

# BlueJeans

## **Relay**

Getting Started



## What Is Blue Jeans Relay?

**Blue Jeans Relay** is a software solution that integrates customer-premise components and applications with the Blue Jeans cloud.

**Relay Touch**, the first solution powered by Blue Jeans Relay, integrates calendar applications, conference room systems, and tablets to make joining a Blue Jeans meeting easy and automatic.

Participants can touch to join meetings from most H.323- and SIP-based conference room systems by using the Relay Touch app or room system's built-in calendar, with no need to dial, pair, or enter a meeting ID.

## Components of Relay

Deploying Relay involves three components:

The **Listener Service** is an on-premise program which controls your Endpoints on your behalf. It connects to the hosted Relay server.

Your **Endpoints** will be provisioned in the Relay server with network and calendar information.

Tablets in conference rooms will show meetings and allow single-tap joining with the **Relay Touch** app. Alternately, meetings can be pushed to supported Endpoints' built-in calendars.

## **Signing Up for Relay**

To start using Relay, you will need to have Relay enabled on your Blue Jeans account.

Contact your Blue Jeans Account Manager to sign up for Relay.

## What Do I Need to Get Started?

In addition to your Relay credentials, you will need:

- › a [host operating system](#) on which to install the Listener Service on your network
- › access to configure your [Google Calendar](#), [Exchange](#), or [Office 365](#) calendar server
- › a compatible video conferencing [Endpoint](#)

To join meetings from a separate tablet instead of from the Endpoint, you will also need

- › an Android 4.2 or later tablet on which to install the [Relay Touch](#) app, or an iPad running iOS 10 or later on which to install the [BlueJeans Rooms](#) app

Refer to [Requirements](#) for more information.

# 1 Listener Service Requirements

The Listener Service is a Java program, and can run in a variety of operating systems, including

- › Debian/Ubuntu Linux
- › Red Hat/Fedora/CentOS Linux
- › Windows Server 2008 or later

Java is required, and JRE 8–12 are the recommended versions. Both Oracle and OpenJDK distributions are supported. The Oracle JRE requires the [Unlimited Strength Jurisdiction Policy Files](#). On Linux, you can install the `openjdk-8-jre-headless` or similar packages.

A 1.5GHz CPU and at least 1GB RAM is recommended. You can use a physical machine, a virtual machine, or even a Raspberry Pi!

## 2 Listener Service Installation & Upgrade

Once your host OS is set up, download the Listener Service installer from the [Blue Jeans Downloads page](#).

Unzip it, then run the installation commands for your OS:

### Debian or Ubuntu

```
sudo dpkg -i listenerservice.deb
/opt/listenerservice/setup.sh
sudo service listenerservice restart
```

### Red Hat, Fedora, or CentOS

```
sudo rpm -Uvf listenerservice.rpm
/usr/local/listenerservice/setup.sh
sudo service listenerservice restart
```

### Windows

Temporarily turn off your anti-virus program.

Run listenerservice.exe as an administrator.

### Java executable JAR

Unpack listenerservice.jar and setup.sh to a directory.

After [configuration](#), start the service by running

```
java -jar listenerservice.jar
```

### Upgrading

Download the installer and run the above installation commands. It's a good idea to back up **private.der** and **config.properties** from your installation directory.

## **3 Listener Service Enhanced Encryption**

Relay can optionally use Public Key Encryption to secure your Endpoint passwords. Only you will be able to read these passwords, because your private key will never leave your LAN host.

The Listener Service installers will offer to set up Enhanced Encryption for you, which will automatically create your private key.

Later, if you choose to install additional Listener Services, and you're already using Enhanced Encryption, then you must provide that same private key file to each installer.

Be sure to keep a secure backup of your private key! Don't lose it or let it fall into the wrong hands.



## 4 Listener Service Configuration Tips

### Location

Listener Services should be located close (in network terms) to the Endpoints they will control. For multiple geographies, it is best to host a Listener Service in each geography, and set the Endpoints to use the closest one.

### Exchange Integration

When setting up multiple Listener Services in a Microsoft Exchange environment, enable Exchange polling only on the Listener Service (or cluster, see below) closest to Exchange for optimal performance. If multiple Listener Services poll multiple Exchange servers, it is imperative that all Exchange servers return the same calendar data.

### Alternative Transport

The Listener Service makes brief outbound connections on port **443** (HTTPS) and persistently connects to the Relay server on a port in the range **5671–5679** (AMQP over TLS) or **443** (STOMP over WebSocket), depending on which outbound ports are open. To manually specify a transport, set up the Listener Service normally, then

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manually edit the **config.properties** file and add one of:

```
transport=webstomp  
transport=amqp
```

Save the file, then restart the Listener Service.

### Clustering

For high availability and load balancing, the Listener Service may be deployed in clusters where each Listener Service is active and shares the work load. If one stops working, the others continue.

To the Admin UI, each cluster appears as a single Listener Service. All Listener Service instances in a cluster must be configured identically, and they will share a single Listener Service ID.

To set up a cluster, install the Listener Service on each host in the cluster. After configuring the first one as a new Listener Service using the setup program, configure the others, but choose the name of the existing Listener Service when prompted instead of creating a new one.

Alternatively, **config.properties** may be copied from the first host to the others. Always restart the Listener Service after making any changes to config.properties.

## 5 Endpoint Requirements

Relay has been verified on these Endpoints.

- › Avaya Scopia XT5000
- › Cisco/Tandberg, excluding CTS
- › Lifesize Express; Icon 400, 600; Room; Team
- › Polycom HDX, VSX; RealPresence Group, Debut; Trio; G7500; Studio X
- › Sony IPELA PCS-XG80
- › StarLeaf GT Mini 3330
- › Yealink VC800

Refer to [Requirements](#) for more details, including verified models, usage notes, and peripheral compatibility. To provision your Endpoint, you will need to know its

- › IP address or host
- › username and password
- › manufacturer and model
- › calendar information (see the [Google Calendar](#), [Exchange](#), and [Office 365](#) setup guides)

## 6 Endpoint Provisioning

In the [Relay admin interface](#), go to Endpoints and click the **+ add** button.

Pick a descriptive **Name** and select the **Listener Service** you provisioned.

Set the **Control Protocol** to the type of your Endpoint.

Fill in the **IP Address**, **Username**, and **Password** of your Endpoint.

Set the **Calendar ID** and **Calendar Type** according to the [Google Calendar](#), [Exchange](#), or [Office 365](#) setup guide.

You should leave the other fields at their default values unless you need to deal with a specific issue.

Press the save button, and you should be able to use the **Join meeting** link to dial the Endpoint into a Blue Jeans meeting. Type in a Meeting ID and Passcode, and see if the call connects.

## 7 Joining Meetings from an Endpoint

Using Relay, scheduled meetings can be displayed and joined from the built-in touchscreens and on-screen displays of certain Endpoints:

- › Avaya Scopia XT<sup>1</sup>
- › Cisco, excluding CTS
- › Lifesize Express; Icon 400, 600; Room
- › Polycom HDX; RealPresence Group, Debut; Trio; G7500; Studio X<sup>2</sup>

To activate, select an Endpoint with one of these Control Protocols, and enable **Push Meetings To Endpoint**.

If you have another system managing your Endpoint, such as TMS or UVC Manager, you should disable its calendar scheduling or management features for this Endpoint to avoid scheduling conflicts with Relay.

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<sup>1</sup> Requires connection from Endpoint to Listener Service on ports 3336 and 5060–5061.

<sup>2</sup> Requires connection from Endpoint to Listener Service on port 443 (RealPresence Group, G7500, Studio X) or 8443 (all others). HDX requires Polycom Touch Control.

## 8 Joining Meetings from the Tablet App

For Endpoints that cannot display scheduled meetings from Relay, you can install the Relay Touch app on an Android tablet or iPad in the conference room.

Relay Touch displays the list of scheduled meetings and allows the user to join with a single tap, mute/unmute the Endpoint's microphone, and hang up.

To set up Relay Touch, you will need a tablet with at least Android 4.2 Jelly Bean or iOS 10. A wifi internet connection is required. A charging cable and security enclosure are recommended.

To install the app, search for  **Relay Touch** on the Play Store or  **BlueJeans Rooms** on the App Store.

Log in to the app with your Relay username and password. If you don't have them, go to the [Relay admin interface](#). In the top-right corner of the Relay interface, click your enterprise name. From here, you can get your enterprise Username and set a Password to log in to Relay Touch.

## 9 Tablet Configuration

Once the Relay Touch app is installed, start the app and log in with your Relay username and password.

Pair the tablet with an Endpoint, either by choosing an existing one or provisioning a new one. Once you have chosen the Endpoint, you can dial a test call.

If you are provisioning a new Endpoint, set up calendar integration using the [Relay admin interface](#).

Scheduled meetings for the Endpoint should appear. If the calendar invitation contains a Blue Jeans meeting URL in the description or location, the meeting icon will turn blue, and you can tap it to join instantly. Meetings displayed are limited to the last 30 minutes through the next 14 hours.

To reconfigure the app later, tap the tablet's menu button (☰ or ⋮) or long-press the back button, then tap Settings.

## 10 Endpoint Bulk Uploading

The [Relay admin interface](#) provides for bulk inserts and updates of Endpoints via a CSV file. To use this feature, click the “bulk upload” link from the Endpoints section. Follow the steps that appear. You’ll first download a CSV containing your existing endpoints, or one with only headers if you haven’t added any endpoints yet.

Just as with Endpoint provisioning, most of the time you’ll leave the port, signalingprotocol, dialstyle, addressstyle, and customdata fields blank/empty.

When adding a new endpoint, you will also leave the id field blank. To leave a password unchanged when modifying an endpoint, leave the password field blank. To use an empty password when adding a new endpoint, leave the password field blank. Remember, you can always change the password using the Relay administrative site as well.

Several of the fields have only certain values that are



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permitted; notably controlprotocol, signalingprotocol, dialstyle, addressstyle, and calendartype. Valid values can be found in the [API documentation for Endpoint](#). These exact values must be used, or CSV uploads will fail. When in doubt, you can create a “dummy” endpoint using the web form, and then find it as an example in the CSV file that you download in the first step.

When making edits to existing endpoints, be sure to leave the id field intact.

# 11 Health Monitoring

You can monitor the health of the Relay API server by sending an HTTPS GET request to

`https://relay.bluejeans.com/api/system/health`

The response status code will be **200** if all services are OK, and **503** otherwise. See the [system.getHealth API documentation](#) for more details.

You can remotely monitor the health of your Listener Services by sending an HTTPS GET request to

`https://relay.bluejeans.com/api/system/listenerhealth`

with your Relay username and password in Basic Auth. Inspect the JSON response for health information. See the [system.getListenerHealth API documentation](#).

You can locally monitor the health of your Listener Services by opening a socket connection to your Listener Service host on port 8880. It will immediately echo **OK** if the service is running and connected to the Relay server, and **FAIL** otherwise.