System Requirements

- System requirements for 720p broadcasts

- System requirements for attendees

- System requirements for encoder broadcasts

- System requirements for single webcam broadcasts

- System requirements for telephone broadcasts

- System requirements for VCU/telepresence broadcasts

- System requirements for video bridge broadcasts

- Webcast network requirements for presenters

System requirements for 720p broadcasts

For video events with the 720p high-resolution player size. Not available for telephone broadcasts.

This article covers additional requirements to broadcast video in 720p. For requirements specific to your broadcast type, see system requirements articles for:

- Single webcam broadcasts

- Video bridge broadcasts

- Encoder broadcasts

- VCU/telepresence broadcasts

Note: 720p encoder broadcasts require HD encoding software (for example, Wirecast, OBS, or vMix) to be installed on the encoder.

Live Studio Requirements

If you're joining the Live Studio as a moderator or presenter, your system must meet the following requirements.

What you need	Moderators and Presenters
Hardware	- PC or Mac - Your computer must be plugged in and have a sound card with speakers and a monitor with 1024x768+ resolution support. - A high definition webcam (720p or better) is required to stream in HD (single webcam and video bridge). - Headset or webcam mic with built-in noise cancellation. Do not use your computer or webcam's built-in microphone.
Software	For encoder broadcasts only: HD encoding software (for example, Wirecast, OBS, or vMix)

What you need	Moderators and Presenters
Operating System	- Windows 10 - Windows 8.1 Pro or newer - macOS 10.14 or newer
Processor (CPU)	Intel Core i5 3.0GHz or better **Note:** Less powerful processors will degrade audio and video performance.
Memory (RAM)	4 GB
Browser	Current or previous 5 versions of: - Google Chrome - Firefox - Microsoft Edge - Safari (Mac devices only) **Note:** Firefox and Safari do not support screen sharing for 720p events.
Internet Speed	A dedicated and wired high-speed internet connection of 4 Mbps or better (upload and download) **Note:** To ensure a stable connection, disconnect from the VPN and use a wired internet connection, instead of Wi-Fi. Wi-Fi connections are prone to dips in bandwidth that can negatively impact your video connection.

System requirements for attendees

You can attend an event on a desktop computer or mobile device - just open the event URL in a supported browser. This article details the system requirements for attending an event.

Note: If you enter the event link in a browser window and the event doesn't open, access might be blocked by a firewall or your company network security rules. Review our network requirements and make sure the ports and IP ranges in the Webcast Audience Members column are permitted. If you're unsure of your settings, contact your IT Administrator.

Desktop System Requirements

What you need	Requirements
Hardware	PC or Mac **Note:** Your computer must be plugged in and have a sound card with speakers and a monitor with 1024x768+ resolution support.
Operating System	- Windows 10 - Windows 8.1 Pro or newer - macOS 10.14 or newer
Processor (CPU)	Intel Core i5 2.0GHz or better **Note:** Less powerful processors will degrade audio and video performance.
Memory (RAM)	4 GB
Browser	Current or previous 5 versions of: - Google Chrome - Firefox - Microsoft Edge - Safari (Mac devices only)

What you need	Requirements
Internet Speed	A dedicated and wired high-speed internet connection of 1 Mbps or better (upload and download). 2 Mbps or better is recommended to view the event at the highest quality. **Note:** To ensure a stable connection, disconnect from the VPN and use a wired internet connection, instead of Wi-Fi. Wi-Fi connections are prone to dips in bandwidth that can negatively impact your event experience.

Mobile System Requirements

What you need	Requirements
Hardware	- Android phone or tablet - Apple iPhone or iPad
Operating System	- Android 5.1 or newer - Apple iOS 12 or newer
Browser	Current or previous 5 versions of: - Google Chrome - Firefox - Microsoft Edge - Safari (Mac devices only)
Internet Speed	A dedicated high-speed internet connection of 1,000 Kbps (1 Mbps) or better (upload and download) or a 4G connection or better. **Note:** To ensure a stable connection, disconnect from the VPN.

System Test

Check your system before the event. The diagnostic test checks your computer and network connections to help you troubleshoot problems before the event begins and if you're having issues during the event.

Run the system test »

System requirements for encoder broadcasts

For events with **Your Encoder** as the live acquisition source. This article details the system requirements for broadcasting a Live event or recording a Simulated Live event with an encoder.

To join the Live Studio and moderate or present, your system must meet the following minimum system and hardware requirements. At least 48 hours before the event, run the system test with the hardware and network you will use on the day of the event.

If you're unable to open the Live Studio, access might be blocked by a firewall or your company network security rules. Review our network requirements and make sure the ports and IP ranges in the Webcast Presenters - Video Events column are permitted. If you're unsure of your settings, contact your IT Administrator.

Live Studio Requirements

If you're joining the Live Studio as a moderator or presenter, your system must meet the following requirements.

What you need	Moderators and Presenters
Hardware	PC or Mac **Note:** Your computer must be plugged in and have a sound card with speakers and a monitor with 1024x768+ resolution support.
Operating System	- Windows 10 - Windows 8.1 Pro or newer - macOS 10.14 or newer
Processor (CPU)	Intel Core i5 3.0GHz or better **Note:** Less powerful processors will degrade audio and video performance.
Memory (RAM)	4 GB

What you need	Moderators and Presenters
Browser	Current or previous 5 versions of: • Google Chrome • Firefox • Microsoft Edge • Safari (Mac devices only) **Note:** Safari is not supported for screen sharing.
Internet Speed	A dedicated and wired high-speed internet connection of 3 Mbps or better (upload and download) **Note:** To ensure a stable connection, disconnect from the VPN and use a wired internet connection, instead of Wi-Fi. Wi-Fi connections are prone to dips in bandwidth that can negatively impact your video connection.

Broadcasting Requirements

A moderator must join the Live Studio to connect the encoder to the event, start the event, manage event content and Q&A, and end the event. Presenters that will be presenting content must also join the Live Studio.

To broadcast with an encoder, your must:

- Have a dedicated connection with bandwidth that consistently exceeds the bit rate you are transmitting. For example, if you are streaming at 600 Kbps we recommend a dedicated connection of at least 1.2 Mbps. If you're using an active backup encoder, the bandwidth requirements should be doubled.

- Have a hardware and software package capable of encoding live video streams delivered using the Real Time Messaging Protocol (RTMP). Your PC must permit either the RTMP (TCP over port 1935) or RTMPT (over port 80) live streaming protocol or both.

- Support H.264 (Video) / AAC (Audio) configurations

- For 720p broadcasts, have HD encoding software installed (for example, Wirecast, OBS, or vMix)

Notes:

- To prevent the media playback from freezing and requiring a stream refresh, corporate users behind proxy servers should make sure their network settings don't time out on RTMPT requests. If you're unsure of your settings, contact your IT Administrator.

- If you are using an active backup encoder during a live webcast the bandwidth requirements discussed above should be doubled.

- Be conscious of your target audience's bandwidth capabilities when broadcasting at higher bit rates.

System requirements for single webcam broadcasts

For events with **Webcam** as the live acquisition source. This article details the system requirements for broadcasting a Live event or recording a Simulated Live event with a single webcam.

To join the Live Studio and moderate or present, your system must meet the following minimum system and hardware requirements. At least 48 hours before the event, run the system test with the hardware and network you will use on the day of the event.

If you're unable to open the Live Studio, access might be blocked by a firewall or your company network security rules. Review our network requirements and make sure the ports and IP ranges in the Webcast Presenters - Video Events column are permitted. If you're unsure of your settings, contact your IT Administrator.

Live Studio Requirements

If you're joining the Live Studio as a moderator or presenter, your system must meet the following requirements.

What you need	Moderators and Presenters
Hardware	PC or Mac **Note:** Your computer must be plugged in and have a sound card with speakers and a monitor with 1024x768+ resolution support.
Operating System	- Windows 10 - Windows 8.1 Pro or newer - macOS 10.14 or newer
Processor (CPU)	Intel Core i5 3.0GHz or better **Note:** Less powerful processors will degrade audio and video performance.
Memory (RAM)	4 GB

What you need	Moderators and Presenters
Browser	Current or previous 5 versions of: - Google Chrome - Firefox - Microsoft Edge
Internet Speed	A dedicated and wired high-speed internet connection of 3 Mbps or better (upload and download). **Note:** To ensure a stable connection, disconnect from the VPN and use a wired internet connection, instead of Wi-Fi. Wi-Fi connections are prone to dips in bandwidth that can negatively impact your video connection.

Broadcasting Requirements

For the best audio and video quality, we recommend that presenters use a:

- High quality webcam (for example, Logitech C920) or HD webcast camera

- Headset or webcam mic with built-in noise cancellation. Do not use your computer or webcam's built-in microphone.

When you join the Live Studio, you must grant it access to your mic and camera to connect your audio and video.

System requirements for telephone broadcasts

For events with **Telephone** as the live acquisition source. This article details the system requirements for broadcasting a Live event or recording a Simulated Live event over the phone or with VoIP audio.

To join the Live Studio and moderate or present, your system must meet the following minimum system and hardware requirements. At least 48 hours before the event, run the system test with the hardware and network you will use on the day of the event.

If you're unable to open the Live Studio, access might be blocked by a firewall or your company network security rules. Review our network requirements and make sure the ports and IP ranges in the Webcast Presenters - Audio Events column are permitted. If you're unsure of your settings, contact your IT Administrator.

Live Studio Requirements

If you're joining the Live Studio as a moderator or presenter, your system must meet the following requirements.

What you need	Moderators and Presenters
Hardware	PC or Mac **Note:** Your computer must be plugged in and have a sound card with speakers and a monitor with 1024x768+ resolution support.
Operating System	- Windows 10 - Windows 8.1 Pro or newer - macOS 10.14 or newer
Processor (CPU)	Intel Core i5 3.0GHz or better **Note:** Less powerful processors will degrade audio and video performance.
Memory (RAM)	4 GB

What you need	Moderators and Presenters
Browser	Current or previous 5 versions of: • Google Chrome • Firefox • Microsoft Edge • Safari (Mac devices only) **Note:** Safari is not supported for screen sharing.
Internet Speed	A dedicated and wired high-speed internet connection of 2 Mbps or better (upload and download). **Note:** To ensure a stable connection, disconnect from the VPN and use a wired internet connection, instead of Wi-Fi. Wi-Fi connections are prone to dips in bandwidth that can negatively impact your video connection.

Broadcasting Requirements

For the best audio and video quality, we recommend that presenters use a:

- Touchtone phone if dialing in to the event

- Headset or mic with built-in noise cancellation. Do not use your computer's built-in microphone if using VoIP.

When you join the Live Studio and connect with VoIP audio, you must grant it access to your mic to connect your audio.

System requirements for VCU/telepresence broadcasts

For events with **VCU/Telepresence** as the live acquisition source. This article details the system requirements for broadcasting a Live event or recording a Simulated Live event from a video conferencing unit (VCU) or other endpoint or meeting app accessible by its SIP or H323 address.

To join the Live Studio and moderate or present, your system must meet the following minimum system and hardware requirements. At least 48 hours before the event, run the system test with the hardware and network you will use on the day of the event.

If you're unable to open the Live Studio, access might be blocked by a firewall or your company network security rules. Review our network requirements and make sure the ports and IP ranges in the Webcast Presenters - Video Events column are permitted. If you're unsure of your settings, contact your IT Administrator.

Live Studio Requirements

If you're joining the Live Studio as a moderator or presenter, your system must meet the following requirements.

What you need	Moderators and Presenters
Hardware	PC or Mac **Note:** Your computer must be plugged in and have a sound card with speakers and a monitor with 1024x768+ resolution support.
Operating System	- Windows 10 - Windows 8.1 Pro or newer - macOS 10.14 or newer
Processor (CPU)	Intel Core i5 3.0GHz or better **Note:** Less powerful processors will degrade audio and video performance.
Memory (RAM)	4 GB

What you need	Moderators and Presenters
Browser	Current or previous 5 versions of: • Google Chrome • Firefox • Microsoft Edge • Safari (Mac devices only) **Note:** Safari is not supported for screen sharing.
Internet Speed	A dedicated and wired high-speed internet connection of 3 Mbps or better (upload and download) **Note:** To ensure a stable connection, disconnect from the VPN and use a wired internet connection, instead of Wi-Fi. Wi-Fi connections are prone to dips in bandwidth that can negatively impact your video connection.

Broadcasting Requirements

A moderator must join the Live Studio to connect the VCU to the event, start the event, manage event content and Q&A, and end the event. Presenters that will be presenting content must also join the Live Studio.

To broadcast with a VCU, your VCU must allow incoming SIP or H.323 calls and support H.264 video.

Contact your Video Conferencing vendor or local IT Administrator to ensure firewall permissions allow incoming video calls.

Note: To prevent the media playback from freezing and requiring a stream refresh, corporate users behind proxy servers should make sure their network settings don't time out on RTMPT requests. If you're unsure of your settings, contact your IT Administrator.

System requirements for video bridge broadcasts

For events with **Video Bridge** as the live acquisition source (includes advanced video bridge). This article details the system requirements for broadcasting a Live event or recording a Simulated Live event with the video bridge.

To join the Live Studio and moderate or present, your system must meet the following minimum system and hardware requirements. At least 48 hours before the event, run the system test with the hardware and network you will use on the day of the event. For system test instructions, see Video Bridge Guide for Presenters and Guest Admins.

If you're unable to open the Live Studio, access might be blocked by a firewall or your company network security rules. Review our network requirements and make sure the ports and IP ranges in the Webcast Presenters - Video Events column are permitted. If you're unsure of your settings, contact your IT Administrator.

Live Studio Requirements

If you're joining the Live Studio as a moderator or presenter, your system must meet the following requirements.

What you need	Moderators and Presenters
Hardware	PC or Mac **Note:** Your computer must be plugged in and have a sound card with speakers and a monitor with 1024x768+ resolution support.
Operating System	- Windows 10 - Windows 8.1 Pro or newer - macOS 10.14 or newer
Processor (CPU)	Intel Core i5 3.0GHz or better **Note:** Less powerful processors will degrade audio and video performance.
Memory (RAM)	4 GB

What you need	Moderators and Presenters
Browser	Current or previous 5 versions of: • Google Chrome • Firefox • Microsoft Edge **Note:** Firefox does not support screen sharing.
Internet Speed	A dedicated and wired high-speed internet connection of 3 Mbps or better (upload and download) **Note:** To ensure a stable connection, disconnect from the VPN and use a wired internet connection, instead of Wi-Fi. Wi-Fi connections are prone to dips in bandwidth that can negatively impact your video connection.

Broadcasting Requirements

Video Bridge (20 webcams)

For the best audio and video quality, we recommend that presenters use a:

• High quality webcam (for example, Logitech C920) or HD webcast camera

• Headset or webcam mic with built-in noise cancellation. Do not use your computer or webcam's built-in microphone.

When you join the Live Studio, you must grant it access to your mic and camera to connect your audio and video.

Advanced Video Bridge

If you're broadcasting with an advanced video bridge, you can connect to the event by phone or with webcam. You can also dial in to the event from Skype/Lync, an encoder, and a VCU or have the Live Studio dial out to your conference room or device. A moderator must join the Live Studio to connect the room or device to the event, start the event, manage event content and Q&A, and end the event. Presenters that will be presenting content must also join the Live Studio.

Note: To prevent the media playback from freezing and requiring a stream refresh, corporate users behind proxy servers should make sure their network settings don't time out on RTMPT requests. If you're unsure of your settings, contact your IT Administrator.

Encoder Requirements

To broadcast with an encoder, your must:

- Have a dedicated connection with bandwidth that consistently exceeds the bit rate you are transmitting. For example, if you are streaming at 600 Kbps we recommend a dedicated connection of at least 1.2 Mbps. If you're using an active backup encoder, the bandwidth requirements should be doubled.

- Have a hardware and software package capable of encoding live video streams delivered using the Real Time Messaging Protocol (RTMP). Your PC must permit either the RTMP (TCP over port 1935) or RTMPT (over port 80) live streaming protocol or both.

- Support H.264 (Video) / AAC (Audio) configurations

Notes:

- If you are using an active backup encoder during a live webcast the bandwidth requirements discussed above should be doubled.

- Be conscious of your target audience's bandwidth capabilities when broadcasting at higher bit rates.

VCU/Telepresence Requirements

To broadcast with a VCU, your VCU must allow incoming SIP or H.323 calls and support H.264 video.

Contact your Video Conferencing vendor or local IT Administrator to ensure firewall permissions allow incoming video calls.

Telephone Requirements

For the best audio and video quality, we recommend that presenters use a:

- Touchtone phone if dialing in to the event

- Headset or mic with built-in noise cancellation

Webcast network requirements for presenters

Network requirements for presenters can be accessed here:

https://webcasts.com/networkresources/

Refer to the right columns for the requirements for presenters based on if it will be an audio or video event. Please provide these instructions to your IT department to ensure your network meets the requirements outlined here.