



BlueJeans Rooms with Dolby Conference Phone version 4.3

Advanced Configuration Guide

28 August 2019

Notices

Copyright

© 2019 Dolby Laboratories. All rights reserved.

Dolby Laboratories, Inc.

1275 Market Street
San Francisco, CA 94103-1410 USA
Telephone 415-558-0200
Fax 415-645-4000
<http://www.dolby.com>

Trademarks

Dolby and the double-D symbol are registered trademarks of Dolby Laboratories.

The following are trademarks of Dolby Laboratories:

Dialogue Intelligence™	Dolby Theatre®
Dolby®	Dolby Vision™
Dolby Advanced Audio™	Dolby Voice®
Dolby Atmos®	Feel Every Dimension™
Dolby Audio™	Feel Every Dimension in Dolby™
Dolby Cinema™	Feel Every Dimension in Dolby Atmos™
Dolby Digital Plus™	MLP Lossless™
Dolby Digital Plus Advanced Audio™	Pro Logic®
Dolby Digital Plus Home Theater™	Surround EX™
Dolby Home Theater®	

All other trademarks remain the property of their respective owners.

Patents

THIS PRODUCT MAY BE PROTECTED BY PATENTS AND PENDING PATENT APPLICATIONS IN THE UNITED STATES AND ELSEWHERE. FOR MORE INFORMATION, INCLUDING A SPECIFIC LIST OF PATENTS PROTECTING THIS PRODUCT, PLEASE VISIT <http://www.dolby.com/patents>.

Contents

1 Introduction.....	5
1.1 About this guide.....	6
1.2 New in this version.....	6
1.3 Related documentation.....	6
1.4 Documentation feedback.....	6
2 Network preparation.....	7
2.1 Hardware requirements.....	8
2.2 Architectural overview.....	8
2.3 Firewall requirements.....	10
2.4 Bandwidth requirements.....	11
2.5 Configuring 802.1X.....	11
2.5.1 Uploading a new CA certificate.....	12
2.6 Configuring Network Time Protocol (NTP).....	13
2.7 Enabling RTCP for Dolby codecs.....	15
2.8 Proxy configuration.....	15
2.8.1 Specifying a proxy configuration with a PAC URL.....	16
2.8.2 Specifying a conferencing app-specific proxy server.....	17
2.9 VLAN configuration.....	18
2.9.1 Disabling voice LLDP VLAN autodiscovery.....	18
2.9.2 Entering VLAN information manually.....	19
2.10 DNS configuration.....	19
2.10.1 Manually overriding DHCP assigned DNS settings.....	19
2.11 IP PBX configuration.....	20
2.12 LDAP configuration for a corporate directory.....	20
3 Plug and play setup.....	21
3.1 Plug and play setup requirements.....	22
3.2 Plugging in and setting up the phone automatically.....	22
4 Local setup.....	24
4.1 About local setup.....	25
4.2 Dolby Conferencing Console preparation.....	25
4.3 Configuring local setup.....	25
4.4 802.1X deployment with Dolby Conferencing Console.....	28
4.5 Setting the BlueJeans Rooms with Dolby Conference Phone configuration parameters.....	28
5 Troubleshooting.....	30
5.1 Plug and play setup issues and solutions.....	31
5.1.1 Plug and play setup error messages.....	31
5.1.2 Access to *dolbyvoice.com is blocked.....	31
5.2 No Audio Detected screen displays on the BlueJeans Rooms with Dolby Conference Phone.....	32
5.2.1 Troubleshooting VLAN-related networking issues.....	33

5.2.2 Troubleshooting 802.1X-related networking issues.....	34
5.3 Blue LED halo turns on for 10 seconds after setup, then turns off.....	34
5.4 Retrieving log files.....	35
6 Support information.....	36
6.1 Reporting an issue.....	37
6.2 Support contacts.....	37
Glossary.....	38

1

Introduction

Deploying the BlueJeans Rooms with Dolby Conference Phone is a multi-step process that may involve preparing your network, Dolby Conferencing Console, or your provisioning server, and configuring the BlueJeans Rooms with Dolby Conference Phone conferencing app.

- [About this guide](#)
- [New in this version](#)
- [Related documentation](#)
- [Documentation feedback](#)

1.1 About this guide

This document provides advanced instructions for configuring the Dolby Conference Phone to work with the BlueJeans Rooms with Dolby Conference Phone solution. Use this document to guide you through the deployment process and ensure a successful and timely deployment at your site.

This guide is intended for sales engineers and IT groups requiring advanced configuration for local setup to address:

- Complex network environments
- The need to provision multiple devices and scale
- The ability to control firmware application provisioning

Before you begin deployment, make sure that you have copies of the related documentation. You may need to refer to other documentation for more information and specific instructions.

1.2 New in this version

Dolby Conference Phone software (version 4.3) does not include any updates to this document.

1.3 Related documentation

The documentation for the Dolby Voice product family consists of software development kit (SDK) documentation, release notes, and guides. Several of these guides are especially useful for users of the Dolby Conference Phone.

The *Dolby Conference Phone Administrator's Guide* describes how to install and administer the Dolby Conference Phone.

The *Dolby Conference Phone User's Guide* describes how to use the basic and advanced phone features, and how to customize the phone.

The *Dolby Conferencing Console Open Source Software Guide* describes third-party open-source software that is incorporated into the Dolby Conferencing Console software.

The *Dolby Conferencing Console Operations and Management Guide* describes how to install the Dolby Conferencing Console software and use it to administer Dolby Conference Phones.

For BlueJeans Rooms with Dolby Conference Phone documentation, see the BlueJeans Support website (<https://support.bluejeans.com/knowledge/dolby-rooms>).

1.4 Documentation feedback

If you have comments or feedback about this documentation, send us an email at dolbyvoicedocs@dolby.com.

2

Network preparation

Before deploying the BlueJeans Rooms with Dolby Conference Phone, you need to prepare your network.

- [Hardware requirements](#)
- [Architectural overview](#)
- [Firewall requirements](#)
- [Bandwidth requirements](#)
- [Configuring 802.1X](#)
- [Configuring Network Time Protocol \(NTP\)](#)
- [Enabling RTCP for Dolby codecs](#)
- [Proxy configuration](#)
- [VLAN configuration](#)
- [DNS configuration](#)
- [IP PBX configuration](#)
- [LDAP configuration for a corporate directory](#)

2.1 Hardware requirements

When preparing your BlueJeans Rooms with Dolby Conference Phone, make sure that your hardware meets the minimum system requirements.

The BlueJeans Rooms with Dolby Conference Phone solution consists of a computer, Dolby Conference Phone, and camera. Your computer needs to meet the following minimum requirements:

- Intel Core i5 processor
- 2.3 GHz CPU
- 8 GB RAM
- Microsoft Windows 10

For more information about system requirements and recommendations, see <https://support.bluejeans.com/knowledge/huddle-hardware>.

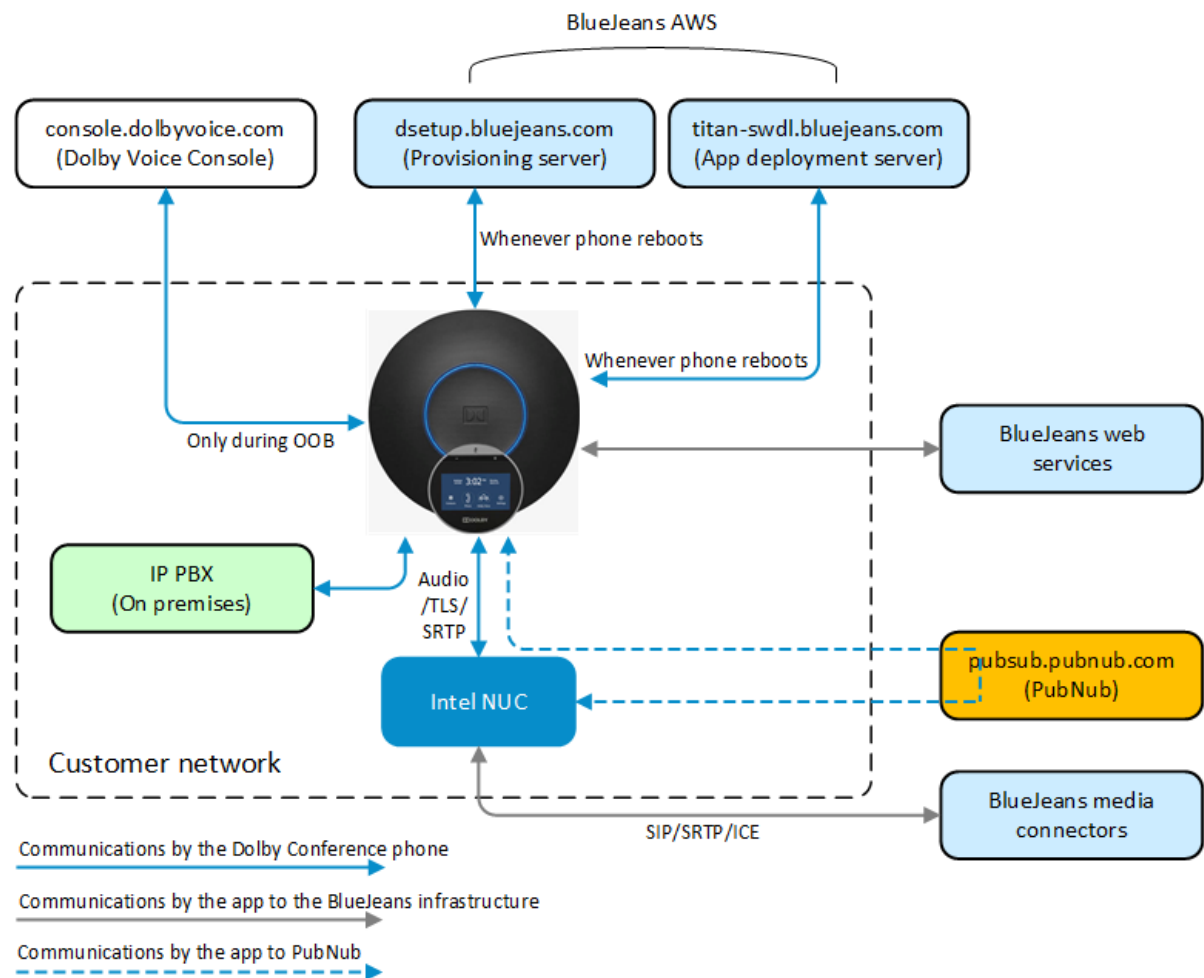
2.2 Architectural overview

Before you set up the BlueJeans Rooms with Dolby Conference Phone, review the following architectural diagrams to learn about the essential components and their relationships to one another.

The following figures show two basic architecture options for configuring your BlueJeans solution:

- Plug and play setup
- Local setup

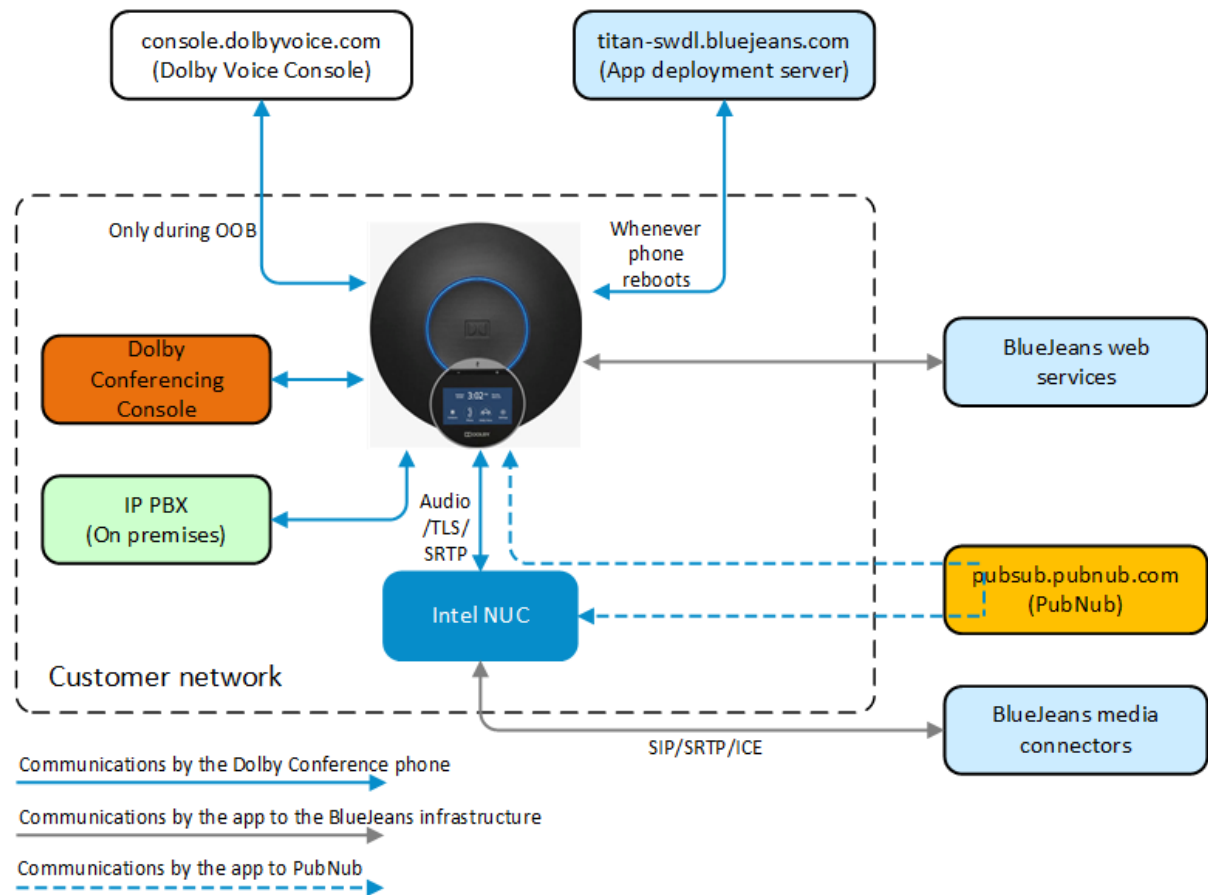
Figure 1: BlueJeans plug and play setup architecture



Plug and play setup provides the following benefits:

- It is ideal for small-scale and trial deployments.
- Setup is easy and gets you started quickly.
- BlueJeans manages the firmware that runs on the Dolby Conference Phone.
- You can configure IP private branch exchange (PBX) settings using the BlueJeans Command Center or the phone web interface.

Figure 2: BlueJeans local setup architecture



Use local setup when:

- You are managing a medium-to-large-scale deployment, especially if integrating with IP PBX.
- You require more control over the phone. (For example, you can use the Dolby Conferencing Console for bulk deployment of phones and to manage device pools, firmware upgrades, certificates, and LDAP credentials.)
- You want operational insights for both IP PBX and BlueJeans usage.

2.3 Firewall requirements

If you have a firewall, the policy must be configured to meet BlueJeans Rooms with Dolby Conference Phone requirements.

Connect to the BlueJeans cloud server using the recommended Transmission Control Protocol (TCP)/User Datagram Protocol (UDP) ports, and open the firewall ports against the recommended IP range.

For more information about configuring firewalls for BlueJeans, see <https://support.bluejeans.com/knowledge/tcp-udp-ports>.

Related information

[Plug and play setup requirements](#) on page 22

2.4 Bandwidth requirements

The following table describes the bandwidth and other network measurements required for adequate call quality when implementing the BlueJeans Rooms with Dolby Conference Phone.

Table 1: Call quality measurements

Measurement	Requirements
Bandwidth	A minimum of 384 kilobits per second (kbps), for both upload and download, is required. 720p high definition (HD) resolution requires at least 1024 kbps (1 Mbps) upload and download bandwidth, and a 720p-capable webcam.
Jitter	Variations in delay greater than 40 ms can result in poor video quality.
Packet loss	Loss greater than 1 percent can result in poor video quality.
Round-trip	Results greater than 150 ms can result in poor video quality.

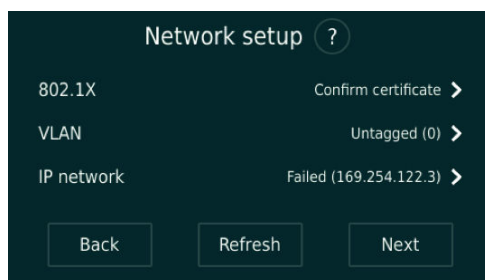
If tests indicate that your network does not meet the minimum requirements, or if you have persistent issues with jitter, packet loss, or round-trip times, contact your IT engineer or broadband service provider.

2.5 Configuring 802.1X

If your network requires 802.1X during the network setup portion of the setup wizard, you must complete 802.1X setup.

About this task

Depending on the 802.1X configuration, you may need to accept the authentication server certificate. The setup wizard guides you through the process and detects many of the settings for you, including your virtual LAN (VLAN) and IP network settings. In this figure, the Dolby Conference Phone has detected those settings on initial setup.



If you see this screen, you can configure some 802.1X options directly in the wizard.

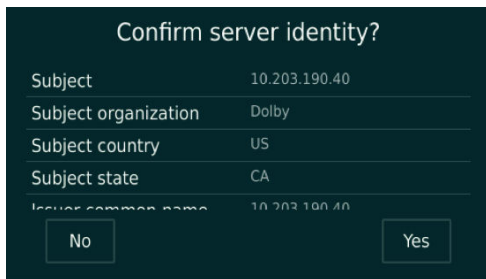
You can also upload certificates to the Dolby Conference Phone using the phone web interface.

Note: If you use a self-signed authentication certificate, or a certificate authority that is not in the default Dolby Conference Phone trusted certificate authority list, we recommend that you use local setup with the Dolby Conferencing Console for 802.1X. The Dolby Conferencing Console makes it easier to distribute the certificate. For more information, see [802.1X deployment with Dolby Conferencing Console](#) on page 28.

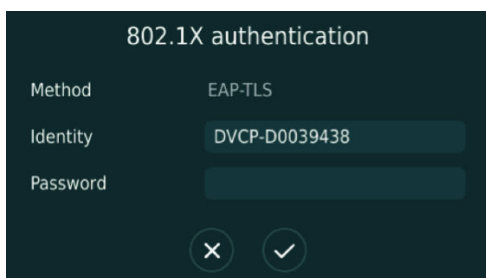
Note: Configure the Intel Next Unit of Computing (NUC) for 802.1X as you would other PCs on your network that require 802.1X authentication. For configuration information, see the Microsoft Windows 10 documentation.

Procedure

1. If a public key infrastructure-based authentication method is selected by the authentication server, you are prompted to review the server certificate information.



2. Enter the user name and password when the server requires credentials for authentication. Depending on the authentication server configuration, you may be prompted to enter authentication credentials before you accept the server certificate.



2.5.1 Uploading a new CA certificate

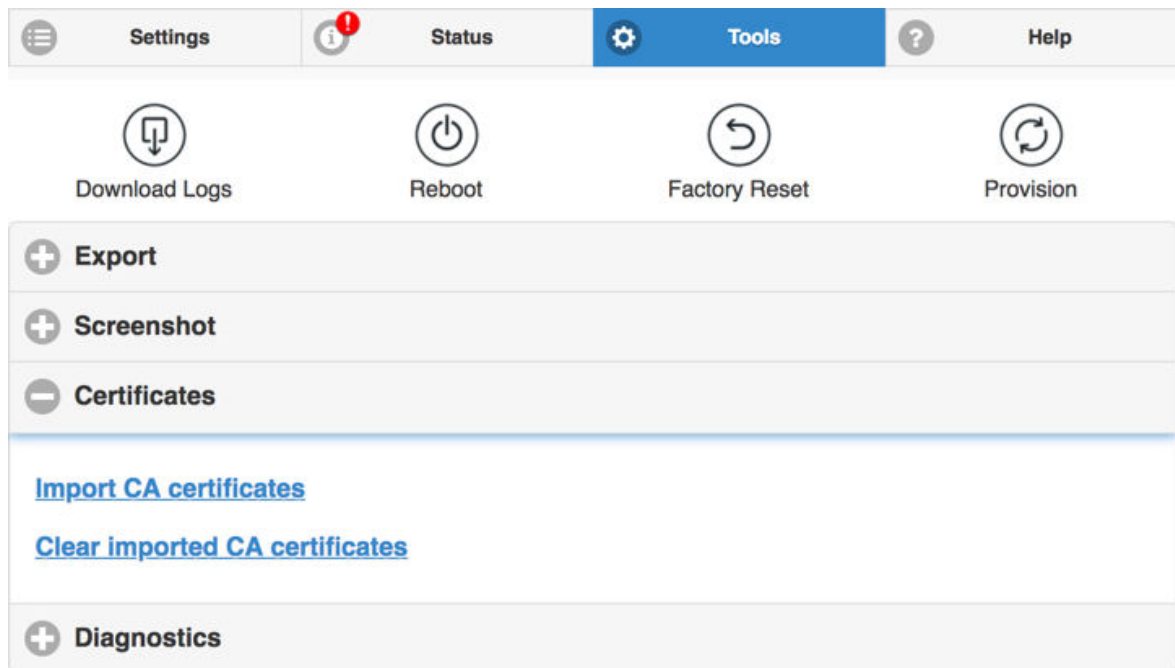
You can change the CA certificate store using the Dolby Conference Phone web interface.

About this task

Use this procedure in cases where Dolby Conferencing Console is not available or you do not have access to a provisioning server. You must make sure the Dolby Conference Phone is configured in a network that permits you to connect to the Dolby Conference Phone web interface from your computer. The Dolby Conference Phone accepts *.pem* and *.cer* file types.

Procedure

1. Log in to the Dolby Conference Phone web interface.
For instructions, see the *Dolby Conference Phone Administrator's Guide*.
2. Select **Tools > Certificates > Import CA certificates**.



3. A dialog box displays, from which you can navigate to the certificates on your system.

Results

When the upload is complete, the number of certificates uploaded is displayed.

2.6 Configuring Network Time Protocol (NTP)

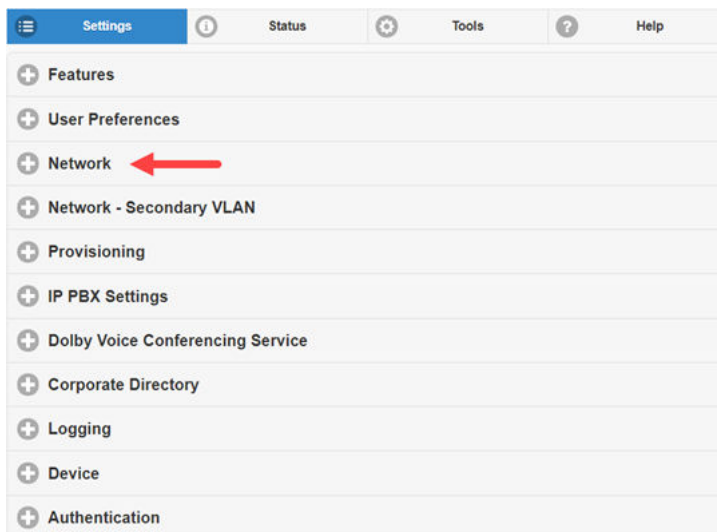
The Dolby Conference Phone uses a time server to synchronize the clock. You must specify Network Time Protocol (NTP) servers in the network settings so that you can use features like the calendar and other functionality dependent on accurate time and date.

About this task

We recommend that the Dolby Conference Phone and the Intel Next Unit of Computing (NUC) reference the same NTP server. Default NTP servers are available. However, if your network blocks access to NTP servers on the Internet, you must configure a local NTP server.

Procedure

1. Click the + to open the network settings parameters.



2. Click the + to open the **NTP** section.

A screenshot of the 'Network' configuration page. The page title is 'Network' with a minus sign icon. The configuration is organized into sections. The first section is 'DHCP Network Configuration Method', which is set to 'On'. Below this are input fields for 'IP Address' (10.112.102.108), 'Subnet Mask' (255.255.254.0), and 'Default Gateway' (10.112.102.1). The 'Override DHCP assigned DNS Settings' option is set to 'Off'. Below this are input fields for 'Domain Name' (dolby.net), 'DNS Server Address' (10.140.21.5), and 'Alternative DNS Server Address' (10.140.21.6). The next section is '+ IEEE 802.1X', which is currently collapsed. The final section is '- NTP', which is expanded to show two input fields: 'Primary NTP Server Address' (0.pool.ntp.org) and 'Secondary NTP Server Address' (1.pool.ntp.org).

3. Enter the server addresses provided by your local system administrator.

What to do next

For more information about configuring NTP, see the *Dolby Conference Phone Administrator's Guide*.

2.7 Enabling RTCP for Dolby codecs

Dolby Conference Phone supports RTP Control Protocol (RTCP) for standard codecs by default, but this support for Dolby codecs needs to be enabled. Set the RTCP parameter to enable BlueJeans audio-only mode.

About this task

You can perform this procedure from the phone web interface or from Dolby Conferencing Console.

Procedure

1. From the phone web interface:
 - a) On the **Settings** tab, navigate to **Dolby Voice Conferencing Service > Server > Enable RTCP in conference calls**.
 - b) Turn **Enable RTCP** on.


This option controls the `Dvms.Server.EnableRTCP` parameter.
2. Alternatively, from Dolby Conferencing Console:
 - a) From the home screen, select the device pool that contains the device with the parameters you wish to edit.
 - b) Select the device you wish to edit.
 - c) In the left navigation bar, click the edit button.

The **Device configuration** screen displays.
 - d) Navigate to **Dolby Voice Conferencing Service > Server > Enable RTCP in conference calls**.
 - e) Drag **Enable RTCP in conference calls** to the device configuration.

The `Dvms.Server.EnableRTCP` parameter appears in the device configuration.
 - f) Set this parameter to **ON**.

2.8 Proxy configuration

Some network configurations and phone software require that you specify a proxy server.

 **Note:** Depending on your network settings and phone software version, this procedure may not be necessary. For a complete description of this functionality, see the *Dolby Conference Phone Administrator's Guide*.

The information listed in this table is required.

Attributes	Description
Proxy server address	IP address.
Proxy server credentials: User name and password	If the proxy server requires devices to authenticate before being allowed access, then a user name and password are required.

In many cases, networks require clients to go through a proxy server to communicate with Internet services. The phone supports the Hypertext Transfer Protocol (HTTP) proxy in these scenarios:

- The phone downloads its configuration and firmware from the provisioning server or the Dolby Conferencing Console.
- The phone downloads the conferencing app from the app deployment server.
- The conferencing app communicates with the BlueJeans web and call-control services using Hypertext Transfer Protocol Secure (HTTPS) and secure WebSocket.

The Dolby Conference Phone supports proxy automatic configuration (PAC) and Web Proxy Automatic Discovery (WPAD) for automatic proxy configuration.

You can configure the proxy server in two ways:

- [Specifying a proxy configuration with a proxy automatic configuration URL](#) on page 16
- [Specifying a conferencing app-specific proxy server](#) on page 17

For more information about PAC and WPAD, see the *Dolby Conference Phone Administrator's Guide*.

2.8.1 Specifying a proxy configuration with a PAC URL

Configure a PAC URL that instructs the Dolby Conference Phone to automatically discover the proxy settings based on the target URL.

About this task

Dolby Conference Phone supports the WPAD method for locating the PAC URL. Enable this to trigger automatic proxy discovery in the network. This is the recommended mechanism, because it allows for more flexibility in dynamically allocating proxy resources in your network.

Additionally, you can use one of these methods to specify the proxy configuration:

Procedure

- Use the Dolby Conference Phone web interface:
 - a) Navigate to **Settings > Network > Proxy**.
 - b) Switch **Enable WPAD** to **On**, and then complete these steps:
 - In the **Proxy Server Login Name** field, type a proxy authentication user name.
 - In the **Proxy Server Login Password** field, type a proxy authentication password.

If your network does not implement WPAD, leave this parameter off and manually set the PAC URL by using the **PAC Configuration URL** field as described in the next step.
 - c) If your network does not implement PAC, leave **Enable WPAD** off (described in the previous step) and complete these steps:
 - In the **PAC Configuration URL** field, enter the PAC URL.
 - Optional: In the **Proxy Server Login Name** field, type a proxy authentication user name.
 - Optional: In the **Proxy Server Login Password** field, type a proxy authentication password.
- Use the Dolby Conferencing Console:
 - a) From the Dolby Conferencing Console, select a device, and then click the **Edit device configuration** button.



- b) If your network supports WPAD, from **Network > Proxy**, drag **Enable WPAD** to the device configuration. Switch **Network . Proxy . AutoDiscover** to **ON**, and then complete these steps:
 - Drag **Proxy Server Login Name** to the device configuration. In the **Network . Proxy . UserName** field, type a proxy authentication user name.
 - Drag **Proxy Server Login Password** to the device configuration. In the **Network . Proxy . Password** field, type a proxy authentication password.

If your network does not implement WPAD, leave this parameter off and manually set the PAC URL by using **Network . Proxy . PacUrl** as described in the next step.

- c) If your network does not support WPAD, navigate to **Network > Proxy** and then complete these steps:

- Drag **PAC Configuration URL** to the device configuration. In the `Network.Proxy.PacURL` field, type the PAC URL.

The phone uses the `Network.Proxy.PacURL` parameter to determine which proxy server to communicate with in the BlueJeans infrastructure.

- Optional: Drag **Proxy Server Login Name** to the device configuration. In the `Network.Proxy.UserName` field, type a proxy authentication user name.
- Optional: Drag **Proxy Server Login Password** to the device configuration. In the `Network.Proxy.Password` field, type a proxy authentication password.

2.8.2 Specifying a conferencing app-specific proxy server

Configure a conferencing app-specific proxy server using `Dvms.Proxy.x` configuration parameters.

About this task

If your network does not implement a PAC file, configure a conferencing app-specific proxy server. If both proxy configuration methods are implemented, the `Dvms.Proxy.x` parameters for conferencing app network communications are used; the PAC file is not utilized.

For more information on proxy setup, see the *Dolby Conference Phone Administrator's Guide*.

Use one of these methods to configure a conferencing app-specific proxy server.

Procedure

- Use the phone web interface:
 - a) Navigate to **Settings > Dolby Voice Conferencing Service > Proxy**.
 - b) In the **Proxy Address** field, type the proxy address.
 - c) Set the **Proxy Port** by typing in the value or using the slider to set the value.
 - d) In the **Proxy User** field, type the proxy authentication user name.
 - e) In the **Proxy Password** field, type the proxy password.
- Use Dolby Conferencing Console:
 - a) From Dolby Conferencing Console, select a device and then click the **Edit device configuration** button.
 - b) From **Dolby Voice Conferencing Service > Proxy**, drag **Proxy Address** to the device configuration.

This parameter specifies a statically configured proxy server address, dedicated to the conferencing app. After configured, the phone goes through the specified proxy server to download the conferencing app. All network communications initiated from the conferencing app go through this proxy server.
 - c) In the `Dvms.Proxy.Address` field, type the proxy address.
 - d) Drag **Proxy Port** to the device configuration.

By default, this parameter is set to 8080. It specifies the network port for the proxy server.
 - e) Set `Dvms.Proxy.Port` by typing in a value or using the slider to set a value.
 - f) Drag **Proxy User** to the device configuration.
 - g) In the `Dvms.Proxy.User` field, type the proxy authentication user name.
 - h) Drag **Proxy Password** to the device configuration.
 - i) In the `Dvms.Proxy.Password` field, type the proxy authentication password.

2.9 VLAN configuration

The phone can be configured on single- or dual-VLAN networks.

By default, the Dolby Conference Phone uses the data VLAN (Native VLAN or VLAN0). The Dolby Conference Phone and the Intel NUC are not required to be on the same VLAN. However, if the Dolby Conference Phone and the Intel NUC are on different VLANs, those VLANs must be routable.

If you plan to connect the phone to an IP PBX call-control platform, you may need to use a voice VLAN. If you do not plan to use an IP PBX, you can skip this section.

The phone can automatically discover a voice VLAN using Link Layer Discovery Protocol (LLDP) or VLAN information entered manually into the network settings of the phone. If a VLAN is discovered, the phone places itself on the voice VLAN.

You will need information about the voice and data VLAN settings for your organization to proceed. See this table for the information that is required.

Note:

Attributes	Description
Voice and data VLAN	Determine whether there are separate voice and data VLANs.
Do the local area network (LAN) switches have LLDP enabled?	If your network is configured this way, the phone is placed on the voice VLAN automatically through LLDP autodiscovery. If you do not want to place your phone on the voice VLAN, you must disable LLDP.

For additional information and instructions about how to set up the phone in a dual-VLAN environment, see the *Dolby Conference Phone Administrator's Guide*.

Note:

- The Dolby Conference Phone uses a single media access control (MAC) address for both networks.
- When the dual VLAN feature is used in conjunction with a Cisco switch port with 802.1X authentication enabled, the Ethernet port on the switch must be configured to Single-Host or Multiple-Hosts mode. If the port is set to Multidomain Authentication or Multiauthentication mode, dual VLAN does not work on the phone.

Related information

[Disabling voice LLDP VLAN autodiscovery](#) on page 18

[Entering VLAN information manually](#) on page 19

2.9.1 Disabling voice LLDP VLAN autodiscovery

By default, LLDP is disabled out-of-the-box for the Dolby Conference Phone. If you enable it and experience a network connectivity issue, you may need to disable voice LLDP VLAN autodiscovery.

About this task

If you are using **Conferencing Only Mode** and your voice VLAN restricts Internet access, disable voice LLDP VLAN autodiscovery and use the data VLAN instead.

If any these situations apply to you, skip this task:

- Your network does not implement voice VLAN and data VLAN segregation.
- Your network implements voice VLAN but does not restrict Internet access from the voice VLAN.

Use the `Network.Services.LLDPEnabled` parameter to enable and disable voice VLAN autodiscovery.

Procedure

- Using the phone web interface:
 - a) Navigate to **Network > Services**.
 - b) Switch **Enable LLDP** to **Off**.
- Using the phone user interface:
 - a) Navigate to **Advanced > Administrative settings > Network configuration > Ethernet**.
 - b) Disable **LLDP enabled**.

Results

Voice LLDP VLAN autodiscovery is disabled.

2.9.2 Entering VLAN information manually

You can enter VLAN information manually into the network settings of the phone.

About this task

Use the `Network.Vlan.ManualVlanId` parameter to set the primary VLAN ID.

Procedure

- Using the Dolby Conference Phone web interface:
 - a) Navigate to **Network > Virtual LAN**.
 - b) Type the value into the **Manual VLAN ID** field.
- Using the phone user interface:
 - a) Navigate to **Advanced > Administrative settings > Network configuration > Ethernet**.
 - b) Type the value into the **Manual VLAN ID** field.

You can also manually configure VLAN information using the setup wizard.

2.10 DNS configuration

The Dolby Conference Phone requires a valid Domain Name System (DNS) configuration to function properly.

If DNS configuration through Dynamic Host Configuration Protocol (DHCP) does not meet your requirements, you can override that configuration using the Dolby Conference Phone web interface or the phone user interface setup wizard.

For information about configuring DNS, see the *Dolby Conference Phone Administrator's Guide*.

2.10.1 Manually overriding DHCP assigned DNS settings

If you want to use another set of DNS settings, or if you do not have a valid DNS configuration, you can manually override the DHCP-assigned DNS settings.

About this task

You can manually assign the domain name, the DNS server address, and the alternative DNS server address.

Note:

When dual VLAN configuration is enabled, manual override is available only on the primary VLAN.

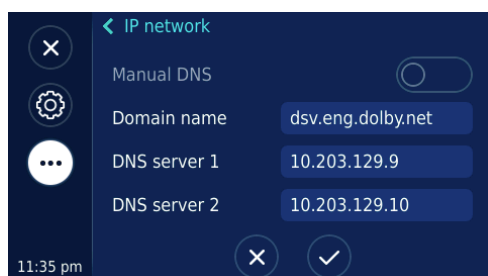
For more information, see the *Dolby Conference Phone Administrator's Guide*.

Procedure

1. From the phone home screen, tap this sequence:



2. Enter the administrator password, and tap **Enter**.
3. Select **Network configuration > IP network**.



4. Enable **Manual DNS**.
5. Modify the **Domain name**, the **DNS server 1**, and the **DNS server 2**, as required, and tap ✓.

2.11 IP PBX configuration

The Dolby Conference Phone can connect to your preferred IP PBX service or on-premises IP PBX server for regular Voice over Internet Protocol (VoIP) telephony functionality.

BlueJeans supports configuration of IP PBX through the [Command Center](#). You can also use an on-premises Dolby Conferencing Console to manage a large number of Dolby Conference Phone IP PBX configurations, or the phone web interface to configure an individual phone.

For more information about IP PBX configuration, see the *Dolby Conference Phone Administrator's Guide*.

2.12 LDAP configuration for a corporate directory

You can connect your Dolby Conference Phone to a directory server that supports Lightweight Directory Access Protocol (LDAP) version 3.

When the Dolby Conference Phone is connected to an LDAP server, you can search the company directory to find phone extension numbers. For instructions on how to configure and connect to an LDAP server, see the *Dolby Conference Phone Administrator's Guide* .

3

Plug and play setup

After you configure the BlueJeans Rooms with Dolby Conference Phone network settings and options, you can automatically provision the phone using plug and play setup.

- [Plug and play setup requirements](#)
- [Plugging in and setting up the phone automatically](#)

3.1 Plug and play setup requirements

With plug and play setup, the Dolby Conference Phone is provisioned automatically by the BlueJeans provisioning service.

In addition to the firewall requirements, plug and play setup requires you to enable HTTPS protocol (port 443) access to:

- The Dolby Voice Console:
<https://console.dolbyvoice.com/>
- The BlueJeans Rooms with Dolby Conference Phone provisioning server:
<https://dsetup.bluejeans.com>
- The BlueJeans Rooms with Dolby Conference Phone setup app:
<https://titan-swdl.bluejeans.com>

Related information

[Network preparation](#) on page 7

[Firewall requirements](#) on page 10

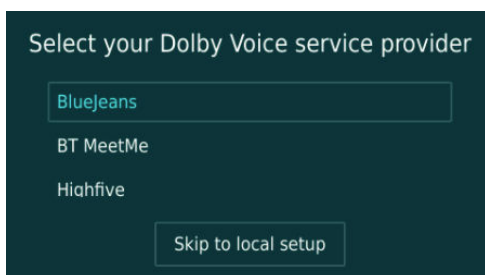
3.2 Plugging in and setting up the phone automatically

The Dolby Conference Phone requires a wired network connection, supporting Power over Ethernet (PoE). After your phone is plugged in, many settings may be automatically detected. If your network does not support PoE, a PoE injector is required to provide power to the phone.

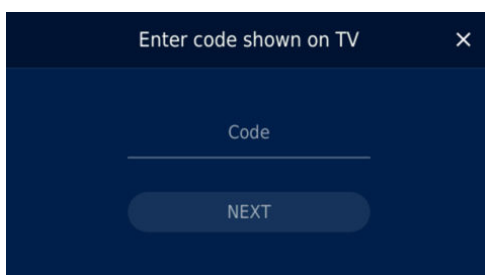
Procedure

1. Connect the phone to a PoE Ethernet port on the network using an Ethernet cable.
The setup wizard appears on the phone.
2. Select BlueJeans as your service provider or enter the BlueJeans Rooms with Dolby Conference Phone Captcha code shown on your TV to pair the Dolby Conference Phone.

If you purchased a BlueJeans Rooms with Dolby Conference Phone bundle, you will see this screenshot on first boot.



If you purchased the Dolby Conference Phone separately from the PC and camera, you will see the screen to enter the Captcha code shown on your TV.



What to do next

See the BlueJeans Rooms with Dolby Conference Phone *Admin Guide* on the BlueJeans Support website (<https://support.bluejeans.com/knowledge/dolby-rooms>) for detailed plug and play setup information.

If needed, see the *Dolby Conference Phone Administrator's Guide* for complete information and instructions for these provisioning methods.

4

Local setup

You can configure BlueJeans Rooms with Dolby Conference Phone for local setup if you require a configuration that is more advanced than the plug and play setup.

- [About local setup](#)
- [Dolby Conferencing Console preparation](#)
- [Configuring local setup](#)
- [802.1X deployment with Dolby Conferencing Console](#)
- [Setting the BlueJeans Rooms with Dolby Conference Phone configuration parameters](#)

4.1 About local setup

You can deploy BlueJeans Rooms with Dolby Conference Phone using local setup for several scenarios.

These are the possible scenarios:

- You want to control or lock the firmware and application version that run on your BlueJeans Rooms with Dolby Conference Phone.
- You have more than six BlueJeans Rooms with Dolby Conference Phones and want to enable IP PBX configuration.
- You use 802.1X network authentication.
- You use an LDAP directory server and want to enable LDAP on the BlueJeans Rooms with Dolby Conference Phone to allow users to search for other extension numbers.
- You want an aggregated report for both BlueJeans Rooms with Dolby Conference Phone and IP PBX usage in your rooms.

Note:

With local setup, BlueJeans Rooms with Dolby Conference Phone still has access to logs from the rooms and can provide tier-one and tier-two customer support.

4.2 Dolby Conferencing Console preparation

The Dolby Conferencing Console software provides an interface for IT administrators to use in managing BlueJeans Rooms with Dolby Conference Phones.

As an administrator, you can use the Dolby Conferencing Console software to provision devices, assemble them into device pools for ease of management, obtain analytic information about them, and monitor device status on both an individual and group level.

Depending on your deployment, you can install the Dolby Conferencing Console software on physical or virtual machines using an *.ova* installation file or an RPM Package Manager (RPM) package.

For trials and small- to medium-scale deployments (less than 500 BlueJeans Rooms with Dolby Conference Phones), we recommend that you install the Dolby Conferencing Console software on virtual machines using the *.ova* installation file. This is the simplest installation process and requires 30 minutes or less.

For other deployments, especially those involving more than 500 BlueJeans Rooms with Dolby Conference Phones and where scalability is important, we recommend that you install the Dolby Conferencing Console software on Linux-based physical or virtual machines, or on Amazon Web Services (AWS) virtual machines, by using the RPM package.

For information on installing the Dolby Conferencing Console software on-premises and using it to administer BlueJeans Rooms with Dolby Conference Phones, see the *Dolby Conferencing Console Operations and Management Guide*.

4.3 Configuring local setup

You can skip the plug and play setup and proceed to configuring local setup when you see one of the initial screens on the BlueJeans Rooms with Dolby Conference Phone.

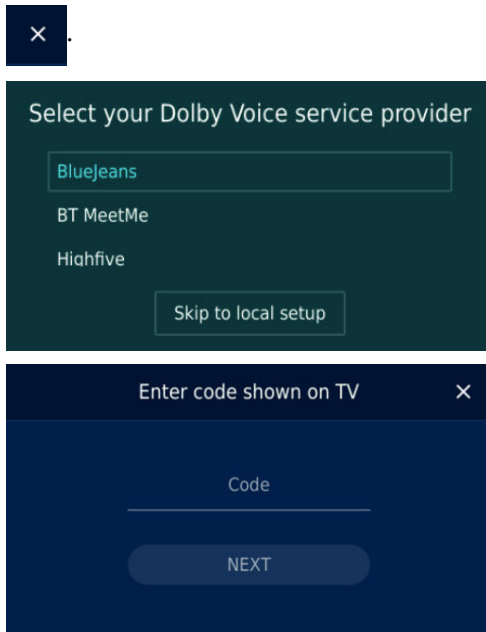
About this task

If the plug and play setup fails, you can use the setup wizard to manually enter the Dolby Conferencing Console server address. You can also set up the Domain Name System service record (DNS SRV) for the BlueJeans Rooms with Dolby Conference Phone to automatically discover the Dolby Conferencing Console on your network.

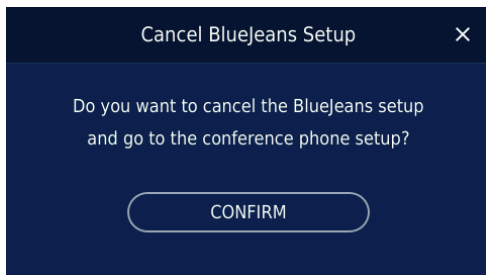
For information on out-of-the-box discovery of the provisioning server and setting up the DNS SRV, see the *Dolby Conference Phone Administrator's Guide*.

Procedure

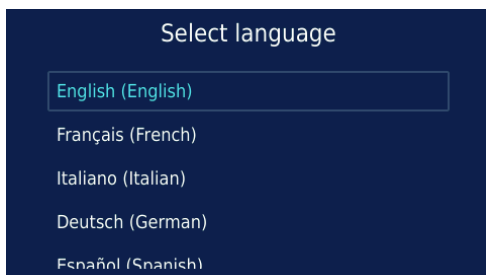
1. On the BlueJeans Rooms with Dolby Conference Phone user interface, tap **Skip to local setup** or tap



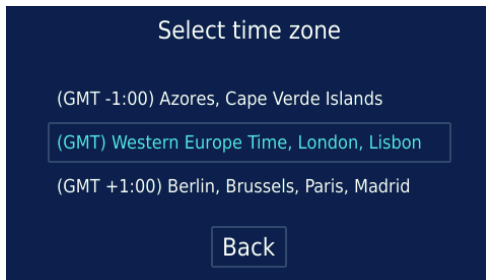
2. Tap **Confirm** to cancel the BlueJeans setup.



3. From the **Select language** screen, choose a language. If needed, scroll up or down to find the language.

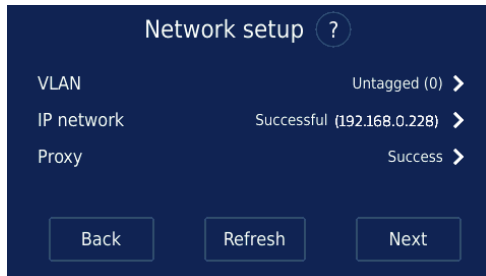


4. From the **Select time zone** screen, choose a time zone. If needed, scroll up or down to find the time zone.

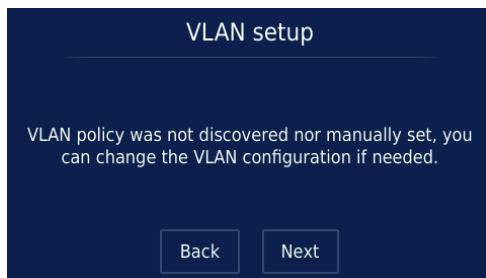


5. Optional: From the **Network setup** screen, you can change your VLAN settings, if needed.

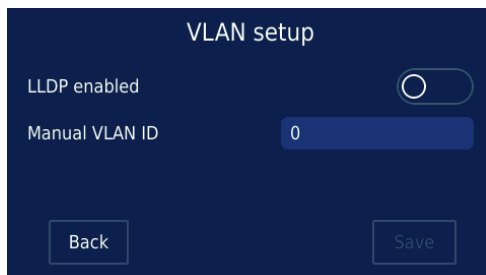
a) Tap **VLAN** to change the VLAN configuration.



b) Tap **Next**.

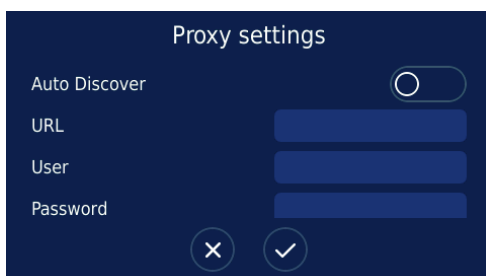


c) Enable LLDP, and update the manual VLAN ID.



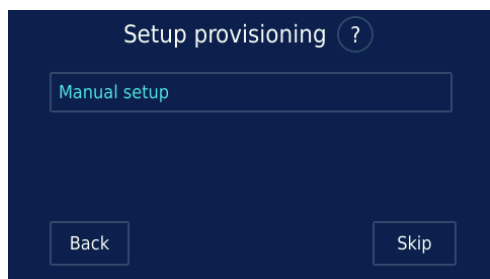
By default, LLDP is disabled.

6. From the **Network setup** screen, you can change your proxy settings, if needed.

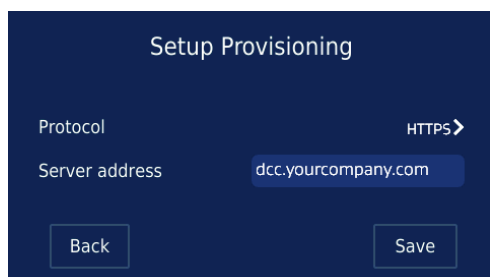


7. If challenged for 802.1X authentication, tap **Confirm certificate**, and then follow the instructions in [Configuring 802.1X](#) on page 11.

8. From the **Setup provisioning** screen, tap **Manual setup**.



9. Enter your Dolby Conferencing Console server address, and tap **Save**.



What to do next

Wait for the phone to connect to the Dolby Conferencing Console, and then continue with the BlueJeans setup workflow to pair the Dolby Conference Phone using the Captcha code shown on your TV.

To re-enable LLDP, you must enable the setting manually in **Settings**, either on the phone user interface or using the Dolby Conferencing Console.

4.4 802.1X deployment with Dolby Conferencing Console

To deploy your BlueJeans Rooms with Dolby Conference Phone with 802.1X network authentication, use the Dolby Conferencing Console software to provision certificate authority (CA) certificates on the Dolby Conference Phone.

Prior to configuring 802.1X authentication on the BlueJeans Rooms with Dolby Conference Phone:

- Import the server CA certificate into Dolby Conferencing Console.
- Assign the certificate to the device pool to which the BlueJeans Rooms with Dolby Conference Phone is allocated.

For information on managing device pools and certificates using the Dolby Conferencing Console, see the *Dolby Conferencing Console Operations and Management Guide*.

4.5 Setting the BlueJeans Rooms with Dolby Conference Phone configuration parameters

With local setup, you must configure the Dolby Conference Phone profile on the Dolby Conferencing Console so that the phone can load the BlueJeans conferencing app.

Prerequisites

- ! **Important:** The BlueJeans conferencing app is compatible with Dolby Conference Phone software version 3.3 or later. If the phone does not use software version 3.3 or later, you must upgrade the phone. For instructions, see the *Dolby Conference Phone Administrator's Guide*.

About this task

Use the Dolby Conferencing Console to create a profile to assign to the device pool to which the BlueJeans Rooms with Dolby Conference Phone is allocated.

For information on device pool management and creating and adding a profile, see the *Dolby Conferencing Console Operations and Management Guide*.

Procedure

1. From the Dolby Conferencing Console web interface, on the home screen, select the pool where you want to create the new profile.
A screen displays the pool with a listing of all its devices.
2. From the **Settings** menu, select **Profiles**.
The **Current profiles** screen displays.
3. Create a new profile by clicking the add button.
The **Create a new profile** screen displays.
4. Enter a profile name.
5. Select **Features**, and drag **Operation Mode** to the device configuration.
6. In the **Features.OperationMode** drop-down list, select the operation mode:
 - **Dual Mode:** Use if you want to integrate IP PBX with the BlueJeans Rooms with Dolby Conference Phone.
 -
 - **Conferencing Only Mode:** Use if you plan on using your phone only with the BlueJeans Rooms with Dolby Conference Phone.

By default, BlueJeans provisioning sets the operation mode to **Dual Mode**.

7. From **Dolby Voice Conferencing Service > Server**, drag **Dolby Voice Conferencing Server Address** to the device configuration.
8. In the `Dvms . Server . Address` field, type the URL.
Enter the address or domain of the BlueJeans web server where your BlueJeans Rooms with Dolby Conference Phone conferencing application files are located. The phone will download the files from <https://titan-swdl.bluejeans.com/titan>.
9. From **Dolby Voice Conferencing Service > Server**, drag **Codec** to the device configuration.
10. In the `Dvms . Server . Codec` field, type `121;DVC2;8000`.
11. From **Dolby Voice Conferencing Service > Service**, drag **Logo** to the device configuration.
12. In the `Dvms . Service . Logo` drop-down list, select **Disabled**.
13. From **Dolby Voice Conferencing Service > Service**, drag **Name** to the device configuration.
14. In the `Dvms . Service . Name` field, type `BlueJeans Huddle`.

This sets the Dolby Voice conferencing service name that appears on the home screen of the device.

15. From **Dolby Voice Conferencing Service > Service**, drag **Service provider** to the device configuration.
16. In the `Dvms . Service . Provider` drop-down list, select **Custom**.
17. From **Dolby Voice Conferencing Service > Service**, drag **Application type** to the device configuration.
18. In the `Dvms . Service . Type` field, select **App**.
19. To save your changes, click the confirm button.

What to do next

You are ready to start hosting and joining BlueJeans meetings from the BlueJeans Rooms with Dolby Conference Phone.

5

Troubleshooting

The information here describes likely causes of phone issues and corrective actions you can take to resolve them.

Follow the available troubleshooting procedures to review logs and error messages, run diagnostics, and possibly upgrade the phone software. If you encounter an issue with the BlueJeans Rooms with Dolby Conference Phone, we recommend that you attempt basic troubleshooting before you contact Dolby Support.

- [Plug and play setup issues and solutions](#)
- [No Audio Detected screen displays on the BlueJeans Rooms with Dolby Conference Phone](#)
- [Blue LED halo turns on for 10 seconds after setup, then turns off](#)
- [Retrieving log files](#)

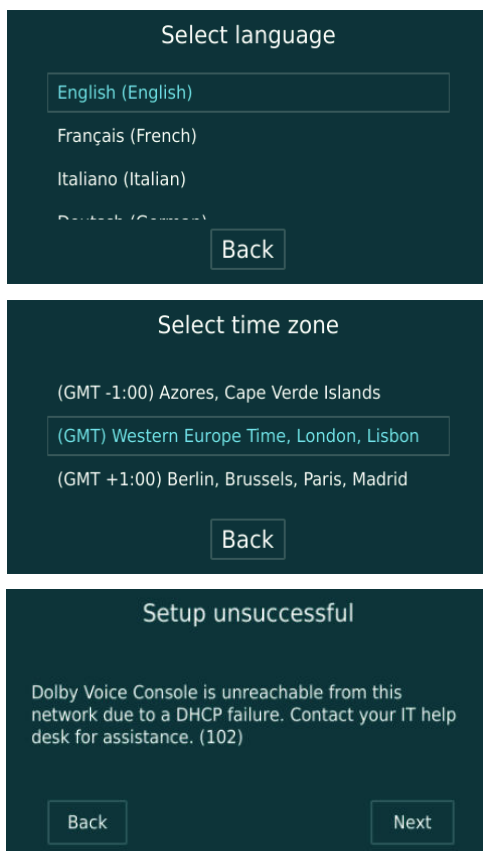
5.1 Plug and play setup issues and solutions

Use this information for likely causes and corrective actions if you are using plug and play setup to deploy your phone. These messages appear on the BlueJeans Rooms with Dolby Conference Phone screen.

5.1.1 Plug and play setup error messages

If plug and play setup fails for any reason, you will not see the initial setup screen.

Plug and play setup can fail due to provisioning issues or network restrictions, preventing the BlueJeans Rooms with Dolby Conference Phone from contacting necessary cloud services to complete the plug and play setup. If plug and play setup fails, the BlueJeans Rooms with Dolby Conference Phone displays the **Select language** screen, the **Select time zone** screen, and the **Setup unsuccessful** screen, as shown here.



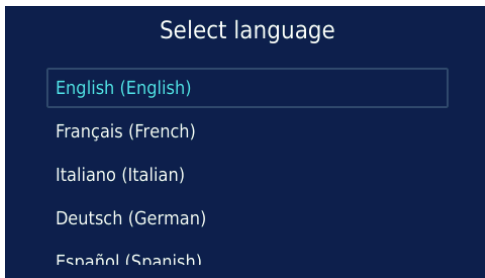
For detailed information on plug and play setup error messages and solutions, see the *Dolby Conference Phone Administrator's Guide*.

5.1.2 Access to *.dolbyvoice.com is blocked

When setting up a BlueJeans Rooms with Dolby Conference Phone, you must have access to *.dolbyvoice.com on your network. If you do not have access to *.dolbyvoice.com, manually configure the provisioning server and update the firmware on your phone.

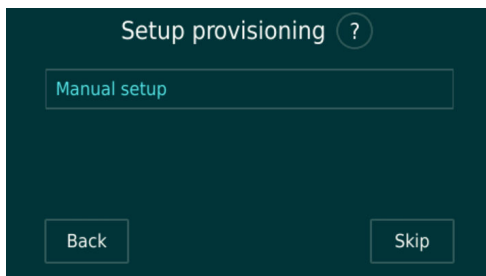
About this task

If you see the following screen when you boot the Dolby Conference Phone, you need to manually access the BlueJeans provisioning service and update the firmware on the phone.

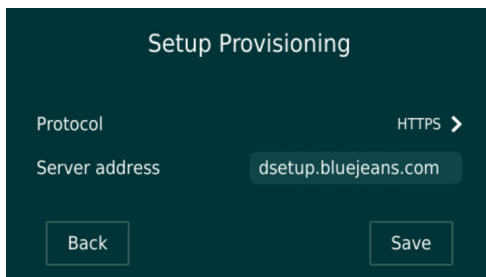


Procedure

1. Select the language and time zone on the Dolby Conference Phone setup screens.
2. On the **Setup provisioning** screen, tap **Manual setup**.
3. Follow the **Manual setup** path, and in **Setup provisioning**, tap **Skip**.



4. For **Protocol**, select **HTTPS**, and for **Server address**, enter `dsetup.bluejeans.com`.



5. Tap **Save**.

Results

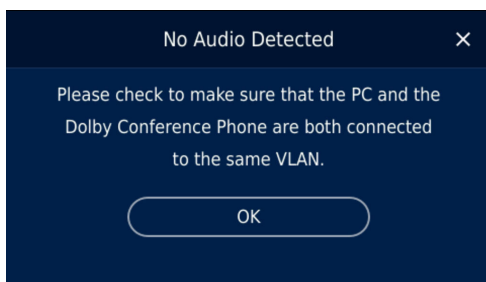
The phone connects to `https://dsetup.bluejeans.com`, upgrades to the latest version of the Dolby Conference Phone firmware, and loads the BlueJeans setup workflow.

5.2 No Audio Detected screen displays on the BlueJeans Rooms with Dolby Conference Phone

After setup is complete, the LED halo on the phone does not light up and the **No Audio Detected** screen displays.

The most common cause for this issue is when the Dolby Conference Phone and the PC are not on the same network.

If the Dolby Conference Phone LED halo does not light up during the call setup, and the Dolby Conference Phone user interface displays the following screen, it is likely that the Dolby Conference Phone and PC cannot communicate with each other over the local network.



There are three common solutions for this issue:

- [Troubleshooting virtual LAN-related networking issues](#) on page 33.
- [Troubleshooting 802.1X-related networking issues](#) on page 34.
- Setting up correct Microsoft Windows Firewall rules. See [Blue light-emitting diode halo turns on for 10 seconds after setup, then turns off](#) on page 34.



Contact your IT administrator for assistance with diagnosing the networking issue.

5.2.1 Troubleshooting VLAN-related networking issues

You can troubleshoot VLAN-related networking issues that may prevent your Dolby Conference Phone and the PC from being on the same network.

Procedure

1. Get the IP address of the Dolby Conference Phone.

From the home screen, tap  >  > **About** > **General** and scroll down until you see the IP address.

2. Open one of the supported web browsers.

For a complete list of supported web browsers, see the *Dolby Conference Phone Administrator's Guide*.

3. Enter `https://your phone IP address` in the browser address bar.
4. Log in as the administrator. (Default values are `admin` and `1739`.)



5. Get the IP address of the PC.

From the **Settings** menu, navigate to **Dolby Voice Conferencing Service** > **Peer Device**.

The Dolby Conference Phone IP address and PC IP address may be on the same subnet. If they are not, you can try to ping the Dolby Conference Phone from the PC to see if they can connect.

6. Your IT administrator can move the two devices to the same network and adjust the Dolby Conference Phone VLAN.

The Dolby Conference Phone supports LLDP VLAN autodiscovery and manual VLAN setup:

- a) From the phone home screen, tap  >  > **Administrative Settings**.
- b) Enter the administrator password.
The default administrator password is `1739`.
- c) Tap **Network configuration** > **Ethernet**.
- d) You can enable LLDP if your network supports VLAN autodiscovery through LLDP.
- e) Manually specify the VLAN ID.

 **Note:** A reboot of the Dolby Conference Phone is required to apply the new VLAN settings.

5.2.2 Troubleshooting 802.1X-related networking issues

You can troubleshoot 802.1X-related networking issues that may prevent your Dolby Conference Phone and the PC from being on the same network.

If using 802.1X authentication, the Dolby Conference Phone may have been placed on a guest network. The Dolby Conference Phone appears to have completed the plug and play setup properly because the guest network has Internet access. However, the PC may be on your data network with no network connection to the guest network.

You may need to import your certificate authority (CA) certificate into the Dolby Conference Phone:

- You can use a self-signed certificate, which must be manually imported into the Dolby Conference Phone. Otherwise, 802.1X authentication fails and the phone cannot be placed on the proper network.

For more information on uploading a new device certificate, see [Uploading a new CA certificate](#) on page 12.

- You must place the Dolby Conference Phone on a staging network that does not have strict security policies so that you can connect to the phone's IP address.
- You may have to supply device-specific authentication credentials.

5.3 Blue LED halo turns on for 10 seconds after setup, then turns off

After setup is complete, the LED halo on the phone lights up for 10 seconds, and then turns off.

About this task

This issue is most likely caused by a Microsoft Windows Firewall setup problem on the PC, where essential processes are not granted with firewall access. This issue is more common with the Dolby DVC-2 codec. You must run the BlueJeans *run.bat* script to set up the correct firewall rules.

Procedure

1. Connect a mouse and keyboard to the PC.
2. Navigate to the `C:\Users\username\AppData\Local\Huddle\current\PostInstaller` directory.
3. Locate and double-click the *run.bat* file.
A pop-up displays asking if you want to allow the application to make changes to your device.
4. Click **Yes**.
A command prompt window opens and runs the firewall script.
5. Press `r` to restart.

```

Administrator: C:\Windows\System32\cmd.exe
Firewall rule already existing, so removing it
Firewall rule added successfully for Huddle
Firewall rule already existing for BlueJeans_Aps, so removing it
Firewall rule added successfully for Huddle-APS
Notifications are disabled successfully
Screensaver is disabled successfully
Auto-hide of taskbar is done successfully
Enabling Auto-save of crash dumps (Huddle.exe) is success
Enabling Auto-save of crash dumps (APS.exe) is success
If there are no errors reported, press r to restart. Press anyother key to quit:

```

5.4 Retrieving log files

You can retrieve log files from the BlueJeans Rooms with Dolby Conference Phone for debugging and troubleshooting issues.

Procedure

1. Get the IP address of the Dolby Conference Phone.

From the home screen, tap  >  > **About** > **General** and scroll down until you see the IP address.

2. Open one of the supported web browsers.



Note: Make sure you have a computer that is on a network that can connect to the IP address.

3. Enter `https://your phone IP address` in the browser address bar.
4. Log in as the administrator. (Default values are `admin` and `1739`.)
5. From the phone web interface, select **Tools** and click **Download Logs**.

What to do next

For more information on log files, see the *Dolby Conference Phone Administrator's Guide*.

6

Support information

If you have a problem, we recommend that you review this document and the related documentation. If you cannot troubleshoot the problem on your own, contact BlueJeans for support.

- [Reporting an issue](#)
- [Support contacts](#)

6.1 Reporting an issue

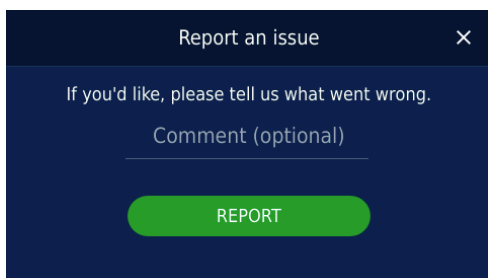
If you encounter a problem with the BlueJeans Rooms with Dolby Conference Phone, you can directly report an issue to BlueJeans using the phone user interface.

Procedure

1. From the phone home screen, tap this sequence:



2. In the comment field, enter the issue and tap **Report**.



6.2 Support contacts

In addition to reporting a problem using the BlueJeans Rooms with Dolby Conference Phone user interface, you can refer to the BlueJeans knowledge base, or directly contact BlueJeans for support.

For additional information and support:

- Visit the [BlueJeans Knowledge Base](#)
- Contact [BlueJeans Support](#)

Glossary

API

Application programming interface. A set of functions that can be used to access the functions of an operating system or other type of software.

AWS

Amazon Web Services. The Amazon cloud computing services platform.

DHCP

Dynamic Host Configuration Protocol.

DNS

Domain Name System. An Internet service that translates Internet domain and host names to IP addresses and conversely. DNS automatically converts between the name entered in a web browser and the IP addresses of the web server hosting the site whose URL is entered in the web browser.

DNS SRV

Domain Name System service record. A service record (SRV record) defines the location (the host name and port number) of a server in a DNS.

FTP

File Transfer Protocol. A network-based protocol designed for transferring data using a client-server architecture.

HD

High definition.

HTTP

Hypertext Transfer Protocol. An application protocol for hypermedia information systems, and the foundation for data communication for the World Wide Web.

HTTPS

Hypertext Transfer Protocol Secure. An application protocol for secure communication over a network and the Internet that provides authentication of websites and keeps user information private.

IP

Internet Protocol.

IP address

Internet Protocol address. A numerical identifier assigned to a device that is a member of a network that uses the IP for communication.

kbps

Kilobits per second.

LDAP

Lightweight Directory Access Protocol. An application protocol for querying or modifying items in corporate directories that allows sharing of information about users, devices, and applications on a network.

LED

Light-emitting diode.

LLDP

Link Layer Discovery Protocol . A vendor-neutral link layer protocol for Ethernet network devices such as switches, routers, and wireless local area network (LAN) access points to announce information about themselves to other nodes on the network and store the information they discover, as defined in IEEE 802.1AB.

NTP

Network Time Protocol. A network protocol for clock synchronization on computers.

NTLMv2

A Microsoft security protocol that provides authentication, integrity, and confidentiality to users. NTLMv2 is part of Windows NT LAN Manager, which is a suite of security protocols.

NUC

Next Unit of Computing. A small-form-factor personal computer designed by Intel.

PC

Personal computer.

PAC

Proxy automatic configuration. A file that defines how web browsers and other user agents can automatically choose the appropriate proxy server (access method) for fetching a given URL.

PBX

Private branch exchange. A phone system that is delivered as a hosted service.

PKI

Public key infrastructure. A set of roles, policies, and procedures needed to create, manage, distribute, use, store, and revoke digital certificates and manage public-key encryption.

PoE

Power over Ethernet. A solution in which an electrical current is run to networking hardware over Ethernet category 5 or higher data cabling.

RTCP

RTP Control Protocol. A protocol for communicating quality-of-service information about Real-time Transport Protocol (RTP) sessions.

RTP

Real-time Transport Protocol. An IP network audio and video protocol.

RPM

RPM Package Manager. A system for managing Linux software installation packages.

SIP

Session Initiation Protocol. An application-layer communications protocol used for signaling and controlling communications sessions.

TCP/IP

Transmission Control Protocol/Internet Protocol. Communications protocols that specify how data should be formatted, addressed, transmitted, routed, and received at the destination. Part of the Internet protocols communications suite.

TLS

Transport Layer Security. A cryptographic protocol designed to provide communications security over a computer network.

UDP

User Datagram Protocol. A communications protocol that uses no handshaking dialogues to establish a connection with the remote host. UDP is a member of the IP suite.

URL

Uniform resource locator.

VLAN

Virtual LAN. Any broadcast domain that is partitioned and isolated in a computer network at the data link layer (OSI layer 2).

WPAD

Web Proxy Automatic Discovery. An Internet protocol that enables a web browser to automatically connect to a cache server (or proxy server) location in a network to retrieve stored web pages more quickly by than leaving the network to request the web page from the site of the originating web server.

Dolby Laboratories, Inc. 1275 Market Street, San Francisco, CA 94103-1410 USA. © Dolby Laboratories. All rights reserved. Dolby and the double-D symbol are registered trademarks of Dolby Laboratories. All other trademarks remain the property of their respective owners.

