Video Terminal Configuration Guide

عمانتل
Omantel
Business

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1 Introduction

Audio and video conferencing is a set of video communication and audio communication in the new generation of interactive multimedia communications system. For the enterprise, there are maybe different types of terminals, and this document is just used for the VIDEO terminals configuration guide for the end user.

Note:
Different vendors have different types of the video terminals; this document is a general guide for the end user.

2 General Configuration for the Terminal

If the enterprise administrator wants to use the video terminal to join the video conference, the terminal should register in IMS, then the end user can dial the access number to join the conference.

2.1 Register Server

ims.omantel.om

2.2 Proxy Server

If the terminal supports domain configuration, then enter the proxy server domain:

imsreg.omantel.om

If the terminal only support IP configuration, then enter the IP address of the proxy server:

212.72.5.136/212.72.5.138

Note:
These two IPs must be reachable from the terminal; otherwise the terminal can't register in IMS;

2.3 User Name and Password

When the enterprise subscribes the video conference, Omantel will assign one access number for the enterprise and together 5 video terminal numbers to register in IMS. For example:

User Name: +96824243496@ims.omantel.om

Password: XXXXX

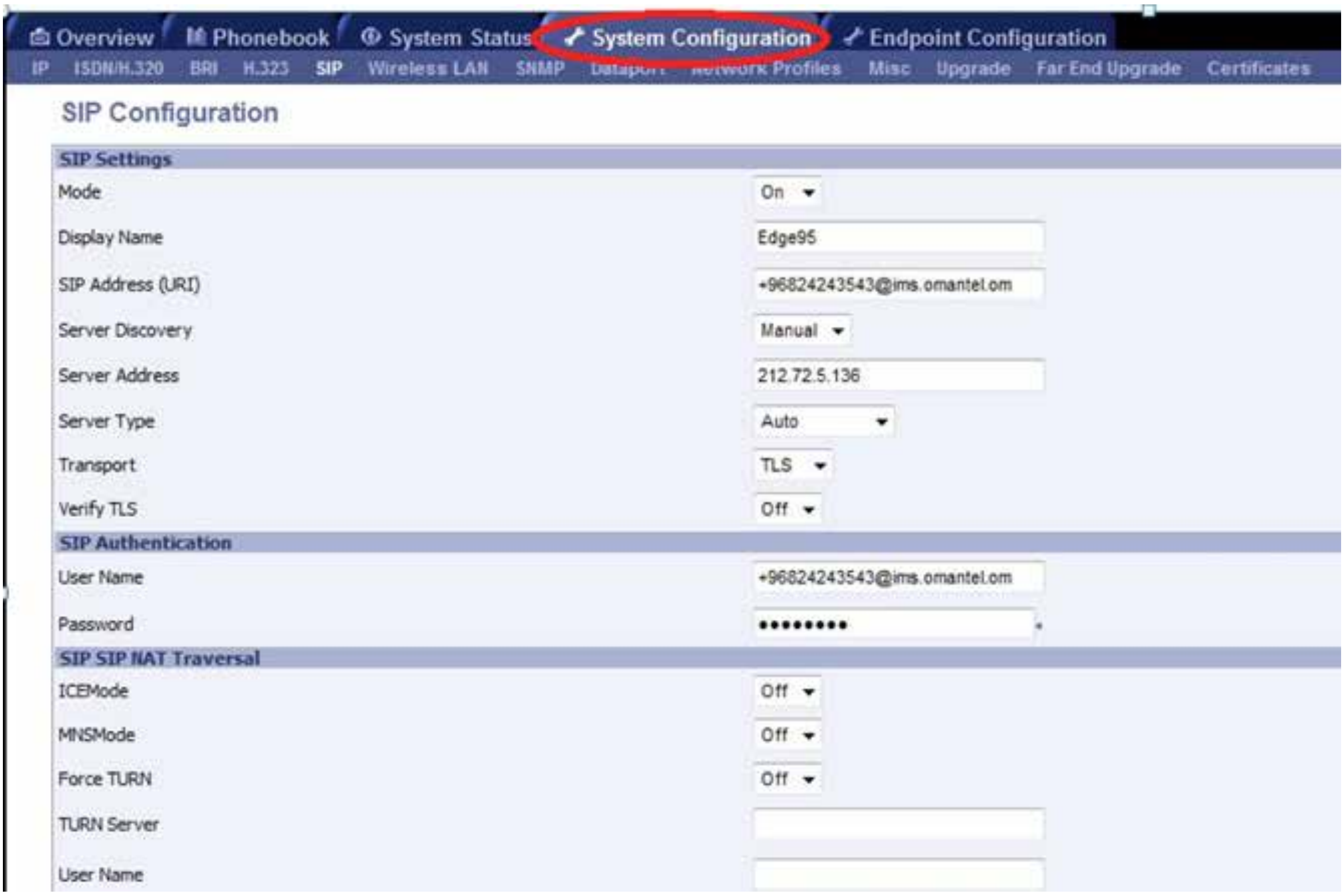
3 Configuration example

3.1 Disable H.323 protocol and enable SIP protocol

1) POLYCOM video terminal configuration guide

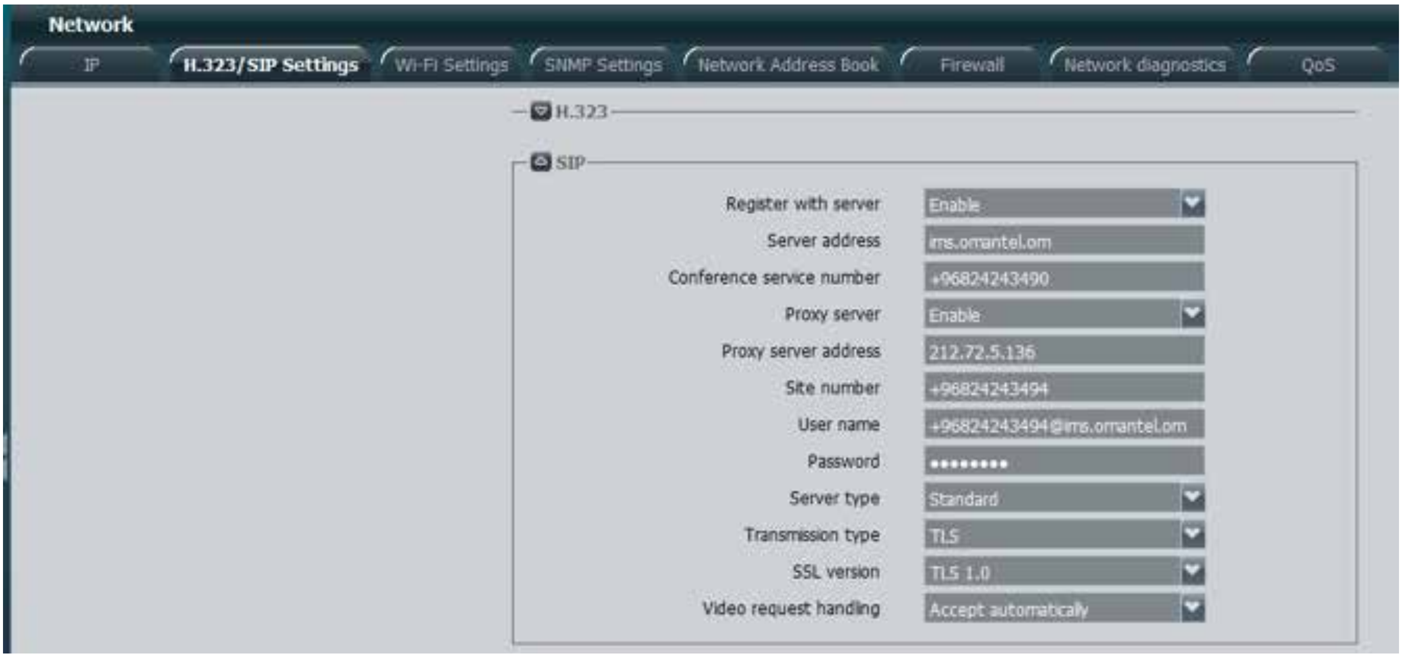
2) Cisco video terminal configuration guide

Go to the H.323 label switch the mode of H.323 off, and go to the SIP label to switch the SIP mode on



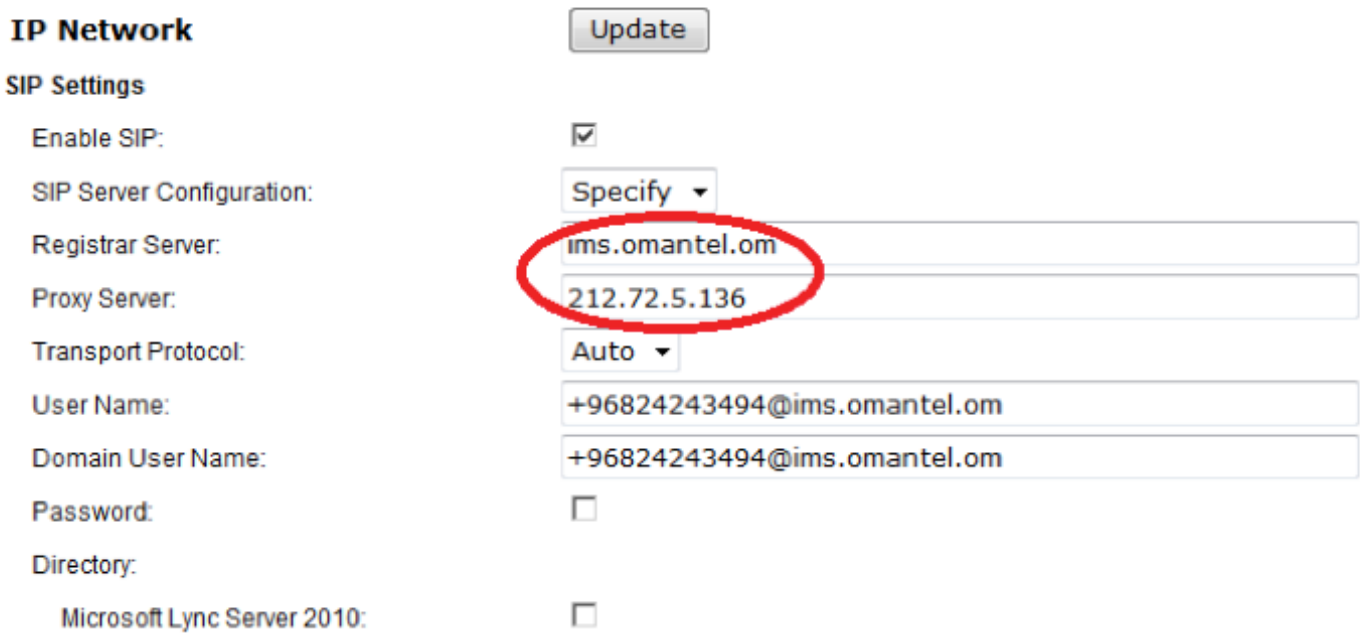
3) Huawei video terminal configuration guide

Go to the H.323 label disable H.323 server, and go to the SIP label to enable the SIP server.

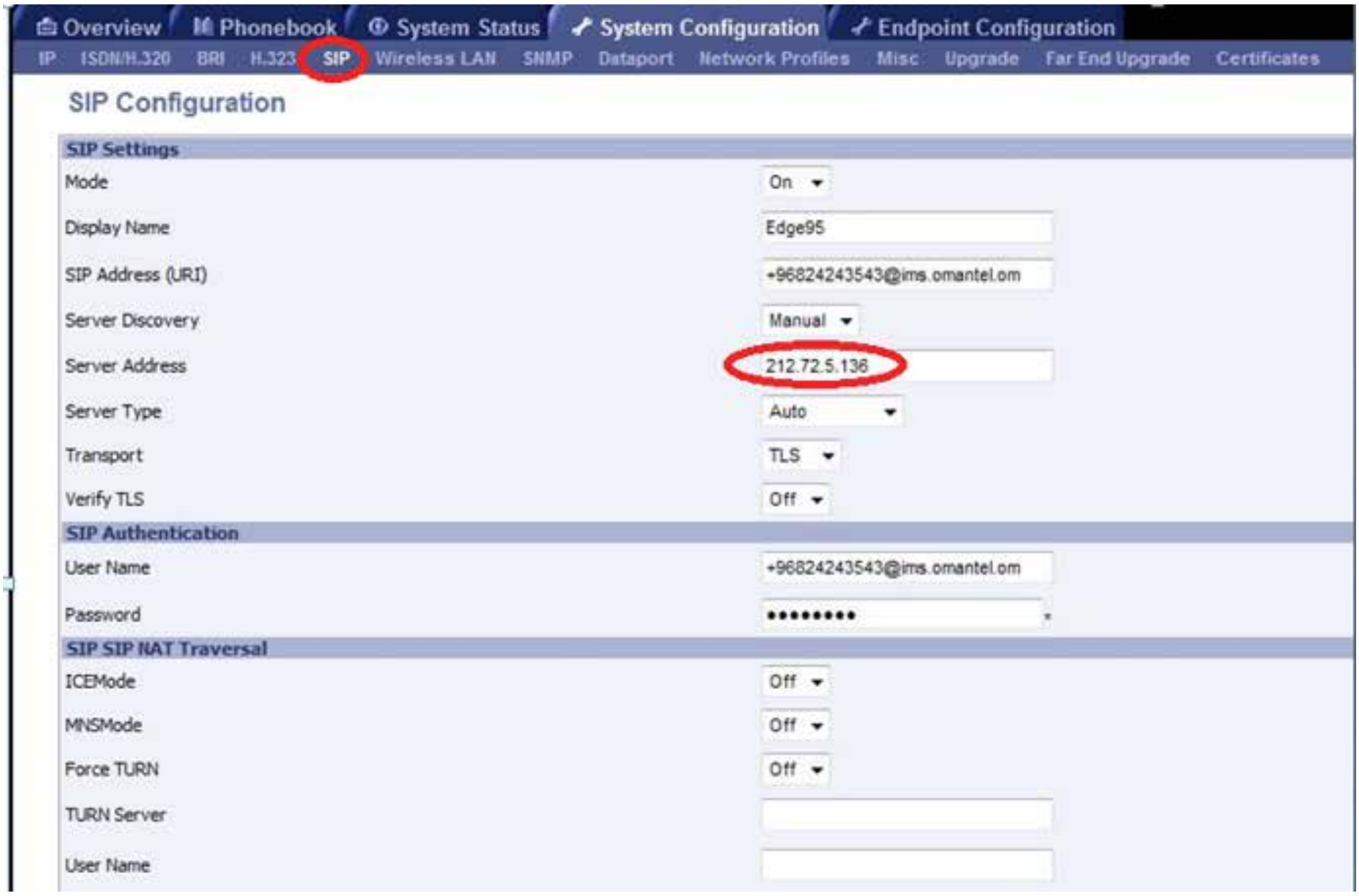


3.2 Configure the SIP register server and proxy server.

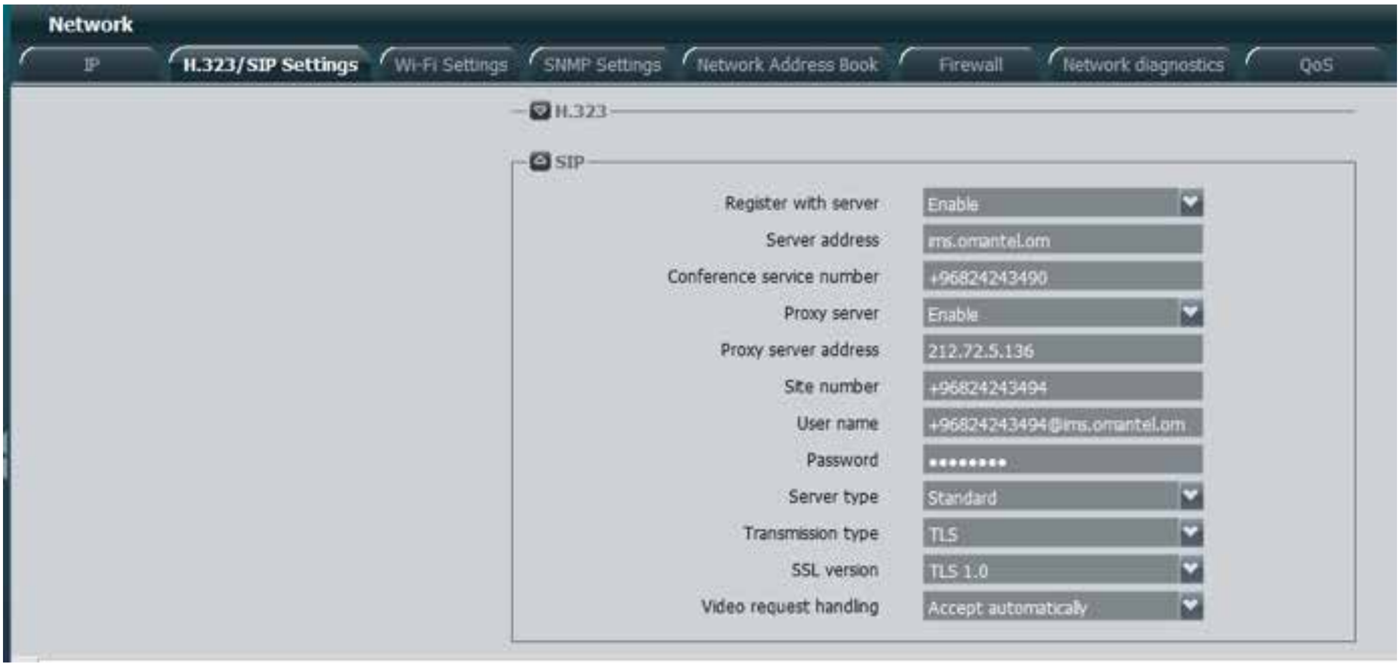
1) POLYCOM video terminal configuration guide



2) Cisco video terminal configuration guide



3) Huawei video terminal configuration guide

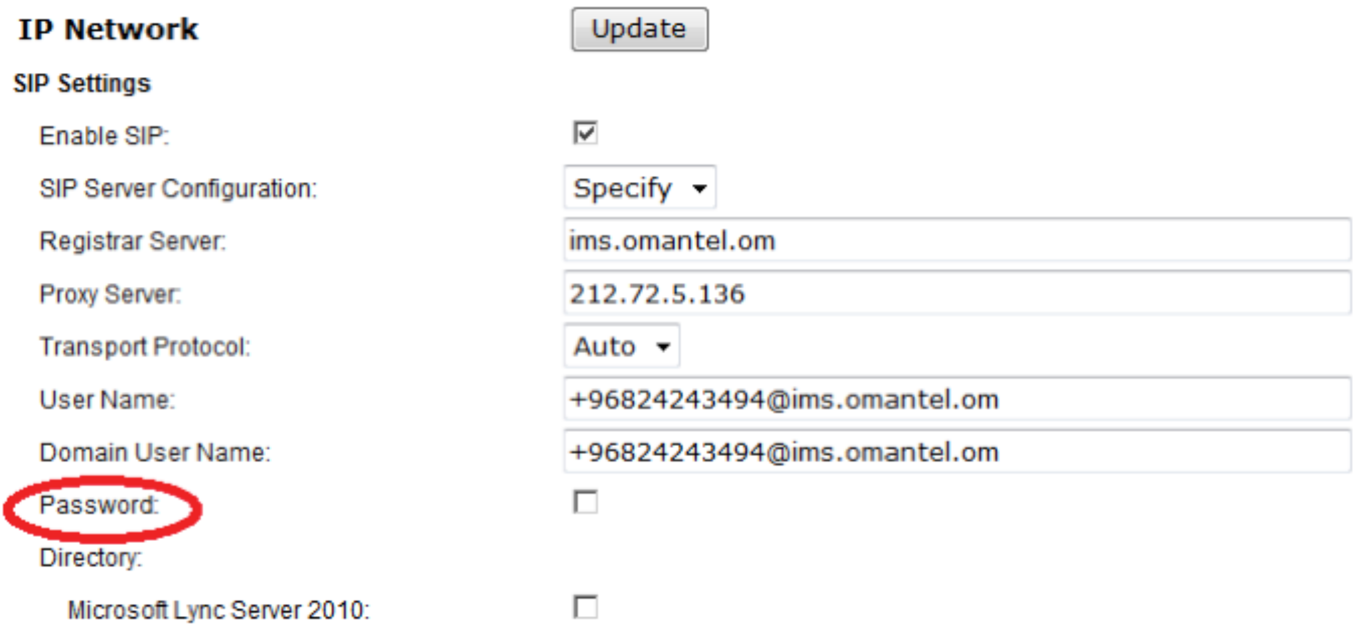


Note:

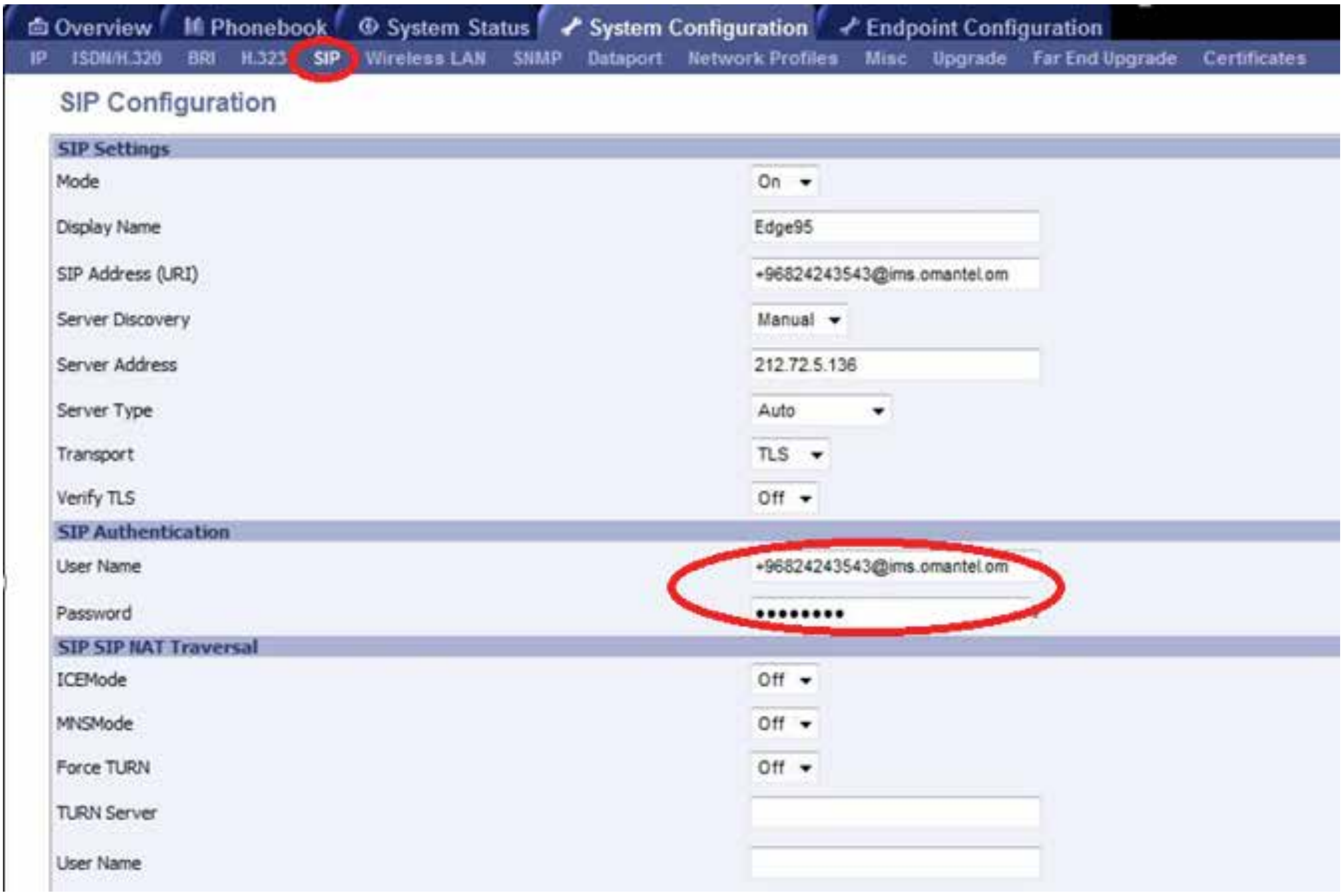
1. Transport protocol should be TLS, port is 5061, but some POLYCOM terminals should be configured as Auto, so first use Auto, if the POLYCOM terminal can't register in IMS, then uses TLS to register.
2. Proxy Server: If the terminal supports the domain name, then enter imsreg.omantel.om, if the terminal only supports IP input, then choose one of the IPs to enter:212.72.5.136 or 212.72.5.138.

3.3 Configure the username and password to register in IMS

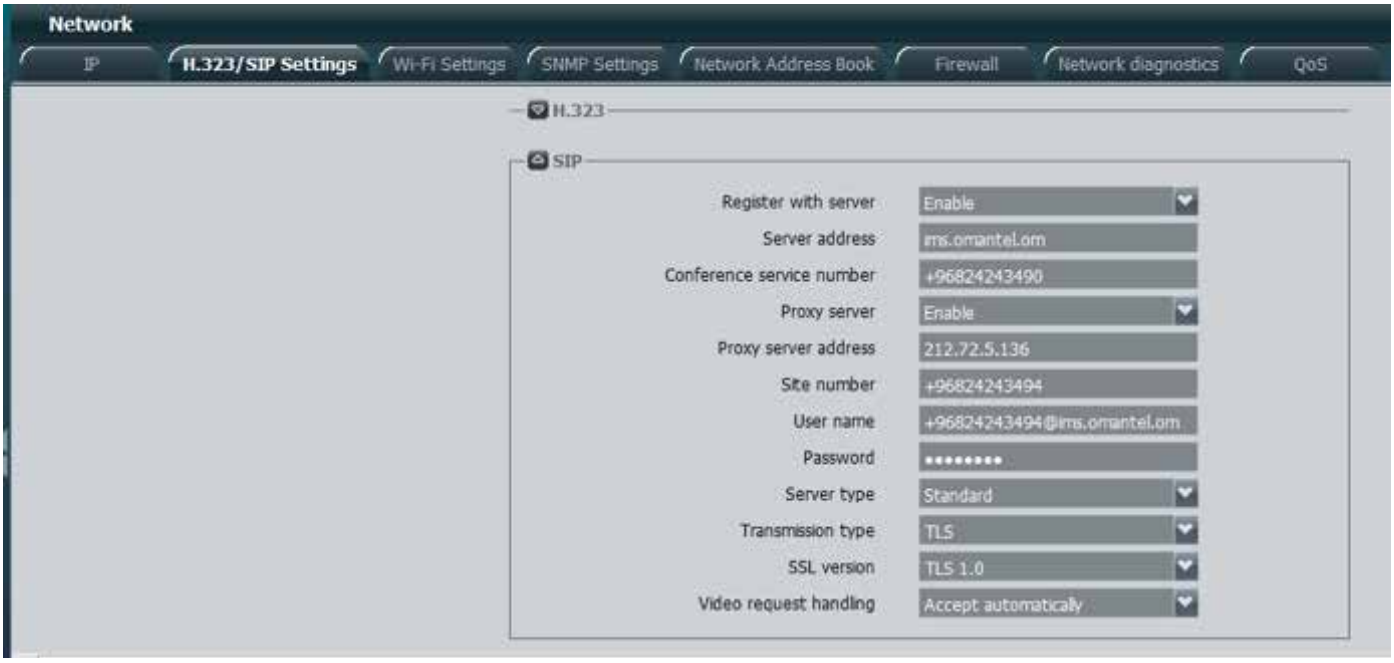
1) POLYCOM video terminal configuration guide



2) Cisco video terminal configuration guide

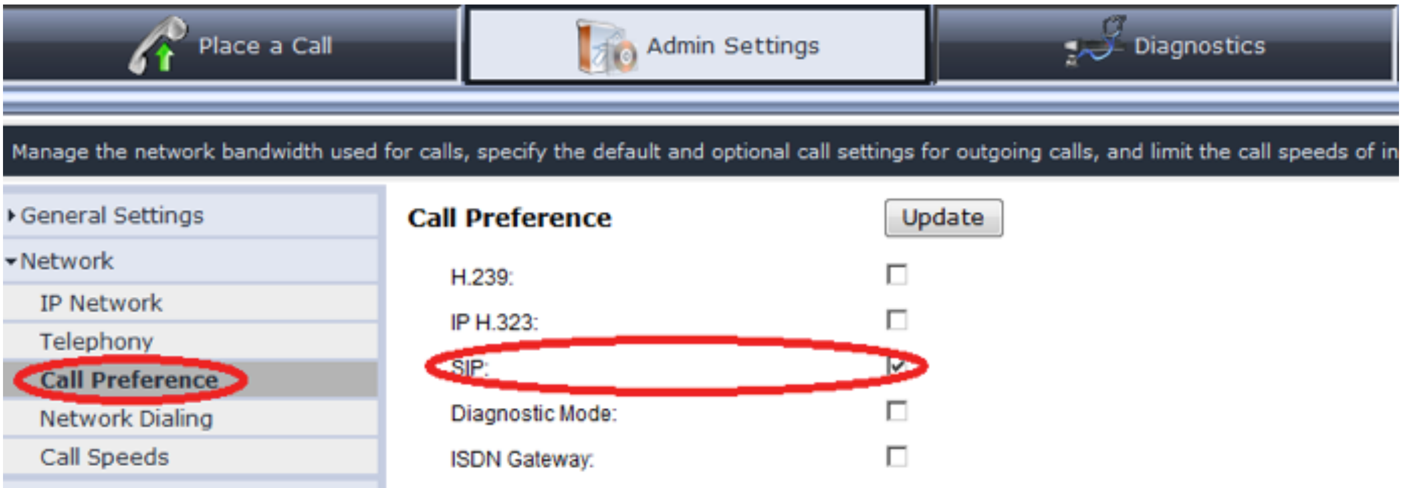


3) Huawei video terminal configuration guide



Note:
The username and password should be provided by Omantel, and the administrator should keep the password well, if the administrator forget the password, please ask Omantel for help.

3.4 Configure the call preference



Note:
If you can choose the call preference protocol, please disable other protocols, only enable the SIP protocols.

4 Network IP and Ports Requirements

There are 8 IPs for the video conference, if there is a firewall in the enterprise, please open these ports of the IPs.

NO	Public IP	Ports			
1	212.72.5.136	443(TCP,TLS,UDP)	5060(UDP)	5061(TCP)	80(TCP,UDP)
2	212.72.5.137	10001-61000(UDP)	5061(TCP)	443,80(TCP,UDP)	
3	212.72.5.138	443(TCP,TLS,UDP)	5060(UDP)	5061(TCP)	80(TCP,UDP)
4	212.72.5.139	10001-61000(UDP)	5061(TCP)	443,80(TCP,UDP)	
5	212.72.5.147	443(TCP,TLS,UDP)	80(TCP,UDP)	5061(TCP)	
6	212.72.5.148	443(TCP,TLS,UDP)	80(TCP,UDP)	5061(TCP)	
7	212.72.5.149	443(TCP,TLS,UDP)	80(TCP,UDP)	5061(TCP)	
8	212.72.5.150	443(TCP,TLS,UDP)	80(TCP,UDP)	5061(TCP)	

5 Network QoS Requirements

5.1 Signaling QoS Requirements

Due to large packets generated by some conference services, the bearer network is required to be capable of delivering a packet of at least 1500 bytes to ensure the smooth deployment of the conference system, that is, the Maximum Transmission Unit (MTU) of the bearer network should be at least 1500 bytes. The MTU with 1500 bytes of the bearer network is the universal standard for the industry.

5.2 Media QoS Requirements of Audio Conference

The Following table describes the media QoS requirements of different audio conference experiments.

Quality Class	Expected Result	Codec	Delay	Jitter	Unexpected Packet Loss
A (clear)	The valioice quty is good.	G.711	≤ 100 ms	≤ 20 ms	
		G.729	Not deteriorated	Not deteriorated	
		AMR	≤ 100 ms	≤ 20 ms	
		iLBC			
B (fair)	The voice quality is average.	G.711	≤ 200 ms	≤ 40 ms	
		G.729	≤ 50 ms	≤ 10 ms	Not deteriorated
		AMR	≤ 200 ms	≤ 30 ms	
		iLBC			
C (available)	The voice quality is poor.	G.711			
		G.729			
		AMR			
		iLBC			

5.3 Media QoS Requirements of HD Conference

The Following table describes the media QoS requirements of different HD conference experiments.

Quality Class	Expected Result	Main Stream Image Format	Delay	Jitter	Unexpected Packet Loss	Bandwidth Without Auxiliary Streams (Media)	Bandwidth Without Auxiliary Streams (Network)
A (clear)	1. Both parties can hear each other clearly. 2. Voice and video are clear and smooth. 3. Voice and video are synchronized.	720p@30fps	≤ 100 ms	≤ 30 ms	1%	2 Mbit/s	2.6 Mbit/s
		720p@60fps	≤ 100 ms	≤ 30 ms	1%	2 Mbit/s	2.6 Mbit/s
		1080p@30fps	≤ 100 ms	≤ 30 ms	1%	3 Mbit/s	3.6 Mbit/s
		1080p@60fps	≤ 100 ms	≤ 30 ms	1%	6 Mbit/s	7.2 Mbit/s
B (fair)	1. Subscribers can perceive delay in some calls but the delay does not affect the communication between two parties. 2. Video is smooth and clear. Voice is clear. 3. Voice and video are synchronized.	720p@30fps	≤ 150 ms	≤ 50 ms	%5	1 Mbit/s	1.3 Mbit/s
		720p@60fps	≤ 150 ms	≤ 50 ms	%5	1.5 Mbit/s	2 Mbit/s
		1080p@30fps	≤ 150 ms	≤ 50 ms	%5	2.5 Mbit/s	3 Mbit/s
		1080p@60fps	≤ 150 ms	≤ 50 ms	%5	4 Mbit/s	4.8 Mbit/s
C (available)	1. Subscribers perceive obvious delay, which may slightly affect the communication between two parties. 2. Video is not clear and smooth enough, which does not affect the communication. 3. Voice quality is not affected. 4. Voice and video are synchronized.	720p@30fps	≤ 200 ms	≤ 50 ms	%10	1 Mbit/s	1.3 Mbit/s
		720p@60fps	≤ 200 ms	≤ 50 ms	%10	1.5 Mbit/s	2 Mbit/s
		1080p@30fps	≤ 200 ms	≤ 50 ms	%10	2.5 Mbit/s	3 Mbit/s
		1080p@60fps	≤ 200 ms	≤ 50 ms	%10	3 Mbit/s	3.6 Mbit/s

Notes:
1. This above data is based on the scenario that TEX0 series HD conference terminal attend the SD conference with supporting SEC3.0 function.