Strategies for a Stable zoom Connection

For anyone who’s been in a Zoom meeting or webinar and told their video is frozen or their audio is distorted or garbled, this is usually due to network latency and can be a frustrating experience. And separate from the tell-tale poor video and audio experience, there may be a warning from Zoom: “Your connection is unstable.” Of course, troubleshooting these issues during a live session may inevitably lead to further frustration! But there are several strategies we can employ to reduce the likelihood that these less-than-perfect experiences happen to us.

Switch to a wired connection, if possible.
If you’re not in an office setting with a network connection jack in the wall, your modem or wireless router at home will have an ethernet port (opening) that you can use. Even with a wireless network that is usually fantastic, it is a good idea to have a 10-, 20-, or even 30-foot high-performance ethernet cable as a backup. *(For most newer devices with comparable internet bandwidth, a cable classified as Cat6 performance is appropriate.)* Note that your connection will still rely on things beyond your control, most obviously the internet speed coming into your home or building.

If unable to switch to a wired connection, please refer to Zoom’s Help Center’s documentation on [Wireless (WiFi) Connection Issues](#) for helpful suggestions.

Reduce the demand on your network.
Ask others sharing your same wireless network to reduce their own demand during your session. This may include other computer users, mobile devices, video games, streaming televisions, and even the sometimes less obvious music streaming through Google Home or similar connected devices.

Reduce the demand on your computer’s resources.
Completely close any other internet-dependent services on your computer and/or mobile device. Sometimes this means “quitting” the program or application and not just closing a Window. For example: Microsoft Outlook, Teams, Skype, Spotify, and even Microsoft OneDrive and Google Backup and Sync are internet-dependent programs that can be closed but still operate in the background until they are forcibly quit and thus completely closed.

Adjust your settings in Zoom.
Consider turning off [HD (High Definition) Video in your webcam’s Video settings](#). Sending high definition video through the Zoom session requires a lot more data be passed through the network than standard, non-HD video. If the quality of your image isn’t critical, standard video should suffice.

Similarly, in your Meeting settings, turn off [Group HD video](#), if your licensed account allows it.
Consider turning off any video filters and virtual backgrounds in your Zoom client’s settings, which also require more data be passed through the network.

Rev. 11/13/20 For more information, see the CTL Teaching Toolkit’s website:
[http://ctl.jhsph.edu/toolkit](http://ctl.jhsph.edu/toolkit)
Reduce the amount of data that will be passed through Zoom.

Share relevant files outside of Zoom before, or even during, your meeting. If you can provide a link to a file instead of passing the entire resource (i.e., uploading it) through Zoom’s chat, there is less data passed through your live sessions. Additionally, participants can download the resource(s) when they aren’t in the meeting or webinar which reduces the demand on their own connections.

Consider other ways to collaborate synchronously other than using Zoom’s whiteboard or screen sharing, such as working on a document stored in SharePoint (MS Teams) or OneDrive. Working in these other online collaborative tools – even at the same time as your Zoom session – is often beneficial because most require less data than streaming the shared screen or whiteboard inside of Zoom.

Take other steps during your session.

Despite being proactive, you may still occasionally experience latency issues. If you do, here are some things you can do during your session to improve performance:

- Do not share your webcam video unless necessary.
- Mute your microphone’s audio if you’re not speaking. Unmuted, the microphone still passes data even when you aren’t talking.
- Only share your screen or the Zoom whiteboard as long as absolutely necessary. While different from a webcam, the data passed by screen sharing and the whiteboard is still considered streaming video.
- If you are relying on a wireless connection, move your computer closer to the wireless router.