

TECHNICAL GUIDE

Firewall Configuration:

BlueJeans Network Readiness

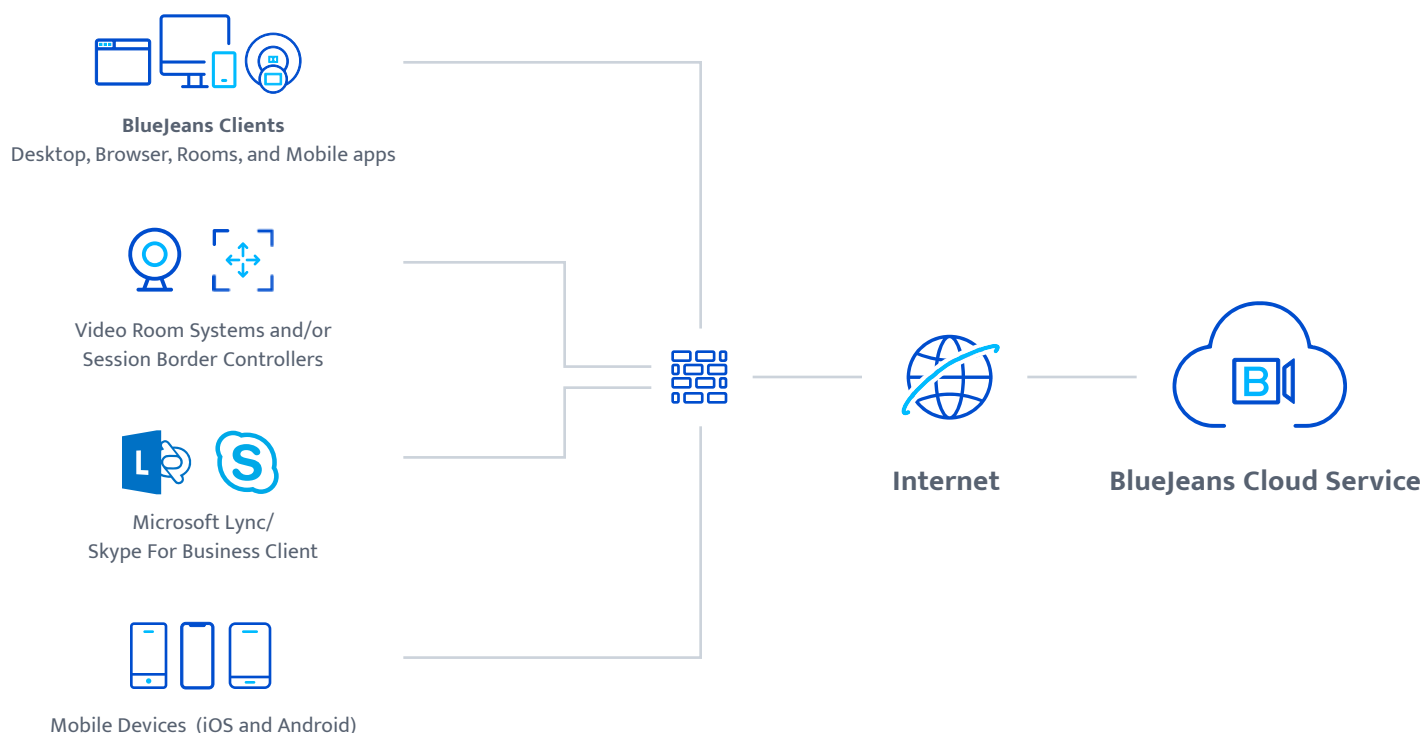
BlueJeans is a cloud-based video conferencing service that connects participants across a wide range of devices and conferencing platforms. BlueJeans supports desktop, web browsers, room systems (H.323 & SIP), mobile devices and other software-based clients. This document will provide recommendations on how to optimize your network to experience high-quality video meetings.

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Firewall Configurations and BlueJeans

BlueJeans was created as a dial-out “meet me” service, so you are not required to open your private network to allow inbound connections. The following diagram illustrates how BlueJeans uses Network Address Translation (NAT) to obscure outbound video traffic in order to keep endpoints safely contained behind the firewall. NAT allows a single device to act as an agent between the Internet (or “public network”) and a local (or “private”) network. This means that only a single, unique IP address is required to represent an entire group of computers. When NAT is not configured correctly it can lead to quality issues with video, audio and content sharing.



TCP/UDP Ports Used by BlueJeans

BlueJeans has several POPs distributed globally. The call will be automatically directed to the closest POP to the end point or media egress point. Audio and video traffic will likely be routed to any of the below IP ranges based on geo location. Hence, it’s important that firewall ports are opened against the entire IP range.

- 199.48.152.0/22
- 31.171.208.0/21
- 103.20.59.0/24
- 103.255.54.0/24
- 8.10.12.0/24
- 165.254.117.0/24
- 13.210.3.128/26
- 34.245.240.192/26
- 13.251.83.128/26

Ports Utilized by Endpoint Type

H.323 based room systems and SBCs

- Outbound TCP Port 1720 - H.225 Signaling for H.323
- Outbound TCP Ports 5000-5999 - H.245 Call Control for H.323
- Outbound UDP Ports 5000-5999 - RTP Media

SIP based room systems and SBCs:

- Outbound TCP Port 5060 - SIP Signaling
- Outbound TCP Port 5061 - SIPS (TLS) Signaling
- Outbound UDP Ports 5000 - 5999 - RTP Media

BlueJeans Desktop, Browser, Room and Mobile Apps:

- Outbound TCP Port 443, 5061 - Call Setup Signaling
- Outbound UDP Ports 5000 - RTP Media

Microsoft Lync/Skype For Business Client:

- Outbound/Inbound TCP Port 5061 - Lync federation and SIP/TLS connection.
- Outbound/Inbound UDP Ports 50000-59999 - RTP Media
- Outbound/Inbound TCP Ports 50000-59999 - RTP Media

Note: If your web traffic routes via an HTTP Proxy, then please create an exception to allow network traffic to route to ***.bluejeans.com** and ***.bjn.vc**

If you are using **BlueJeans Rooms**, please make sure these domains are also allowed: ***.bjn.sh**, ***.dolbyvoice.com**, ***.pubnub.com**, and ***.pndsn.com**

Ensure that your firewall does not block **Akamai** or **AWS**. Blocking one or both can cause instability with certain features in our services.

Session Border Controller Considerations

For large video room deployments, enterprises typically deploy Session Border Controllers (SBCs). These offer several benefits including:

- Assistance in Network Address Translation (NAT)
- Hiding internal IP addressing scheme
- Normalizing protocol exchanges
- Converting call signaling protocols

It's important to note that the video endpoints will send all external traffic through the SBC, which will often reside in a company's demilitarized zone (DMZ). When integrating with BlueJeans, keep in mind your SBC DMZ locations in relation to the BlueJeans data center locations (San Jose, CA; Ashburn, VA; Amsterdam, Netherlands; Singapore; Sydney, Australia). Ensuring external calls are being placed through the SBC that has the best path to the local BlueJeans data center will help minimize any network latency, jitter and packet loss.

Bandwidth Requirements

The maximum bandwidth that BlueJeans software clients will utilize is 3Mbps. The BlueJeans software is designed to dynamically adapt based on current network conditions causing the actual amount of bandwidth to vary. If the network is congested, the bitrate and video resolution will automatically be reduced until the network conditions improve.

If you have further questions or concerns about the bandwidth requirements or network readiness for the BlueJeans service, please feel free to contact us at support@bluejeans.com