

WHAT YOU'LL LEARN

- ✓ Network service requirements
- ✓ A guide to network connectivity
- ✓ Tools and services for success

Perfect VoIP and video conferencing: how to avoid digital mush

Everyone knows digital mush.... It's the moment your video conference call becomes a half-frozen conversation with a space alien. It's the moment your company-wide meeting bridge turns into oral garbage at the exact moment the CEO announces quarterly bonus payouts. For users and IT folks alike, digital mush is maddening. Here's how to ensure your VoIP and real-time communications are crystal clear.

Removing latency and jitter from the user experience

The quality of the user experience is determined by the IT network that supports communications. When it comes to real-time communications, network jitter and latency are non-negotiable. Whether you're using your own private network or a provider's network service, high-quality VoIP and video connectivity require the following:

- Perfect in-sequence voice packet delivery
- Low latency
- Virtually no jitter
- Fast failover rates
- End-to-end service availability guarantees (SLAs)

Selecting the right network for video traffic: a connectivity guide

Today, there are many network connectivity options, making it easy to get confused about which type of access should support video communications. Here's a connectivity guide to help you put critical VoIP and video applications on the networks best suited to accommodate it.

- **BEST - Private Access:** These are the preferred, gold-standard for VoIP and video because of their unwavering stability. Preferably, critical and real-time services should traverse on private network architectures, which provide the highest levels of reliability and availability. This ensures your mission-critical IP traffic receives the predictable outcome customers expect. SLAs are considered the book of truth and can be used to compare any external network services used to support communications.
- **BETTER - Dedicated Internet Access (DIA):** These types of access are less expensive than private access, but they are also less reliable in comparison. Also, keep in mind that most network providers offering DIA service do NOT put detailed SLAs around jitter or latency. Customers will likely get a 99.99% availability and a mean-time-to-repair guarantee, but don't expect more. If your standard is nothing short of perfection, this option may disappoint your users.
- **FAIR to GOOD - Public Internet Access/Broadband:** Beware! Depending on how you configure broadband access, latency and jitter delays can be an issue. Many IT leaders are attracted to the low cost of broadband, forgetting to take into consideration that this is the most unreliable of the three primary types of network access. Transporting network traffic over long distances via broadband is particularly difficult. You may want to reserve this option only for communications that are regional (rather than global) or truly optional (rather than business critical).

Reaching perfection with tools and services

The process and capabilities for troubleshooting challenges and optimizing network performance are the keys to balancing bandwidth demands. These tools and services can accelerate VoIP and video success.

- **Software-Defined Network Platforms and SD-WAN:** Modern network technologies serve up deep performance intelligence, empowering administrators to pinpoint bandwidth-hungry applications and modify performance on the fly. Plus, they're access agnostic, meaning enterprises can customize access methodology for each application and make changes as needed without exorbitant fees.
- **Ubiquitous Global Coverage and Service:** With a unified network and the same quality of service around the world, the IT team can easily troubleshoot issues and efficiently serve a global enterprise.
- **Full Visibility into the Network Performance:** Real-time analytics dashboards should show where the bottlenecks are and expose any issues as it relates to voice and video packets.
- **Self-Service Controls:** Using centralized management via an online web portal, customers should be in control and have the option to make network optimization changes themselves or call on a managed service provider for help.
- **SLAs with Proactive Customer Notifications:** Providers should deliver on all service guarantees and monitor network performance, communicating any service quality issues proactively.

Recognizing a network built for video and VoIP

The clearest video conferences and VoIP calls are backed by global networks with the best quality of service. When the network delivers the following guarantees, it's likely designed to deliver on communications excellence.

- 100% in-sequence packet delivery
- 0% packet loss
- Less than 1 millisecond of jitter
- 99.999% network uptime



Additional resources

- [The Hidden Iceberg: Seven Metrics for Evaluating the Network Beneath Your Unified Communications Solution](#)
- [The Next Evolution of Unified Communications: Why Team Collaboration is the New Centerpiece](#)
- [Global UCaaS RFPs: The Five Question Approach Every CIO Should Use](#)
- [The Future is Now: How AI is Digitally Disrupting Enterprise Communication](#)

About Masergy

Masergy is the software-defined network and cloud platform for the digital enterprise. Recognized as the pioneer in software-defined networking, Masergy enables unrivaled application performance across the network and the cloud with Managed SD-WAN, UCaaS, CCaaS, and Managed Security solutions. Industry-leading SLAs coupled with an unparalleled customer experience enable global enterprises to achieve business outcomes with certainty.