



## Network Requirements

GlobalMeet Phone Service  
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# Introduction

Thank you for choosing GlobalMeet as your UCaaS phone service provider.

This guide is intended to assist companies in preparing their networks for GlobalMeet Phone service. It is a work in progress and will be updated as additional information is developed.

This document is intended for IT and network personnel. It is not an end user document.

## What's new in this guide

This is the first release of the guide. When a new version is posted, updates and corrections will be listed here.

## Network switch and hardware requirements

One or more VLANs are required. VLANs allow you to segment out a physical network into virtual networks. This prevents calls from competing with other traffic on the network, helping to avoid delays in delivering voice packets.

Ensure that your switches, Ethernet cards, and Ethernet cabling support the following standards.

Standard	Description	Purpose
IEEE 802.1p/q	VLAN prioritization and queueing	Provides prioritization and queuing of call audio on the VLAN; supports Quality of Service (QoS) for better reliability and quality
IEEE 802.3af	Power over Ethernet (PoE)	Provides power to devices via Ethernet cable rather than AC adapters
Cat 5 Cable	Ethernet cable meeting Category 5 standard or higher	For every port on which you'll connect a SIP phone. Provides performance of up to 100 Mb/s.

### Power over Ethernet (PoE)

The default configuration is to have IP phones use Ethernet cabling for power, rather than separate AC adapters. (This is referred to as *Power over Ethernet* or *PoE*.) Your network should include network switches that provide power on the Ethernet cable. These network switches should support the IEEE 802.3af standard.

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**Note: For an additional cost, your implementation can include AC adapters as needed.**

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#### Wattage considerations

PoE switches must be able to supply adequate wattage to all devices attached to them. When connecting phones, keep the total wattage consumption of the phones below the switch's PoE power output. (This is in addition to wattage needs of any other devices you have connected to the PoE switch.)

In general:

- Desk phones require from 2.5w (standby) to 8w (max)
- Conference phones require from 3.9w (standby) to 12.3w (max)

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For wattage requirements for specific models, visit the manufacturer websites and search for datasheets. Search shortcuts:

- Polycom: [https://support.polycom.com/PolycomService/coveo/search.htm?q=Data%20sheet&t=All&sort=relevancy&f:@commonsource=\[KB%20Articles\]&f:@contentchannel=\[Data%20Sheets\]&f:@commonproducttype=\[Voice\]&f:@commonproduct=\[VWX,Polycom%20Trio\]](https://support.polycom.com/PolycomService/coveo/search.htm?q=Data%20sheet&t=All&sort=relevancy&f:@commonsource=[KB%20Articles]&f:@contentchannel=[Data%20Sheets]&f:@commonproducttype=[Voice]&f:@commonproduct=[VWX,Polycom%20Trio]) .
- Yealink: <http://support.yealink.com/documentFront/forwardToDocumentFrontDisplayPage> - click the model to review and open the datasheet. In the datasheet, look for “Power consumption (PoE).”

## Virtual Local Area Network (VLAN)

Set up a VLAN for your phone system and tag voice audio packets with priority 6 (voice traffic with less than 10ms latency). Without a VLAN configuration, voice quality will suffer.

Your network switches and routers should support IEEE 802.1p/q standard.

IP phones connected as part of your Cloud Phone implementation will automatically detect the VLAN on which they're connected.

## Bandwidth requirements

From a planning perspective, you can estimate bandwidth need based on the active audio path – that is, per “line” involved in a call:

- 100 kb/s per call
- 10 calls per Mb (megabits)

## General router settings

The following options and port settings are typically available in your router/firewall's web interface (GUI) and are generally required to ensure quality GlobalMeet service. (Not every setting will be available in every router.)

Setting	Value	Purpose
SIP ALG	Disable	SIP ALG ("Application Layer Gateway") is designed to prevent some of the problems caused by router firewalls by inspecting VoIP traffic (packets). However, this can cause audio issues like one-way audio, incoming calls failing, and phones not registering.  SIP ALG is enabled by default on many commercial routers and internet gateways (modems).
DSCP	46	QoS setting. This is used to request high priority or best effort delivery for traffic voice traffic.

## Domain whitelisting, ports, and protocols

Polycom and Yealink use ZTP (Zero Touch Provisioning) to configure their devices. When you plug in a SIP phone, it contacts its defined configuration server (either Polycom or Yealink). The manufacturer site in turn redirects the phone to provisioning and media servers on the globalmeet.com domain where it is managed via the Phone Admin Portal.

Ensure that your network allows inbound and outbound communications to the domains and all child subdomains for **\*.globalmeet.com** and for your selected device providers.

Pin-holes must be preserved on a per-session basis for the outbound ports on \*.globalmeet.com.

Domain	Inbound Ports	Outbound Ports	Purpose
*.globalmeet.com		80,443 TCP	
		5060, 7000 TCP/UDP	SIP call setup and handling
		5061, 7001 TCP	SIP call setup and handling
		16384-32768 UDP	RTP/ RTCP multimedia streaming for call audio
*.polycom.com		80,443 TCP	Polycom conference and desk phones
*.yealink.com		80,443 TCP	Yealink conference and desk phones

## Supported devices

GlobalMeet UC Phone supports the following SIP phones and devices. Firmware is managed by GlobalMeet.

Manufacturer	Types	Models
Polycom	Desk phones	VX 301 VX 311 VX 601
	Conference phones	Trio 8500
Yealink	Desk phones	T42S T46S T46G
	Conference phones	CP920 CP960
Polycom Obihai	ATA analog converters	OBI 302 OBI 504

## Support

Everyone needs support from time to time, and we are here to help.

**Visit** the [Phone service support site](#)

**Send** an email directly to Support:  
[PhoneSupport@GlobalMeet.com](mailto:PhoneSupport@GlobalMeet.com)