



# Dolby Conference Phone version 4.3

## Configuration Guide for West Conferencing

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

<b>1 Introduction.....</b>	<b>4</b>
1.1 About this guide.....	5
1.2 New in this version.....	5
1.3 Related documentation.....	5
1.4 Solution architecture.....	5
1.4.1 Provisioning phones.....	8
1.4.2 TLS configuration.....	9
1.4.3 West conferencing app.....	9
1.5 Documentation feedback.....	9
<b>2 Configuration procedures.....</b>	<b>10</b>
2.1 Plug and play setup.....	11
2.2 Plugging in and setting up the phone automatically.....	11
2.3 Configuring 802.1X.....	12
2.4 Opening the phone web interface.....	13
2.5 Configuring the operational mode.....	14
2.6 Configuring Network Time Protocol (NTP).....	15
2.7 Proxy configuration.....	16
2.7.1 Specifying a proxy configuration with a PAC URL.....	17
2.7.2 Specifying a conferencing app-specific proxy server.....	18
2.8 VLAN configuration.....	18
2.8.1 Disabling voice LLDP VLAN autodiscovery.....	19
2.8.2 Entering VLAN information manually.....	20
2.8.3 Dual-VLAN settings.....	20
2.9 Configuring the firewall.....	20
2.10 Setting the phone display name.....	21
2.11 Setting phones to personal mode.....	21
2.11.1 Clearing personal data.....	22
2.12 Reserved configuration parameters.....	22
<b>3 Configuring the West conferencing app.....</b>	<b>23</b>
3.1 Setting West configuration parameters.....	24
3.2 Utility functions.....	25
<b>4 Troubleshooting.....</b>	<b>26</b>
4.1 Error messages.....	27
4.2 Viewing information about the West conferencing app.....	28
4.3 Manually overriding DHCP assigned DNS settings.....	29
<b>Glossary.....</b>	<b>30</b>

# 1

## Introduction

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

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

## 1.1 About this guide

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

Before you begin deployment, make sure that you have copies of the related documentation. You may need to refer to other documents 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

Review all of the Dolby Conference Phone documentation to ensure that the phone is set up correctly so that you have the best conferencing experience possible.

These documents are available:

- *Dolby Conference Phone Administrator's Guide*

This guide explains how to set up and provision the Dolby Conference Phone.

- *Dolby Conference Phone Quick Start Guide*

This guide describes the contents of the phone package, how to assemble the phone, and how to connect the phone to the network. The quick start guide is included in the phone package. It is also available from the Dolby Conference Phone support pages.

- *Dolby Conference Phone Third-Party Software Guide*

This guide describes the open source software used in the Dolby Conference Phone software.

- *Dolby Satellite Microphone Quick Start Guide*

This guide describes the contents of the microphone package and how to connect them to the Dolby Conference Phone. The quick start guide is included in the microphone package. It is also available from the Dolby Conference Phone support pages.


## 1.4 Solution architecture

Before you begin the deployment process, make sure that you understand what is involved and how you can make the process go more smoothly.

### Components

A deployment of the Dolby Conference Phone for West utilizes a number of components. Understanding what they are and how they interact with each other can make the deployment processes easier, and may help you with troubleshooting later.

The key components required for deployment are listed in this table.

Component	Description
App deployment server	<p>West hosts an app deployment server in its service infrastructure.</p> <p>The app deployment server contains the conferencing app. The Dolby Conference Phone downloads the conferencing app from the app deployment server through Hypertext Transfer Protocol (HTTP) or Hypertext Transfer Protocol Secure (HTTPS) when it boots up for the first time. The phone also periodically checks for and automatically downloads new versions.</p> <p>If an HTTP proxy is required for connecting the phone to the app deployment server, the phone can utilize the HTTP proxy to download the conferencing app.</p> <p>West deploys new versions of the conferencing app when they are available.</p>
West conferencing app	The conferencing app is hosted on the app deployment server.
Dolby Conference Phone	<p>Dolby Conference Phones are deployed at your site. Based on its configuration, the phone downloads the conferencing app from the app deployment server.</p> <p> <b>Important:</b> The West conferencing app version 1.0 is compatible with Dolby Conference Phone software version 3.1 or later. If the phone does not use software version 3.1 or later, you must upgrade the phone. For instructions, see the <i>Dolby Conference Phone Administrator's Guide</i>.</p>
Service back end enabled for Dolby Voice	The service back end enabled for Dolby Voice is the service infrastructure created and maintained by West. The conferencing app uses HTTP, WebSocket, Session Initiation Protocol (SIP), and Real-time Transport Protocol (RTP) to communicate with the service back end.
Dolby Conferencing Console or other provisioning server	<p>The provisioning server allows for flexibility in installing, upgrading, maintaining, and configuring the Dolby Conference Phone at scale.</p> <p>The provisioning server is typically located at your site and is managed by your IT group.</p> <p>The Dolby Conference Phone supports File Transfer Protocol (FTP), HTTP, and HTTPS for provisioning; it also supports automatic provisioning server discovery through a Domain Name System (DNS) SRV record.</p>
Proxy server	<p>In certain customer environments, an HTTP proxy server may be required to allow network clients to connect to an Internet server.</p> <p>The Dolby Conference Phone supports the HTTP proxy server, which can be either statically configured or dynamically configured through a proxy automatic configuration (PAC) file.</p>

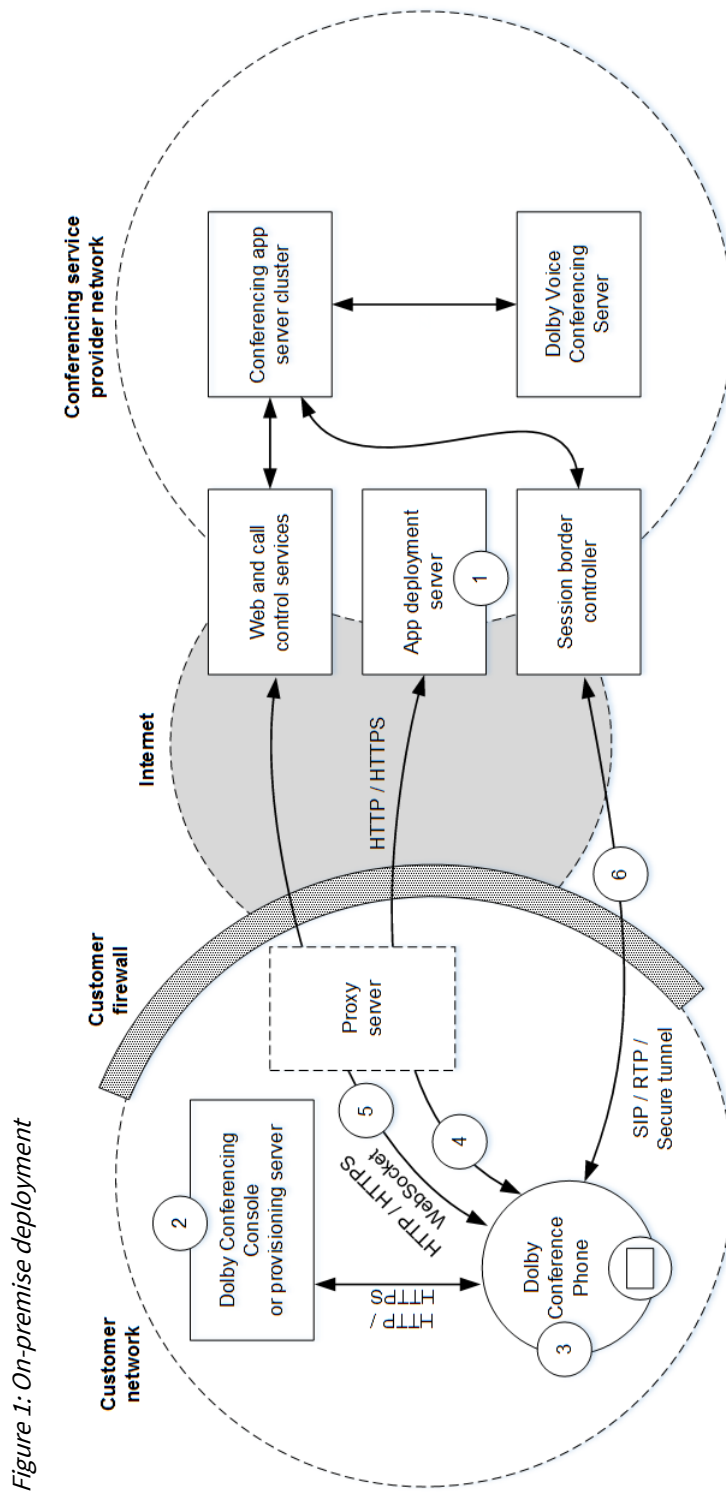


Figure 1: On-premise deployment

1. West deploys the conferencing app on the app deployment server.
2. Configuration profiles on Dolby Conferencing Console or your provisioning server enable the phone to connect to the West infrastructure.
3. The phone connects to the provisioning server to retrieve configuration files.
4. The phone accesses the app deployment server and downloads the conferencing app. Once the download is complete, the phone loads the conferencing app.
5. The conferencing app uses HTTP and WebSocket to interact with the West web and call-control services.
6. The responding instructions from the West web and call-control services connect the phone to the infrastructure to join an audio conference.

## 1.4.1 Provisioning phones

An easy way to set up and use the Dolby Conference Phone is to use Dolby Conferencing Console as the provisioning server. We recommend using Dolby Conferencing Console if you have more than five Dolby Conference Phones to manage.

### Using a provisioning server to configure phones

A provisioning server allows for flexibility in installing, upgrading, maintaining, and configuring the phone. You must have a provisioning server in order to bulk set up and upgrade Dolby Conference Phones.

You have two choices:

- Use Dolby Conferencing Console as the provisioning server for phones.
- Set up an FTP, HTTP, or HTTPS server as the provisioning server for phones.

You can use Dolby Conferencing Console 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.

### What is Dolby Conferencing Console?

Dolby offers Dolby Conferencing Console, a web-based dashboard and management portal powered by a highly secure and scalable back-end server.

The Dolby Conferencing Console replaces manual, time-consuming configuration and provisioning tasks with a streamlined and automated bulk-provisioning process. It also provides real-time operational awareness via detailed device and network analytics and reports, enabling IT to track assets, proactively monitor systems, and remotely diagnose and resolve issues.

Because the Dolby Conferencing Console acts as a provisioning server, you can avoid the complex task of setting up your own provisioning server. In addition, a RESTful application programming interface (API) and SNMPv2 protocol simplify integration into West enterprise network management platforms.

For more information about setting up and using Dolby Conferencing Console or a provisioning server to configure phones, see the *Dolby Conferencing Console Operations and Management Guide* and the *Dolby Conference Phone Administrator's Guide*.

### Supported provisioning protocols

The Dolby Conference Phone supports FTP, HTTP, and HTTPS for provisioning. HTTPS is the recommended protocol, because it provides the best performance and security.

For more information, see the *Dolby Conferencing Console Operations and Management Guide* and the *Dolby Conference Phone Administrator's Guide*.

### Configuration parameters

You must set certain configuration parameters to connect the phone to the app deployment server and download the conferencing app.

For more information, see [Setting West configuration parameters](#) on page 24.

### Automatic Local Setup

The Dolby Conference Phone can automatically discover Dolby Conferencing Console or the provisioning server on the network using a DNS SRV record. This simplifies the deployment of the phone and minimizes configuration errors. To take advantage of this feature, you must plan ahead.

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




## 1.4.2 TLS configuration

The Dolby Conference Phone supports Transport Layer Security (TLS).

The phone uses HTTPS to download configuration parameters and firmware from Dolby Conferencing Console or your provisioning server. It also uses HTTPS to download the conferencing app from the app deployment server.

The conferencing app communicates with West web and call-control services using HTTPS or Secure WebSocket.

In all these scenarios, the phone must be installed with adequate CA certificates to allow for successful TLS negotiation. If the phone is provisioned using plug and play setup, it will get the required certificates using the West provisioning server. Dolby Conferencing Console also supports easy-to-use mechanisms for deployment.

 **Note:** If your setup involves Dolby Conferencing Console, contact your West account team to acquire the West certificate and add them to Dolby Conferencing Console.

## 1.4.3 West conferencing app

The West conferencing app provides a customized interface for West.

Configuring the conferencing app is the final step of the deployment process. Once finished, you and your end users are ready to host and join West meetings from the phone.

## 1.5 Documentation feedback

If you have comments or feedback about this documentation, send us an email at [dolbyvoicedocs@dolby.com](mailto:dolbyvoicedocs@dolby.com).

# 2

## Configuration procedures

After you configure the Dolby Conference Phone network settings and options, you can activate the phone with West.

- [Plug and play setup](#)
- [Plugging in and setting up the phone automatically](#)
- [Configuring 802.1X](#)
- [Opening the phone web interface](#)
- [Configuring the operational mode](#)
- [Configuring Network Time Protocol \(NTP\)](#)
- [Proxy configuration](#)
- [VLAN configuration](#)
- [Configuring the firewall](#)
- [Setting the phone display name](#)
- [Setting phones to personal mode](#)
- [Reserved configuration parameters](#)

## 2.1 Plug and play setup

With plug and play setup, the Dolby Conference Phone is provisioned automatically by your conferencing service provider's provisioning service.

plug and play setup requires that the phone have Internet access to both of these servers using HTTPS protocol (port 443):

- The Dolby Voice Console:  
<https://console.dolbyvoice.com/>
- Your conferencing service provider's provisioning server:  
<https://dcc.mc.iconf.net/>
- Your conferencing service provider's setup app:  
<https://content101.mc.iconf.net/web/dcp/>

The phone can utilize your HTTP proxy server to connect to the aforementioned servers. During setup, the phone will automatically discover the proxy server on your network.

The phone can also support port authentication using 802.1x, but you must enter the valid 802.1x authentication credentials. For more information, see the *Dolby Conference Phone Administrator's Guide*.

If your network does not implement proxy auto discovery using WPAD, you can configure a PAC (Proxy Auto Configuration) URL from the setup wizard. The phone supports NTLMv2, Digest, and Basic for proxy authentication methods.

## 2.2 Plugging in and setting up the phone automatically

Each Dolby Conference Phone requires a wired network connection, preferably supporting Power over Ethernet (PoE). Once your phone is plugged in, many settings may be automatically detected.

### Procedure

1. Connect the phone to a PoE Ethernet port on the network using an Ethernet cable.

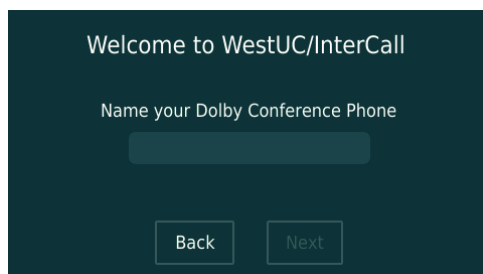
The setup wizard appears on the phone. The screens vary depending on your network setup.

2. If the phone has Internet access and can connect to the Dolby Voice Console and your conferencing service provider's provisioning service:

This only happens if you meet the requirements for plug and play setup.

Requirements for plug and play setup vary based on your conferencing service provider. For a list of requirements, see the configuration guide for your conferencing service provider.

- If the phone is recognized by the Dolby Voice Console, the phone connects to your conferencing service provider's provisioning service. No additional action is required to provision the phone.



- If the phone is not recognized by the Dolby Voice Console, select your conferencing service provider from the list. Follow the on-screen prompts to connect the phone to your conferencing service provider's provisioning service.

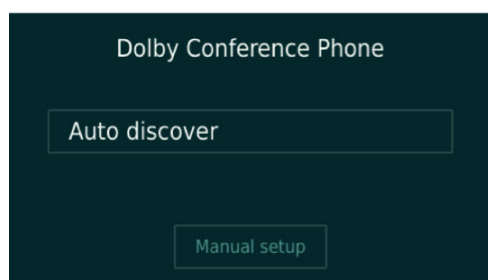
If this does not happen, proceed to the next step.

3. If the phone discovers a Dolby Conferencing Console or a provisioning server on your network, follow the on-screen prompts to connect the phone to one of these provisioning servers.

This only happens if the phone's administrator completed preparations so that the phone can discover the presence of a Dolby Conferencing Console or a provisioning server by means of a DNS SRV record.

If this does not happen, proceed to the next step.

4. If you cannot set up the phone with the methods mentioned earlier, you must perform Manual Setup.
  - a) Choose **Manual setup** from this screen:



- b) Follow the on-screen prompts to connect the phone to your Dolby Conferencing Console or provisioning server.

## Results

The phone is now connected to either your conferencing service provider's provisioning service, or a Dolby Conferencing Console or a provisioning that is on your network.

## What to do next

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

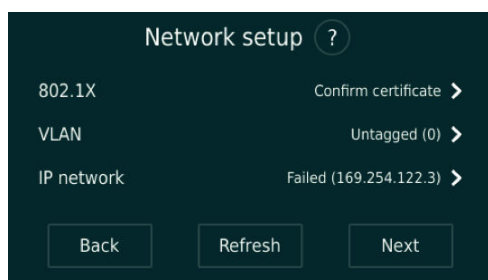
- Plug and play setup
- Automatic Local Setup
- Manual Setup

## 2.3 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.



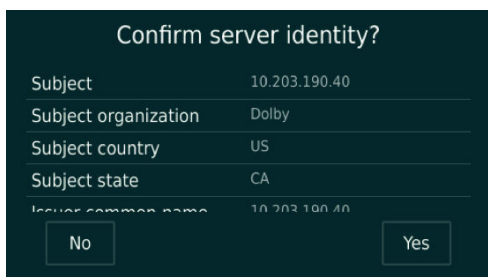
If you see this screen, you can configure some 802.1X options directly in the wizard.

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

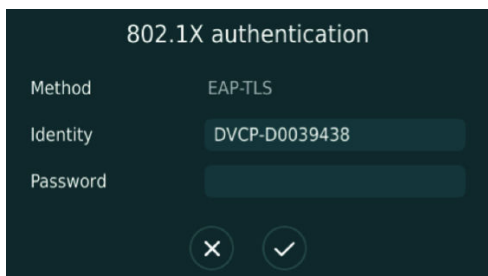
**Note:** If you use a self-signed authentication certificate, or a certificate authority that is not in the default Dolby Conference Phone trusted certificate authority list, we recommend that you use local setup with the Dolby Conferencing Console for 802.1X. The Dolby Conferencing Console makes it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

### 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.



## 2.4 Opening the phone web interface

Enter the phone IP address in your web browser to open the phone web interface.

### Prerequisites

You must have a network-connected desktop or laptop computer with a web browser supporting HTML5 installed. (Modern versions of Internet Explorer, Firefox, Chrome, and Safari are supported.)

The web browser will be used to configure the phone, so it must have IP network connectivity to the Dolby Conference Phone.

### Procedure

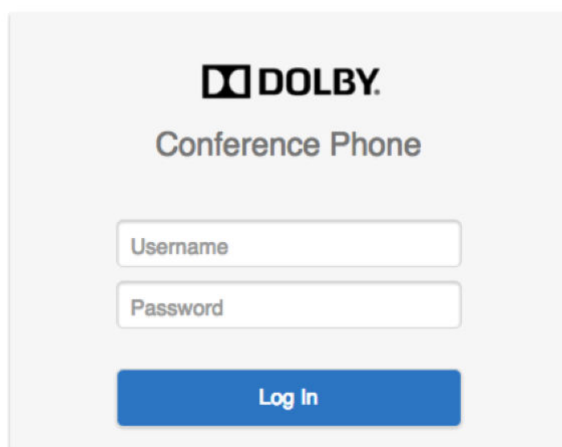
1. From the phone home screen, tap this sequence:



2. Scroll down until you see the IP address.



3. Enter this URL in the browser address bar.  
If a security warning displays, accept the warning and proceed.  
`https://your-phone-IP-address`
4. Log in to the Dolby Conference Phone using the default credentials:
  - **Username** = *admin*
  - **Password** = 1739



## 2.5 Configuring the operational mode

You can configure the Dolby Conference Phone for either Conferencing mode or Dual mode.

### About this task

#### Conferencing mode

Use if you plan on using your phone with the West only.

#### Dual mode

Use if you want to integrate IP private branch exchange (PBX) with the West.

Configuration parameter description	Configuration parameter name
Selects the operational mode	Features.OperationMode

### Procedure

1. Go to **Settings** > **Features** in the phone web interface.
2. Choose a value for **Operation Mode**.

## 2.6 Configuring Network Time Protocol (NTP)

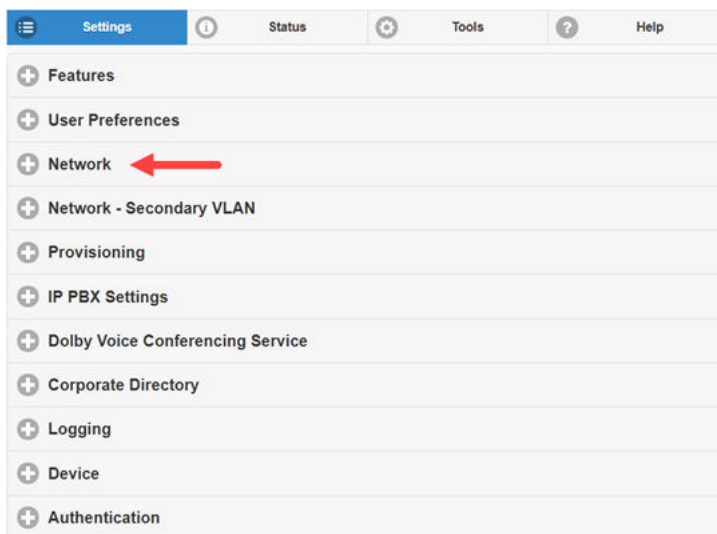
The Dolby Conference Phone uses a time server to synchronize the clock. You must specify Network Time Protocol (NTP) servers in the network settings so that you can use features like the calendar and other functionality dependent on accurate time and date.

### 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.

- Network

DHCP Network Configuration Method	<span style="background-color: #0070c0; color: white; padding: 2px 5px;">On</span> <input type="checkbox"/>
IP Address	<input style="width: 90%;" type="text" value="10.112.102.108"/>
Subnet Mask	<input style="width: 90%;" type="text" value="255.255.254.0"/>
Default Gateway	<input style="width: 90%;" type="text" value="10.112.102.1"/>
Override DHCP assigned DNS Settings	<span style="background-color: #ccc; padding: 2px 5px;">Off</span> <input type="checkbox"/>
Domain Name	<input style="width: 90%;" type="text" value="dolby.net"/>
DNS Server Address	<input style="width: 90%;" type="text" value="10.140.21.5"/>
Alternative DNS Server Address	<input style="width: 90%;" type="text" value="10.140.21.6"/>
<span style="font-size: 1.2em;">+</span> IEEE 802.1X	
<span style="font-size: 1.2em;">-</span> NTP	
Primary NTP Server Address	<input style="width: 90%;" type="text" value="0.pool.ntp.org"/>
Secondary NTP Server Address	<input style="width: 90%;" type="text" value="1.pool.ntp.org"/>

- 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 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 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 HTTPS and secure WebSocket.



The Dolby Conference Phone supports 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 17
- [Specifying a conferencing app-specific proxy server](#) on page 18

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

### 2.7.1 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.

## 2.7.2 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.

## 2.8 VLAN configuration

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

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 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 19

[Entering VLAN information manually](#) on page 20

[Dual-VLAN settings](#) on page 20

## 2.8.1 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.

## 2.8.2 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.

## 2.8.3 Dual-VLAN settings

If you want to use the West conferencing app in conjunction with an IP PBX service (dual mode), and your IP PBX service is accessible only from a voice VLAN, a dual-VLAN setup is required.

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

## 2.9 Configuring the firewall

All Dolby Voice clients, including the Dolby Conference Phone, must connect to the Dolby Voice-enabled backend server through either a direct SIP connection or a SIP connection over a secure tunnel.

### Procedure

Make sure that the following network ports used by the West conferencing app are open:

Port number	Protocol type
443	TCP
5,061	TCP
16,400–16,431 <sup>[a]</sup>	User Datagram Protocol (UDP)

[a] RTP ports are always odd numbers; RTP Control Protocol (RTCP) ports are always even numbers. The numbers always start from 16,400/16,401 and move on to 16,402/16,403 and so forth, until they reach the end of the range. At this point, they revert back to 16,400/16,401 and start over.

## 2.10 Setting the phone display name

The display name on the phone will appear in the conference roster when the phone joins conference calls, so this should be configured to a meaningful name.

### Procedure

Use one of these procedures to set the display name of the phone:

- From the Dolby Conferencing Console software:
  - a) From Dolby Conferencing Console, select a device, and then click the **Edit device configuration** button.



- b) From **IP PBX > Account**, drag **Display name** to the device configuration.
  - c) In the `Sip.Account.DisplayName` field, type a device name.
- From the phone web interface:
    - a) Click the **+** to open the **IP PBX Settings > Account** section.
    - b) In the **Display Name** field, enter the device name.

The screenshot shows the 'IP PBX Settings' page with the 'Account' section expanded. The 'Display Name' field is highlighted with a blue border. Other fields include 'Extension Number/Address', 'Display Number', 'Transport Type' (set to 'AUTO'), 'Secure Media' (set to 'Mandatory'), and 'Transport Port' (set to '5060').

## 2.11 Setting phones to personal mode

End users can host West meetings from the Dolby Conference Phone in conference rooms that are shared by many different people, or from a personal office.

### About this task

As the administrator, you choose the mode of phones. Set the mode for the phone based on where the phone is physically located and who will use it.

### Personal mode

Use this mode for personal phones that are in executive or private offices.

By default, personal mode is disabled.

### Public mode

Use this mode for phones that are in conference rooms and are shared by many different people.

By default, the phone functions in public mode.

No setup by a host or participants is required.

When personal mode is enabled, hosts can save their conference code and chairperson PIN on the Dolby Conference Phone. They can avoid reentering information each time they host a meeting.

You can switch the phone from public mode to personal mode from either Dolby Conferencing Console or the phone web interface:

### Procedure

- Use the Dolby Conferencing Console software:
  - a) Select a device, and then click the **Edit device configuration** button.



- b) From **Features > Personal Mode**, drag **Set phone for personal use** to the device configuration.
  - c) Switch **Features.PersonalMode.Enabled** to **ON**.
- Use the phone web interface:
    - a) Navigate to **Features > Personal Mode**.
    - b) Switch **Set phone for personal use** to **On**.

### Related information

[Clearing personal data](#) on page 22

## 2.11.1 Clearing personal data

You can remove personal data saved to the phone, such as your conference code and leader PIN.

### Procedure

1. From the phone user interface, tap this sequence:



2. Scroll down and tap **Preferences**.
3. Tap **Clear personal data**, choose one of these options, and follow the on-screen prompts.
  - **Clear recent calls**
  - **Clear local contacts**
  - **Clear user preferences**

Choosing **Clear user preferences** clears the conference code and chairperson PIN from the phone.

## 2.12 Reserved configuration parameters

Certain configuration parameters are utilized by the West app and should not be included in any provisioning server configuration.

Do not use these configuration parameters:

- `Dvms.Custom.Parameter1`
- `Dvms.Custom.Parameter2`
- `Dvms.Custom.SecureParameter1`

For more information, see [Utility functions](#) on page 25.

---

# 3

## Configuring the West conferencing app


After the phone is connected to the network and either Dolby Conferencing Console or your provisioning server, you are ready to configure West.

- [Setting West configuration parameters](#)
- [Utility functions](#)

## 3.1 Setting West configuration parameters

The phone does not connect to West by default. You must configure the phone to automatically connect to West.

### Prerequisites

-  **Important:** The West conferencing app version 1.0 is compatible with Dolby Conference Phone software version 3.1 or later. If the phone does not use software version 3.1 or later, you must upgrade the phone. For instructions, see the *Dolby Conference Phone Administrator's Guide*.

### About this task

We recommend that you use Dolby Conferencing Console to manage your devices, but the information in this topic applies when using a provisioning server or the phone web interface.

Use one of these options to set the required configuration parameters:

### Procedure

- 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 > Server**, drag **Dolby Voice Conferencing Server Address** to the device configuration.
- c) In the **Dvms.Server.Address** field, type the URL.

Enter the address or domain of the Dolby Voice web server where your West conferencing application files are located. The phone will download the files from this location.

- For North America and Europe, enter <https://content101.mc.iconf.net/web/dcp>.
  - For the Asia Pacific region, enter <https://content301.mc.iconf.net/web/dcp>.
- d) From **Dolby Voice Conferencing Service > Service**, drag **Logo** to the device configuration.
  - e) In the **Dvms.Service.Logo** drop-down list, select **Disabled**.
  - f) From **Dolby Voice Conferencing Service > Service**, drag **Service provider** to the device configuration.
  - g) In the **Dvms.Service.Provider** drop-down list, select **Custom**.
  - h) From **Dolby Voice Conferencing Service > Service**, drag **Application type** to the device configuration.
  - i) In the **Dvms.Service.Type** field, select **App**.
  - j) From **Features**, drag **Operation Mode** to the device configuration.
  - k) In the **Features.OperationMode** field, select **Conferencing Only Mode** or **Dual Mode**.

For more information about the differences in these operation modes, see [Configuring the operational mode](#) on page 14.

- Use the phone web interface:
  - a) Navigate to **Settings > Dolby Voice Conferencing Service > Server**.
  - b) In the **Dolby Voice Conferencing Server Address** field, type the URL.

Enter the address or domain of the Dolby Voice web server where your West conferencing application files are located. The phone will download the files from this location.

- For North America and Europe, enter <https://content101.mc.iconf.net/web/dcp>.
- For the Asia Pacific region, enter <https://content301.mc.iconf.net/web/dcp>.



- c) In the **Logo** drop-down list, select **Disabled**.
- d) In the **Service provider** drop-down list, select **Custom**.
- e) In the **Application type** field, select **App**.
- f) In the **Operation Mode** drop-down list, select **Conferencing Only Mode** or **Dual Mode**.

For more information about the differences in these operation modes, see [Configuring the operational mode](#) on page 14.

### What to do next

You are ready to start hosting and joining West meetings from the phone.

## 3.2 Utility functions

The West app uses certain configuration parameters for local storage on the Dolby Conference Phone.

As explained in [Reserved configuration parameters](#), you should never provision these configuration parameters. However, you can use them to perform certain utility functions by manually clearing them from the phone web interface.

### **Dvms.Custom.Parameter1**

Clears the recent calls list

### **Dvms.Custom.Parameter2**

Clears all West app internal storage

### **Dvms.Custom.SecureParameter1**

Resets the West app to its initial state

# 4

## Troubleshooting

If you encounter an issue with the Dolby Conference Phone, we recommend that you attempt basic troubleshooting before you contact Support.

- [Error messages](#)
- [Viewing information about the West conferencing app](#)
- [Manually overriding DHCP assigned DNS settings](#)

## 4.1 Error messages

Error messages describe the causes and possible solutions to problems.

Table 1: Issue types

Issue type	Action
Invalid input issue	Check meeting details (conference code and leader PIN) on the email they received when the account was created.
Contact IT	This is an issue with the local setup of the phone or network.
Contact West Tech Support	This is an issue with the conferencing app on the Dolby Conference Phone or an issue with West infrastructure. Contact West tech support.
Contact West Account Support	This is an issue with the the West conferencing account. Contact West Account support.

### Error messages for West conferencing app

Error message	More information	Issue type
Cannot start meeting		
The meeting could not be started. Verify that the meeting credentials are correct.	The user provided a meeting URL that does not have a meeting associated with it.	Invalid input
The meeting could not be started. The meeting account is locked. Contact West regarding this issue.	The user tried the incorrect Leader PIN too many times.	Contact West Account Support
The meeting could not be started. Verify that the meeting credentials are correct.	The user tried the incorrect Leader PIN too many times.	Contact West Account Support
Cannot connect to the meeting because the meeting credentials are not allowed to be used. Contact West regarding this issue.	For some reason, the conference code entered can no longer be used. This is typically control by West.	Contact West Account Support
Cannot connect to the meeting because of a conference service issue. Contact West regarding this issue.	This typically means that there is an issue with the West conferencing product.	Contact West Account Support
Cannot connect to the meeting because of network error resolving the conference service server. Contact your IT administrator regarding this issue.	This typically means that the West conferencing app cannot connect to the West conferencing infrastructure.	Contact IT
Cannot join meeting		

Error message	More information	Issue type
The meeting could not be found. Verify that the conference code is correct.	The user entered the incorrect conference code.	Invalid input
Cannot connect to the meeting because of a conference service issue. Contact West regarding this issue.	This typically means that there is an issue with the West product. Either the West conferencing app or the West conferencing infrastructure.	Contact West Tech Support
Cannot connect to the meeting because of network error resolving the conference service server. Contact your IT administrator regarding this issue.	This typically means that the West conferencing app cannot connect to the West conferencing infrastructure.	Contact IT
Cannot connect to the meeting because the conference service ended the meeting. Try connecting again.	The moderator may have dismissed the participant before the connection was completed.	Contact West Account Support
Leaving meeting issue		
There was an issue with the meeting connection. The meeting information may not be updated. You may try reconnecting to your meeting. Contact your IT administrator if this issue persists.	There was a problem closing the connection with the conference service.  This usually has no ill effect, but if the problem persists it can indicate an incorrect networking setup or conditions.	See Network Issue
Meeting connection issue		
The meeting connection was lost. Try joining again. Contact your IT administrator regarding this issue.	There was an unrecoverable issue with the connection to the conference service. Restarting the call may address the connectivity issue. If the problem persists, it can indicate a problem with the networking setup or conditions.	See Network Issue
There was an issue with the meeting connection. The meeting information may not be updated. You may try reconnecting to your meeting. Contact your IT administrator if this issue persists.	There was an issue communicating meeting changes to the conference service even though the audio may still be present. Restarting the call should address the connectivity issue. If the problem persists, it can indicate a problem with the networking setup or conditions.	See Network Issue

## 4.2 Viewing information about the West conferencing app

You can view information about the West conferencing app, such as the version number of the conferencing app or the loading status.

### Procedure

1. From the phone user interface (UI), tap this sequence:



2. Scroll down, and then tap **Conferencing app**.

## 4.3 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 Dynamic Host Configuration Protocol (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.

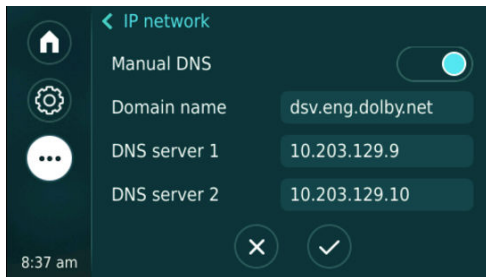
For more information, see the *Dolby Conference Phone Administrator's Guide*.

### 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 ✓.

# 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.

**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.

**FTP**

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

**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.

**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.

**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.

**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.

---

**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.

**RTP**

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

**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.

**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.



