

GUIDANCE FOR USING ZOOM IN LOW BANDWIDTH ENVIRONMENTS

Below you will find some helpful tips and best practices for using Zoom in low bandwidth environments that might be helpful for presenters, moderators, volunteers, and attendees. Also, the document concludes with tips on how to improve Zoom performance overall.

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Internet Connection Considerations

Wired (Ethernet) Connection

If your Internet router has an option for a wired connection, join with a wired option versus a wireless connection. Whenever possible, plug an Ethernet cable directly from your computer into the wireless router (be sure to disable WiFi on your computer if plugged in). Wired is better than Wifi, but Wifi is better than Cellular (3G/4G/LTE).

Wireless (WiFi) Connection

To maximize signal quality, you must do one of two things: move the router or move yourself. The closer you are to your router, the better your signal quality. Just like any other radio device, WiFi routers have a particular range. As you move further from it, you'll get choppy packet delivery (your video and audio could freeze). Also note that walls and staircases can weaken the WiFi distance.

Wireless Router Maintenance

Similar to having to reboot your computer periodically, it's also a good idea to reboot your wireless router. Typically, this can be done by unplugging the power cable for 30 seconds and then plugging back it. It will generally take a few minutes for the router to reboot so that you can connect. Whether you own or rent your router, it's always a good idea to perform software updates to them. You can contact your Service Provider and the manufacture to find out information on how to update your router.

Video Considerations

Turn Off Video When You are not Speaking

Only start your video only when you need to show yourself on camera and stop your video when that isn't needed. Stopping your own video will reduce traffic going out on your network.

Disable HD Video in Zoom

Sending high definition (HD) webcam video requires more bandwidth than sending non-HD. Disabling HD video will free up more of your Internet connection for other parts of your Zoom meeting. Disable this setting. Open the Zoom Desktop App – click the gear icon, selecting video and uncheck HD Video.

To turn off HD in your Zoom client:

1. In your desktop Zoom client, click Settings (the gear icon).
2. Click Video in the left-hand menu.
3. In the My Video section, uncheck the box beside Enable HD if it is checked.

Stopping All Incoming Video in A Meeting or Webinar

If you need to preserve bandwidth for shared content, or want to avoid mental fatigue from viewing multiple, active video participants, you can easily stop all incoming videos. This will only affect your view of the meeting, while others are unaffected and unaware.

How To Stop Incoming Video

Windows | MacOS | Linux

1. Start or join a meeting.
2. Click View in the top-right corner, and then click Stop Incoming Video.
3. To resume videos, click View again and select Start Incoming Video.

Android | iOS

1. Start or join a meeting.
2. Tap the More ●●● option in your meeting controls.
3. Tap Meeting Settings.
4. Find and tap the toggle next to the Stop incoming video option.
5. To resume videos, tap the toggle next to Stop incoming video to disable.

Web Client

1. Start or join a meeting with the [web client](#).
2. Click the More ●●● option in the meeting controls.
3. Click Stop incoming video.

Audio Considerations

Mute Your Audio when not Speaking

While it doesn't use as much bandwidth as your video, you can also reduce your bandwidth somewhat by muting your audio when you're not speaking. Use the Mute button in the bottom left corner of the Zoom screen to toggle your audio off and on.

Consider Calling in to the Webinar

You might also consider using a phone call to connect to the Zoom meeting or webinar audio instead of using computer audio within the meeting. The phone numbers to connect to a Zoom session will be made available on the details page of a session on Pathable under the heading "Dial by your location."

Improving your Zoom Performance Overall

Close Unneeded Applications on your Computer

Zoom meetings can demand significant memory and processing power from your computer. Improve your overall Zoom client performance by not running other applications during meetings that might also be using a large share of your bandwidth. Examples of data-intensive programs might include streaming video or music sites, or other websites with dynamic content. You can always check your network usage using Activity Monitor on the Mac or Task Manager in Windows to pinpoint which programs are data hogs.

Limit High-Bandwidth Activities by Yourself and Others at Your Location

Other people or yourself on other devices using the Internet from your remote location will affect the bandwidth available to your Zoom session. Don't start other bandwidth-intensive activities just before, or during, a Zoom meeting. On your Zoom device and other computers/devices that share your Internet connection—avoid:

- Large downloads/uploads
- Streaming video (e.g., Netflix, Hulu, YouTube)
- Cloud backups (e.g., Carbonite, CrashPlan)
- Cloud file synchronizations (e.g., Box, OneDrive, DropBox)

Additional Resources:

- [Optimizing Performance in Low Bandwidth Environments](#)
- [Network and Firewall Zoom Resources](#)
- [Wireless \(WiFi\) Connection Issues](#)
- [Zoom System Requirements: Windows, MacOS, Linux](#)

Questions, Comments, Concerns? Contact adminict4dconf@crs.org