Video conferencing: The basics

Description

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Video conferencing has become a key way of communicating online in recent years. However, joining a video conferencing session over platforms such as Zoom, Microsoft Teams, or Skype with a slower internet speed can sometimes be a challenge.

Some platforms handle slower speeds or high latency better than other platforms. Below are some suggestions that may improve your experience.

Video calling for education

Check out our connecting for education at home video for tips on improving your set up for educational video conferencing in distance and online education settings

- Check out our connecting for health at home video for tips on improving your set up for online and phone (telehealth) appointments, as well as the nbn® Telehealth video conferencing connectivity guide.

  For further information, download and save our guide to Wi-Fi calling, VoIP, and video conferencing, as well as the nbn® video conferencing connectivity guide.

- ## Video calling made simple

- ○ 1Buffering and why you need to know about it

  Audio or video services over the internet generally download and store the content on your computer, then play the local content back to you using the specific program. This temporary location is called the “buffer”.

  The buffer is why satellite connections handle video conferencing better than expected, given the 3-4 second delay in each direction. When you speak or move, it still takes a few seconds until everyone else sees and hears you, but you’ll tend to see everyone moving and reacting at roughly the same time.

  If the content can’t download faster than it’s being displayed, the buffer empties too quickly. The software must wait until the buffer is filled with enough content to play. That’s when you see “waiting” symbols on a range of movie streaming programs.

  Video conferencing, however, doesn’t tend to display a “wait” symbol. Instead, you might see one of the following common behaviours.

  Note that these behaviours can and do occur even on the very best internet connections. They may, however, be seen more frequently on slower or more overloaded connections.

  - Freezing: The sound or image may freeze (stop temporarily) and then jerk back into action.
  - “Stop-motion” or “fast-forward” effects. When the playback catches up with the

buffer content, it might skip frames to try and get back in sync with the audio, or you might see a “fast-forward” effect.
- Judder, stutter, choppiness: The display is broken up or jerky, and the sound may break up or become unclear.
- Pixelation/blurriness. The display may break into a much lower-resolution display, where all the edges are blurry or pixelated into square blocks.
- The video stops completely.
- The audio stops completely.

If these issues occur continuously, we suggest running some speed tests and contacting your service provider, to ensure you have the best possible service for your connection. Or check out our troubleshooting page.

Take me there

- 2Tips to improve your video conferencing connection before you start
  1. **Consider Alternatives:**
     - Determine if a full video conference is necessary. Explore options like group phone calls or chat systems for less bandwidth usage.
     - Discuss preferences with participants beforehand, as some may not be comfortable with video calls.
  2. **Software Preparation:**
     - Ensure you have the latest version of the conferencing software installed.
     - If facing issues, try accessing the web version of the conference for smoother performance.
  3. **Connection Optimisation:**
     - Use the best-quality Wi-Fi router available.
     - Position yourself close to the router or consider a wired connection to minimise wireless interference.
     - For mobile connections, seek the best reception area.
  4. **Bandwidth Management:**
     - Reduce internet traffic from other users on the same network.
     - Encourage others to pause unnecessary internet activities during the conference.
     - Dial in using a phone if video presence is not required.
     - Turn off the VPN if it is unnecessary for the meeting.
  5. **System Optimisation:**
     - Close unnecessary applications and browser tabs to free up bandwidth.
     - Pause file downloads and uploads, including cloud syncing.
     - Lower display resolution if possible.
     - Test sound and camera functionality beforehand.
  6. **Software Settings:**
     - Customise background images or blur backgrounds for privacy.
     - Avoid full-screen mode to maintain video performance.

        - Adjust settings within the conferencing app before joining the call.
    7. **Sound Improvement:**
        - Check computer sound settings and ensure speakers and microphones are functional.
        - Use headphones to minimise background noise and echoes.
        - Prefer wired headsets for reliability over wireless options.
        - Mute yourself when not speaking to prevent background noise disruptions.
- 3Tips to improve visual quality before you start
    1. Adjust your lighting. Natural, side and overhead lighting work best.
    2. A strong light behind you can make your face hard to see. If you can't change the backlighting, try to put another light in front and to the side of your face.
    3. Strong light in front of you can cause flare on your face. Try to put another light behind and to the side of your face.
    4. Background images can fix many lighting issues; make sure they're static, not moving, images.
    5. If you can't adjust the lighting, try moving your computer or web camera itself. Even a small move can make a big difference.
- 4Tips to improve accessibility before you start

  Teleconferencing is generally a very inclusive form of communication. These are ways to ensure everyone can participate equally.

    1. Provide a written agenda or document with key points, and a written summary afterwards.
    2. Speak clearly and try to avoid interruptions.
    3. Ensure everyone is muted when not speaking, to reduce background noise.
    4. Turn on captioning, if available.
    5. Describe any video material being presented.
    6. Introduce yourself before speaking.

  Read more on improving accessibility
- 5Tips to improve the call while it's running
    1. Turn off your video and mute your audio unless speaking (or video is needed). Many teacher: student lessons can be done without two-way video of a whole class.
    2. Let other people finish speaking before starting to speak.
    3. However, remember that people may be joining over high-latency connections such as satellites, and that their audio will arrive 3-4 seconds after they've actually started speaking. Such interruptions may be accidental.
    4. Give everyone a chance to speak.
    5. Type comments into the "chat" function of your software.
    6. Keep an eye on the "chat" function of your software.

More information on videoconferencing:

- Royal Institute for Deaf and Blind Children: Videoconferencing with vision impairment
- Accessible Telecoms: Video Call and Conference Apps
- Rooted in Rights: How to Make Your Virtual Meetings and Events Accessible to the Disability Community
- Lifewire: How To Avoid Buffering Issues When Streaming Video
- Choice Australia: Free group video apps review: Skype, Zoom, Google Hangouts & more
- Choice Australia: Video conferencing app reviews
- Choice Australia: How to find the best video conferencing apps

Didn’t find the answers you were after?

Chat to us on our hotline with one of our team members and let’s get the conversation

started. If we don’t answer, we’ll get back to you in no time at all.

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Category

1. Tech Tips

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