

# Firewall Configuration BlueJeans Network Readiness



## Introduction

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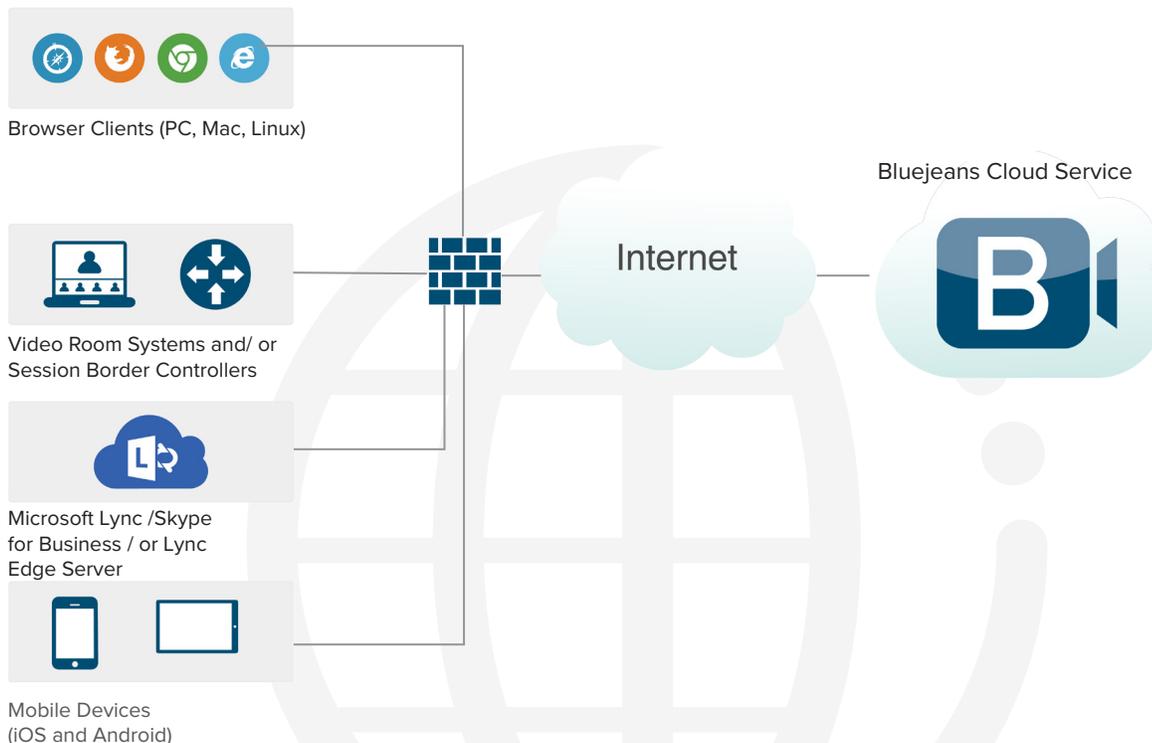
BlueJeans is a cloud-based video conferencing service that allows all parties to connect easily using their platform of choice. BlueJeans supports web browsers, room systems (H.323 & SIP), mobile devices, Microsoft Lync, Cisco Jabber, other software-based clients, and phone connections. This document will take you through the process of optimizing your network for all of these different endpoints to connect and experience a high-quality video meeting.

Topics covered include:

- Firewall Configurations and BlueJeans
- Ports Utilized by Endpoint Type
- Web Browser Considerations
- Session Border Control Considerations
- Bandwidth Requirements

## Firewall Configurations and BlueJeans

In many customer environments, video endpoints are behind network firewalls to help mitigate intrusion. This is one of the reasons BlueJeans was created as a dial-out “meet-me” service. There is no requirement to open your private network to allow inbound connections. Keep your endpoints safely contained behind your firewall that will NAT all your outbound video traffic.



BlueJeans Network uses the following TCP and UDP ports with the service. Make sure to open firewall ports against BJN’s 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

Note: 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/video traffic will likely be routed to any of the above IP ranges based on geo location. Hence, it’s important that firewall ports are opened against entire IP range.

## Ports Utilized by Endpoint Type

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### 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

### Browser and iOS app:

- Outbound TCP Port 443, 5061 - Call Setup Signaling
- Outbound UDP Ports 5000-5999 - RTP Media

### Lync and Skype for Business users:

- 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

#### Notes:

\*Some firewalls, such as Palo Alto Networks, prefer to filter network traffic based on the Fully Qualified Domain Name (FQDN). If this applies to your firewall configuration please use the following FQDN in order to connect to BlueJeans: `bjn.vc`

\*Please make sure that Akamai and AWS are not being blocked by your firewall. Blocking them might cause instability with our services

## Web Browser Considerations

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A lot of enterprises have deployed web proxies for additional security for browsers connecting to the Internet. Because of this BlueJeans has added support for not only direct browser connections, but also for browser connecting through a Proxy. Please note that if a proxy is setup to restrict certain traffic, you will need to create an exception to allow web traffic to route to `*.bjn.vc`

## Session Border Controller Considerations

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

- Assist in NAT translation
- Hide internal IP addressing scheme
- Normalize protocol exchanges
- Convert 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 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

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BlueJeans supports a wide range of resolutions and call speeds. Details around these can be found here. The max bandwidth supported with BlueJeans is 1.6 Mbps (typically we will only see room systems reach this level). The recommended minimum bandwidth is 384 kbps. Typically the average bandwidth from browser endpoints will be approximately 1 Mbps. Keep in mind—resolutions, speeds, and the resulting bandwidth will scale dynamically based on current network conditions.

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 [info@bluejeans.com](mailto:info@bluejeans.com) and we will be happy to assist.