How RingCentral Ensures Quality of Service for Business Communications

Quality of service

Cloud communications solutions deliver a variety of benefits for small and medium-sized business. These range from cost savings to support for mobile and remote workers to disaster prevention. However, first and foremost, a business phone system must deliver consistent and reliable quality of service (QoS), which includes carrier-class call quality.

Factors impacting QoS

On the internet and other IP (internet protocol) networks, communications like an email or voice call are broken up into small packets. The network reassembles these packets—into an email, voice call, etc.—as they arrive at their destination. When packets become delayed, dropped, arrive in the wrong order, or encounter network congestion (insufficient bandwidth), call quality can suffer.

Network delay or latency

A variety of factors in an IP network can impact the amount of time it takes for voice data packets to travel between the speaker and the listener. Two problems can arise when end-to-end delay or latency occurs in a voice network: echo and talker overlap.

Packet loss and out-of-order packets

IP networks cannot guarantee delivery of every packet, much less their order of arrival. Packets will be dropped under peak load conditions and during periods of congestion. When packet loss rises above a certain level, QoS can no longer be assured, and degradation of voice quality can occur.

Available bandwidth

Having plentiful bandwidth is unrealistic across a global network such as the internet. Higher levels of QoS require a cloud communications provider that uses techniques to minimize congestion loss in a network and ensure sufficient available bandwidth to support an application. Additionally, you need to ensure you have sufficient available bandwidth to and across your local network.
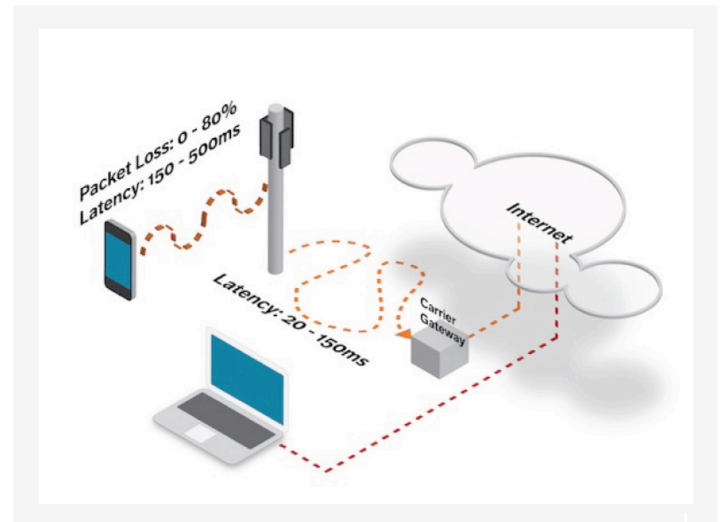
Optimizing your network to support high call quality

You can take a number of actions to ensure your network is optimized to support voice traffic and eliminate or minimize the factors above.

Test your bandwidth

To ensure you have available bandwidth to support voice quality, use a high-speed DSL, cable, or fiber-optic connection with dedicated upload and download bandwidth for voice of 90 Kbps or higher for each voice line you plan to run. Click the links below to test your internet connection:

- RingCentral VoIP capacity test (https://www.ringcentral.com/support/capacity.html)
- RingCentral VoIP quality test (https://www.ringcentral.com/support/qos.html)

Upgrade and configure routers and equipment

If the packets of an email or fax arrive late, the network buffers the traffic and reassembles the message with an imperceptible delay. However, in a voice call, delay is noticeable, so make sure you have a QoS-enabled router that prioritizes voice traffic over lower-priority data traffic, such as large downloads. Visit recommended routers for information on network design and recommended routers and their QoS settings. You may discover that VoIP will work reliably with your present connection and equipment or that you would benefit from an upgrade.

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About RingCentral

RingCentral is a leading provider of cloud-based global collaborative communications solutions. More flexible and cost-effective than legacy on-premise systems, RingCentral empowers today's mobile and distributed workforce to communicate, collaborate, and connect from anywhere, on any device. RingCentral unifies voice, video, team messaging and collaboration, conferencing, online meetings, and integrated contact center solutions. RingCentral's open platform integrates with leading business apps and enables customers to easily customize business workflows. RingCentral is headquartered in Belmont, California, and has offices around the world.

Contact us to get started.

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