port#* port_cfg {pri | sec}

Syntax description

port#	Zero-based number of the telephony port.
pri	Use primary port-common parameters
sec	Use secondary port-common parameters

Factory default

Primary

show port port#

This command displays port-unique parameters for a telephony interface port.

show port

Syntax Description

port#	**Zero-based number of the telephony port.**

Configuring Port-Common Parameters

The ITG maintains two sets of port-common parameters, primary and secondary. Each telephony port chooses which of them to be used by specifying it in one of its port-unique parameters. Refer to command "set port *port#* port_cfg" on page 20 for details on how to choose port-common parameters for a telephony port.

The following sections describe commands for configuring port-common parameters. Commands for configuring port-common parameters share the same syntax as follows:

set port_cfg [sec] *option* [*option*] . . .

Where the optional key word sec, if entered, stands for configuring secondary port-common parameter. This key word may be omitted, if you are configuring the primary port-common configuration. For simplicity, commands described in the following sections only include those for configuring primary port-common parameters.

Commands for configuring port-common parameters are categorized into the following groups:

- **Commands for configuring general port-common parameters that apply to all types of telephony interface port.**
- **Commands for configuring port-common parameters unique to FXO interface**
- **Commands for configuring port-common parameters unique to FXS interface**

Configuration General Port-Common Parameters

The following sections describe commands that apply to all types of telephony interface port.

set port_cfg ans_wait

This command is used to set a wait-for-answer time limit on a telephony port. If the call destination does not answer within this period, the call is automatically terminated.

set port_cfg anw_wait *seconds*

Syntax description

seconds	**Value in seconds, ranging from 0 to 65534, or –1 or 65535 for forever.**

Factory default

-1

set port_cfg call_limit

This command is used to set a call length limit for calls on a telephony port. If the call length is exceeded, the call is automatically terminated.

set port_cfg call_limit *seconds*

Syntax description

seconds	**Value in seconds, ranging from 0 to 65534, or –1 or 65535 for forever.**

Factory default

-1

set port_cfg default

This command resets the port-common parameters to factory default values.

set port_cfg default

Syntax description

This command has no arguments or keywords

set port_cfg fax_prof

This command is used to select the preferred fax coding profile for a telephony port. Please refer to 5. Voice and Fax Coder Configuration Commands

on page 31 for details about coding profile.

set port_cfg fax_prof *profile_id*

Syntax description

profile_id	**Preferred coding profile ID for fax**

Factory default

The factory default preferred fax coding profile for all the telephony ports is coding profile number 5, which is the coder for standard T.38 fax.

set port_cfg out_type

The ITG supports tone-dial and pulse-dial. This command is used to select the dial-out characteristic of a telephony port.

set port_cfg out_type {tone | pulse}

Syntax description

tone	**Tone dial**
pulse	**Pulse dial**

Factory default

tone

set port_cfg out_wait

This command is used to specify the time to delay after going off-hook before generating outbound dial digits.

set port_cfg out_wait *milliseconds*

Syntax description

milliseconds **Value is milliseconds, ranging from 0 to 65535.**

Factory default

400

set port_cfg rxgain

The ITG adjust the power level of the PCM signal coming in from the telephony ports before feeding it to the voice processor for further processing. This command allows user to specify the gain level for PCM signal received from the telephony port.

set port_cfg rxgain *db*

Syntax description

db **Gain level in dB, ranging from −14 to 14.**

Factory default

0

Related Command

set port_cfg txgain

set port_cfg tone_out_off

This command is used to set the off time for DTMF tones for a telephony port.

set port_cfg tone_out_off *milliseconds*

Syntax description

milliseconds **Value is milliseconds, ranging from 0 to 65535.**

Factory default

200 ms

Related Commands

set port_cfg tone_out_on

set port_cfg tone_out_pwr

set port_cfg tone_out_on

This command is used to set the on time for DTMF tones for a telephony port.

set port_cfg tone_out_on *milliseconds*

Syntax description

milliseconds **Value is milliseconds, ranging from 0 to 65535.**

Factory default

200 ms

Related Commands

set port_cfg tone_out_off

set port_cfg tone_out_pwr

set port_cfg tone_out_pwr

This command is used to set the power level for DTMF tones generated by the ITG.

set port_cfg tone_out_pwr *power*

Syntax description

power **Power level of DTMF tones in 0.1 dBm.**

Factory default

-60. The factory setting for DTMF tone power for all telephony ports is −6.0 dBm.

Related Commands

set port_cfg tone_out_on

set port_cfg tone_out_off

set port_cfg txgain

After decompressing a voice packet, the ITG adjusts the signal level of the voice stream before sending the signal toward the telephony port. This command allows user to specify the gain level for PCM signal before feeding the signal to a telephony port.

set port_cfg txgain *db*

Syntax description

db **Gain level in dB, ranging from −14 to 14.**

Factory default

0

Related Command

set port_cfg rxgain

set port_cfg voice_prof

This command is used to select the preferred voice coding profile for a telephony port. Please refer to 5. Voice and Fax Coder Configuration Commands

on page 31 for details about coding profile.

set port_cfg voice_prof *profile_id*

Syntax description

profile_id	**Preferred coding profile ID for voice**

Factory default

The factory default preferred voice coding profile for all the telephony ports is coding profile number 0, which is the coder for G.723 6.3 kbps.

show port_cfg

This command displays port-common parameters.

show port_cfg [pri | sec]

Syntax Description

pri	**Display the primary port-common parameters.**
sec	**Display the secondary port-common parameters.**

FXS Signaling Configuration Commands

The FXS signaling configuration commands are used to define parameters specific to FXS interface. These commands apply to Loop Start FXS signaling protocol only.

set port_cfg fxs answ_clear_detect

This command is used to set the minimum time to wait, in milliseconds, when the answering party drops the line before declaring on-hook.

set port_cfg fxs answ_clear *milliseconds*

Syntax description

milliseconds	**Time in milliseconds, ranging from 1 to 60000.**

Factory default

2000

set port_cfg fxs caller_id

This command selects if Caller ID will be generated on a FXS port.

set port_cfg fxs caller_id {on | off}

Syntax description

on	**Enable Caller ID generation**
off	**Disable Caller ID generation**

Factory default

on

Related Commands

set port *port* cid name

set port *port* cid number

set port_cfg fxs cpc_dur

The ITG implements loop current shutdown feature on FXS port. It shuts down the current feeding toward a FXS port upon detecting a call is being terminated by the other party participated in the call. This command is used to set the duration, in milliseconds, of the loop current shutdown (CPC supervisory disconnect).

set port_cfg fxs cpc_dur *milliseconds*

Syntax description

milliseconds	**Time in milliseconds, ranging from 1 to 60000. 0 stands for never shutting down loop current**

Factory default

0

set port_cfg fxs cpc_wait

This command is used to set the time to wait, in milliseconds, after a FXS port shutting down loop current and before checking for on-hook.

set port_cfg fxs cpc_wait *milliseconds*

Syntax description

milliseconds	**Time in milliseconds, ranging from 1 to 60000.**

Factory default

20

set port_cfg fxs ff_batt_rev

If a call is originated from a FXS port, the ITG may be optionally reverse the DC voltage applied to the tip and ring signal of the FXS port after the called party off-hook the called port. This command is used to enable this option.

set port_cfg fxs ff_batt_rev {on | off}

Syntax description

on	**Enable battery reverse option for FXS port**
off	**Disable battery reverse option for FXS port**

Factory default

off

set port_cfg fxs offhook_db

This command specifies the time in milliseconds to use as a debouncer interval for debouncing the off-hook signal.

set port_cfg fxs offhook_db *milliseconds*

Syntax description

milliseconds **Time in milliseconds, ranging from 1 to 1000.**

Factory default

50

Related Command

set port_cfg fxs offhook_detect

set port_cfg fxs offhook_detect

This command is used to set the time to wait, in milliseconds, before an off-hook condition is declared. For preventing from mistakenly interpreting noise signal or flash key as off-hook, when a hook switch off state is detected on a FXS port, the switch off state must sustain for at least this duration, otherwise it is no regarded as a off-hook.

set port_cfg fxs offhook_detect *milliseconds*

Syntax description

milliseconds **Time in milliseconds, ranging from 1 to 1000.**

Factory default

150

Related Command

set port_cfg fxs offhook_db

set port_cfg fxs onhook_db

This command specifies the time in milliseconds to use as a debouncer interval for debouncing the on-hook signal.

set port_cfg fxs onhook_db *milliseconds*

Syntax description

milliseconds **Time in milliseconds, ranging from 1 to 1000.**

Factory default

50

Related Command

set port_cfg fxs onhook_detect

set port_cfg fxs onhook_detect

This command is used to set the time to wait, in milliseconds, before an on-hook condition is declared. For preventing from mistakenly interpreting noise signal as on-hook, when a hook switch on state is detected on a FXS port, the switch on state must sustain for at least this duration, otherwise it is no regarded as a on-hook.

set port_cfg fxs onhook_detect *milliseconds*

Syntax description

milliseconds **Time in milliseconds, ranging from 1 to 1000.**

Factory default

800

Related Command

set port_cfg fxs onhook_db

set port_cfg fxs ring_id

A ringing signal is a repetition of ring-on and ring-off cycles (the so-called cadence). The ITG can generate 11 types of ring cadence, each having a unique ID, on/off cadence and total ringing duration. Types of ringing cadence and their IDs are shown in the following table.

	Ring-On/Off Cycle						Ringing
ID	On	Off	On	Off	On	Off	Duration
0	2.0	4.0					Forever
1	1.0	3.0					3 minutes
2	0.8	0.4	0.8	4.0			3 minutes
3	0.4	0.2	0.4	0.2	0.8	4.0	3 minutes
4	0.3	0.2	1.0	0.2	0.3	4.0	3 minutes
5	0.5	0.1					0.6 seconds
6	0.5	0.2	0.3	0.2	0.5	3.0	3 minutes
7	2.0	4.0					3 minutes
8	3.0	5.0					3 minutes
9	0.5	0.1					0.6 seconds
10	1.0	3.0					3 minutes

Table 4-1 Ring and Ring ID supported by ITG

This command is used to select which ring ID is to use on a FXS port.

set port_cfg fxs ring_id *ring_id*

Syntax description

ring_id **Ring ID, ranging from 0 to 10.**

Factory default

0

5. Voice and Fax Coder Configuration Commands

The coding profile is used to store coding parameters for voice and fax coders that can be used by any telephony port on the ITG. The ITG has 4 built-in coding profiles, each having a unique profile ID and parameters for a specific voice or fax application. Table 5-1 summarizes coding profiles available for voice and fax applications.

Profile ID	Profile Name	Coder
0	g723	G.723 6.3 kbps voice coder
1	g729	G.729AB voice coder
2	g723_53	G723 5.3 kbps voice coder
3	g711	G.711 μ-law voice coder
5	fax	Standard T.38 fax coder

Table 5-1 Coders and Coding Profiles

This chapter is organized as follows:

- Common coding profile configuration commands
- Voice coding profile configuration commands
- Fax coding profile configuration commands

Common Coding Profile Configuration Commands

The following sections describe commands that apply to all types of coding profiles.

set coding default

This command resets the parameters for all coding profiles to factory default values.

set coding default

Syntax description

This command has no arguments or keywords

show coding profile_id

This command displays parameters for a coding profile.

show coding *profile_id*

Syntax Description

profile_id **Profile ID or name, as shown in Table 5-1, of the coder to be modified.**

Voice Coding Profile Configuration Commands

The following sections describe commands that apply to coding profiles for voice coder.

set coding profile_id dtmf_relay

The ITG supports DTMF relay, in which DTMF tones are detected during voice processing, encoded into H323-UserInformation packets and conveyed to the remote ITG via the H.323 call control band. This command is used to enable or disable the DTMF relay feature.

set coding *profile_id* dtmf_relay {on | off}

Syntax description

profile_id	**Profile ID or name, as shown in Table 5-1, of the coder to be modified.**
on	**Enable DTMF relay.**
off	**Disable DTMF relay. DTMF tones are compressed and send to remote gateway the same as regular voice frame.**

Factory default

Profile	g723	g729	g723_53	g711
Setting	on	on	on	on

set coding profile_id sampling_time

Voice coders sample voice signals periodically then compress sampled signal into frame for delivery to the remote party. Each coder supported by the ITG has a standard sampling time. Sampling introduces delay to the voice packet. This command is used to modify the sampling time for a coder. Increasing the sampling time introduces more delay but consumes less bandwidth for the delivery of the voice packet, since relatively less overhead is needed to delivery the packet.

set coding *profile_id* sampling_time *milliseconds*

Syntax description

profile_id	**Profile ID or name, as shown in Table 5-1, of the coder to be modified.**
milliseconds	**Sampling time for a voice coder. The appropriate sampling times of a coder of values other than those shown in the table are not valid.**

Coder	Sampling time
g711	10 ms
	20 ms
	30 ms
g723	30 ms
g723_53	
	60 ms
g729	10 ms
	20 ms
	30 ms
	40 ms
	50 ms
	60 ms

Factory default

Profile	g723	g729	g723_53	g711
Setting	30	20	30	10

set coding profile_id vad

This command is used to enable/disable the Voice Activity Detector (VAD) for a coding profile.

set coding *profile_id* vad {on | off}

Syntax description

profile_id	**Profile ID or name, as shown in Table 5-1, of the coder to be modified.**
on	**Enable VAD.**
off	**Disable VAD.**

Factory default

Profile	g723	g729	g723_53	g711
Setting	on	on	on	on

Fax Coding Profile Configuration Commands

The following sections describe commands that apply to coding profiles for fax.

set coding profile_id fax_hs_pkt_rate

This T.38 mode command is used to set the rate at which high-speed data will be sent across the network, for a fax coder (i.e., determines the size of the high-speed IFP packets).

set coding *profile_id* fax_hs_pkt_rate *milliseconds*

Syntax description

profile_id	**Profile ID or name, as shown in Table 5-1, of the coder to be modified.**
milliseconds	**Value in milliseconds**

Factory default

Profile ID	fax
Setting	30 ms

set coding profile_id fax_hs_redundancy

The T.38 mode command is used to specify the packet-level redundancy for high-speed data transmissions (i.e., T.4 image data) for a fax coder profile.

set coding *profile_id* fax_hs_redundancy *pkt*

Syntax description

profile_id	**Profile ID or name, as shown in Table 5-1, of the coder to be modified.**
pkt	**Number of prior primary packets to be encapsulated in each fax payload, ranging from 0 to 2.**

Factory default

Profile ID	fax
Setting	1

Related Command

set coding *profile_id* fax_ls_redundancy

set coding profile_id fax_ls_redundancy

This T.38 mode command is used to specify the packet-level redundancy for low-speed data transmissions (i.e., T.30 handshaking information), for a fax coder.

set coding *profile_id* fax_ls_redundancy *pkt*

Syntax description

profile_id **Profile ID or name, as shown in Table 5-1, of the coder to be modified.**

pkt **Number of prior primary packets to be encapsulated in each fax payload, ranging from 0 to 5.**

Factory default

Profile ID	fax
Setting	5

Related Command

set coding *profile_id* fax_hs_redundancy

6. H323 Configuration Commands

The ITG employs ITU-T H.323 protocol for call signaling and call control. The gatekeeper is an H.323 entity on the network that provides admission control and address translation services. The ITG allows calls to remote gateways be routed through a H.323 gatekeeper or not. This chapter describes commands for configuring the H.323 protocol.

This chapter is organized as follows:

- General H.323 configuration commands
- H.323 gatekeeper related configuration commands

General H.323 Configuration Commands

The following sections describe the general H.323 configuration commands.

set h323 alt_dtmf

There are two ways VoIP gateway handles DTMF relay, per H.323 and IMTC specifications. While the "set h323 default_dtmf" command (Page 36) specifies the DTMF relay technique the ITG employs for conveying DTMF digits to remote VoIP devices over Internet. There is still a need for conveying DTMF digits using the alternate DTMF relay technique to certain remote VoIP devices. This command allows users to maintain a table of IP address of remote gateways to which the ITG will convey the DTMF tones using the DTMF relay technique other than the one defined by CLI command "set h323 default_dtmf".

set h323 alt_dtmf {add | del} ***ip_addr***

Syntax Description

add	**Add an entry to the table of IP address of remote gateways to which the ITG convey DTMF tone using the alternate DTMF relay technique.**
del	**Delete an entry from the table.**
ip_addr	**IP address of the remote gateway.**

Related Command

set h323 default_dtmf

set h323 call_name

One of the UUIEs in the H.323 Setup message that the ITG sends to a remote gateway when initiating a call is *sourceAddress*. The *sourceAddress* UUIE is a list of alias addresses, by which the remote gateway identifies the ITG. This command is used to set a string that the ITG will place in the 3rd alias address filed of the *sourceAddress* UUIE in the H.323 Setup message.

set h323 call_name "*call_name*"

Syntax Description

call_name	**Call name, up to 30 characters, to be encapsulated in the 3rd alias address field of *sourceAddress* UUIE of the H.323 Setup message.**

Factory default

""

Related Commands

set h323 display_name

set h323 term_id

set h323 callSignalPort

Per ITU-T H.323 standard, the TCP port which the H.225 listens for incoming call setup request is port number 1720. This command is used to configure the TCP port number which the ITG listens for incoming call setup request..

set h323 callSignalPort *port*

Syntax Description

port	**TCP port number which the ITG listens for incoming H.225 call setup request**

Factory default

1720

set h323 cisco_t38

Cisco FoIP solutions support standard T.38 fax. However, they expect their peer gateways initiating Open Logical Channel (OLC) request, when it determines itself as a H.323 Master. For the ITG to be aware of initiating OLC request when interoperating with Cisco gateway, this command is provided.

set h323 cisco_t38 {on | off}

Syntax Description

on	**Initiates H.323 OLC under slave mode.**
off	**Waits for H.323 OLC from maser under slave mode.**

Factory default

off

set h323 default

This command resets the all the H323 related parameters to factory default values.

set h323 default

Syntax description

This command has no arguments or keywords

set h323 default_dtmf

There are two ways VoIP gateway handles DTMF relay, per H.323 and IMTC specifications. By default, the ITG conveys DTMF digits in H.323 format. This command is used to specify how DTMF digits are to be conveyed to a remote VoIP device.

set h323 default_dtmf {imtc | h323v2}

Syntax Description

h323v2	**Convey DTMF digits per H.323 specification.**

imtc Convey DTMF digits per IMTC specification.

Factory default
h323v2

Related Command
set h323 alt_dtmf

set h323 display_name

One of the UUIEs in the H.323 Setup message that the ITG sends to a remote gateway when initiating a call is *sourceAddress*. The *sourceAddress* UUIE is a list of alias addresses, by which the remote gateway identifies the ITG. This command is used to set a string that the ITG will place in the 2nd alias address filed of the *sourceAddress* UUIE in the H.323 Setup message.

set h323 display_name "*display_name*"

Syntax Description
display_name **The string, up to 64 characters, to be is encapsulated the 2nd alias address field of *sourceAddress* UUIE of the H.323 Setup message.**

Factory default
"Customer"

Related Commands
set h323 call_name
set h323 term_id

set h323 dtmf_duration

When the ITG employs IMTC relay mode, users may specify the duration the gateway plays out a DTMF tone. This command is used to set the duration of a DTMF tone, when IMTC DTMF relay technique is employed.

set h323 dtmf_duration *milliseconds*

Syntax Description
millisecond **Duration for the DTMF tone in millisecond.**

Factory default
300

set h323 gk_mode

The H.323 protocol allows calls to be established through H.323 gatekeeper. This command is used to specify if calls are established through a gatekeeper.

set h323 gk_mode {off | manual}

Syntax Description
off **Disable gatekeeper operation**

manual — **Enable gatekeeper in manual discovery mode. The gk_addr must be set appropriately.**

Factory default
off

Related Command
H.323 Gatekeeper Related Configuration Commands

set h323 h245_term_type

This command is used to set the H.245 terminal type. The terminal type is used as part of the master/slave determination process of H.245.

set h323 h245_term_type *terminal_type*

Syntax Description

termmal_type — **A numerical value designating the H245 terminal type. Typically, setting the H.245 terminal type to a value less than 50 will force the slave operation, and a value greater than 200 will force the master operation.**

Factory default
60

set h323 h245_timeout

This command is used to set the timeout value, in milliseconds, for an outgoing H.245 packet.

set h323 h245_timeout *milliseconds*

Syntax Description

milliseconds — **H.245 timeout value in milliseconds**

Factory default
30000

set h323 h245_tunneling

In order to conserve resources, synchronize call signaling and control, and reduce call setup time, it may be desirable to convey H.245 messages within the Q.931 Call Signaling Channel instead of establishing a separate H.245 channel. This process is known as "tunneling" of H.245 messages. This command is used to set tunneling feature.

set h323 h245_tunneling {on | off}

Syntax Description

on — **Turn on H.245 tunneling feature**

off — **Turn off H.245 tunnelling feature**

Factory default
off

set h323 in_fast_start

This command is used to enable or disable accepting incoming call in H.323 Fast Start mode.

set h323 in_fast_start {on | off}

Syntax Description

on	**Accept incoming calls with H323 Faststart mode**
off	**Do not accept incoming calls with Set H323 Faststart mode**

Factory default

off

Related Command

set h323 out_fast_start

set h323 local_alert

Per ITU-T H.323 standard, an H.323 terminal initiating a call sends a Setup message to the remote gateway, then wait for an Alerting message from remote gateway. Upon receiving the Alerting message, the H.323 terminal sends ring back tone to the telephony port which initiates the call. During the period after sending Setup message and before receiving Alerting message, the caller will experience a period of silence. Duration of the silence period depends on the network delay. The ITG provides an option for generating ring back tone before the Alerting message is received from the remote gateway. This command is for selecting if ring back tone should be generated toward calling telephony port before Alerting message is received.

set h323 local_alert {on | off}

Syntax Description

on	**ITG generates ring back tone before receiving Alerting message from remote gateway.**
off	**Do not generate ring back tone until Alerting message is received from remote gateway.**

Factory default

off

set h323 nat_call

When the remote gateway is installed behind a NAT router, and the remote gateway does not encapsulate NAT router network address in the call control packets, call setup with the remote gateway would fail. This command is used to enable the ITG to connect to such remote gateways .

set h323 nat_call {on | off}

Syntax Description

on	**Enable the ITG to connect to remote gateway which sits behind a NAT router and does not encapsulate NAT router's network address in the call control packets.**

off Disable the feature.

Factory default
on

set h323 out_fast_start
This command is used to select the H.323 mode for outgoing calls.

set h323 out_fast_start {on | off}

Syntax Description
on Initiate outgoing calls with H323 Fast Start mode

off Initiate outgoing calls with H323 Non Fast Start mode

Factory default
off

Related Command
set h323 in_fast_start

set h323 rtp_port_base
This command is used to select the starting port number for assignment of RTP ports. When calls are made to remote gateways, an RTP and RTCP ports are opened for each call. The ITG uses the *port_base* as the RTP port number and *port_base* + 1 as the RTCP port for the first call, the next call uses the next two successive ports, and so on.

set h323 rtp_port_base *port_base*

Syntax Description
port_base **The starting port number for the assignment of RTP port. If *port_base* is assigned a value of 0, the assignment of port number will be dynamic. The port number can be specified from 0 to 32767, and per H.323 Standard, it must be an even number. Typically, numbers from 0 to 1023 are reserved on most systems. The recommended value is 30000.**

Factory default
30000

set h323 term_id
One of the UUIEs in the H.323 Setup message that the ITG sends to a remote gateway when initiating a call is *sourceAddress*. The *sourceAddress* UUIE is a list of alias addresses, by which the remote gateway identifies the ITG. This command is used to set a string that the ITG will place in the 1st alias address filed of the *sourceAddress* UUIE in the H.323 Setup message. This string is also placed in the 1st alias address filed in the *terminalAlias* filed in RRQ the gateways sends to the gatekeeper for registration.

set h323 term_id *string*

Syntax Description
string **The string, up to 64 characters, to be is encapsulated the 1st alias address field of *sourceAddress* UUIE of the H.323 Setup message**

address field of *sourceAddress* UUIE of the H.323 Setup message

Factory default

Null

Related Commands

set h323 call_name

set h323 display_name

show h323

This command displays all H.323 related parameters.

show h323

Syntax description

This command has no argument or keyword

H.323 Gatekeeper Related Configuration Commands

The following sections describe the general H.323 configuration commands.

set h323 alias

This command is used to create and delete aliases that are registered with the gatekeeper.

set h323 alias {add | del} {"*alias*" | all}

Syntax description

add	**Create an alias *alias***
del	**Delete a previously created alias *alias* or all previously created aliases, if the parameter that follows is all.**
alias	**Alias to be created or deleted**
all	**Delete all previously created aliases. This optional applies to del only**

set h323 allow_calls_wo_gk

When gatekeeper mode is enabled, before initiating a call to a remote gateway or accepting an incoming from a remote gateway, the ITG sends an Admission Request (ARQ) to the gatekeeper and expects a Admission Confirmation (ACF) from the gatekeeper before proceeding with call setup. If the ARQ is not confirmed, the ITG may claim call setup failure, or automatically switch to non-gatekeeper mode and proceed with call setup with the remote gateway. This command is used to set how the ITG handles call setup under gatekeeper mode when the ITG fails obtaining ACF from the gatekeeper.

set h323 allow_calls_wo_gk {true | false}

Syntax description

true	**Allow call setup with remote gateway even the ITG fails obtaining ACF from the gatekeeper.**

false Always claim call setup failure when ITG fails obtaining ACF from the gatekeeper.

Factory default
true

set h323 alt_gk

When the ITG is configured in gatekeeper mode, it can specify two gatekeepers, default and alternate, to register with. After failing registering to the default gatekeeper, the ITG will attempt to register to the alternate gatekeeper. This command is used to specify the address of the alternate gatekeeper.

set h323 alt_gk ***ip_addr***

Syntax Description

ip_addr IP address of the alternate H.323 gatekeeper

ë **Note** Once the IP address of the alternate gatekeeper is specified, the host name of the alternate gatekeeper specified via CLI command **set h323 alt_gk_name** does not take effect.

Factory default
0.0.0.0

Related Commands
set h323 alt_gk_name

set h323 alt_gk_name

When the ITG is configured in gatekeeper mode, it can specify two gatekeepers, default and alternate, to register with. After failing registering to the default gatekeeper, the ITG will attempt to register to the alternate gatekeeper. This command is used to specify the host name of the alternate gatekeeper.

set h323 alt_gk_name ***host_name***

Syntax Description

host_name Host name of the alternate H.323 gatekeeper

ë **Note** If the IP address of the alternate gatekeeper has been specified via CLI command **set h323 alt_gk**, the setting of the host name does not take effect.

Factory default
Null

Related Commands
set h323 alt_gk

set h323 endpoint_prefix

This command is used to set the H.323 prefix that the ITG uses when registering to an H.323 gatekeeper. After registering to a gatekeeper using the prefix, the gatekeeper will map all Admission Request with destination matching the prefix to the ITG.

set h323 endpoint_prefix *alias*

Syntax Description

alias	**H.323 alias of the prefix.**

Factory default

Null

set h323 endpoint_reg_type

When the ITG registers to a gatekeeper, it specifies the H.323 entity type it is registering in the RRQ message it sends to the gatekeeper. This command is used to set the H.323 registration type. This should not be confused with the H.245 terminal type, although the two parameters should be programmed consistently.

set h323 endpoint_reg_type {gw | terminal}

Syntax Description

gw	**The ITG registers itself to gatekeeper as a H.323 Gateway**
terminal	**The ITG registers itself to gatekeeper as a H.323 Terminal**

Factory default

gw

set h323 gk_addr

This command is used to specify the address of the default gatekeeper.

set h323 gk_addr *ip_addr*

Syntax Description

ip_addr	**IP address of the H.323 gatekeeper**

ë **Note** **Once the IP address of the gatekeeper is specified, the host name of the gatekeeper specified via CLI command set h323 gk_name does not take effect.**

Factory default

0.0.0.0

Related Commands

set h323 gk_name

set h323 gk_id

When the ITG registers to a gatekeeper, it specifies the gatekeeper is wishes to register with in the *gatekeeperIdentifier* field in the RRQ message it sends to the gatekeeper. This command is for setting the string to be placed in the *gatekeeperIdentifier* field in the RRQ message the ITG sends to gatekeeper.

set h323 gk_id "*string*"

Syntax Description

string	**Character string to be placed in the *gatekeeperIdentifier* filed in the RRQ message.**

Factory default

""

set h323 gk_max_tries

This command is used to control how many registration attempts will be made before the ITG considers itself has failed registration. Once this number of unsuccessful attempts have been made to the default gatekeeper, the IIG attempts to register to the alternate gatekeeper. Likewise, after this number of unsuccessful attempts have been made to the alternate gatekeeper, the ITG considers itself failed registration to gatekeeper and will only be able to place calls if allow_calls_wo_gk is true.

set h323 gk_max_tries *count*

Syntax Description

count	**Number of registration attempts**

Factory default

2

set h323 gk_name

In stead of specifying the gatekeeper by its IP address, the gatekeeper may be specified by its host name. This command is used to specify the host name of the default gatekeeper.

set h323 gk_name *host_name*

Syntax Description

host_name	**Host name of the H.323 gatekeeper**

ë **Note** **If the IP address of the gatekeeper has been specified via CLI command set h323 gk_addr, the setting of host name does not take effect.**

Factory default

""

Related Commands

set h323 gk_addr

set h323 time_to_live

When the ITG registers to a gatekeeper, it specifies the duration of the validity of the registration in the *timeToLive* field in the RRQ message it sends to the gatekeeper. The gatekeeper may optionally change the *timeToLive* by returning a different value in the RCF message it returns to the ITG. This command is for setting the *timeToLive* to be encapsulated in the RRQ message.

set h323 time_to_live *seconds*

Syntax Description

seconds	**Value in seconds**

Factory default

0

7. Configuration Management Command

The CLI maintains three areas where the parameters for telephony interface ports, voice and fax coders, and H.323 configuration are stored:

- Temporary
- Active
- Non-volatile Storage (NVS)

When a set command is entered and processed, it changes the parameter value in the Temporary area. This does not affect current operation of the ITG, which is using the values in the Active area. The config activate command moves configuration data from the Temporary area to the Active area, where it can actually be used. Thus a user can make multiple changes in the Temporary area using set commands, then put them into use with a single config activate command. (Note that the config activate command may only be used between calls, and will usually tear down any in-progress calls when invoked.)

Configuration data in the Active area is only available while the ITG remains in operation. If the ITG is reset, the Active area is reloaded from the data stored in NVS. Data in the Active area may be saved to NVS by entering the config store command.

For most of the H.323 parameter, settings won't take effect until the ITG is reset. To ensure the H.323 setting to take effect, it is recommended to reset the ITG after changing the settings using the set h323 command.

In summary:

- Use set commands to make configuration parameters changes in the Temporary area
- Use the config activate command to move the new values into the Active area, available for use
- Use the config store command to save the new Active values in NVS
- Reset the ITG after changing H.323 settings and storing the setting to NVS.

config

This command is used to move data among Temporary, Active and NVS areas.

config {activate | store | erase}

Syntax Description

activate	**Move the configuration from Temporary area to Active area.**
store	**Store the active configuration data into NVS.**
erase	**Erase the configuration from NVS. After resetting the ITG, all parameters for telephony interface ports, coding profiles, call progress tone and H.323 reset to their factory default values.**

8. Dial Plan Management Commands

The dial plan is a database, that the Address Translation and Parsing Manager (ATPM) of the ITG looks up for translating a dial string to a destination. The dial plan management commands allow you to modify and display the dial plan. Commands that change the dial plan are only allowed when the ITG is in the database update state. This chapter describes the dial plan management commands.

This chapter is organized as follows:

- Database update control commands
- Destination table management commands
- Hunt group table management commands
- Address table management commands
- Dialling control commands

Database Update Control Commands

atpm done
This command ends the dial plan update session and re-enables the address translation.

atpm done

Syntax description
This command has no arguments or keywords

Allowed only in database update mode
No

Related Command
atpm req

atpm erase
This command erases the dial plan database from the non-volatile memory.

atpm erase

Syntax description
This command has no arguments or keywords

Allowed only in database update mode
No

atpm purge
This command deletes all entries from the dial plan database.

atpm purge {all | addr | dest | hunt}

Syntax description

all	**Delete all entries from ATPM address, destination and hunt group tables.**
addr	**Delete all entries from ATPM address table.**
dest	**Delete all entries from ATPM destination table.**
hunt	**Delete all entries from ATPM hunt group table.**

Allowed only in database update mode

Yes

Related Commands

atpm restore

atpm store

atpm req

This command starts the dial plan database update session. Upon starting the database update session, the ATPM address translation is disabled, hence no phone calls can be made, until a atpm done command is issued.

atpm req

Syntax description

This command has no arguments or keywords

Allowed only in database update mode

No

Related Command

atpm done

atpm restore

This command restores the whole dial plan from non-volatile storage to the ATPM address, destination and hung group tables.

atpm restore

Syntax description

This command has no arguments or keywords

Allowed only in database update mode

Yes

Related Command

atpm store

atpm store

This command stores the ATPM address, destination and hung group tables to the non-volatile storage.

atpm store [erase]

Syntax description

erase	**Erase the non-volatile storage before storing the dial plan database. This option is not recommended except at the very first time you use the atpm store command.**

Allowed only in database update mode

No

Related Command

atpm restore

Destination Table Management Commands

atpm dadd

This command adds a destination entry into the ATPM destination table. A local destination entry is one of the telephony ports on the ITG.

atpm dadd *dest_id* h323 {*ip_addr* / [*tcp_port*] | *host_name* / [*tcp_port*]}

atpm dadd *dest_id* port *port#*

Syntax description

dest_id	**Destination ID. For each destination, you need to assign it a unique identifier between 0 and 99.**
h323	**The destination is a remote gateway designated either by an IP address or a host name.**
ip_addr	**The IP address of the remote destination.**
host_name	**The host name of the remote destination.**
tcp_port	**The H.225 call signaling port which the remote gateway listens for incoming calls.**
port	**The destination is a local telephony, whose ID is *port#*.**
port#	**The ID of the telephony port.**

Allowed only in database update mode

Yes

Related Commands

atpm ddel

atpm dfind

atpm dlist

atpm ddel

This command deletes an entry from the ATPM destination table.

atpm ddel *dest_id*

Syntax description

dest_id	**ID of a previously added destination entry to be deleted from destination table.**

Allowed only in database update mode

Yes

Related Commands

atpm dadd

atpm dfind

atpm dlist

atpm dfind

This command finds and displays an entry in the ATPM destination table.

atpm dfind *dest_id*

Syntax description

dest_id	**ID of a previously added destination entry to be displayed.**

Allowed only in database update mode

No

Related Commands

atpm dadd

atpm ddel

atpm dlist

This command displays all entries in the ATPM destination table.

atpm dlist

Syntax description

This command has no arguments or keywords

Allowed only in database update mode

No

Related Commands

atpm dadd

atpm ddel

Hunt Group Table Management Commands

atpm hadd

This command adds an entry into the ATPM hunt group table.

atpm hadd *id* {1 | 2} *dest_id* [*dest_id*] [*dest_id*] . . .

Syntax description

id	**Hunt group ID. For each hunt group, you need to assign it a unique identifier between 0 and 99.**
1	**Hunt type 1. Hunt type 1 hunts destination within a hunt group starting from the destination member just after the last used member.**
2	**Hunt type 2. Hunt type 2 hunts destination within a hunt group starting from the first destination member.**
dest_id	**List of ID′s of destination members in the hunt group**

Allowed only in database update mode

Yes

Related Commands

atpm hdel

atpm hfind

atpm hlist

atpm hdel

This command deletes an entry from the ATPM hunt group table.

atpm hdel *id*

Syntax description

id	**ID of the hunt group to be deleted from the hunt group table.**

Allowed only in database update mode

Yes

Related Commands

atpm hadd

atpm hfind

atpm hlist

atpm hfind

This command finds and displays an entry in the ATPM hunt group table.

atpm hfind *id*

Syntax description

id	ID of the hunt group to be displayed.

Allowed only in database update mode

No

Related Commands

atpm hadd

atpm hdel

atpm hlist

This command displays all entries in the ATPM hunt group table.

atpm hlist

Syntax description

This command has no arguments or keywords

Allowed only in database update mode

No

Related Commands

atpm hadd

atpm hdel

Address Table Management Commands

atpm aadd

Use the atpm aadd command to add an entry into the ATPM address table.

atpm aadd *tel# min_digits max_digits hunt_group_id prefix_strip_len* [*prefix#*]

Syntax description

tel#	Telephone number to match. This is only part of the total dialed string.
min_digits	Minimum number of digits to be collected before the ATPM starting matching the dialed string with entries in the address table.
max_digits	Maximum number of digits to be collected before the ATPM starting matching the dialed string with entries in the address table.
hunt_group_id	Hung group ID for this telephone number
prefix_strip_len	The number of digits to be stripped at the beginning of the collected dial string and before forwarding the string to the destination.
prefix#	Digit to be added before the beginning of the collected dial string and before forwarding it to the destination.

Allowed only in database update mode

Yes

Related Commands

atpm adel

atpm afind

atpm alist

atpm adel

This command deletes an entry from the ATPM address table.

atpm adel *tel#*

Syntax description

tel#	**Number of a previously added entry to be deleted from the address table.**

Allowed only in database update mode

Yes

Related Commands

atpm adel

atpm adel

atpm alist

atpm afind

This command finds and displays an entry in the ATPM address table.

atpm afind *tel#*

Syntax description

tel#	**Number of a previously added entry in the address table to be displayed.**

Allowed only in database update mode

No

Related Commands

atpm aadd

atpm adel

atpm alist

The atpm alist displays all entries in the ATPM address table.

atpm alist

Syntax description

This command has no arguments or keywords

Allowed only in database update mode

No

Related Commands

atpm adel

atpm afind

Dialing Control Commands

atpm slist

This command displays the parameters that controls the dialing

atpm slist

Syntax description

This command has no arguments or keywords

Allowed only in database update mode

No

Related Commands

atpm sys

atpm sys

This command sets the time constraints for the collection of dialed digits.

atpm sys ***dial_time*** ***1st_digit_wait*** ***inter_digit_wait*** **[*dial_term_digit*]**

Syntax description

dial_time	**The maximum time, in millisecond, allowed for entry of the entire string of dialed digits. At expiration, ATPM starts address lookup.**
1st_digit_wait	**The maximum time, in millisecond, allowed between off-hook and when the first dialed digit is entered. At expiration, ATPM considers address lookup to fail.**
inter_digit_wait	**The maximum time allowed between entry of each digit after the previous digit. At expiration, ATPM starts address lookup.**
dial_term_digit	**End of the dial string is declared when the digit is entered.**

Allowed only in database update mode

Yes

Related Commands

atpm slist

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