Network Configuration for Sococo Usage

This document provides network configurations and capacity requirements to support Sococo media service.

Firewall and Proxy Settings

For the highest level of quality Sococo clients require access to our services via all routes in the following table. Connections are initiated from the client side meaning that in most network environments, the application will work without requiring the network team to modify the configuration. Keep in mind, however, that in some environments which are more restrictive outbound, this information may be needed to control and to perform changes that allow the service to work.

Subnets		Ports	
35.227.128.0/24	35.190.112.0/27		
35.234.176.0/25	35.230.240.0/26		
35.227.0.0/26	35.234.224.0/27		
35.192.192.0/25	35.234.208.0/28		
35.234.240.0/26	35.235.0.0/28	443	TCP/UDP
35.203.232.0/27	206.191.153.81/32	50000-53000	UDP
35.235.48.0/27	35.235.32.0/26		
35.234.160.0/26	35.157.45.253/32	60000-61000	UDP
35.235.32.0/26	35.234.160.0/26		
35.234.192.0/26	35.203.232.0/27		
206.191.153.80/32	35.243.0.64/26		
35.243.8.0/26			
Additional Subnets		**Ports**	
146.20.192.0/25		443	TCP/UDP
148.62.40.128/25		10000-20000	TCP/UDP
3.226.246.0/25			

Additional Considerations

- For the best media experience outgoing traffic should be direct and not sent through a proxy. Proxy servers add unpredictable latency and negatively impact media quality.

- Similarly, full-tunnel VPNs can introduce significant and unpredictable latency. Consider excluding Sococo traffic from the tunnel.

- If a security proxy or web gateway is in place, webrtc and websockets traffic to the following must be whitelisted:
    - *.sococo.com
    - *.sococo.net
    - *.vidyo.io

- Some firewalls may misclassify the media traffic and apply a UDP default timeout. In these cases, calls will always drop at exactly the same time. To avoid call timeouts, change the default (0:02:00 – 2 minutes) to a time that is longer than the longest potential call.

Why do we want to enable UDP for Sococo?

At the Transport layer of the IP network stack, UDP (User Datagram Protocol) is the preferred method for the delivery of live video streams. UDP offers reduced latency over the reliability that TCP (Transmission Control Protocol) provides. It is a faster protocol than TCP and where time sensitive applications are involved (i.e. live video or VoIP), it is better to live with a video glitch caused by a dropped packet than to wait for the retransmission which TCP guarantees (which is not very practical where live video is concerned).

Bandwidth Requirements

The following table provides resolution, codec, and bitrate information for individual media streams in Sococo.

Stream	Codec	Resolution	Bit-rate (kbps)

Audio	Opus	-	64
Video	VP8	480p	768 (1500)
Screen Share	VP8	1080p	1000 (3000) *

* average (maximum) values

Round-trip / Latency Requirements

In order to maintain a high quality experience with audio and video communication, network round trip time between a Sococo client and our media servers should be < 150 ms. Rounds trips of > 400ms will have a significant impact on quality.