

Network Readiness Guide

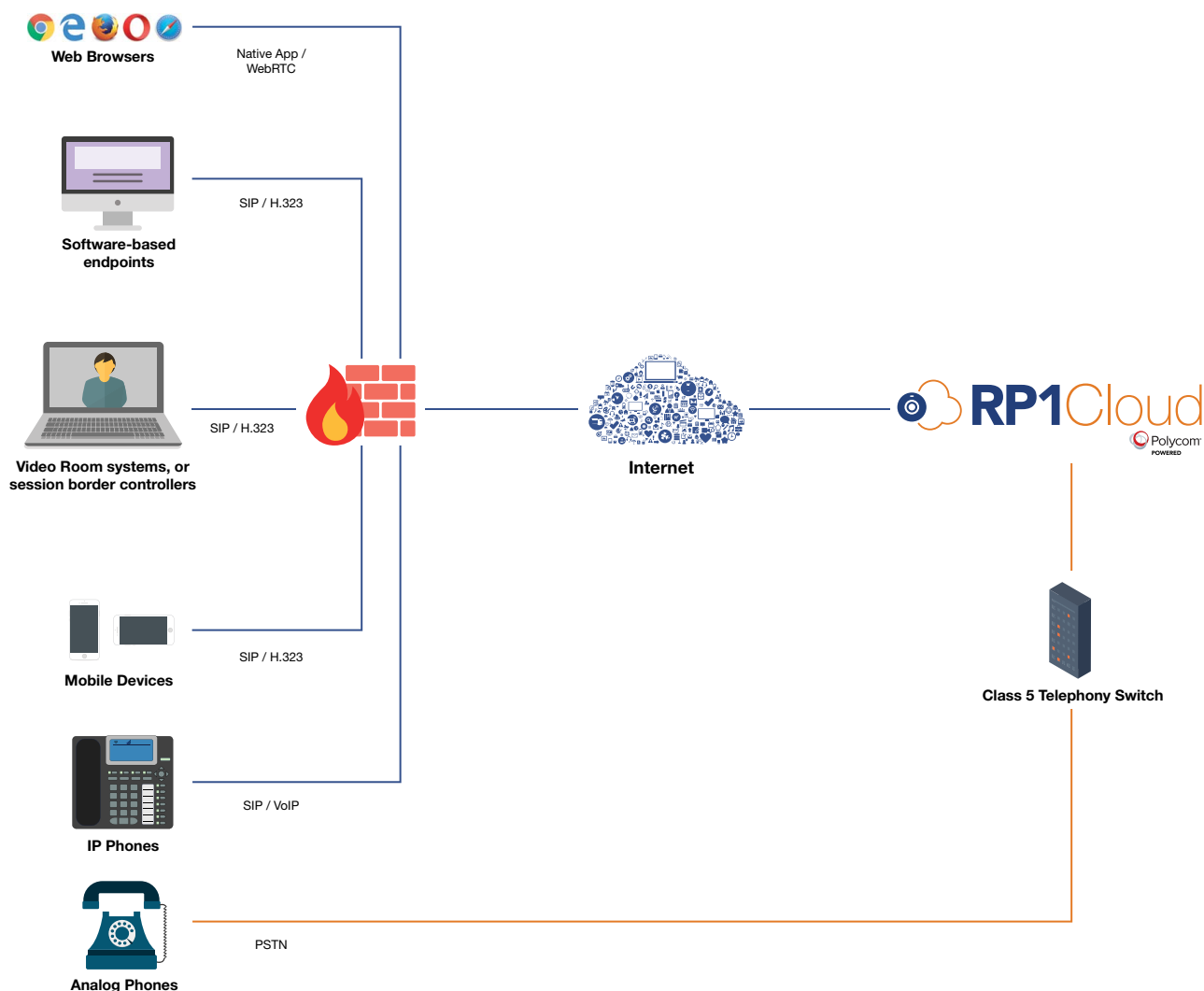
RP1Cloud is a cloud-based video conferencing service that allows all parties to connect easily using their endpoint of choice. Web browsers, room systems (H.323 & SIP), mobile devices (iOS and Android), other software-based clients, and telephones are all supported connection types.

How well your network performs is key to the success of your video solution's deployment. For your employees to receive video performance of consistently high quality, you want to be sure your network is ready to manage and support video traffic.

This document serves as a technical guide to help configure and optimize your network to ensure a high-quality video conferencing experience.

Firewall Configuration

Depending on your network environment, you may need to configure your firewall to accept inbound and outbound connections to the RP1Cloud service.



Firewall Ports Used

Please ensure the following ports are open on your firewall to accept audio, video and content media:

Browser:

- Bi-directional TCP port: 80
- Bi-directional TCP port: 443 for HTTPS tunnelling
- Bi-directional UDP port range: 3230 -> 3237 (Audio/Video Media)
- Bi-directional TCP ports: 9081/9332/9335/9981 (Enhanced Content Sharing)

H.323-based Room Systems and software-based endpoints

- Bi-directional: TCP port 1718/1719 - if using a gatekeeper
- Bi-directional: TCP port 1720 - H.225 signalling for H.323
- Open any additional port range specifically required by your room system. This will vary by manufacturer and software version. Consult your administrator guide for the default port ranges.

SIP-based Room Systems and software-based endpoints

- Bi-directional: TCP/UDP port 5060
- Bi-directional: TCP port 5061 – SIP (TLS) signalling
- Open any additional port range specifically required by your room system. This will vary by manufacturer and software version. Consult your administrator guide for the default port ranges.

Some organizations with more stringent security policies require specification of the remote IP addresses to which your systems are allowed to connect (often referred to as IP whitelisting or ACLs). Below are the IP addresses/ranges of RP1Cloud services:

- 96.45.202.65/28 | IP range: 96.45.202.66 -> 96.45.202.78)
- 96.125.130.224/28 | IP range: 96.125.130.225 -> 96.125.130.238)
- 96.125.139.129/27 | IP range: 96.125.139.130 -> 96.125.139.158)
- 66.97.30.192/28 | IP range: 66.97.30.193 -> 66.97.30.205)

Bandwidth Requirements

Bandwidth use is an integral part of Quality of Service (QoS). Sufficient bandwidth must be in place on each link to carry the expected real-time traffic.

RP1Cloud supports a wide range of resolutions and call speeds. Keep in mind that resolutions, speeds, and the resulting bandwidth will scale dynamically based on current network conditions.

- The minimum bandwidth needed to connect is 128 Kbps on a web browser and 384 Kbps on a room system or Polycom RealPresence Desktop.
- The maximum bandwidth you will ever achieve on your endpoint using RP1Cloud is 3 Mbps.
- On average, an HD browser connection will use between 1 to 1.5 Mbps.

The chart below offers a quick reference into the amount of Ethernet bandwidth you should dedicate to each video endpoint to achieve the desired resolution. By default, RP1Cloud will achieve up to a 720p video resolution - unless otherwise mentioned.

Video Resolution	Frame Rate (Fps)	Transport Rate (in Kbps)	Ethernet Bandwidth Needed (in Kbps)
SIF (352 x 240)	15	128K	154K
4SIF (704 x 480)	15+	256K	256K
720p (1280 x 720)	30	1024K	1024K
1080p (1920 x 1080)	30	1920K	2340K
If content sharing, add 300 - 500 kbps to required Ethernet bandwidth			

Now that you've optimized your network, start testing with a [2-week Free Trial!](#)

If you require further assistance with optimizing your network, please reach out to Customer Success at customersuccess@rp1cloud.com or 1.844.204.0023.