



Studio Network FAQ

Overview

This document provides an overview of the network requirements for using Studio as a presenter and outlines the technology the platform uses to support real-time communications. Note that real-time communication is not required for attendees.

What are the network requirements for using Studio as a presenter?

Studio requires that UDP communication be allowed to the IP addresses noted below. You can determine if your network meets these requirements by using the [Studio System Test](#).

How does Studio use UDP communication?

Studio uses UDP to enable a presenter's browser to connect to the servers in the West data center. This enables speakers to receive low-latency video and audio essential for creating engaging, interactive broadcasts.

Do these requirements apply to all presenters?

UDP communication is required for any presenter that will be broadcasting audio or video or pushing slides during a presentation. If a presenter/moderator will be managing the question queue and responding to questions, they do not need UDP communication, and their experience is served up as a standard web page.

What are TCP and UDP?

There are two protocols used for communication on the Internet. TCP (transmission control protocol) is far more common. It is used for standard web pages. TCP provides error-checking to ensure successful transmission of data, which creates latency. UDP (user datagram protocol) is designed for applications where speed is the most important. UDP eschews error checking in favor of low latency communication. It is the preferred protocol for live broadcasting and online games.

If UDP doesn't have error checking, what happens to a stream if errors occur?

If a transmission error occurs during a broadcast, the user may see a brief distortion in the video feed or hear distortion in the audio. These problems only impact an individual user. Note that in many cases, errors are corrected rather quickly and may not be noticed by the user. To help mitigate this behavior, West, along with browser makers, implement a technology called Forward Error Correction (FEC), which makes streams more resilient.

Why do some organizations not allow UDP traffic?

Many organizations have their firewalls configured so that any unexpected traffic is blocked. Because of this, organizations must configure their firewall to support Studio.

Is it difficult to configure a firewall to support Studio?

No. We've worked with several organizations to enable UDP, and the process is simple. It involves opening a range of ports to a specific list of IP addresses, as noted in the table below.

Function	Host Name(s)	Protocols/Ports
Viewer Connection Information		
MPEG DASH and HLS Adaptive Bitrate Video Streaming Delivery (Live & VOD Delivery)	STUDIOEDGE.AKAMAIZED.NET STUDIO-LIVE.AKAMAIZED.NET STUDIO-VOD.AKAMAIZED.NET STUDIO-SYNLIVE.AKAMAIZED.NET	HTTPS 443 Outbound
Static Content Delivery (Images, Flash PPT Slide Content, etc) (PRIMARY)	PRESENTATIONS.AKAMAIZED.NET STUDIO-SLIDES.AKAMAIZED.NET STATIC.ONLINEXPERIENCES.COM	HTTPS 443 Outbound
General Platform Logon/HTML Wrapper (HTML, JS, Data Calls)	ONLINEXPERIENCES.COM	HTTPS 443 Outbound
Standard (IP-Based) Presenter Connection Information (same as above, along with the below)		
WebRTC STUN binding - Presenter candidate gathering	8.19.201.62 (ING01) 8.19.201.64 (ING03) 8.19.201.65 (ING04)	UDP 3478 Outbound UDP 49152-65535 Outbound
WebRTC Ingest - Presenter Connections For Streaming Video	8.19.201.70 (ING05) 8.19.201.71 (ING06) 8.19.201.72 (ING07)	TCP 80, 443 Outbound
WebRTC Tunneling over TCP Port 80 or 443		
Accelerated (FQDN) Presenter Connection Information (helps remote presenters)		
WebRTC STUN binding - Presenter candidate gathering	ING-IPA-01.ONLINEXPERIENCES.COM ING-IPA-03.ONLINEXPERIENCES.COM ING-IPA-04.ONLINEXPERIENCES.COM	UDP 3478 Outbound UDP 49152-65535 Outbound TCP 80, 443 Outbound
WebRTC Ingest - Presenter Connections For Streaming Video	ING-IPA-05.ONLINEXPERIENCES.COM ING-IPA-06.ONLINEXPERIENCES.COM ING-IPA-07.ONLINEXPERIENCES.COM	
WebRTC Tunneling over TCP Port 80 or 443		
Encoder Needed Connection Information		
Encoders "RTMP Based"	VC.ONLINEXPERIENCES.COM	TCP 1935 Outbound
VCU over SIP	VC.ONLINEXPERIENCES.COM	HTTPS 443 Outbound TCP & UDP 5060, 5061 Outbound
Studio API Access	API.ONLINEXPERIENCES.COM	HTTPS 443 Outbound
As Needed		
Mail Relay (only if email sender is custom and not @theonlinexpo.com)		SMTP 25

A complete list of IP addresses and ports supported by the platform can be found on the [Troubleshooting Webcast & Chat Problems](#) page.

Is this an uncommon request?

No. As noted above, most organizations have their firewalls configured so that any unexpected traffic is blocked. Many other real-time communication systems, including Skype for Business and Cisco Telepresence, also require an organization to allow UDP traffic.