

Zoom Phone

Architected for Reliability



Zoom unifies video conferencing, a modern cloud phone solution, group messaging, and software-defined video conference rooms into one easy-to-use platform. Our solution offers the best video, audio, and screen-sharing experience across Windows, Mac, Linux, iOS, Android, BlackBerry, Zoom Rooms, and H.323/SIP room systems such as Polycom and Cisco.

This guide will provide insight into Zoom's innovation and best-in-class architecture, which provides a seamless and unified end user experience for video, voice, chat, and collaboration.

Built from Experience

Zoom is the most reliable and innovative video conferencing solution available, largely because we have the world's most experienced engineering team in collaboration technology. Eric S. Yuan, Zoom's founder and CEO, is a web conferencing industry leader who was the heart and soul of the WebEx product from 1997 to 2011. Eric left WebEx in 2011 with an all-star, hand-picked engineering team to build the next generation of online video conferencing. Zoom's engineers have over 900 years of combined experience working on real-time collaboration software – the most in the industry – and their mission is to make video communications frictionless. Zoom's vast knowledge and experience that is recognized from a video conferencing experience has been applied to build the Zoom Phone platform.

Zoom's proprietary software was created with the future of video communications in mind. Zoom Phone is architected with this same video-first philosophy and delivers in the UCaaS market from a different angle, not wanting to build just another private branch exchange (PBX). Zoom has a full-stack engineering team with dedicated members for each layer of our architecture and each supported device. This distinctive approach allows our engineers to innovate faster and continue to grow a high-quality service that scales with ease.

Over **300,000** companies trust Zoom

94% of IT organizations would recommend Zoom

87% say Zoom has superior reliability

92% say Zoom has superior quality

techvalidate.com/product-research/zoom

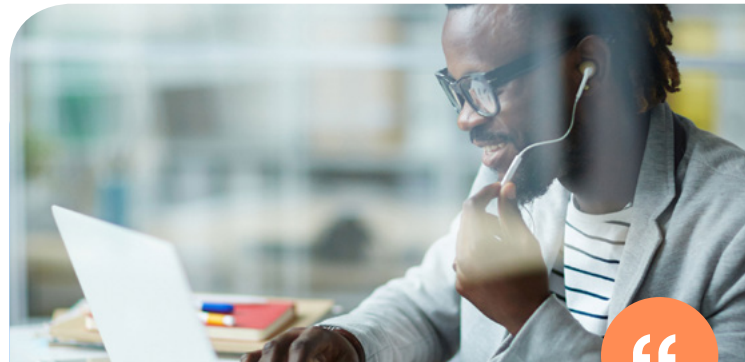
Innovation Creates the Difference in User Experience

Zoom's unique approach to the way we've architected our service means that Zoom has features that are innovative to the cloud PBX world while maintaining a video-first approach in the industry. Zoom Phone allows customers to provide the best Collaboration tools to their end users in one easy to use client.

Zoom Phones key areas of focus:

- Quality & Experience
- Ease of Use
- Core Features
- Innovation
- Manageability
- Migration

Designed to be just as easy to adopt and accessible as the rest of the Zoom experience, Zoom Phone has simplicity at its core. The end user experience is a single pane of glass, where users can seamlessly transition from a phone call to a meeting, without any disruptions or delays. Zoom's vision of delivering great meeting experiences for desktop, mobile, and conference rooms is the focus of the Zoom Phone architecture design.



"Zoom Phone is the innovative modern phone system of the future and exactly what we've all been waiting for. The unified app experience is easy for end users and we are excited to deploy it to our employees."

Steven Mandlebua
VP of business solutions



EAB

Architected for Quality and Reliability

From the ground up, Zoom Phone was built in the cloud, for the cloud, leveraging the same audio quality and application layer switching technology already in our meetings platform. Zoom's architecture has redundancy and resiliency built in to enable a highly available solution that also scales to meet even the largest of organizations needs.

Leveraging our experience of cloud architectures, we are able to deliver a holistic vision to an organization's collaboration needs. This includes the ability to not only support base PBX functionality, but also provide next generation collaboration features.

- | | |
|-----------------------------|--------------------------------|
| • Enhanced OPUS Codec | • Full Redundancy |
| • Elevate to Meeting | • Zoom Audio Processing |
| • Call Diagnostic Dashboard | • Forward Error Correction |
| • TLS 1.2 and SRTP | • Premise Peering |
| • Private Links to Carriers | • Outbound Only Firewall Rules |

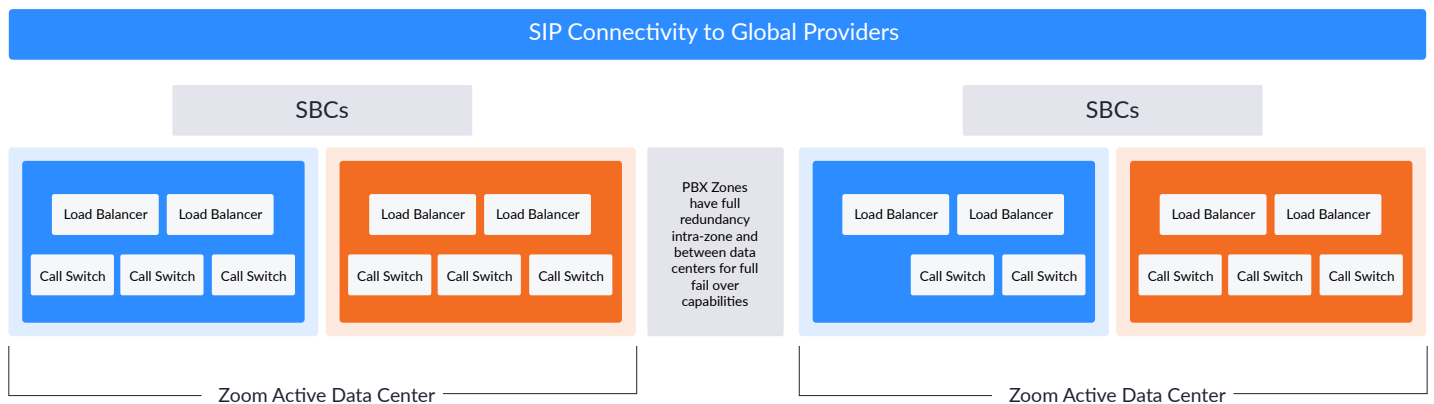


1,699 Total Call 96.76% Good Quality
192 Inbound 97.4% Good Quality
1,507 Outbound 96.68% Good Quality

Zoom has redundant Session Border Controllers (SBCs) in each data center securing client and carrier communications. These carrier-grade SBCs are capable of facilitating easy access from the smallest of customers to global organizations.

Load Balancers redirect SIP based communication to our CallSwitches to evenly distribute the call volume. This distribution enables a smooth experience for users even during peak registration and busy call hours.

CallSwitches are the core call control of the Zoom Phone Platform. These scalable components not only support base PBX functionality, but also facilitate telemetry data to Zoom’s enhanced dashboard and reporting as well as enable advanced features such as Elevate to Meeting.



The Zoom client leverages proprietary logic to monitor the client’s bandwidth, packet loss, latency and jitter, while also collecting the client’s CPU usage, memory and network I/O. This client technology actively monitors calls and makes real-time changes to overcome poor network conditions to provide superior quality and reliability for various network environments and different devices. Because of Zoom’s enhanced client, the system can operate well in an environment with up to 45% packet loss. All of this data is captured and presented to the Zoom Phone call diagnostic dashboard to allow administrators to see each calls statistics in real-time and from a historical perspective. Zoom rates each call with a Zoom Mean Opinion Score (MOS) and presents that data to the dashboard allowing administrators to “drill in” to the details of both good quality and poor quality calls down to the minute interval.

Globally Distributed Data Centers and Redundancy

Zoom has brokers and communications servers distributed among multiple interconnected data centers across the globe. We constantly evaluate our data centers and Internet Service Providers (ISPs) to optimize performance for our customers in regards to bandwidth, latency and disaster recovery isolation. Our data centers are situated in secure co-location facilities that are ISP carrier neutral and provide physical security, redundant power, and simultaneous access to top-tier ISP’s and

peering partners. They are built with fault-tolerant architecture with full redundancy and rapid failover capability. Aligned with our Zoom meetings strategy, Zoom Phone has redundant links from our providers into our global data centers. As Zoom Phone continues to expand to more geographies this same strategy will be replicated. If your organization requires additional locations outside of our footprint, Bring Your Own Carrier is available to support connectivity for local PSTN access in the most remote regions of the world. Zoom Phone also leverages the existing Zoom backbone to transport voice traffic between data centers around the world.

Capacity:

Zoom Phone maintains Zoom's vision of 50% capacity in all aspects of our infrastructure. As with all things Zoom Phone we align our capacity metrics with our existing meetings platform to accommodate our growing business and meet peak usage requirements.

Disaster Recovery:

Zoom Phone is setup in a multi-redundant fashion with Active/Active zones. All data centers are fully redundant with power, cooling, network carriers and SIP providers for virtually no risk of interrupted service. As Zoom Phone expands internationally, all data centers will be deployed in the exact same manner for predictable and scalable reliability.

Conclusion:

Zoom's innovative approach to transforming business communication and bridging the connection from voice to video has produced a modern communications solution with video, voice, conferencing, and messaging in one easy to use solution. End users appreciate the innovative features, ease of use, reliability and incredible video and audio clarity, while IT managers are assured that the solution is globally available and designed to scale with security and dependability all in one ecosystem.

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