

---

# Alexa for Business

## Administration Guide



## **Alexa for Business: Administration Guide**

Copyright © 2019 Amazon Web Services, Inc. and/or its affiliates. All rights reserved.

Amazon's trademarks and trade dress may not be used in connection with any product or service that is not Amazon's, in any manner that is likely to cause confusion among customers, or in any manner that disparages or discredits Amazon. All other trademarks not owned by Amazon are the property of their respective owners, who may or may not be affiliated with, connected to, or sponsored by Amazon.

# Table of Contents

What Is Alexa for Business?	1
How to Get Started with Alexa for Business	1
Related Services	1
Accessing Alexa for Business	1
Concepts	1
Resources	2
Available Alexa commands in Meeting Rooms	4
Prerequisites	6
Sign Up for AWS	6
Create IAM Users and Policies	6
Firewall and Network Requirements	7
WPA2 Enterprise Prerequisite	7
AVS Permissions	7
Getting Started with Shared Devices	9
Get Recommended Hardware	9
Prepare Your Devices	9
Create Network Profile	10
Import Your Devices	10
Create an IAM User for Device Setup Tool	10
Run the Device Setup Tool	11
Create Room Profile, Skill Group, and Room	12
Managing Your Shared Devices	13
Managing Rooms	13
Managing Room Profiles	14
Managing Devices	15
Managing Network Profiles	18
Managing Skills	19
Private Skills	21
Alexa for Business Blueprints	23
Managing Skill Groups	23
Sending Announcements	24
Managing Conferencing and Room Booking	26
Understanding Alexa-enabled Conferencing	26
Compatible Conference Devices	26
Conference Providers	27
PSTN Settings	28
SIP/H323 Settings	28
Calendar Integration	29
Use Zoom Rooms with Alexa for Business	29
Use Cisco TelePresence with Alexa for Business	31
Use Polycom Group Series with Alexa for Business	34
Use Polycom Trio with Alexa for Business	36
Link Alexa for Business to Your Calendar System	38
Link Alexa for Business to Office 365	39
Link Alexa for Business to Google G Suite	41
Link Alexa for Business to Microsoft Exchange	42
Use the Alexa for Business Gateway	44
Installing the Gateway	44
Running Multiple Gateways	46
Maintaining the Gateway	48
Manage Conferencing Providers	52
Managing Calling	54
Managing Address Books	54
Managing Contacts	55

Managing Users .....	56
Set up Enrollment .....	56
Invite and Remove Users .....	57
Set up Microsoft Exchange Access for Users .....	57
Require Users to Restrict Calendars to Voice .....	60
Instruct Users to Use the Alexa Smart Scheduling Assistant .....	61
Troubleshooting .....	62
Creating Usage Reports .....	64
Usage Report Prerequisites .....	64
Create a Report .....	65
Create a Scheduled Report .....	66
Logging API Calls .....	67
Alexa for Business Information in CloudTrail .....	67
Understanding Alexa for Business Log File Entries .....	68
Document History .....	69

# What Is Alexa for Business?

Alexa for Business makes it easy for you to use Alexa in your organization. Alexa for Business gives you the tools you need to manage Alexa devices, enroll your users, and assign skills, at scale. You can build your own context-aware voice skills using the Alexa Skills Kit, and the Alexa for Business APIs, and you can make these available as private skills for your organization. Alexa for Business also makes it easy to voice-enable your products and services, providing context-aware voice experiences for your customers.

## How to Get Started with Alexa for Business

After you set up your shared devices, you organize them by creating rooms and assigning devices to these rooms. You manage skills and settings centrally with skill groups and room profiles. You can configure the rooms to be linked to your corporate calendar and configure them to automatically join meetings.

## Related Services

The Alexa Skills Kit is a collection of self-service API actions, tools, documentation, and code examples. You can create your own skill and add it to the Alexa for Business console. All of the code runs in the cloud and nothing is stored on devices. For more information, see the [Alexa Skills Kit details page](#) and [Managing Skills \(p. 19\)](#).

## Accessing Alexa for Business

Alexa for Business is accessed through the AWS Management Console or the Alexa for Business API.

## Concepts

To help you get started with Alexa for Business, review the following concepts:

### **Alexa**

The cloud-based voice service that powers devices such as the Amazon Echo and Amazon Echo Dot. You can give Alexa new abilities by creating your own cloud-based service that accepts requests from Alexa and returns responses.

### **Alexa device**

A device that provides access to the Alexa service. Examples include Amazon Echo, Amazon Echo Dot, and devices that use the Alexa Voice Service.

### **Device Setup Tool**

A Windows-based application you can use to connect Amazon Echo devices to your Wi-Fi network and register them with Alexa for Business.

### **enrolled user**

Employees can join an organization by enrolling their personal Amazon account. When users join their employer's Alexa for Business organization, they can use all of the Alexa for Business features on an unlimited number of Alexa endpoints registered to the Amazon account used when they join.

### **master account**

Some skills require account linking. If you enable a skill and link your account, this becomes the master account and is shared by default for all devices with that skill enabled. You can override this master account and link a different account inside an individual room.

### **room**

The physical location that contains your device. Examples include conference rooms, lobbies, and hotel rooms.

### **room profile**

A room profile is associated with a room and contains all of the settings for your devices. This enables Alexa to provide weather, time, and other location-based information. You can create a room profile that applies the same settings to all rooms in the same building. You can modify the settings in a room profile, including the default room profile, at any time.

### **private skill**

An Alexa skill that is only available for the users and Alexa devices in your organization. A private skill never shows up in the Alexa Skills store.

### **skill**

A stand-alone capability that an Alexa customer can discover, enable, use, and disable to add new functionality to their Alexa experience.

### **skill group**

A skill group is a collection of one or more skills that can be added to a room. The only way to enable skills on a Alexa for Business-managed device is to add a skill group that contains the skills to enable in a room. After enabling a room, any device in that room has access to those skills.

### **shared device**

An Alexa device placed in a shared location, such as a conference room, lobby, or hotel room.

### **smart home device**

Smart home lights, thermostats, and drapes. Not to be confused with device, which is an Alexa device such as the Amazon Echo.

## Resources

The following related resources can help you as you work with this service.

- [Classes & Workshops](#) – Links to role-based and specialty courses as well as self-paced labs to help sharpen your AWS skills and gain practical experience.
- [AWS Developer Tools](#) – Links to developer tools, SDKs, IDE toolkits, and command line tools for developing and managing AWS applications.
- [AWS Whitepapers](#) – Links to a comprehensive list of technical AWS whitepapers, covering topics such as architecture, security, and economics and authored by AWS Solutions Architects or other technical experts.
- [AWS Support Center](#) – The hub for creating and managing your AWS Support cases. Also includes links to other helpful resources, such as forums, technical FAQs, service health status, and AWS Trusted Advisor.

- [AWS Support](#) – The primary web page for information about AWS Support, a one-on-one, fast-response support channel to help you build and run applications in the cloud.
- [Contact Us](#) – A central contact point for inquiries concerning AWS billing, account, events, abuse, and other issues.
- [AWS Site Terms](#) – Detailed information about our copyright and trademark; your account, license, and site access; and other topics.

# Available Alexa commands in Meeting Rooms

Alexa for Business simplifies meeting room experiences and lets your users interact with meeting rooms by using their voice.

The following table shows an overview of commands that you can ask Alexa in meeting rooms.

You can say...	To do this...
"Alexa, is this room available?" "Alexa, is this room free?" "Alexa, is the room booked at 4 PM?"	Check room availability
"Alexa, is this room free for 30 minutes?"	Check room availability for a specific duration
"Alexa, is this room free at 10 AM?"	Check room availability for a specific time
"Alexa, who booked this room?" "Alexa, who booked this room at 2 PM?"	Find out who reserved room
"Alexa, book this room for 30 minutes" "Alexa, book this room at 2 PM for 60 minutes" "Alexa, reserve this room until 1 PM"	Make an instant booking
"Alexa, extend the meeting" "Alexa, extend the meeting by half an hour" "Alexa, extend the meeting for 15 minutes"	Extend a room reservation
"Alexa, when is the next meeting?"	Find the next reservation
"Alexa, find me a room" "Alexa, find a room for an hour" "Alexa, find a room at noon"	Find an available room
"Alexa, join my meeting" "Alexa, start my meeting"	Join your unscheduled or scheduled meeting
"Alexa, end the meeting" "Alexa, hang up"	Leave a meeting
"Alexa, call 855-255-8888" "Alexa, call 88000"	Dial phone numbers
"Alexa, call [contact name]"	Call contacts
"Alexa, redial"	Redial



You can say...	To do this...
"Alexa, answer" "Alexa, decline"	Answer or decline an incoming call  <b>Note</b> This is only available on third-party conferencing devices that have implemented Alexa Voice Service.
"Alexa, end the call"	End a call
"Alexa, press 123#" "Alexa, enter *7"	Send digits
"Alexa, increase volume" "Alexa, lower volume"	Control the volume
"Alexa, turn on lights" "Alexa, turn off lights" "Alexa, dim the lights"	Control smart devices
"Alexa, ask <company> for the Wi-Fi password?"	Access company FAQs using Blueprints or private skills
"Alexa, ask <company> to report an issue."	Report service issues
"Alexa, ask <company> for latest news."	Hear company flash briefings
<i>Available commands during active calls</i>	
"Alexa, end the call" "Alexa, hangup" "Alexa, end the meeting"	End a call
"Alexa, press 123#" "Alexa, enter *7"	Send digits
"Alexa, increase volume" "Alexa, lower volume"	Control the volume

# Prerequisites

Before you can get started with Alexa for Business, complete the following tasks:

## Tasks

- [Sign Up for AWS \(p. 6\)](#)
- [Create IAM Users and Policies \(p. 6\)](#)
- [Firewall and Network Requirements \(p. 7\)](#)
- [WPA2 Enterprise Prerequisite \(p. 7\)](#)
- [AVS Permissions \(p. 7\)](#)

## Sign Up for AWS

Your AWS account gives you access to all services, but you are charged only for the resources that you use.

If you do not have an AWS account, complete the following steps to create one.

### To sign up for an AWS account

1. Open <https://portal.aws.amazon.com/billing/signup>.
2. Follow the online instructions.

Part of the sign-up procedure involves receiving a phone call and entering a verification code on the phone keypad.

## Create IAM Users and Policies

The Alexa for Business console requires a user name and password so that the service can determine whether you have permission to access its resources. We recommend that you avoid using AWS account credentials for general access because those credentials cannot be revoked or limited in any way. For more information, see [AWS Security Credentials](#) in the *AWS General Reference*.

Instead, use AWS Identity and Access Management (IAM) to create an IAM user and add the user to an IAM group with administrative permissions. You can then access the Alexa for Business console using the credentials for the IAM user. If you signed up for AWS but have not created an IAM user for yourself, you can create one using the IAM console. For more information, see [Creating an IAM User in Your AWS Account](#) in the *IAM User Guide*.

By default, IAM users don't have permissions to manage Alexa for Business resources. You must use a customer managed policy that explicitly grants IAM users those permissions, and attach the policy to the specific IAM users or groups that require those permissions. For more information, see the following topics in the *IAM User Guide*:

- [Managed Policies and Inline Policies](#)
- [Access Management](#)

In alignment with standard security guidelines, we recommend that you create another IAM user for the Device Setup Tool. We recommend a separate user with only the necessary permissions for Alexa for Business. For more information, see [Create an IAM User for Device Setup Tool \(p. 10\)](#).

## Firewall and Network Requirements

To join meetings and make calls from your Echo devices, you must have the following ports and protocols:

Service	Protocol	Destination Port	Transport
Signaling	HTTPS	443	TCP
Media port/connectivity negotiation	ICE/STUN/TURN	3478	TCP/UDP  <b>Note</b> UDP is preferred. Only open TCP 3478 if UDP 3478 isn't allowed.
Conference or PSTN calling audio  <b>Note</b> G.711 audio codec	SRTP	49152 - 65535	UDP

## WPA2 Enterprise Prerequisite

If you plan to use WPA2 Enterprise Wi-Fi to set up your shared devices, you will specify this network security type later in the Device Setup Tool. For more information, see [the section called “Run the Device Setup Tool” \(p. 11\)](#). However, you must create a Private Certificate Authority (PCA) in AWS Certificate Manager (ACM). To do this, follow these steps:

1. [Create a Private Certificate Authority](#) and tag the CA with the following: Key=a4b, Value=enabled.
2. [Get a Certificate Signing Request \(CSR\)](#).
3. [Sign Your Private CA Certificate](#).
4. [Import Your Private CA Certificate into ACM PCA](#).

## AVS Permissions

To register an Alexa Voice Service (AVS) device with Alexa for Business, you must first give access to the Alexa built-in device maker. To do this, use the following steps to create an IAM role in the Alexa for Business console that allows the AVS device maker to register and manage devices with Alexa for Business on your behalf.

### To grant AVS permissions

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Settings, AVS permissions**.
3. From the **AVS device maker** drop-down menu, choose the device maker or **Other**.
4. Enter the **AVS device maker AWS account ID** and **Amazon ID** provided by the device maker.
5. Choose **Create IAM role**.

6. Make note of the **Role ARN** and **External ID** that are displayed. These must be entered in the device maker's management tool. (The experience might be different across device makers.)

# Getting Started with Shared Devices

After setting your IAM permissions, you can now get started with your shared devices. The following devices can be set up as shared devices:

- Echo (1st and 2nd generation)
- Echo Dot (2nd and 3rd generation)
- Echo Plus (1st and 2nd generation)
- Polycom Trio 8500 and 8800

## Tasks

- [Get Recommended Hardware \(p. 9\)](#)
- [Prepare Your Devices \(p. 9\)](#)
- [Create Network Profile \(p. 10\)](#)
- [Import Your Devices \(p. 10\)](#)
- [Create an IAM User for Device Setup Tool \(p. 10\)](#)
- [Run the Device Setup Tool \(p. 11\)](#)
- [Create Room Profile, Skill Group, and Room \(p. 12\)](#)

## Get Recommended Hardware

We recommend that you obtain the following hardware to simplify the setup process:

- Label printer or other equipment to print asset or identification tags for your devices
- Power strips appropriately spaced for Echo or Echo Dot power adapters
- Extra power adapters
- Windows laptop or desktop with Wi-Fi controller

### Note

The Device Setup Tool requires a Windows laptop. It doesn't work on any virtual desktop running in the cloud or on Apple hardware.

## Prepare Your Devices

There are several tips for preparing your devices before setup:

- After you unpack a brand new device, keep the device connected for at least 15 minutes to download the latest firmware. If your device doesn't have the latest firmware, assigning the device to a room fails.
- As you unpack your devices, label them with the last three characters of the device serial numbers (DSN), printed on the box. DSNs are not printed on some devices, and clearly labeling them helps you track them during setup. You can also create asset tags that have the full DSNs and barcode on the label.
- You need to be within a certain distance of your devices, so we recommend that you use power strips and set them up on one or two long tables.
- If it's the first time they're turned on, the devices automatically enter setup mode. If the devices have been turned on previously, hold the action button on the top of the devices for 8 seconds until the light ring turns orange.

- If you are setting up hundreds of devices, leave the power cord for each Echo or Echo Dot plugged into the power strips and move the devices without power cords through your setup station.

## Create Network Profile

To create, assign, and manage network settings for your shared Echo devices, see [the section called “Managing Network Profiles” \(p. 18\)](#). Network profiles enable you to manage wireless password rotations and enterprise certificate rotations.

### Note

We recommend setting up your shared Echo devices on a dedicated network created for IoT devices.

## Import Your Devices

Use the Alexa Companion app to set up your devices using your Amazon.com or Amazon Business account, then import your devices into Alexa for Business. Alternatively, you can create an IAM user for the Device Setup Tool provided by Alexa for Business, then use the Device Setup Tool to set up your devices. For more information, see [Create an IAM User for Device Setup Tool \(p. 10\)](#) and [Run the Device Setup Tool \(p. 11\)](#).

### Note

If you need your devices to connect to WPA2 Enterprise Wi-Fi, you must use the Device Setup Tool.

Follow these steps to import your devices into Alexa for Business using the Alexa Companion app.

### To import your devices

1. Sign in to the Alexa Companion app using your Amazon.com or Amazon Business account credentials.
2. Set up your devices by following the instructions in the Alexa Companion app.
3. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
4. Choose **Shared devices**.
5. Choose **Import devices**.
6. Sign in with the same Amazon.com or Amazon Business credentials that you used to sign in to the Alexa Companion app.
7. For **Choose device(s)**, select the Echo devices to be imported in Alexa for Business, and choose **Import**.

We recommend associating the network profile with your corporate network credentials to the devices you just imported. For more information, see [the section called “Managing Network Profiles” \(p. 18\)](#).

After your devices are set up, they are listed on the **Shared devices** page of the Alexa for Business console.

## Create an IAM User for Device Setup Tool

Before you can use the Device Setup Tool, you must create an IAM user for it.

### To create an IAM user for the Device Setup Tool

1. Open the IAM console at <https://console.aws.amazon.com/iam/>.

2. Choose **Users, Create new users**.
3. Enter a user name (for example, **DeviceSetupTool**), and choose **Programmatic access, Next**.
4. Choose **Attach existing policy directly, AlexaforBusinessDeviceSetup** from the list, and **Next**.
5. (Optional) If you plan to use **WPA2 Enterprise** for the **Network security type** in the **Device Setup Tool**, attach the following custom policy for additional ACM PCA permissions:

**Note**

We recommend that you use scoped down permissions for specific CAs.

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": [
        "acm-pca:ListCertificateAuthorities"
      ],
      "Resource": "*"
    },
    {
      "Effect": "Allow",
      "Action": [
        "acm-pca:IssueCertificate",
        "acm-pca:GetCertificate"
      ],
      "Resource": "arn:aws:acm-pca:region:account:certificate-
authority/11111111-1111-1111-111111111111"
    }
  ]
}
```

If you don't want to be restricted to a specific PCA CA, attach the following policy:

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": [
        "acm-pca:ListCertificateAuthorities",
        "acm-pca:IssueCertificate",
        "acm-pca:GetCertificate"
      ],
      "Resource": "*"
    }
  ]
}
```

6. Choose **Create user**.
7. Download and save the IAM access key and secret key. You need them later when you configure the Device Setup Tool.

## Run the Device Setup Tool

After you create an IAM user for the Device Setup Tool, you can run the Device Setup Tool to set up your devices.

Follow these steps to run the Device Setup Tool on a Windows computer enabled with Wi-Fi.

### To run the Device Setup Tool

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Shared devices**.
3. Choose **Set up devices**.
4. On the **Set up your Alexa devices** page, choose the first button, **Download and run Device Setup Tool**.
5. Install and open the Device Setup Tool.
6. On the home page of the application, choose **Get started**.
7. Enter the **Access key ID** and **Secret access key** that you created for the Device Setup Tool user, and choose **Next**.
8. Select the network profile to associate with your devices, and choose **Save**.
  - For information about how to create a network profile, see [Create Network Profile \(p. 10\)](#).
9. After selecting the network profile and verifying the network configuration is accurate, choose **Next**.
10. Put your Alexa devices into setup mode by powering them on for the first time, or by holding the action button on the top of the Echo device.
11. From the **Device setup** home page, choose **Start setup** to scan for all Alexa devices in setup mode nearby and register them to your Alexa for Business organization.

#### Note

If you don't want to set up all Alexa devices in setup mode near your computer, choose **Select devices** and select from the list the devices to set up. To download a .csv file with the MAC address for your selected devices, choose **Download MAC info**.

12. Wait for the tool to complete. You can monitor progress in the tool to see which device is being set up, as well as the status of each device (**Successful** or **Failed**).

#### Note

After the status for a device changes to **Successful**, you can unplug the device even if the light ring is still orange. If all devices show as **Failed**, make sure that you have a strong connection to the network and that the Wi-Fi information is entered correctly.

After all of your devices have been set up, they are listed on the **Shared devices** page of the Alexa for Business console. To set up more devices, repeat steps 1–12 for the additional devices.

## Create Room Profile, Skill Group, and Room

After you set up your devices with the Device Setup Tool, you are ready to create the following resources:

- [A room \(p. 13\)](#)
- [A room profile \(p. 14\)](#)
- [A skill group \(p. 23\)](#)



# Managing Your Shared Devices

After you set up Alexa for Business, you can add, edit, or delete rooms, room profiles, shared devices, skills, and skill groups.

## Tasks

- [Managing Rooms \(p. 13\)](#)
- [Managing Room Profiles \(p. 14\)](#)
- [Managing Devices \(p. 15\)](#)
- [Managing Network Profiles \(p. 18\)](#)
- [Managing Skills \(p. 19\)](#)
- [Managing Skill Groups \(p. 23\)](#)
- [Sending Announcements \(p. 24\)](#)

## Managing Rooms

A room is a physical location where you can put your Alexa devices. Examples of rooms include conference rooms, lobbies, or hotel rooms.

We recommend naming your rooms with unique and meaningful identifiers that can be logically parsed by a third party. Instead of "Room 12" or "Suite 104," pick a name like "ORD\_01\_0201" or "SEA\_38\_0021." The ResolveRoom API action exposes the room name to third-party skill developers, including any skills that you develop privately for your organization.

### To create a room

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Rooms**, **Create room**.
3. For **Name**, enter a unique name.
4. For **Profile name**, select a room profile or choose **Create room profile** and choose **Next**.
5. (Optional) To add a skill group, select the check box next to the skill group to add and choose **Next**.

#### Note

You can assign a skill group to multiple rooms at once from the **Skill group** detail page.

6. (Optional) To add devices, select the check box next to the devices.

#### Note

You can also assign devices to a room from the **Shared devices** list view.

7. Choose **Create room**.

You can edit the name, description, and room profile of your room in the **Rooms** tab. You can also assign or unassign devices and skill groups in the same tab.

### To edit a room

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.

2. Choose **Rooms** and select the name of the room to edit.
3. Edit the **Name**, **Description**, or **Room profile** and choose **Save**.
4. Under **Devices or Skill groups**, choose **Assign** or **Unassign**.

If you no longer need a room, you can delete it. This stops the Alexa device in the room from responding to voice requests.

#### To delete a room

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Rooms** and select the check box next to the room to delete.
3. Choose **Delete room**, **Delete**.

After your room is deleted, your Alexa devices are automatically unassigned and can be assigned to a different room. For more information, see [Managing Devices \(p. 15\)](#).

Echo, Echo Dot, and Echo Plus devices use on-device keyword spotting to detect a wake word. When they detect a wake word, the light ring around the top of the device turns blue to indicate that Alexa is streaming audio to the cloud. These voice recordings are anonymously stored in the cloud. You can't view or listen to the interactions that users have with the Alexa devices in a room. You can choose to delete voice recordings from all of the devices in a specific room. If you delete these recordings, it might degrade your experience using voice features.

#### To delete voice recordings

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Rooms** and select a room.
3. Choose **Delete voice recordings**, **Delete**.

## Managing Room Profiles

To simplify the process of creating and managing rooms, first define room profiles. A room profile contains the settings for your Alexa devices, so that they can provide you with weather, time, and other location-based information. For example, you can create a room profile that contains the Alexa settings that apply to all rooms in the same building.

If you want to offer room booking to your users, Alexa searches all rooms in a room profile when receiving requests like "Alexa, find a room." To optimize room searching, you can create a room profile that contains all rooms in the same building, or on the same floor (depending on your office size).

When you create a room, you must select a room profile. If you have not created one, a default room profile is provided. You can modify the settings, including the default room profile, at any time.

#### To create a room profile

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Room profiles**, **Create room profile**.
3. Fill in the following fields:
  - **Profile name** – Enter a unique name for the room profile. (Required)
  - **Location** – Enter the physical address of the building. (Required)
  - **Time zone** – Select the time zone for the room profile. (Required)

- **Wake word** – Select the voice command that turns on the device.
  - **Temperature units** – Choose **Fahrenheit** or **Celsius**.
  - **Distance units** – Choose **Feet** or **Meters**.
  - **Max volume** – Choose a value between **6–10** to limit the volume output of the device to this value.
  - **Device setup mode** – Choose **On** to allow users to hold the action button for 7 seconds to put the device into setup mode. Otherwise, choose **Off**.
  - **Outbound calling** – Choose **Enable** or **Disable** to specify the ability to make outbound PSTN phone calls from the Echo devices.
  - **Address book** – Select the address book you want to assign to the room profile.
4. Choose **Create**.

You can edit the name, description, and room profile of your room in **Room profile**.

#### To edit a room profile

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Room profiles** and choose the name of the room profile to edit.
3. Edit any of the fields and choose **Save**.

If a room profile is assigned to a room, you can't delete it.

#### To delete a room profile

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Room profiles**, **Delete room profile**.
3. Select the check box next the room profile to delete.
4. Choose **Delete room profile**, **Delete**.

## Managing Devices

You can set up your Alexa devices (Amazon Echo, Echo Dot, or Echo Plus) using the Device Setup Tool. This connects your device to your Wi-Fi network and registers it with Alexa for Business. You can also use the Alexa Companion app to set up your devices using your Amazon.com or Amazon Business account, then import your devices into Alexa for Business. For more information, see [Import Your Devices \(p. 10\)](#).

After you set up your devices, you can assign them to your rooms.

#### Note

You need a Windows computer to use the Device Setup Tool. You cannot run the Device Setup Tool on any cloud-based, Windows streaming tool, such as Amazon WorkSpaces, or any imaged driver such as Boot Camp.

#### To set up your devices using the Device Setup Tool

1. If you haven't already, install the Device Setup Tool. For more information, see [Run the Device Setup Tool \(p. 11\)](#).
2. Note the last three characters of the device service number (DSN), printed on the box. These characters are included in the Wi-Fi network that the device broadcasts while you are setting it up. They are required when you assign your device to a room.

3. Plug your device into a power outlet, and press and hold the **Action** button (white dot) for five seconds. Wait until the device tells you that it is ready and the light ring turns orange.

**Note**

If the device has already been set up before, you can manually enter setup mode by pressing and holding the **Action** button for 7 seconds.

4. Open the Device Setup Tool, which discovers your device.

**Note**

If the Device Setup Tool doesn't discover your devices, choose **Start setup**.

5. Select the network profile to associate with your devices, and choose **Save**.
  - For information about how to create a network profile, see [the section called "Managing Network Profiles" \(p. 18\)](#).
6. After selecting the network profile and verifying the network configuration is accurate, choose **Next**.
7. Put your Alexa devices into setup mode by powering them on for the first time, or by holding the action button on the top of the Echo device.
8. From the **Device setup** home page, choose **Start setup** to scan for all Alexa devices in setup mode nearby and register them to your Alexa for Business organization.

**Note**

If you don't want to set up all Alexa devices in setup mode near your computer, choose **Select devices** and select from the list the devices to set up. To download a .csv file with the MAC address for your selected devices, choose **Download MAC info**.

9. Wait for the tool to complete. You can monitor progress in the tool to see which device is being set up, as well as the status of each device (**Successful** or **Failed**).

**Note**

After the status for a device changes to **Successful**, you can unplug the device even if the light ring is still orange. If all devices show as **Failed**, make sure that you have a strong connection to the network and that the Wi-Fi information is entered correctly.

The Device Setup Tool connects your devices to your Wi-Fi network and registers them with Alexa for Business. For information about how to create a network profile, see [Managing Network Profiles \(p. 18\)](#).

### To assign devices to a room

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Shared devices** and select the check box next to the devices to assign to a room.
3. Choose **Assign to room**, and choose the room to which to assign the devices.
4. Unplug the device and plug it back in to restart it.

We recommend that you label the devices with the room to help ensure that the device remains in the correct room. To move devices from one room to another, unassign and then re-assign the devices.

### To view device information

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Shared devices** to see a list of your registered devices and the following information for each device:
  - **Serial number** – The serial number of the device.
  - **Type** – The type of device.
  - **Device name** – The name of the device.

- **Assigned room** – The room to which the device is assigned.
- **Status** – The status of the device, including the network connection status of the skills and settings being applied to the device.
  - **Synced** – All skills and settings are applied to the device.
  - **In progress** – The device is connected to the network, and Alexa for Business is applying skills and settings to the device.
  - **Failed** –The device could not be sync. For more information, check the **Failure** column.
  - **Deregistered** –This device has been factory reset, or put into device setup mode and not set up properly. Please set up this device again using the **Device Setup Tool**.

Alexa for Business publishes the number of your shared devices online, offline, and deregistered to Amazon CloudWatch as metrics. These metrics are inside the namespace **AWS/A4B**. The metric names are **OnlineSharedDevices**, **OfflineSharedDevices**, and **DeregisteredSharedDevices**. All of these metrics can be grouped by the metric dimensions **Room Profile** or **Organization**.

**Note**

Viewing **AWS/A4B** metrics by **Room Profile** filters out devices in your organization that aren't assigned to a room. It also allows you to filter results for a specific building with offline devices.

**To monitor devices using CloudWatch**

1. Follow the steps in [View Available Metrics](#) in the *Amazon CloudWatch User Guide*. Instead of choosing the namespace **EC2**, choose the namespace **AWS/A4B**, and then choose a metric dimension (**Organization** or **Room Profile**).
2. To set up alarms from CloudWatch when a critical number of devices go offline, follow these steps:
  1. Graph the metric. For more information, see [Graph a Metric](#).
  2. Create an alarm. For more information, see [Create an Alarm from a Metric on a Graph](#).

**To delete a device**

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Shared devices** and select the check box next to the device to deregister.
3. Choose **Actions, Delete Devices**.

**Note**

This action removes the device from the console.

You can reset a device to clear all timers, alarms, to-do lists, shopping lists, and Bluetooth-connected phones for a device. This also sets the volume to 5 for a shared device.

**To reset a device**

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Shared devices** and select the devices to reset.
3. Choose **Actions, Reset device**.

Alexa for Business manages device accounts and settings through rooms and room profiles. When you add devices to a room, change the room of a device, update specific settings in a room profile (including the wake word, volume limit, and device setup mode), or when you reset a device, the device must be connected to the internet for the update to complete successfully. Alexa for Business retries these calls for one hour, and then the device is placed into a **Sync needed** status. To implement your changes, plug in the Alexa device, ensure that it's connected to Wi-Fi, and sync the device.

### To sync a device

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Shared devices** and select one or more devices with the status **Sync needed**.
3. Choose **Actions, Sync devices**.

## Managing Network Profiles

To simplify the process of creating and managing network configurations, you can define network profiles. Network profiles are associated with devices and consist of network configuration settings, including the SSID, network security type, network credentials, and description. When you make a change to the network profile, the changes are applied to all shared devices associated with that profile. If your shared devices are set up on a closed network, you can use network profiles for password rotation. If your shared devices are set up on a WPA2 enterprise network, you can also use enterprise certificate rotation.

When you set up a device using the device setup tool, you must first select a network profile to associate devices to. If the device was set up using **Import Devices**, you can associate the existing device to a network profile.

### To create a network profile

1. Make sure that you have the **AlexaForBusinessFullAccess** policy attached to your IAM user account. For more information, see [Adding IAM Identity Permissions \(Console\)](#).
2. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
3. Choose **Network profiles, Create network profile**.
4. Fill in the following fields:
  - **Network SSID** – The name of the network SSID. (Required)
  - **Description** – The description of your network profile. This information helps you identify your network configuration if you have multiple network profiles.
  - **Network security type** – The type of security that is used for your network. From the drop-down menu, choose from one of the following options:
    - **Open**
    - **WEP**
    - **WPA Personal**
    - **WPA2 Personal**
    - **WPA2 Enterprise**
  - For password-based networks (WEP, WPA Personal, and WPA2 Personal):
    - **Current password** – The current password of the network. (Required)
    - **Next password** – The next password of the network.

#### Note

When you create a network profile for a password-based Wi-Fi network, Alexa for Business stores your passwords in AWS Secrets Manager and asynchronously transmits the network profile details to associated devices. To rotate the wireless password for the network associated with your shared Echo devices, use and update the **Next password** field.

After the passwords are successfully transmitted to the device, the sync status for those devices changes to **Synced**. You can then change the password of your network, and devices will continue to work with the new password.

5. If you chose **WPA2 Enterprise**, complete the following steps. Otherwise, skip these steps.

1. From the drop-down menus, select the **EAP method** and **AWS certificate authority** that you created earlier, and choose **Next**.

**Note**

Certificate changes for the WPA2\_Enterprise network profile, including CA ARN and root certificate changes, are transmitted asynchronously to the devices.

2. On the **Add root certificate** page to set up the Authentication Server Trust, provide the root certificate of your authentication server (RADIUS). This certificate is installed on your devices and used to trust your authentication server during EAP negotiation. Select the certificate from a file on disk or paste it from your clipboard. The certificate must be in PEM format. When you're done, choose **Save**.
6. Select devices to associate with the network profile (optional), and then choose **Create**.

You can edit the room's name, description, and profile in **Network profile**.

**To edit a network profile**

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Network profiles** and choose the name of the network profile to edit.
3. Edit any of the fields and choose **Save**.

**To assign devices to a network profile**

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Network profiles** and choose the name of the network profile to associate devices to.
3. Review the network profile details. Choose **Associate a device**, and choose the devices to associate the network profile to.

**To delete a network profile**

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Network profiles**.
3. Select the check box next to the network profile to delete.
4. Choose **Delete network profile**, **Delete**.

**Note**

You can delete a network profile only if no devices are associated to it.

## Managing Skills

Skills are voice-driven capabilities that enhance the functionality of your Alexa device. Alexa for Business gives you access to all Alexa skills. To enable skills for your devices, you must first enable it for your organization and then add it to one or more skill groups that are assigned to your rooms. For more information, see [Managing Skill Groups \(p. 23\)](#).

**To enable a skill**

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Skills**, **Alexa Skills store**.
3. Find the skill to add by browsing the list of available skills, filtering by category, or searching by keyword. You can get more details about the skill and how to add it in the skill details.

4. Choose **Enable skill**.
5. If the skill requires it, link your master account by following the account linking steps. When you are done, you receive a success message in the console.
6. If the skill supports it, optionally enable permissions by choosing **Allow** next to each permission and choose **Save**.
7. Choose **Enabled skills**, select the check box next to the skill that you just added, and choose **Add to skill group**.
8. Select the check box next to the skill group to which to add the skill, and choose **Add**.

The skill is enabled on all Alexa devices associated with the skill group.

**Note**

If there are a large number of rooms associated with the same skill group, this step might take up to five minutes.

**To change permissions for a skill**

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Skills** and select the skill name.
3. In the upper-right corner, choose **Change permissions**.
4. Choose **Allow** next to each permission to enable it, and then choose **Save**.

**Note**

The permission given is at the skill level. It applies to all shared devices with that skill enabled in your organization. The permission setting doesn't impact the permissions of your enrolled users. Users must select the permission for themselves in the Alexa companion app. For more information, see [Enable Alexa Skills](#).

**To remove a skill**

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Skills**.
3. Choose **Disable** next to the skill that you want to remove, then choose **Disable**.

**To link a master account to a skill**

Some skills require the ability to connect with a user in another system. This is called account linking, which links an Alexa for Business account to a user account in another system.

When you add a skill that requires account linking, you are prompted to open the sign-in page of the skill provider and sign in with your user account. After you successfully sign in, Alexa obtains an access token that uniquely identifies the user within the system. Alexa for Business applies this token to all devices that receive your skill by default, making this your master account. Alexa stores this token and includes it in requests sent to the skill provider when the skill is invoked.

If you want to link a unique account for the devices in a specific room, you can override the linked account. For example, to use some smart home skill to control the lights in your conference room, you must link to the user account for that room in the smart home system.

**To link a skill to a room**

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Rooms** and select a room.
3. In the **Skills** table, choose **Link account to this room**, **Link**.



4. Follow the skill account linking steps.

On the **Room details** page, there are optional and required actions available in the **Skill configuration** column, depending on skill type and account linking status:

Account linking status/ skill type	Master account linked	Account linked to room	No account linking
Custom skill	Link account to this room	Revert to master account	No action
Smart home skill	Require scope or link account to this room	Revert to master account and require scope	N/A
Private skill	Optional skill parameters  Link account to this room	Optional skill parameters Revert to master account	Optional skill parameters

### To configure the scope of a smart home skill

**Note**

Not all smart home skills use scope. Check with the skill developer to see if they do, and if so, what the value should be.

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Rooms** and select a room.
3. In the **Skills** table, choose the edit icon next to the text field and enter the scope for a smart home with a master account skill linked.
4. Choose **Save**.

### To configure a skill parameter of a private skill

**Note**

Not all private skills call into Alexa for Business to use the scope. Check with the skill developer to determine if this value is needed, and if so, what it should be.

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Rooms** and select a room.
3. In the **Skills** table, choose the edit icon next to the text field and enter the skill parameter value.
4. Choose **Save**.

## Private Skills

In addition to public Alexa skills, developers can use the Alexa Skills Kit to create and publish skills privately to Alexa for Business organizations. This way, developers do not need to certify or have the skill available with all other Alexa skills.

Public and private skills share many of the same features. They are both developed in the same way using the Alexa Skills Kit, and they can both use account linking to map users to a back-end system.

There are, however, areas where private skills are different from public skills. When considering whether to make a skill public or private, refer to the list below.

A private skill has the following characteristics:

- The skill isn't discoverable in the public Alexa Skills Store.
- The skill developer can whitelist which organizations can review the skill, including its description and functionality, as well as enable it.
- The skill developer can control which organizations can enable the private skill and therefore limit attempts to authenticate against back-end systems for account linking.
- The skill does not need to go through Amazon's certification process for public skill publishing and for every skill change. For more information on public skill certification, see [Certification Requirements for Custom Skills](#).
- The IT admin has additional control to review and enable the skill for the organization through the AWS console.
- The IT admin can use Alexa for Business to control whether enrolled users can view and enable a private skill.

If the skill is intended for a limited audience, such as your organization or partner organizations, it's a good candidate for a private skill.

### To create private skills with the Alexa Skills Kit

- For information about how to create private skills with the Alexa Skills Kit, see [Build Skills with the Alexa Skills Kit](#).

#### Note

If you are building a private skill and want to use any information from a shared device that requires permission, follow the instructions in the Alexa Skills Kit. For more information, see [Permissions](#).

### To publish private skills created with the Alexa Skills Kit

- There are two ways you can publish private skills created with the Alexa Skills Kit:
  - If you are publishing a single skill, we recommend that you use the [developer console beta](#). For more information, see [Create and Publish Private Skills \(Developer Console Beta\)](#).
  - If you want to automate the creation of private skills, you can use the ASK CLI. For more information, see [Create and Publish Private Skills \(ASK CLI\)](#).

### To manage private skills created with the Alexa Skills Kit

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Skills, Private skills**.
3. In the list, select the skill that was published to your account and choose **Review**.

#### Note

It takes about 20 minutes after publishing for a skill to appear in this list.

4. To enable the skill for your Alexa for Business organization, choose **Enable**.
5. To enable the skill for your Alexa devices, choose **Enabled skills**, select the check box next to the skill that you added, and choose **Add to skill group**.
6. To make the skill available for end users to discover and enable, choose **Private skills** and select the **Available to users** check box.

## Alexa for Business Blueprints

Any member of an Alexa for Business organization can publish private business skills to your organization within minutes using Alexa for Business Blueprints. After a user builds a blueprint, you can review and publish the skill to use across your company with any Alexa-enabled device. There are two blueprints designed specifically for business use. The **Business Q&A** blueprint is a template that users can customize with their own questions and answers related to your organization. The **Onboard Guide** blueprint helps new employees get up to speed in their new roles with specialized how-to questions about the team and the office. For more information about how to use Alexa for Business Blueprints, see [Create Alexa Experiences for Your Organization](#).

### To create and publish private skills with Alexa for Business Blueprints

1. Invite your employees to create blueprint skills:
  1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
  2. From the dashboard, under **Create Alexa Skills**, choose **send an email**.
  3. Edit the email as needed and send it to your employees.
2. A member of your organization creates and publishes a blueprint skill for your review. For more information about to do this, go to the [Blueprints website](#), and choose **Help Center**, **Publish to Alexa for Business**.
3. Review and enable the blueprint skill:
  1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
  2. Choose **Skills**, **Private skills**, and find the skill submitted by the user.
  3. Choose **Review** to review the skill, and then choose **Enable** to enable it. You can add the skill to skill groups to enable it in the desired rooms. Optionally, you can select the check-box to make the skill available to your organization's enrolled users, who can then use the Alexa app to enable the skill in their account.

As an administrator, you can also create and publish skills with blueprints. Follow the previous steps in this section.

## Managing Skill Groups

Skill groups are collections of skills that Alexa for Business uses to enable skills on the Alexa devices in your rooms. For example, you can define a skill group with all the skills for your conference rooms. When you assign an Alexa device to a room, Alexa for Business enables the skills in the skill groups assigned to the room.

You can add skills to your skill groups at any time, and Alexa for Business automatically enables them on the Alexa devices. To enable skills for a device in a room, you must first add them to a skill group, then assign that skill group to a room or group of rooms.

You can also remove a skill group from one or more rooms, or delete it.

### To create a skill group

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Skill groups**, **Create skill group**.
3. For **Name and Description**, enter unique values and choose **Create**.
4. To add skills, select the group, choose **Add skills to group**, and then select the skills to add.

You can now assign the skill group to your rooms.

#### To add or remove skills for an existing skill group

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Skill groups**.
3. In the **Name** column, choose the name of the skill group to edit.
4. Under **Skills**, select the check box next to the skill to edit, and choose **Add skills** or **Remove skills**.

#### To assign a skill group to one or more rooms

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Skill groups**.
3. In the **Name** column, choose the name of the skill group to assign.
4. Under **Assigned rooms**, select the check boxes next to the rooms to which to assign the skill group, and choose **Assign to room**, **Assign**.

#### To unassign a skill group from one or more rooms

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Skill groups**.
3. In the **Name** column, choose the name of the skill group to unassign.
4. Under **Assigned rooms**, select the check boxes next to the rooms from which to unassign the skill group, and choose **Unassign from room**, **Unassign**.

#### To delete a skill group

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Skill groups**.
3. Select the check box next to the skill group to delete, and choose **Delete skill group**, **Delete**.

## Sending Announcements

You can send Alexa announcements to one or more rooms in your Alexa for Business organization. When you do this, Alexa wakes and speaks the announcement that you enter, for the rooms that you select.

You can create an announcement from the Alexa for Business console, or with the SendAnnouncement API. For more information, see the [Alexa for Business API Reference](#). The API allows developers to trigger a text or audio announcement on Alexa for Business-managed endpoints from any app. For example, when a threshold is reached on an IoT sensor, send an alert to the shared devices in an operations team area. Or, you can turn your Alexa for Business deployment into a PA system.

#### Note

Systems using the API need IAM permissions.

Use the following steps to create an announcement from the console. Also use these steps with the API, to test how the announcement sounds, or to make sure it reaches the correct rooms.

#### To send or test an announcement from the console

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Announcements**, **Create announcement**.

3. On the **Write message** page, next to **Message text**, enter a message for Alexa to announce. Choose **Next**.

**Note**

There is a maximum of 250 characters.

4. On the **Select rooms** page, choose one of the following options from the **Room selection** drop-down menu:
  - **Manual selection** - Select one room from a list of all your rooms. You can filter by **Room name** and **Profile**. This option is good for testing an announcement. You can send it to one room while sitting in that room, to hear how it sounds.
  - **Room ARN** - Enter the ARN of the room or rooms, separated by commas or line breaks. You can call an API to retrieve room ARNs.
  - **Room profile** - Select the name of the room profile and review the list of rooms.
  - **Room name filter** - Enter an exact room name, or the prefix of multiple rooms. For example, enter **Room** to see Room1 and Room2.
  - **All rooms** - Select all the rooms in your organization.
5. Choose **Send announcement**.

**Note**

Alexa doesn't proactively listen for requests after making the announcement. After hearing an announcement, users must say the wake word to make Alexa requests.

# Managing Conferencing and Room Booking

After the calendaring system in Alexa for Business is linked, users can ask Alexa to control existing video conferencing equipment with their voice. They can also use Alexa to find and reserve available meeting rooms in the office. If the room isn't available, Alexa can tell them who made the reservation.

## Tasks

- [Understanding Alexa-enabled Conferencing \(p. 26\)](#)
- [Use Zoom Rooms with Alexa for Business \(p. 29\)](#)
- [Use Cisco TelePresence with Alexa for Business \(p. 31\)](#)
- [Use Polycom Group Series with Alexa for Business \(p. 34\)](#)
- [Use Polycom Trio with Alexa for Business \(p. 36\)](#)
- [Link Alexa for Business to Your Calendar System \(p. 38\)](#)
- [Use the Alexa for Business Gateway \(p. 44\)](#)
- [Manage Conferencing Providers \(p. 52\)](#)

## Understanding Alexa-enabled Conferencing

Alexa for Business lets you bring Alexa to your meeting rooms. Use Alexa to start meetings and control your conference room systems by using your voice. You can say things like “Alexa, join my meeting” and Alexa prompts you to join the scheduled meeting on the calendar. If there is no scheduled meeting or you want to join a different meeting, say your meeting ID and, if required, the PIN.

You can use Alexa for Business to control the conference device in your meeting room. First, enable and set up the Alexa skill for your compatible conference devices, then set up your conferencing provider, and finally, you can link a calendar system.

## Tasks

- [Compatible Conference Devices \(p. 26\)](#)
- [Conference Providers \(p. 27\)](#)
- [PSTN Settings \(p. 28\)](#)
- [SIP/H323 Settings \(p. 28\)](#)
- [Calendar Integration \(p. 29\)](#)

## Compatible Conference Devices

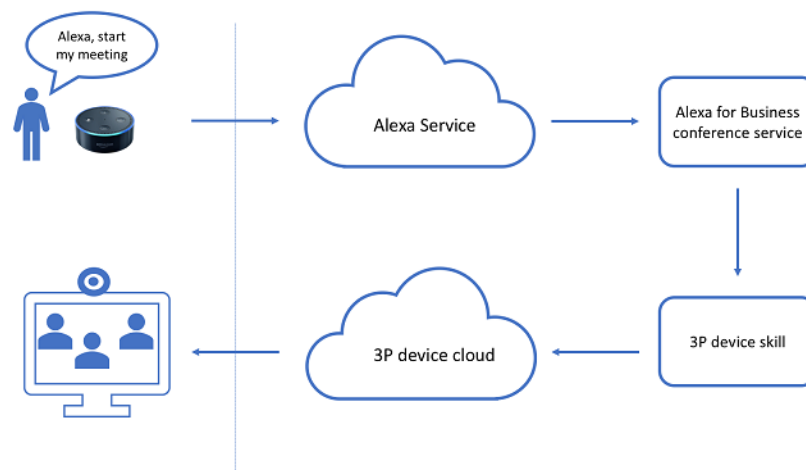
Alexa for Business supports the following video conferencing systems and in-room control systems:

Device model	Requirements
Cisco/Tandberg SX, EX, DX, MX, C	Firmware must be TC7.3 or CE8.0+
Cisco Webex Room Kit	Firmware must be CE8.0+

Device model	Requirements
Zoom Rooms	Zoom Rooms for Mac version 4.1.20278.0206 or higher  Zoom Rooms for PC version 4.1.22620.0319 or higher
Crestron 3-Series	Please contact a Crestron-certified installer
Polycom Group Series 310, 500, 700	
Polycom Trio 8500 and 8000	Firmware must be 5.9.0 or higher

When the room doesn't contain any of the supported video conferencing or in-room control systems, you can use the Echo device as a speaker phone to dial into meetings. In this case, the Echo device uses Alexa Calling and Messaging, and makes a PSTN call to the phone number specified in your conference provider settings. Currently, the Echo device can call phone numbers in the US, Canada, and Mexico.

The following diagram shows how Alexa for Business controls your conference devices.



For more information, see [Getting Started with Shared Devices \(p. 9\)](#) or the documentation provided by the device manufacturer.

## Conference Providers

To use Alexa for Business to join meetings from the conference devices in your meeting rooms, set up your conference provider. Alexa for Business offers a list of built-in conference providers, including Amazon Chime, Cisco WebEx, and Zoom. If your conference provider isn't listed, choose **Custom conference provider** and specify the details.

The conference provider contains the following settings:

- Provider name and meeting
- PSTN dial-in
- SIP/H323 dial-in

When you ask Alexa to join a meeting, Alexa searches for a scheduled meeting on the calendar that you can join. If there's no meeting on the calendar or the user declines to join it, Alexa asks the user for dial-in information to join a one-time meeting. The provider name and meeting settings are used during this exchange. The following table provides examples of what you can say to Alexa to start meetings.

### Example Dialogues

Description	Dialogue
Amazon Chime is set up as the conference provider and no meeting PIN is required.	User: "Alexa, start my meeting"  Alexa: "There is no meeting on the calendar. What is your <Amazon Chime> meeting ID?"
A meeting PIN is optional.	User: "Alexa, start my meeting."  Alexa: "There is no meeting on the calendar. What is your <provider name> meeting ID?"  User: "123456789."  Alexa: "Do you have a meeting PIN?"  User: "Yes."  Alexa: "What is your meeting PIN?"  User: "5678."  Alexa: "OK, joining your meeting."
A meeting PIN is required.	User: "Alexa, start my meeting."  Alexa: "There is no meeting on the calendar. What is your <provider name> meeting ID?"  User: "123456789."  Alexa: "What is your meeting PIN?"  User: "5678."  Alexa: "OK, joining your meeting."

## PSTN Settings

When you use your Echo device as a speaker phone to dial into meetings, you must configure the PSTN settings. Alexa for Business uses PSTN settings, and the meeting ID and PIN from the scheduled meeting, to create a dial sequence.

Alexa for Business uses this dial sequence to join the audio conference in the background and send the meeting ID and PIN as dual-tone multi-frequency signaling (DTMF) tones. The specified delays provide pauses before Alexa for Business enters the information. For example, there is a wait, the welcome announcement completes, and the user can enter the meeting ID.

## SIP/H323 Settings

When you use Alexa to control your existing conference devices, such as Cisco Telepresence, you must specify the SIP or H323 endpoint that gets called when you ask Alexa to join a meeting.



Alexa for Business uses these endpoints, and the meeting ID and PIN from the scheduled meeting to create a dial string. This dial string is sent to the Alexa skill you enabled to control your conference device.

**Note**

SIP/H323 settings are used only when using Alexa to control third-party conference devices. They aren't used when using an Echo device as a speaker phone.

## Calendar Integration

You can connect Alexa for Business to your calendar system. This allows users to join scheduled meetings without knowing the dial-in details. When Alexa for Business is connected to your calendar system and a user asks Alexa to join a meeting, Alexa for Business reads the meeting on the associated room calendar and gets the dial-in information.

Alexa for Business can get meeting dial-in information from the following conference providers:

- Amazon Chime
- BlueJeans
- Zoom
- RingCentral Meetings
- Skype for Business
- Fuze
- Cisco WebEx

**Note**

Cisco WebEx meeting invites that include TSP audio bridge are currently not supported.

- Google Hangouts Meet

**Note**

Google Hangouts Meet is only supported on shared devices.

If there are issues with one of the conference providers, send an email to **a4b-conferencing@amazon.com** and include an example of your meeting invite.

**Note**

Connecting Alexa for Business to your calendar system is required only when your third-party Alexa skill doesn't natively support joining scheduled meetings.

## Use Zoom Rooms with Alexa for Business

You can connect Alexa for Business to your Zoom Rooms system to control meetings using your voice.

To use the integration, make sure you're using:

- Zoom Rooms for macOS: Version 4.1.20278.0206 or higher
- Zoom Rooms for PC: Version 4.1.22620.0319 or higher

### To integrate Alexa for Business with your Zoom Rooms system

1. Prepare for integration:

1. Set up your Echo device. For more information, see [Getting Started with Shared Devices \(p. 9\)](#).

2. Create a new skill group for the Zoom Alexa skill. For more information, see [Managing Skill Groups](#) (p. 23).
3. Create a room in Alexa for Business, add the skill group, and assign the Echo device to the room. For more information, see [Managing Rooms](#) (p. 13).
4. If you're using Office 365 or Microsoft Exchange as your calendar system, link your calendar to Alexa for Business. For more information, see [the section called "Link Alexa for Business to Your Calendar System"](#) (p. 38).
2. Set up Zoom as a conferencing provider:
  1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
  2. Choose **Conferencing, Add provider, Zoom** and save the settings.
3. Enable the Zoom for Alexa skill:
  1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
  2. Choose **Conference settings, Zoom for Alexa** in the list of conference equipment, and **Enable**.
  3. When you're prompted to link an account, sign in with the Zoom account where you registered your Zoom Rooms, and choose **Authorize** to complete the account linking.
  4. Choose **Skills, Enabled skills**, and then select the skill.
  5. Choose **Assign to skill group**, and choose the skill group associated with the rooms where you want to use Zoom.
4. Configure the skill for your room:
  1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
  2. Choose **Rooms**, open the room where you want to use Zoom integration, and choose **Skills**.
  3. Choose the pencil icon to edit the skill configuration.
  4. For the **Scope value**, type the name of a Zoom room that already exists or will be created in the Zoom web portal.
5. Discover your Zoom Room device:
  1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
  2. Choose **Rooms**, open the room, and in the **Alexa Devices** section, verify that the status is **Synced**.
  3. Choose **Smart Home devices, Discover devices**.
  4. If your Zoom Rooms configuration is successfully set up, your Zoom Rooms system displays in the list.

You can now control your Zoom Rooms by talking to Alexa. For example, say "Alexa, start my meeting" or "Alexa, join my meeting."

When a scheduled meeting associated with your Zoom Room is found on the calendar, you are prompted to join this meeting. If you don't want to join the scheduled meeting, you can either start an instant meeting by using the meeting ID 123, or join your personal meeting room by speaking your personal, 10-digit meeting ID.

If you encounter any of the following issues, try the these resolutions:

- Alexa says that the Zoom room isn't found:

Make sure that the account used for account linking is the same as the account that you used to sign into your Zoom room.
- Alexa can't find an upcoming event on your calendar:

Make sure that the meeting on your calendar was scheduled as a Zoom meeting.
- Alexa says "It looks like the conference provider is invalid":

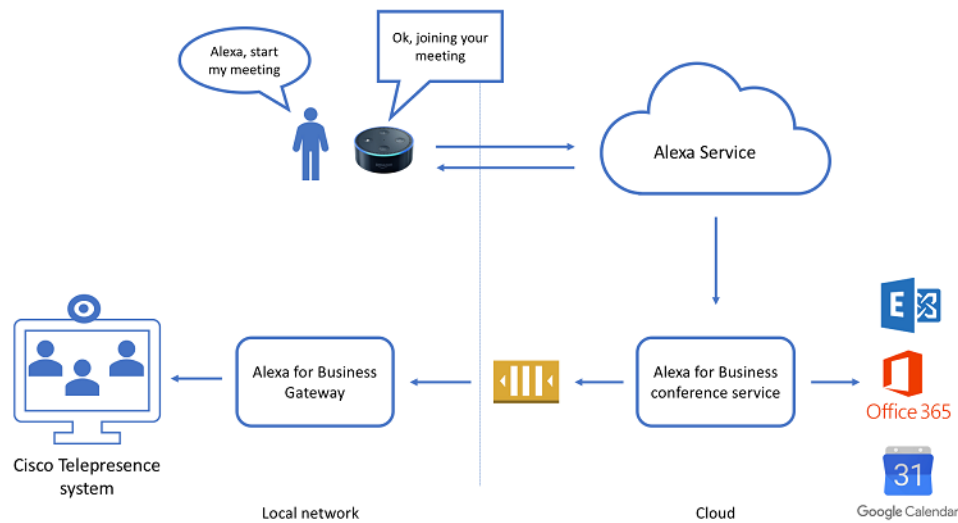
Make sure that you have the latest version of the Zoom Rooms software.

## Use Cisco TelePresence with Alexa for Business

Use Alexa for Business to control your Cisco TelePresence systems and join meetings by using your voice. Alexa for Business supports the following Cisco video conferencing endpoints:

- Cisco Telepresence DX, EX, MX, and SX series
- Cisco Webex Room Kit

To have Alexa control your Cisco video conferencing endpoints, run the Alexa for Business gateway within your local network. The Alexa for Business gateway receives control events from Alexa for Business and issues commands to the Cisco video conferencing endpoints in your meeting rooms. For example, when a user asks Alexa to join a meeting, an event is sent to the gateway. The gateway processes this event, connects to the Cisco video conferencing endpoint in the room, and then initiates the dial-in to the meeting. The following diagram shows the setup and network boundaries.



For more information, see [the section called "Use the Alexa for Business Gateway" \(p. 44\)](#).

To use Alexa for Business to control your Cisco video conferencing endpoints, you must meet the following requirements:

- You have a Cisco TelePresence system with firmware version TC7.3.12 or CE8 or higher.
- You have Windows Server 2008 or later, Windows 7 desktop or later, or a Linux server or choice to run the Alexa for Business gateway. This can be a virtual or physical machine.
- Your locally deployed Alexa for Business gateway is allowed to make outbound HTTPS connections and has local network access to control your Cisco TelePresence system. Incoming external communication or inbound ports aren't required.

### To use Cisco TelePresence with Alexa for Business

1. Set up your conferencing provider in Alexa for Business.

- a. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
  - b. Choose **Conference settings** and then choose the name of your default conferencing provider.
  - c. Enter the H323/SIP endpoint if it isn't filled in. Alexa for Business sends these settings with the meeting ID/PIN to create a dial-in string that's called on in the Cisco TelePresence system.
2. Enable the skill.
  - a. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
  - b. Choose **Conference settings** and **Alexa for Cisco TelePresence** in the list of conference equipment.
  - c. Choose **Enable**.
  - d. You receive a prompt to link an account. Sign in or create an Amazon.com account (for example, marymajor@example.com).
  - e. Choose **Skills, Enabled skills**, and then select the skill.
  - f. Choose **Assign to skill group** and choose the skill group associated with the rooms where you want to make the skill available.
3. Install the Alexa for Business gateway. For more information, see [Use the Alexa for Business Gateway](#) (p. 44).
4. Add your Cisco TelePresence system to Alexa for Business and add it to a room.
  - a. Choose **Endpoint, Add endpoint**.
  - b. Specify the **Cisco TelePresence** system name.
  - c. Enter a friendly name, which can be used to control the Cisco endpoint using your voice. For example, "Alexa, turn on <friendly name>."
  - d. (Optional) Enter a description.
  - e. Choose the **Cisco TelePresence** model.
  - f. Specify the endpoint URL of your Cisco TelePresence endpoint. For example, "http://10.0.1.42".

**Note**  
If you don't specify a protocol, "http" is used.
  - g. Choose the Alexa for Business room where the Cisco TelePresence endpoint is located.
  - h. Choose **Add**.
  - i. Choose **Rooms** and the name of the room where you just assigned the Cisco TelePresence endpoint.
  - j. Choose the gateway group to control your Cisco endpoint.
  - k. Choose **Discover devices** to have the endpoint available in your room.
  - l. Test the integration by saying "Alexa, start my meeting," and say the meeting ID and PIN for your meeting when prompted.

### To add a Cisco TelePresence endpoint

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Conferencing settings, Alexa for Cisco TelePresence**.
3. In the endpoint section, choose **Add endpoint**. For **System name**, enter **Cisco TelePresence**.
4. Enter a friendly name, which can be used to control the Cisco endpoint using your voice. For example, "Alexa, turn on <friendly name>." Enter an optional description.
5. Choose **Cisco TelePresence model** and specify the endpoint URL of your Cisco TelePresence endpoint. For example, "http://10.0.1.42".

#### **Note**

If you don't specify a protocol, "http" is used.

6. Choose the Alexa for Business room where the Cisco TelePresence endpoint is located and choose **Add**.
7. Choose **Rooms** and the name of the room where you just assigned the Cisco TelePresence endpoint.
8. Choose the gateway group to control your endpoint.
9. To have the endpoint available in your room, go to the **Smart Home devices** section and choose **Discover devices**.

You can now use Alexa to control your Cisco TelePresence endpoint using voice.

### To remove an endpoint

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Conferencing settings, Alexa for Cisco TelePresence**.
3. Go to the endpoint section and select the check box next to the device to deregister.
4. Choose **Remove**.

### To use HTTPS to connect to your Cisco Telepresence endpoints

1. Choose one of the following options:
  1. To connect Alexa for Business to your Cisco Telepresence systems over Transport Layer Security (TLS), the gateway must be able to verify the signature of the certificates. To enable this capability, install the root CA and other intermediate CAs that signed the certificate on the host where you run the gateway. If the Cisco system can't be authenticated, the connection isn't established.  
  
You can either install the root CA and other intermediate CAs in the certificate store of your gateway host. You can also specify the path to the certificates in the gateway config file; for example:..  
  
**"rootCAsFile": "path\\to\\certs\\custom-certs.pem"**
  2. (Not secure and not recommended) If your Cisco endpoints are configured with a self-signed certificate, you can also disable the certificate validation to allow the gateway to connect regardless of the certificate in use. To do this, open the gateway configuration file and change the following configuration value:

**"skipSslVerification": true**

2. To apply the change, restart the gateway.
3. Verify the gateway log file to confirm that the certificate validation works correctly. If the certificate validation fails, you see the following message in the log file:

**handler-cisco: failed executing request: Get https://<ip-address>/getxml?location=/Status: x509: certificate signed by unknown authority**

### To debug log files

1. Go to one of the following locations to see the log files written by the Alexa for Business gateway:
  - On Windows: C:\ProgramData\Amazon\AlexaForBusinessGateway\Logs
  - On Linux: /var/log/a4b-gateway/gateway.log
2. In the log files, verify that the gateway is listening to the queue for control commands. Find control requests in the log file by searching for "inbound: worker received request." By default, the log shows all the different control commands the gateway is performing. Look for errors to determine why the gateway can't control your Cisco endpoint.

# Use Polycom Group Series with Alexa for Business

Use Alexa for Business to control your Polycom Group Series systems and join meetings by using your voice.

To have Alexa control your Polycom Group Series video conferencing endpoints, run the Alexa for Business gateway within your local network. The Alexa for Business gateway receives control events from Alexa for Business and issues commands to the Cisco video conferencing endpoints in your meeting rooms. For example, when a user asks Alexa to join a meeting, an event is sent to the gateway. The gateway processes this event, connects to the Cisco video conferencing endpoint in the room, and then initiates the dial-in to the meeting.

To use Alexa for Business to control your Polycom Group Series video conferencing endpoints, you must meet the following requirements:

- You have Polycom Group Series 310, 500, or 700.
- You enabled SSH on your Polycom Group Series endpoint.
- You have Windows Server 2008 or later, Windows 7 desktop or later, or a Linux server or choice to run the Alexa for Business gateway. This can be a virtual or physical machine.
- Your locally deployed Alexa for Business gateway is allowed to make outbound HTTPS connections and has local network access to control your Polycom Group Series system. Incoming external communication or inbound ports aren't required.

## To use Polycom Group Series with Alexa for Business

1. Set up your Alexa-enabled devices. For more information, see [Getting Started with Shared Devices](#) (p. 9).
2. Link your calendar system to Alexa for Business. For more information, see [the section called "Link Alexa for Business to Your Calendar System"](#) (p. 38).
3. Enable the **Alexa for Cisco TelePresence/Polycom Group** skill.
  - a. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
  - b. Choose **Skill groups, Create skill group**, and then enter a name for your skill group (for example, Conferencing skills).
  - c. Choose **Conference settings**, and then in the list of conference equipment, choose **Alexa for Cisco TelePresence/Polycom Group Series**.
  - d. Choose **Enable**.
  - e. You receive a prompt to link an account. Sign in or create an Amazon.com account (for example, marymajor@example.com).
  - f. Choose **Skills, Enabled skills**, and then select the skill.
  - g. Choose **Assign to skill group**, and then choose the skill group that you just created.
4. Install the Alexa for Business gateway. For more information, see [Use the Alexa for Business Gateway](#) (p. 44).
5. Set up your conferencing provider in Alexa for Business.
  - a. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
  - b. Choose **Conference settings**, and then choose the name of your conferencing provider.
  - c. If you're using Polycom Group Series for Skype for Business, choose **Skype for Business** and make sure the following SIP URI is specified as SIP endpoint:

```
sip:{{USERNAME}}@{{DOMAIN}};gruu;opaque=app:conf:focus:id:{{VIDEOID}}
```

- d. For other conferencing providers, enter the H323/SIP endpoint if the field is empty. Alexa for Business sends these settings with the meeting ID/PIN to create a dial-in string that's called in the Polycom Group Series system.
6. Create your meeting rooms in Alexa for Business. For more information, see [the section called "Managing Rooms" \(p. 13\)](#).
7. Add your Polycom Group Series endpoint to Alexa for Business, and then add it to a room.
  - a. Choose **Endpoint, Add endpoint**.
  - b. Specify the system name.
  - c. Enter a friendly name, which can be used to control the endpoint using your voice. For example, "Alexa, turn on <friendly name>."
  - d. (Optional) Enter a description.
  - e. Choose the **Polycom Group Series** model.
  - f. If your Polycom Group Series endpoint is running Skype for Business mode, choose **Skype for Business mode**.
  - g. Specify the IP address or host name of your Polycom Group Series endpoint. For example, "10.0.1.42".
  - h. Choose the Alexa for Business room where the Polycom Group Series endpoint is located.
  - i. Choose **Add**.
  - j. Choose **Rooms** and the name of the room where you just assigned the Polycom Group Series endpoint.
  - k. Choose the gateway group to control your Polycom endpoint.
  - l. To have the endpoint available in your room, in the **Smart Home devices** section, choose **Discover devices**.
  - m. To test the integration, schedule a meeting on the room calendar, say "Alexa, start my meeting," and confirm the scheduled meeting when prompted.

### To add another Polycom Group Series endpoint

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Conferencing settings, Alexa for Cisco TelePresence/Polycom Group Series**.
3. Choose **Endpoint, Add endpoint**.
4. Enter the **System name**.
5. Enter a friendly name, which can be used to control the endpoint using your voice. For example, "Alexa, turn on <friendly name>."
6. (Optional) Enter a description.
7. Choose the **Polycom Group Series** model.
8. If your Polycom Group Series endpoint is running Skype for Business mode, choose **Skype for Business mode**.
9. Enter the IP address or host name of your Polycom Group Series endpoint. For example, "10.0.1.42".
10. Choose the Alexa for Business room where the Polycom Group Series endpoint is located, and then choose **Add**.
11. Choose **Rooms** and the name of the room where you just assigned the Polycom Group Series endpoint.
12. Choose the gateway group to control your endpoint.
13. To have the endpoint available in your room, go to the **Smart Home devices** section and choose **Discover devices**.
14. When the Polycom Group Series endpoint is listed under **Smart Home device**, setup is complete.

15. To test the integration, schedule a meeting on the room calendar, say "Alexa, start my meeting," and confirm the scheduled meeting when prompted.

You can now use Alexa to control your Polycom Group Series endpoint using voice.

### To remove an endpoint

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Conferencing settings, Alexa for Cisco TelePresence/Polycom Group Series**.
3. Go to the endpoint section and select the check box next to the device to de-register.
4. Choose **Remove**.

## Use Polycom Trio with Alexa for Business

The latest firmware for Polycom Trio has integrated natively with Alexa Voice Service and lets you use Alexa in your meeting rooms. With Alexa on Polycom Trio, you can make hands-free phone calls, join meetings, check meeting room availability, book or find a meeting room for your meeting, and access private skills, such as a company briefing or company FAQs. For more information, see [Polycom Trio Systems with Alexa for Business Deployment Guide](#).

To use Alexa on Polycom Trio devices, you must meet the following requirements:

- Firmware 5.9.0 or higher must be installed on your Polycom Trio devices.
- Your Polycom Trio must be registered with the Polycom Cloud Service. To get your Polycom Cloud Service tenant created, contact your Polycom sales representative, or go to <https://www.polycom.com/forms/pdms-e-trial.html>.

### To use Polycom Trio with Alexa for Business

1. Set up AVS permissions.

To grant Polycom permissions to register your Trio devices into your AWS account and assign them to a room, you must create an IAM service role.

If your IAM user account, group, or role is assigned administrator or PowerUserAccess permissions, then you have all the permissions to set up Alexa for Business. If you don't have administrator permissions, then an AWS account administrator must update your IAM user account, group, or role to include PowerUserAccess permissions or perform the following steps for you.

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
  2. Choose **Settings, AVS permissions**.
  3. Choose **Poly** from the drop-down menu and choose **Create IAM role**.
  4. Download the CSV file. You'll need to upload this file in the Polycom Cloud Service in a future step.
2. Set up your conferencing provider.

To have Alexa for Business join your meetings, you must set up your conferencing provider. Alexa for Business offers a list of built-in conference providers, including Amazon Chime, BlueJeans, Cisco WebEx, Skype for Business, and Zoom. Alexa for Business uses the conference provider settings to build the dial sequence when joining a meeting. For more information, see [the section called "Manage Conferencing Providers" \(p. 52\)](#).

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Conferencing and Add provider**.



3. Choose the conferencing provider that you are using in your organization, and enter the PTSN dial-in number and SIP endpoint.
3. Link your calendar.

To join scheduled meetings, check room availability, and book a room for a meeting by asking Alexa, you must link your calendar to Alexa for Business.

Alexa for Business supports Microsoft Exchange, Microsoft Office365, and Google G-Suite. For more information, see [the section called "Link Alexa for Business to Your Calendar System" \(p. 38\)](#).

**Note**

Although your Polycom Trio might be connected to your calendar system to provide one-touch join, the locally linked calendar won't be used by Alexa.

4. Enable skills and add them to a skill group.

Skills are voice-driven capabilities that enhance the functionality of your Alexa device. Alexa for Business gives you access to all skills in the Alexa Skills store. You can also build skill specifically for your organization by using Blueprints or developing a private skill.

To enable skills for your devices, you must first enable the skill for your organization and then add it to one or more skill groups that are assigned to your rooms. For more information, see [the section called "Managing Skill Groups" \(p. 23\)](#) and [the section called "Managing Skills" \(p. 19\)](#).

5. Create a room profile.

To simplify the process of creating and managing rooms, first define room profiles. A room profile contains the settings for your Alexa devices, so that they can provide you with weather, time, and other location-based information. For example, you can create a room profile that contains the Alexa settings that apply to all rooms in the same building.

6. Prepare your Polycom Trio device.

To use Alexa for Business on your Polycom Trio, you must register your Polycom Trio through PDMS-E with Alexa for Business. Before you can register your Polycom Trio, first Enable the Universal Agent (formerly known as Polycom Cloud Connector or PCC). The Universal Agent must onboard your Polycom Trio to PDMS-E, even if you're onboarding Polycom Trio using the MAC address.

Before you begin using the following steps, make sure that you have configured your Network Time Protocol server with Polycom Trio.

- a. Copy the following XML information into a text file and save it as a .cfg file (for example, pcc.cfg).

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<UPLOAD>
<ALL
feature.pcc.enabled.set="1"
feature.da.enabled="1"
/>
</UPLOAD>
```

- b. Log in to the Polycom Trio Web Interface as an administrator.
- c. Choose **Utilities, Import & Export Configuration, Choose File**, and select the .cfg file generated (for example, pcc.cfg) to enable Universal Agent.
- d. To enable Alexa for Business for your Polycom Trio, copy the following XML information into a text file and save it as a .cfg file (for example, alexa.cfg).

**Note**

You can also enable these settings using your existing management and provisioning solution, such as Polycom Resource Manager.

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<upload>
<ALL
feature.alexaforBusiness.enabled="1"
feature.alexaforBusiness.HandsFree.enabled="1"
/> </UPLOAD>
```

- e. Log in to the Polycom Trio Web Interface as an administrator.
  - f. Choose **Utilities, Import & Export Configuration, Choose File**, and select the .cfg file generated (for example alexa.cfg).
  - g. After the device restarts, a gray Alexa icon appears at the bottom of the Trio display.
7. Set up Alexa for Business in PDMS-E.

To enable Alexa on your Polycom Trio devices, you must first register them into Alexa for Business. Registration is done through Polycom Device Management Service (PDMS-E).

- a. Go to <https://console.plcm.cloud> and sign in using the credentials provided by Polycom.
  - b. Choose **Alexa for Business**, enable Alexa for Business, upload the CSV file you created in step 1, and choose **Save**.
8. Add your Polycom Trio devices to PDMS-E.

To enable Alexa for Business on your Polycom Trio device, first make sure that the latest 5.9 firmware is installed.

- a. Go to <https://console.plcm.cloud> and sign in using the credentials provided by Polycom.
- b. Choose **PDMS-E, Device Monitor, Add, RealPresence Trio**, and select the check-box for **Cloud registration**.
- c. Log in to the Polycom Trio Web Interface as an administrator, choose **Diagnostics and Cloud Services**, and make note of the registration key.
- d. Enter the registration key into the **Registration code** field.
- e. Choose your Polycom Trio model and enter a device name.
- f. Choose **Save** to complete device registration.
- g. The newly added Polycom Trio appears on the **Device Monitor** page and all status icons appear grayed out.
- h. To finalize setup, assign your Polycom Trio to an Alexa for Business room:
  1. Choose the Device name (Polycom Trio only) that you want to assign to an Alexa for Business Room.
  2. Choose the **Alexa for Business** tab, select one of the existing Alexa for Business rooms (or create a new one), and choose **Save**.

**Note**

You can also do this in the Alexa for Business console.

- i. Your device is now successfully registered to Alexa for Business and assigned to a room. Within couple of minutes, you will see the Alexa icon on the Trio UI turn blue. Alexa is now active and can be used by either saying the wake word or by pushing on the Alexa icon.
- j. In the Alexa for Business console, you can view all of your Polycom Trio devices that have Alexa for Business enabled, manage Alexa settings, and enable new skills.

## Link Alexa for Business to Your Calendar System

Alexa can automatically dial into scheduled meetings using your Echo devices or existing video conferencing equipment deployed in meeting rooms. Once deployed in the conference room, Alexa can

check whether the room is available, book the room, and tell you who reserved the room. To do this, link Alexa for Business with one of the following calendaring providers.

#### Tasks

- [Link Alexa for Business to Office 365 \(p. 39\)](#)
- [Link Alexa for Business to Google G Suite \(p. 41\)](#)
- [Link Alexa for Business to Microsoft Exchange \(p. 42\)](#)

## Link Alexa for Business to Office 365

There are two methods to link Alexa for Business to your Office 365 account.

Use Method 1 to link your Office 365 account by using a service account that has permissions to read and write to your room calendars. This method provides you with more control over the calendar resources that Alexa for Business can access.

Use Method 2 to use application permissions and set up the calendar only once. Then you won't need to update permissions when you add Alexa to more rooms. You must sign in as a global administrator user to link your Office 365 account to Alexa for Business.

#### Note

If your organization has set up Microsoft Azure AD conditional access policies, you might need to allow the Alexa for Business client app to access data in your Microsoft Office tenant. For more information about managing conditional access policies, see [What are conditions in Azure Active Directory conditional access?](#)

## Method 1: Link with Delegate Permissions (Recommended)

### To link with delegate permissions

1. Create a service account for Alexa for Business in your Office 365 tenant:
  1. Sign into Office 365 as an administrator.
  2. Add a user in your Office 365 account that will use a service account. For more information, see [Add users individually or in bulk to Office 365](#).  
  
For example, if your domain is "mycompany.com" and you add a user with the user name of "alexaforbusiness," the email address is "alexaforbusiness@mycompany.com".
2. Open PowerShell and connect to Exchange Online. For more information, see [Connect to Exchange Online PowerShell](#).
3. Run the following PowerShell command to create a service account with access to the calendars in your organization:

```
New-Mailbox -UserPrincipalName alexaforbusiness@<your_domain> -Alias  
"AlexaforBusiness" -Name alexaforbusiness -FirstName Alexa -LastName  
"Service Account" -DisplayName "Alexa for Business Service Account"
```

#### Note

Make sure that "your\_domain" is the domain of your organization, and enter your password when prompted.

4. To look up meeting dial-in information from your resource mailboxes, configure them to include descriptions. Run one of the following commands to keep the descriptions in the meeting invites of your resource mailboxes:

For a single room mailbox:

```
Set-CalendarProcessing "<room name>" -DeleteComments $FALSE
```

For all room mailboxes:

```
Get-Mailbox -ResultSize unlimited -RecipientTypeDetails "RoomMailbox" | Set-  
CalendarProcessing -DeleteComments $FALSE
```

5. Run one of the following commands to give the service account permissions to access the room calendars in your organization:

For a single room mailbox:

```
Add-MailboxFolderPermission <room name>:\Calendar -User alexaforbusiness -  
AccessRights Editor
```

For all room mailboxes:

```
Get-Mailbox -ResultSize unlimited -RecipientTypeDetails "RoomMailbox"  
| ForEach-Object {Add-MailboxFolderPermission $_:"\calendar" -user  
alexaforbusiness -AccessRights Editor}
```

6. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
7. Choose **Calendar, Office 365**.
8. Choose **Service account using delegate access** and **Link account**, sign in with the service account you created in step 4, and accept the user consent.

Now you can associate the email address of your resource mailboxes with your rooms in Alexa for Business.

### To complete room setup

1. Associate the email address of your resource mailboxes in Office 365 to your Alexa for Business rooms.
  1. In the Alexa for Business console, choose **Rooms** and choose the room to which to add the email address.
  2. Choose **Edit** and enter the email address of your resource mailbox to associate to the Alexa for Business room.
  3. Choose **Save**.
2. Test the calendar integration.
  1. Create a new meeting invite in your Microsoft Outlook client.
  2. Add the room as the resource, add meeting dial-in information to your meeting invite, and send the invite to book the room.
  3. Say "Alexa, start my meeting" to the Echo device assigned to the room. Your Echo device automatically dials into your meeting without prompting you for a meeting ID.
  4. To test room booking, say "Alexa, is this room free?" to the Echo device in the room.

## Method 2: Link with Application Permissions

### To link with application permissions

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Calendar, Office 365**.
3. Choose **Application permissions** and **Link account**, then sign in with the Office 365 account that belongs to the Global Administrators group.

4. Give consent that Alexa for Business has read and write access to the calendars in your Office 365 organization.

### To complete room setup

1. Associate the email address of your resource mailboxes in Office 365 to your Alexa for Business rooms.
  1. In the Alexa for Business console, choose **Rooms** and choose the room to which to add the email address.
  2. Choose **Edit** and enter the email address of your resource mailbox to associate to the Alexa for Business room.
  3. Choose **Save**.
2. Test the calendar integration.
  1. Create a new meeting invite in your Microsoft Outlook client.
  2. Add the room as the resource, add meeting dial-in information to your meeting invite, and send the invite to book the room.
  3. Say "Alexa, start my meeting" to the Echo device assigned to the room.

Your Echo device automatically dials into your meeting without prompting you for a meeting ID.

## Link Alexa for Business to Google G Suite

The following versions of G Suite are supported:

- G Suite Basic
- G Suite Business
- G Suite Enterprise
- G Suite for Education

### Note

If you already linked your account and want to enable room booking, you must re-link it.

### To link Alexa for Business to Google G Suite

1. Make sure that you have a super administrator account and have enabled API access in the Google Admin console. For more information, see [Enable API access in the Admin console](#).
2. Link Alexa for Business to Google G Suite using your administrator account.
  - a. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
  - b. Choose **Calendar, G Suite**.
  - c. Choose **Link account** and sign in with an account that has super administrator privileges.
  - d. Give consent that Alexa for Business has manage permissions to the calendars in your G Suite organization.
3. Create a new meeting invite in your G Suite client.
4. Add the room as the resource, add meeting dial-in information to your meeting invite, and send the invite to book the room.
5. Associate the email address of your resource mailboxes in G Suite to your Alexa for Business rooms.
  1. In the Alexa for Business console, choose **Rooms** and choose the room to which to add the email address.

2. Choose **Edit** and enter the email address of your resource mailbox to associate to the Alexa for Business room.
3. Choose **Save**.
6. Say "Alexa, start the meeting" to the Echo device assigned to the room. Your Echo device automatically dials into your meeting without prompting you for a meeting ID.
7. To test room booking, say "Alexa, is this room free?" to the Echo device in the room. Your Echo device returns that the room is booked.

## Link Alexa for Business to Microsoft Exchange

### To link Alexa for Business to Microsoft Exchange

1. Before you proceed, confirm that you meet the following requirements:
  - You have an administrator account within your Microsoft Exchange server.
  - Microsoft Exchange is version 2013.
  - You have a valid Exchange Web Services (EWS) endpoint with a valid digital certificate purchased from a trusted public certificate authority (CA).
  - You have basic authentication enabled on your Exchange Web Servers (EWS) endpoint.

2. Verify that basic authentication is enabled:

1. Open Microsoft Exchange Management Shell.
2. Type **Get-WebServicesVirtualDirectory | fl.**
3. Verify that the parameter **BasicAuthentication** is set to **True**.

3. If basic authentication isn't enabled, run the following command to enable it:

```
Set-WebServicesVirtualDirectory -Identity "Contoso\EWS(Default Web Site)" -BasicAuthentication $true
```

#### Note

Contoso\EWS(Default Web Site) is the identity of the Microsoft Exchange Web Services virtual directory.

4. Create a service account with access to the calendars in your organization.
  - a. Open the Exchange Management Shell.
  - b. Run the following command to create the service account.

```
New-Mailbox -UserPrincipalName alexaforbusiness@your_domain -Alias Alexa for Business -Name alexaforbusiness -OrganizationalUnit Users -FirstName Alexa -LastName Service Account -DisplayName "Alexa for Business Service Account"
```

#### Note

Make sure that `your_domain` is the domain of your organization. You are prompted to enter a password.

5. To look up meeting dial-in information from your resource mailboxes, configure them to include descriptions:
  - Run one of the following commands to keep the descriptions in the meeting invites of your resource mailboxes:

For a single room mailbox:

```
Set-CalendarProcessing <room name> -DeleteComments $FALSE
```

For all room mailboxes:

```
Get-Mailbox -ResultSize unlimited -RecipientTypeDetails 'RoomMailbox' |  
Set-CalendarProcessing -DeleteComments $FALSE
```

6. Set up permissions. The service account must have permissions to access the room calendars in your organization. Run one of the following commands to give the service account access to your room resource mailboxes:

For a single room mailbox:

```
Add-MailboxFolderPermission <room name>:\Calendar -User alexaforbusiness -  
AccessRights Editor
```

For all room mailboxes:

```
Get-Mailbox -ResultSize unlimited -RecipientTypeDetails 'RoomMailbox'  
| ForEach-Object {Add-MailboxFolderPermission $_":\calendar" -user  
alexaforbusiness -AccessRights Editor}
```

7. Link the service account to Alexa for Business.
  - a. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
  - b. Choose **Calendar, Microsoft Exchange**.
  - c. Enter the user principal name (UPN) of your service account.
  - d. Enter the service account password.
  - e. Enter the URL of your EWS endpoint. The default URL for EWS is usually in the following format: <https://mail.domain.com/EWS/Exchange.asmx>.
  - f. For **Access method**, select **Delegation**.
  - g. Choose **Link account**.
8. Associate the email address of your resource mailboxes in Microsoft Exchange to your Alexa for Business rooms.
  - a. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
  - b. Choose **Rooms** and choose the room to which to add the email address.
  - c. Choose **Edit**.
  - d. Enter the email address of your resource mailbox that you want to associate to the Alexa for Business room.
  - e. Choose **Save**.
9. Test the integration.
  - a. Create a new meeting invite in your Microsoft Outlook client.
  - b. Add the room as the resource.
  - c. Add meeting dial-in information to your meeting invite.
  - d. Send the invite to book the room.
  - e. Say "Alexa, start my meeting" to the Echo device assigned to the room. Your Echo device prompts you to join the scheduled meeting without asking you for the meeting ID.
  - f. Say, "Alexa, is this room free?" to the Echo device assigned to the room. Your Echo device returns that the room is booked.

## Use the Alexa for Business Gateway

The Alexa for Business gateway enables you to connect Alexa for Business to your Cisco TelePresence and Polycom Group Series endpoints to control meetings with your voice. The gateway software runs on your on-premises hardware and securely proxies conferencing directives from Alexa for Business to your Cisco endpoint. The gateway is available for both Windows and Linux.

The gateway needs two pairs of AWS credentials to communicate with Alexa for Business. We recommend that you create two limited-access IAM users for your Alexa for Business gateways, one for installing the gateway and one for operating the gateway.

### To create new IAM users

1. Open the IAM console at <https://console.aws.amazon.com/iam/>.
2. Choose **Users, Add user**.
3. Enter a user name (for example, AlexaforBusinessGatewayInstaller).
4. For **Access type**, choose **Programmatic access**.
5. Choose **Next, Attach existing policies directly, AlexaForBusinessFullAccess** in the list of policies, and then choose **Next**.
6. Choose **Create user**.
7. Download and save the IAM access key and secret key. You need them later when you configure the Alexa for Business gateway.
8. To create a second user that is used to run the Alexa for Business gateway, repeat steps 2-7. Enter a user name (for example, AlexaforBusinessGateway) and choose **AlexaForBusinessGatewayExecution** in the list of policies.

### Tasks

- [Installing the Gateway \(p. 44\)](#)
- [Running Multiple Gateways \(p. 46\)](#)
- [Maintaining the Gateway \(p. 48\)](#)

## Installing the Gateway

The gateway is available on the Alexa for Business console.

To install the Alexa for Business gateway, you need the following:

- One of the following virtual or physical machines to run the Alexa for Business gateway:
  - Windows Server 2008 or later
  - Windows 7 desktop or later
  - Linux server
- A minimum of 1 GB available disk space.
- A minimum of 2 GB of RAM.
- Your locally deployed Alexa for Business gateway is allowed to make outbound HTTPS connections. It also has local network access to control your Cisco TelePresence or Polycom Group Series endpoints. (Incoming external communication or inbound ports aren't required.)

### To prepare for installation

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.



2. Choose **Conferencing, Conferencing equipment skills, Alexa for Cisco TelePresence, and Download gateway**.
3. Select the package for your operating system and choose **Download**.

### To install and configure the gateway on Windows

1. Run the installer on your Windows server as an administrator: right-click on the downloaded file and choose **Run as administrator**.
2. When prompted, enter the user credentials to sign into your Cisco TelePresence or Polycom Group Series endpoints.
3. Register your gateway. If it's enabled, the Alexa for Business registration tool starts automatically. You can also manually run the registration tool as an administrator at **C:\Program Files\Amazon\AlexaForBusinessGateway\register.exe**.
4. Open the Alexa for Business console again, refresh **Alexa for Business Gateways**, and confirm that your gateway is listed.
5. In the **Services** window, verify that the service (Alexa for Business gateway) is installed and running.

### To install and configure the gateway on Amazon Linux

1. Install the gateway:

- On Amazon Linux, Red Hat, or CentOS, run the following command:

```
sudo yum install -y a4b_gateway_<architecture>.rpm
```

- For Ubuntu Server, run the following command:

```
sudo dpkg -i a4b_gateway_<architecture>.deb
```

- On other Distros, run the following commands:

```
sudo tar zxvf a4b_gateway_<architecture>.tar.gz
```

```
sudo cp bin/* /usr/bin/
```

```
sudo mkdir /etc/alexaforbusinessgateway
```

```
sudo cp config/* /etc/alexaforbusinessgateway
```

```
(sysvinit): sudo cp service/sysvinit/alexaforbusinessgateway /etc/init.d/alexaforbusinessgateway
```

```
(Upstart): sudo cp service/upstart/alexaforbusinessgateway.conf /etc/init/alexaforbusinessgateway.conf
```

```
(Systemd): sudo cp service/systemd/alexaforbusinessgateway.service /usr/lib/systemd/system/alexaforbusinessgateway.service
```

2. Set the credentials of your Cisco TelePresence or Polycom Group Series endpoints:

```
sudo nano /etc/alexaforbusinessgateway/secrets.cfg
```

3. Verify that the system manager is set to the correct value (valid values are sysvinit, upstart, or systemd):

```
sudo cat /etc/alexaforbusinessgateway/gateway.cfg.template | grep serviceManager
```

4. Register the gateway to your Alexa for Business setup:

1. Run the following command:

**sudo /usr/bin/alexaforbusinessgateway-register**

2. When prompted, enter the IAM access keys and secret keys of the IAM users that you created previously.
3. For more advanced scenarios, run the following command to see additional help documentation:

**sudo /usr/bin/alexaforbusinessgateway-register --help**

5. Start the Alexa for Business gateway service:
  - sysvinit: **sudo service alexaforbusinessgateway start**
  - Upstart: **sudo initctl start alexaforbusinessgateway**
  - Systemd: **sudo systemctl start alexaforbusinessgateway**
6. (Optional) Check the logs for errors logged when starting the service:

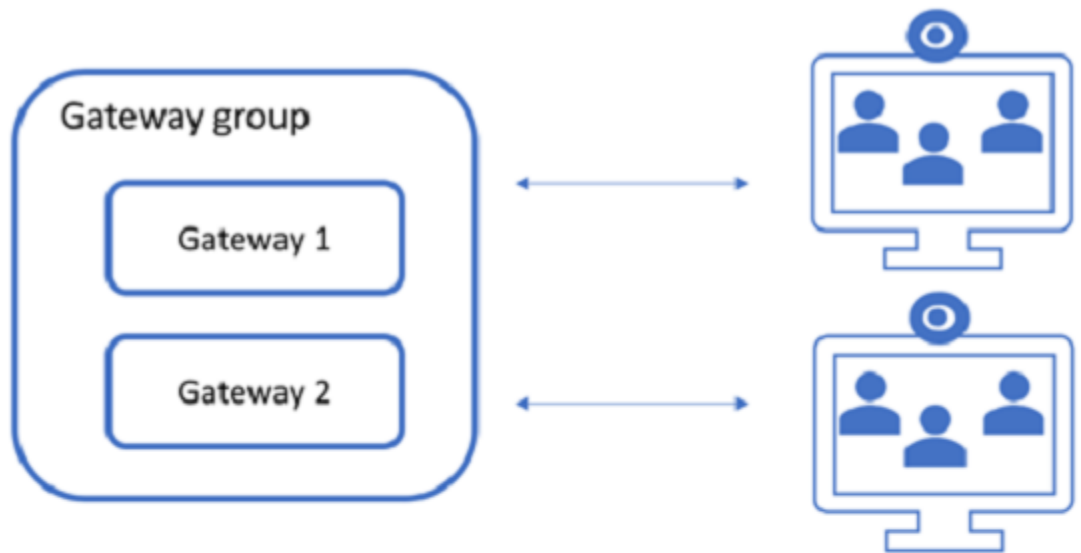
**sudo tail /var/log/alexaforbusinessgateway/gateway.log**

## Running Multiple Gateways

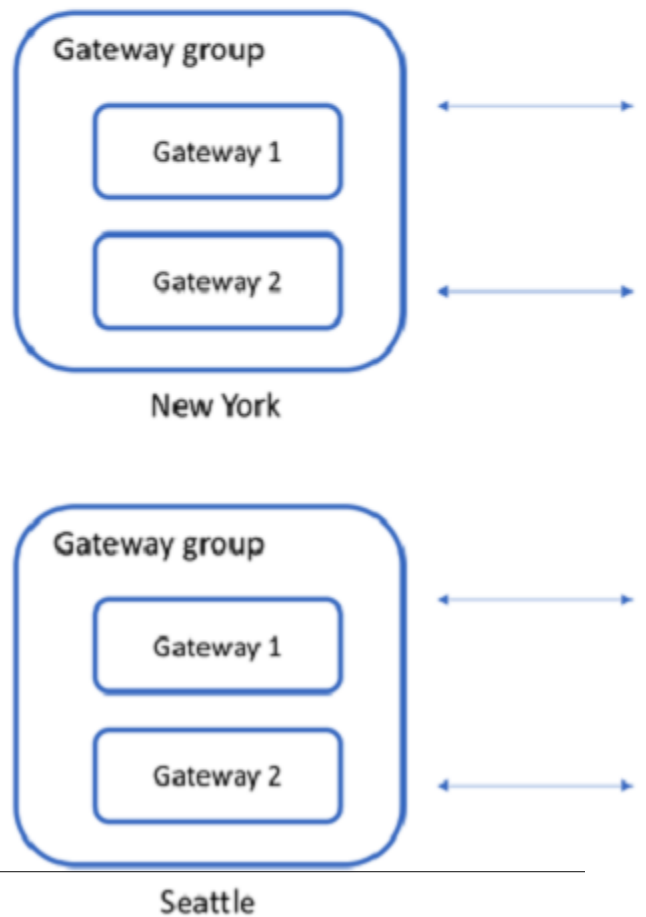
You can run multiple gateways to eliminate a single point of failure. You can also run a gateway in each of your locations to lower the latency between the gateway and your Cisco or Polycom endpoints. This is also an option if you want to run the gateway on different network subnets.

The following are two examples of how to set up multiple gateways:

### High Availability setup



### High Availability setup in multiple locations



When you register a gateway to your AWS account, the gateway is added to a gateway group. When you add video conferencing endpoints, you must also assign a gateway group. The gateways registered to this gateway group will control your endpoint when you ask Alexa to start your meeting.

**Note**

You can add a gateway group to run a gateway in a different location, and choose this group when you register new gateway.

**To add a gateway group**

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Conferencing settings, Alexa for Cisco TelePresence/Polycom Group Series, Add gateway group**.
3. Enter the **Name** and an optional description, and choose **Add gateway group**.
4. To add a gateway to your group, follow the steps to install and register the gateway. (When prompted, select the gateway group that you just created.)

If you need to add a gateway to a different group, first remove the gateway, then register it again.

**To remove a gateway group**

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Conferencing settings, Alexa for Cisco TelePresence/Polycom Group Series, Remove gateway group**, and **Remove**.
3. Alexa for Business can no longer control the conferencing endpoints that were controlled with this group.

## Maintaining the Gateway

By default, the gateway automatically updates every day during predefined maintenance windows. These windows are defined in the gateway.cfg file that the gateway accesses at startup. To change these maintenance windows, edit the gateway.cfg file and restart the gateway service. To manually update the gateway, run the updater binary installed with the gateway as the administrator (for Windows) or as the root (for Linux).

If your Cisco TelePresence or AWS credentials change, use the following steps to update your Alexa for Business gateways to use the new credentials.

**To update Cisco TelePresence Credentials for Windows**

1. Stop the **AlexaForBusinessGateway** service.
2. Choose **Start** and type **Command Prompt**.
3. From the search results, right-click **Command Prompt** and choose **Run as administrator**.
4. Run the following command:

```
del <path_to_secrets.cfg_file> (for example: del "C:\Program Files\Amazon\AlexaForBusinessGateway\secrets.cfg")
```

5. Create a new secrets.cfg file with the following structure:

```
{
  "CISCO": {
    "USERNAME": "your cisco appliance username here",
    "PASSWORD": "your cisco appliance password here"
  }
}
```

- 
6. Start the **AlexaForBusinessGateway** service.

### To update Cisco TelePresence Credentials for Linux

1. Update the credentials in `/etc/alexaforbusinessgateway/secrets.cfg`.
2. Restart the **AlexaForBusinessGateway** service:
  - Sysvinit: `sudo service alexaforbusinessgateway restart`
  - Upstart: `sudo initctl restart alexaforbusinessgateway`
  - Systemd: `sudo systemctl restart alexaforbusinessgateway`

### To update AWS Credentials for Windows

1. Stop the **AlexaForBusinessGateway** service.
2. Choose **Start** and type **Command Prompt**.
3. From the search results, right-click **Command Prompt** and choose **Run as administrator**.
4. Run the following command:

```
del <path_to_credentials_file> (for example: del "C:\Program Files\Amazon\AlexaForBusinessGateway\credentials")
```

5. Create a new credentials file with the following structure:

```
[default]
aws_access_key_id = YOUR ACCESS KEY ID HERE
aws_secret_access_key = YOUR SECRET ACCESS KEY HERE
```

6. Start the **AlexaForBusinessGateway** service.

### To update AWS Credentials for Linux

1. Update the credentials in `/etc/alexaforbusinessgateway/credentials.cfg`.
2. Restart the **AlexaForBusinessGateway** service:
  - Sysvinit: `sudo service alexaforbusinessgateway restart`
  - Upstart: `sudo initctl restart alexaforbusinessgateway`
  - Systemd: `sudo systemctl restart alexaforbusinessgateway`

## Gateway Configuration Options

The following configuration parameters are available in the `gateway.cfg` file.

### Main Configuration

Parameter	Description	Default Value	Type
a4b	A4B		Object
skipSslVerification	Set to true to ignore SSL validation errors when the gateway is connecting to your	false	Boolean

Parameter	Description	Default Value	Type
	video conferencing endpoints		
credentials	Defines which AWS credentials to use		Null or object
localLog	Settings to have gateway log to a local file		Object
remoteLog	Settings to have gateway log to Amazon CloudWatch		Object
maintenance	Maintenance settings for the gateway, such as the update window and service manager	/path/to/root-ca/cert.pem	Object
rootCAsFile	Maintenance settings for the gateway, such as the update window and service manager		String
metrics			Object

#### A4B Object

Parameter	Description	Default Value	Type
region	AWS Region where the gateway connects with the Alexa for Business endpoint	us-east-1	String
endpoint	The Alexa for Business endpoint the gateway connects to	https://a4b.us-east-1.amazonaws.com	String
gatewayARN	The ARN of the gateway after it is registered with your Alexa for Business setup		String

#### Shared Credentials

Parameter	Description	Default Value	Type
filename	Path to your AWS credentials	/path/to/.aws/credentials/file	String
profile	The profile to use in your AWS credentials file		String

### Static Credentials

Parameter	Description	Default Value	Type
accessKeyId	AWS access key		String
secretAccessKey	AWS secret key		String
sessionToken	AWS session token. This is required only if you use temporary security credentials		String

### LocalLog Object

Parameter	Description	Default Value	Type
enable	Boolean to enable logging to a local file	True	Boolean
logDir	Path to the log location		String

### RemoteLog Object

Parameter	Description	Default Value	Type
enable	Boolean to enable logging to AWS Cloudwatch	False	Boolean
failureDir	Path to the directory for backup when logging to AWS Cloudwatch fails		String

### Maintenance Object

Parameter	Description	Default Value	Type
serviceName	The service name of the gateway	alexaforbusiness	String
serviceManager	The service manager used on your Linux systems. Valid values are sysvinit, upstart, or systemd	systemd	String
updateFrequency	Defines how often to check for an update inside a maintenance window	15m	String
updateBranch	Defines which branch to update from	stable	String

Parameter	Description	Default Value	Type
windows	Defines the time windows of the gateway checking for updates		Object
healthCheckPeriod	How long to wait after an update for the service to regain health, before the update is considered a failure	5m	String

### Maintenance Window Object

Parameter	Description	Default Value	Type
day	Day of the week when the gateway checks for updates		String
time	Time of day when the gateway checks for updates		String
width	Maximum length of the maintenance window		String

### Metrics Object

Parameter	Description	Default Value	Type
enable	Boolean to enable logging to AWS Cloudwatch	When this option is enabled, metrics are pushed to AWS Cloudwatch	String

## Manage Conferencing Providers

For more information about conference providers, PSTN settings, and SIP/H323 settings, see [the section called “Understanding Alexa-enabled Conferencing” \(p. 26\)](#).

### To add a conferencing provider

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Conference settings, Add provider**.
3. Choose one of the available conferencing providers, which automatically fills in the **Provider** pane.

#### Note

If the conference provider used by your organization is not available, choose **Other**.

4. Review the following settings and edit them as necessary:
  - **Meeting settings** – Specify whether a meeting PIN is required to join the meeting. (Required)



- **PSTN dial-in number** – Specify the phone number of your conferencing provider. This must be a US phone number.
  - **PSTN dial-in delays** – Specify the delays before the meeting ID and PIN are sent using DTMF.
  - **SIP/H323 dial-in** – SIP/H323 dial-in settings are used to dial into meetings using your existing video conferencing equipment. (Required)
5. Choose **Add**.

You can edit the meeting settings and dial-in information for a provider at any time.

### To remove a conferencing provider

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. In the navigation bar, choose **Conference settings**.
3. On the **Conference settings** page, choose **Remove**.

#### Note

You can't remove a provider that is set as the default.

### To edit a conferencing provider

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Conference settings** and choose the name of the provider to edit.
3. Edit the following settings as necessary:
  - **Meeting settings** – Specify whether a meeting PIN is required to join the meeting. (Required)
  - **PSTN dial-in number** – Specify the phone number of your conferencing provider. This must be a US phone number.
  - **PSTN dial-in delays** – Specify the delays before the meeting ID and PIN are sent using DTMF.
  - **SIP/H323 dial-in** – SIP/H323 dial-in settings are used to dial into meetings using your existing video conferencing equipment. (Required)
4. Choose **Save**.

### To set a conferencing provider as default

When a user joins a meeting and there is no scheduled meeting, the user is prompted for the meeting ID and PIN of the default provider. You can only have one default provider for your account.

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Conference settings**.
3. Select the name of the provider to set as default.
4. Choose **Set as default**.

# Managing Calling

You can make calls from your shared devices with Alexa for Business. You can call a contact that you defined in the Alexa for Business console by saying the name out loud. Likewise, you can call a contact's number by saying the number out loud. For example, say "Alexa, call helpdesk" or "Alexa, call 206-555-0126."

## Note

The following types of calls are currently not supported when using an Echo device:

- Emergency services numbers (for example, "911")
- Premium-rate numbers (for example, "1-900" numbers or toll numbers)
- N-1-1 numbers or abbreviated dial codes (for example, "211" or "411")
- International numbers (numbers outside of the US, Canada, or Mexico)
- Dial-by-letter numbers (for example, "1-800-FLOWERS")

## To configure Alexa for Business to make calls from your shared devices

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Room profiles**, select the name of the room profile associated with your rooms, and enable **Outbound calling**.

## Tasks

- [Managing Address Books \(p. 54\)](#)
- [Managing Contacts \(p. 55\)](#)

# Managing Address Books

To call contacts from your shared devices, you must first create an address book and assign it to the room profile associated with the rooms where the devices are assigned. You can create multiple address books, but you can only assign one address book to a room profile.

## To create an address book

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Directory**, **Create address book**, and enter a unique name for the address book.

## To assign an address book to a room profile

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Rooms profiles** and select the name of the room profile to edit.
3. Under **Outbound calling**, select the address book to assign, and then choose **Save**.

## To edit an address book

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Directory** and select the name of the address book to edit.

3. Edit the values for **Name** and **Description**, and then choose **Save**.

#### To delete an address book

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Directory** and select the name of the address book to delete.
3. Choose **Delete address book**, **Delete**.

## Managing Contacts

To call people using Alexa, add contacts to Alexa for Business. After you create contacts, you can add them to address books. Edit or delete a contact at any time.

Contacts can contain multiple phone numbers and one SIP address. When asking Alexa to call someone, you can add the words "at home," "work," or "mobile." Say something like: "Alexa, call John Stile's mobile." If a contact has both a work phone number and SIP address, Alexa always calls the work phone number.

To bulk import contacts into Alexa for Business, use the AWS CLI or AWS SDK. For more information, see [Alexa for Business API Reference](#).

#### To create a contact

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Directory, Contacts**.
3. Choose **Create contacts**, and enter a name, the phone numbers, SIP address, and description.
4. To add more contacts, choose **Add another contact**.
5. Choose **Add contacts**.

#### To add contacts to address books

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Directory, Contacts**.
3. Select the names of the contacts to add to your address book and choose **Add to address books**.
4. Select the check boxes next to the address book to which to add the contacts and choose **Add**.

#### To edit a contact

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Directory, Contacts**, and select the contacts to edit.
3. Edit the values for **Name**, **Phone number**, **SIP address**, and **Description**, and then choose **Save**.

#### To delete a contact

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Directory, Contacts**, and select the check box next to the contacts to delete.
3. Choose **Delete contacts**, **Delete**.

# Managing Users

You can invite users to connect their personal Alexa account with your organization. When you send an invitation to a user, they receive an email with a temporary URL that allows them to join your organization after logging in with their Amazon account. When they join your organization, they gain access to the following features on their Alexa devices, both at home and at work:

- Discovering and enabling all the private skills that you make available to users.
- Discovering and enabling the private skills that you made available to them in their companion app.
- Joining meetings on Amazon Echo-family devices (Echo Show, Echo Plus, Echo, Echo Dot, and Echo Spot) managed by the account they used when joining your organization, and using the default conferencing provider.
- Linking their Microsoft Exchange calendar, if you issued the invitation to an email address that is part of the Exchange service account you linked in the Alexa for Business console.

In addition to the benefits available to users after joining your organization, you can require that users restrict any calendar accounts that they have linked and that match the domain of your service account configured in the **Calendar** section of the Alexa for Business console.

## Tasks

- [Set up Enrollment \(p. 56\)](#)
- [Invite and Remove Users \(p. 57\)](#)
- [Set up Microsoft Exchange Access for Users \(p. 57\)](#)
- [Require Users to Restrict Calendars to Voice \(p. 60\)](#)
- [Instruct Users to Use the Alexa Smart Scheduling Assistant \(p. 61\)](#)

## Set up Enrollment

Before you can invite users, you must first set up user enrollment.

### To set up user enrollment

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Settings, User enrollment, Edit**.
3. For **Company Name**, enter the name of your company.
4. For **Company contact email address**, enter the full email address that your invited users can contact if they have any questions while going through the enrollment process.
5. Choose **Save**.

You can edit the company name, company contact email, featured private skills, and featured public skills at any time.

#### Note

Any invitations that have been sent before you make edits displays old information in both the email and the online webpage that a user navigates to during enrollment.

### To edit the user enrollment email

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **User Enrollment, Edit**.

3. Edit the values for **Company name**, **Company contact email address**, **Featured private skills**, or **Featured public skills**.
4. Choose **Save**.

## Invite and Remove Users

After you configure user enrollment for your organization, you can invite users.

### To invite a user

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Users** and select **Invite new user**.
3. Enter the **First name**, **Last name**, and **Email address** of the user to enroll.

#### Note

Typically, this is a corporate email address that can be mapped to a corporate identity in your system. When connecting to a Microsoft Exchange account, this must be the same email address as the one on the corporate Exchange server.

Make sure that the email addresses you enter when inviting users are correct. Whoever receives the email with the unique URL can log in with their Amazon account and be a part of your organization.

4. (Optional) Choose **Add another user** and add the information from step 3. Repeat this step until you have entered all the information for the users to invite.
5. Choose **Send invite** to send an invitation to each user for whom you provided information.

### To remove a user

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Users** and select the check box next to the user to delete.
3. Choose **Remove user**, **Remove**.

After you remove a user, they can no longer access any of the benefits of being enrolled in your organization. If you remove a user who has not completed enrollment, the token is not valid.

A user might fail to enroll while the URL token is valid. In this case, you can resend the invitation.

### To resend an expired invitation

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Users** and select the check box next to the user.
3. Choose **Resend invitation**.

## Set up Microsoft Exchange Access for Users

You can link Alexa for Business to your Microsoft Exchange server. This enables enrolled users to ask Alexa about their scheduled events or add new events to their Microsoft Exchange calendar.

To give enrolled users access to their Microsoft Exchange calendar, set up a service account on your Microsoft Exchange server to access the users' calendars. After the service account is set up, users can link Alexa to their Microsoft Exchange using the Alexa app.

If you already set up a service account to access your room calendars, skip to step 3 and give the service account permissions to your users' calendars.

Before you proceed, confirm that you meet the following requirements:

- You have an administrator account within your Microsoft Exchange server.
- Microsoft Exchange is version 2013 or higher.
- You have a valid Exchange Web Services (EWS) endpoint with a valid digital certificate purchased from a trusted public certificate authority (CA).
- Basic authentication is enabled on both your EWS endpoint.

### To verify that basic authentication is enabled

1. Open the Exchange Management Shell.
2. Type **Get-WebServicesVirtualDirectory | fl.**
3. Verify that the parameter `BasicAuthentication` is set to `True`.
4. If basic authentication isn't enabled, run the following command to enable it:

```
Set-WebServicesVirtualDirectory -Identity "Contoso\EWS(Default Web Site)" -
BasicAuthentication $true
```

#### Note

Contoso\EWS(Default Web Site) is the identity of the EWS virtual directory.

### To create a service account with access to the calendars in your organization

1. Open the Exchange Management Shell.
2. Run the following command to create the service account: `New-Mailbox -UserPrincipalName alexaforbusiness@your_domain -Alias Alexa for Business -Name alexaforbusiness -OrganizationalUnit Users -FirstName Alexa -LastName Service Account -DisplayName "Alexa for Business Service Account"`

#### Note

Make sure that "your\_domain" is the domain of your organization. You are prompted to enter a password.

The service account must have permissions to access the calendars in your organization. You can enable service account access to the calendars in your organization by using one of the following two methods:

- Set up impersonation, which enables the service account to impersonate a given account so that it can perform all operations using the permissions associated with the given account.
- Add the service account as full access and send as permissions for each of your user mailboxes.

### To set up impersonation

1. Open the Exchange Management Shell and run the following command:

```
New-ManagementRoleAssignment -name:impersonationAssignmentName -
Role:ApplicationImpersonation -User: alexaforbusiness
```

2. To limit the service account, define the scope. For example, to only give the service account permissions to the room mailboxes in the organization, run the following command in Exchange Management Shell:

```
New-ManagementScope -Name "UserMailboxes" -RecipientRestrictionFilter
{RecipientTypeDetails -eq "UserMailbox"}
```

3. To apply permissions to the service account, run the following command:

```
New-ManagementRoleAssignment -Name "ResourceImpersonation" -Role  
ApplicationImpersonation -User alexaforbusiness -CustomRecipientWriteScope  
"UserMailboxes"
```

### To add the service account as full access

- Run one of the following commands to give the service account access to all user mailboxes:

For a single user:

```
Add-MailboxFolderPermission <username>:\Calendar -user alexaforbusiness -  
accessrights Editor
```

```
Add-ADPermission -Identity <username> -User alexaforbusiness -Extendedrights  
"Send As"
```

#### Note

Replace <username> with the alias of your user.

For all user mailboxes:

```
$users = Get-Mailbox -ResultSize unlimited -RecipientTypeDetails  
UserMailbox | Select -ExpandProperty Name Foreach ($user in $users) { Add-  
MailboxFolderPermission -Identity $user":\Calendar" -user alexaforbusiness -  
accessrights Editor Add-ADPermission -Identity $user -User alexaforbusiness  
-Extendedrights "Send As" }
```

### To link the service account to Alexa for Business

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Calendar, Microsoft Exchange**.
3. Enter the user principal name (UPN) of your service account and service account password.
4. Enter the URL of your EWS endpoint. The default URL for EWS is usually in the following format: <https://mail.domain.com/EWS/Exchange.asmx>.
5. Select the access method that you have set up and choose **Link account**.

### To test integration to access the calendar of an enrolled user

1. Open the Alexa app as an enrolled user.
2. Choose **Settings, Calendar**.
3. Choose **Microsoft Exchange** and complete the required steps.

Alexa can now read back the upcoming events on the calendar.

### To troubleshoot Microsoft Exchange access

- If you experience one of the following issues, follow these steps:
  - If account linking fails in the Alexa app, verify that the email address you invited the user with matches the email address in your Microsoft Exchange server. Also, make sure that basic authentication is enabled for your EWS endpoint.
  - If setting up the Microsoft Exchange account fails in Alexa for Business and you see the error message "The calendar account could not be linked. If the issue persists, contact [AWS Support](#). Invalid parameter provided.", validate that your EWS endpoint is valid and remotely accessible.

### To test the EWS endpoint connection and service account credentials

1. Open the [Microsoft Remote Connectivity Analyzer](#).
2. On the **Exchange Server** tab, choose **Service account access**.
3. Follow the prompts, fill in the required information, and verify that the service is working correctly.
4. If you receive one of the following results, follow these steps:
  - If the tool fails, the issue is probably your setup. Verify the following:
    - You're using the EWS endpoint instead of the OWA endpoint. EWS endpoints are usually formatted as: `https://mail.domain.com/EWS/Exchange.asmx`
    - The service account and password are correct.
    - You're using Microsoft Exchange 2013 or higher.
    - Your EWS endpoint is reachable from the internet.
  - If the tool succeeds, but associating the account still fails in the Alexa for Business console, verify that you have entered the right credentials in the console.
  - If the issue persists, contact [AWS Support](#).

### To manage expiring service account passwords

1. Create a new user principal name (UPN) service account and password.
2. Ensure that the new UPN service account has access to calendars, impersonation, and full access.
3. Validate that the new account works by testing the EWS endpoint and UPN.
4. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
5. Choose **Calendar, Microsoft Exchange**.
6. Enter the new user principal name (UPN) of the service account that you just created.
7. Enter the service account password for the new UPN, and choose **Link account**.

### Expiring password notifications

Alexa for Business sends warning emails to the service account holder at 14 days, 7 days, 3 days, and 1 day before their password expires. After the password expires, the user receives a daily reminder email. Users can also see these alerts in their AWS [Personal Health Dashboard](#).

## Require Users to Restrict Calendars to Voice

After users link their work calendars to Alexa, they can restrict their calendars to respond to their voices only. You have the option in the Alexa for Business console to make this a requirement for all users by registering domains for voice restriction. The domains must match the email addresses of the linked calendars.

### To add domains for calendar voice restriction

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Calendars**, and in the **Calendar voice restriction** section, choose **Add domain**.
3. Follow the steps to add your email domain (for example, example.com).

### To remove domains from calendar voice restriction

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.



2. Choose **Calendars**, and in the **Calendar voice restriction** section, select the check box next to the domain you want to remove.
3. Choose **Remove domain** and follow the steps.

Enrolled users can set a voice restriction for their linked calendar accounts in the Alexa app. When users set a voice restriction, Alexa uses voice profiles to determine who is speaking, and when to provide information from their calendar.

**Note**

To set a voice restriction for their calendar, users must first create a voice profile. If they don't have one already, they are prompted to create one in the **Voice Restriction** section in their calendar settings. For more information, see [Create a Voice Profile](#).

**To set a voice restriction for a calendar**

1. Open the Alexa app, and on the menu, choose **Settings** and **Calendar**.
2. Choose the linked calendar from the list.
3. In the **Voice Restriction** section, on the menu, choose one of the following options:
  - **Only My Voice** – Alexa reads calendar events only after recognizing your voice.
  - **All Enrolled Voices** – Alexa reads calendar events for any recognized speakers in your home with a voice profile.
  - **No Voice Restriction** – Alexa doesn't restrict access to the calendar.

The voice restriction selected applies to all of the devices registered to the user's account.

If there are other adult users in the user's home, users can personalize calendar access across their shared Alexa devices by creating an Amazon Household. Users can link their calendar accounts to Alexa individually in the Alexa app, then set the **Only My Voice** voice restriction so that Alexa provides information from that calendar only when recognizing each of their voices. For more information, see [Using Household Profiles on Alexa Devices](#).

## Instruct Users to Use the Alexa Smart Scheduling Assistant

Alexa for Business allows enrolled users to connect their work calendar to Alexa. They can then use the Alexa Smart Scheduling Assistant to add, move, or cancel meetings or ask Alexa about what meetings are on their calendar. They can also invite other users to join conference calls scheduled on their calendar.

The following calendars are supported:

- Google G Suite
- Microsoft Office 365
- Microsoft Exchange 2013 or later

Enrolled users can perform any of the following procedures.

**To link a work calendar account to Alexa**

1. Open the Alexa app, and on the menu, choose **Settings, Calendar**.

2. Choose your calendar from the list of supported providers, choose **Link**, and follow the steps.

**Note**

You may need to provide sign-in information for your calendar account and verify that you want to give Alexa access to it. To link your Exchange calendar to Alexa, your IT administrator must set up Exchange. For more information, see [the section called "Set up Microsoft Exchange Access for Users" \(p. 57\)](#).

3. Set your work calendar as the default calendar for new events.

### Enable Alexa calling and messaging

- To join a conference call scheduled on your calendar, see [Sign Up for Alexa Calling and Messaging](#).

### To manage contacts to use for scheduling or calling

- To manage work or personal contacts for your Alexa app, see [Add and Edit Your Contacts to the Alexa App](#).

### Use utterances to talk to Alexa

- You can ask Alexa any of the following questions:
  - To browse events on your calendar:
    - Alexa, what's on my calendar?
    - Alexa, what's on my calendar tomorrow?
    - Alexa, what's on my calendar on [any day]?
  - To schedule a meeting:
    - Alexa, schedule a meeting today at 3PM.
    - Alexa, schedule a one hour meeting with John.
    - Alexa, schedule a meeting with John tomorrow.
  - To move a meeting:
    - Alexa, move my meeting.
    - Alexa, move my meeting at 2PM today to 4PM today.
    - Alexa, move my meeting called [meeting title] to 5PM tomorrow.
  - To cancel a meeting:
    - Alexa, cancel my meeting at 2PM today.
    - Alexa, cancel [meeting title] from my calendar.
  - To join a conference call:
    - Alexa, join my meeting.
  - To call a contact:
    - Alexa, call John.
    - Alexa, call 222-555-0126.

**Note**

Emergency services, such as 911, are not supported. For more information, see [Alexa Calling and Messaging FAQs](#).

## Troubleshooting

---

If you experience any of the following issues with the Alexa Smart Scheduling Assistant, try these steps:

- **I can't schedule a meeting with a contact, but I can schedule an event.**

Choose **Contacts** in your Alexa companion app and see if the contact is displayed. If the contact is not in the Alexa app but in your phone contacts, log out of the app and log in again.

- **I can't get availability information when scheduling a meeting.**

Open your calendar and check that you have access to the contact's availability information. Next, verify that there is an email address associated with your contact in your Alexa companion app. Then try again - Alexa may not have recognized the name you spoke. If you're still having issues, try scheduling a different contact. If that doesn't work, contact support through the [AWS Forum](#).

- **I can't get availability for the full day.**

For Microsoft Office 365 and Microsoft Exchange, Alexa follows the work hours set on the calendar. Work hours are set in your provider and can be changed using your calendar client. To learn more, contact your IT administrator.

- **I show as available on my calendar, but Alexa doesn't offer that time in its suggestion.**

Alexa checks availability information across all linked calendars. For example, if you have Microsoft Office 365 and Gmail linked, then Alexa looks at the availability across both calendars for you as the organizer. Note that Alexa does check all calendars of the recipient.

- **I see "Created with Alexa <<https://aws.amazon.com/alexaforbusiness>>" in the invite email.**

Meeting invites created with Alexa for Business include this text in the invite by default.

# Creating Usage Reports

See how Alexa for Business helps your organization by creating usage reports. These reports include the following informative metrics:

- Invocations on shared devices
- Meetings joined using Alexa
- Private skill invocations
- Active enrolled users
- Alexa invocations on shared devices
- Meetings joined
- Private skill invocations
- Daily active enrolled users of Alexa for Business
- Meetings joined on shared devices
- Meetings auto-joined and joined by PIN
- Total utilization by room name on shared devices
- Meetings joined by room name on shared devices
- Private skill invocations on shared devices
- Top five invocation types on shared devices
- Top 25 invocation types on shared devices
- Total number of private skill invocations

The reports consist of .csv files that you can view in BI tools. You can use them for further analysis by using ETL processes. A visual HTML report is generated alongside the .csv files. It gives you a comprehensive view of Alexa for Business use in your organization. You can create a report to deliver immediately to your S3 bucket, or create a scheduled report that gets delivered automatically to your S3 bucket daily or weekly. The .csv files contain 1-day or 7-day aggregate metrics based on your selection. The HTML report shows a summary of the last 30 days of use.

## Tasks

- [Usage Report Prerequisites \(p. 64\)](#)
- [Create a Report \(p. 65\)](#)
- [Create a Scheduled Report \(p. 66\)](#)

## Usage Report Prerequisites

Before you can export your usage reports to S3, complete the following steps.

### To prepare for report creation

1. If you don't have one already, create an S3 bucket.
  1. Open the [S3 console](#) and create an S3 bucket.

2. Enter a bucket name. (For example, my-s3-bucket-name.)
2. Set the S3 bucket policy.
  1. Select the S3 bucket you created, choose **Permissions**, and then choose **Bucket Policy**.
  2. In the **Bucket policy editor**, copy and paste the following S3 bucket policy. Replace "<my-s3-bucket-name>" with your bucket name, and choose **Save**.

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Sid": "Stmt1530229847751",
      "Effect": "Allow",
      "Principal": {
        "AWS": "arn:aws:iam::994698236012:root"
      },
      "Action": [
        "s3:PutObject",
        "s3:PutObjectAcl",
        "s3:GetBucketAcl"
      ],
      "Resource": [
        "arn:aws:s3:::<my-s3-bucket-name>",
        "arn:aws:s3:::<my-s3-bucket-name>/*"
      ]
    }
  ]
}
```

3. Verify that you have permissions to write to the S3 bucket location. Also make sure that the AWS IAM user, which you logged into the Alexa for Business console with, has the same permissions.

**Note**

If your IAM user can't write to the S3 bucket, you can't configure it as an export location.

## Create a Report

You can create an individual report to immediately deliver to your S3 bucket.

**To create a report**

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Usage reports**, and then choose the **Create report** button on the **Create report** tab.
3. Choose the **Time frame** and **Delivery option** of the report, then choose **Create**.

**Note**

If you choose **Deliver to my S3 bucket**, additionally specify the **Format**, **S3 bucket name**, and **Path prefix**. Using a zip file format containing individual .csv files is usually better for archive use cases, and using an unpacked structure is easier for automated processing of data or ETL. The file name for zip files and partition for unpacked files include the date range associated with the data. The file/partition name or the date column in the spreadsheet corresponds to the last day of the date range. For example, for a 7-day aggregate, the date column is the final day of the date range.

You can view the status of reports that you created on the **Create report** tab under **Report status**.

## Create a Scheduled Report

You can create a scheduled report that gets delivered automatically to your S3 bucket every day or every week.

### To create a scheduled report

1. Open the Alexa for Business console at <https://console.aws.amazon.com/a4b/>.
2. Choose **Usage reports**, and then choose the **Schedule report** button on the **Scheduled reports** tab.
3. Enter a **Name** for the report, then choose the **Frequency**, **Delivery day**, **Format**, **S3 bucket name**, and **Path prefix**.

#### Note

Using a zip file format containing individual ,csv files is usually better for archive use cases, and using an unpacked structure is easier for automated processing of data or ETL. The file name for zip files and partition for unpacked files include the date range associated with the data. The file/partition name or the date column in the spreadsheet corresponds to the last day of the date range. For example, for a 7-day aggregate, the date column is the final day of the date range.

4. When you're done, choose **Create**.

You can view your scheduled reports at any time on the **Schedule reports** tab or from the Alexa for Business **Dashboard**. On the **Dashboard**, under the **Usage Reports** section, choose the button to view your daily or weekly reports and open the S3 location associated with those reports.

To stop the delivery of scheduled reports, choose **Remove schedule reports** on the **Schedule reports** tab.

# Logging Alexa for Business API Calls with AWS CloudTrail

Alexa for Business is integrated with AWS CloudTrail, a service that provides a record of actions taken by a user, role, or an AWS service in Alexa for Business. CloudTrail captures all API calls for Alexa for Business as events. The calls captured include calls from the Alexa for Business console and code calls to the Alexa for Business API operations. If you create a trail, you can enable continuous delivery of CloudTrail events to an Amazon S3 bucket, including events for Alexa for Business. If you don't configure a trail, you can still view the most recent events in the CloudTrail console in **Event history**. Using the information collected by CloudTrail, you can determine the request that was made to Alexa for Business, the IP address from which the request was made, who made the request, when it was made, and additional details.

To learn more about CloudTrail, see the [AWS CloudTrail User Guide](#).

## Alexa for Business Information in CloudTrail

CloudTrail is enabled on your AWS account when you create the account. When activity occurs in Alexa for Business, that activity is recorded in a CloudTrail event along with other AWS service events in **Event history**. You can view, search, and download recent events in your AWS account. For more information, see [Viewing Events with CloudTrail Event History](#).

For an ongoing record of events in your AWS account, including events for Alexa for Business, create a trail. A *trail* enables CloudTrail to deliver log files to an Amazon S3 bucket. By default, when you create a trail in the console, the trail applies to all AWS Regions. Currently, events for Alexa for Business only appear in US East (N. Virginia), which is the only available region. The trail logs events from all Regions in the AWS partition and delivers the log files to the Amazon S3 bucket that you specify. Additionally, you can configure other AWS services to further analyze and act upon the event data collected in CloudTrail logs. For more information, see the following:

- [Overview for Creating a Trail](#)
- [CloudTrail Supported Services and Integrations](#)
- [Configuring Amazon SNS Notifications for CloudTrail](#)
- [Receiving CloudTrail Log Files from Multiple Regions](#) and [Receiving CloudTrail Log Files from Multiple Accounts](#)

All Alexa for Business actions are logged by CloudTrail and are documented in the [Alexa for Business API Reference](#). For example, `CreateRoom`, `AssociateSkillGroupWithRoom`, and `DeleteRoom` all generate entries in CloudTrail log files.

Every event or log entry contains information about who generated the request. The identity information helps you determine the following:

- Whether the request was made with root or AWS Identity and Access Management (IAM) user credentials.
- Whether the request was made with temporary security credentials for a role or federated user.
- Whether the request was made by another AWS service.

For more information, see the [CloudTrail `userIdentity` Element](#).

## Understanding Alexa for Business Log File Entries

A trail is a configuration that enables delivery of events as log files to an Amazon S3 bucket that you specify. CloudTrail log files contain one or more log entries. An event represents a single request from any source and includes information about the requested action, the date and time of the action, request parameters, and so on. CloudTrail log files aren't an ordered stack trace of the public API calls, so they don't appear in any specific order.

The following is an example of a CloudTrail log entry for Alexa for Business:

```
{
  "Records": [{
    "eventVersion": "1.05",
    "userIdentity": {
      "type": "IAMUser",
      "principalId": "EX_PRINCIPAL_ID",
      "arn": "arn:aws:iam::123456789012:user/Alice",
      "accountId": "123456789012",
      "accessKeyId": "EXAMPLE_KEY_ID",
      "userName": "Alice"
    },
    "eventTime": "2017-11-13T10:00:02Z",
    "eventSource": "a4b.amazonaws.com",
    "eventName": "CreateRoom",
    "awsRegion": "us-east-1",
    "sourceIPAddress": "192.2.0.1",
    "userAgent": "AWS Internal",
    "requestParameters": null,
    "responseElements": {
      "roomArn": "arn:aws:a4b:us-east-1:123456789012:room/8eed09c4eae340d2ba08b8c6c3e40970/66afda686e75c5b62fcea6f60ac00e7a6"
    },
    "requestID": "6a875d42-c859-11e7-93bc-f944dc16ba6b",
    "eventID": "2b045b94-82d9-407d-aff3-6c308b40fecb",
    "resources": [{
      "ARN": "arn:aws:a4b:us-east-1:123456789012:profile/8eed09c4eae340d2ba08b8c6c3e40970/00491b672c651240de09540d2072f660",
      "accountId": "123456789012",
      "type": "AWS::A4B::Profile"
    }, {
      "ARN": "arn:aws:a4b:us-east-1:123456789012:room/8eed09c4eae340d2ba08b8c6c3e40970/66afda686e75c5b62fcea6f60ac00e7a6",
      "accountId": "123456789012",
      "type": "AWS::A4B::Room"
    }
  ],
    "eventType": "AwsApiCall",
    "recipientAccountId": "123456789012"
  }
]
```



# Document History for Alexa for Business Administration Guide

The following table describes important changes to the Alexa for Business Administration Guide, beginning in November 2017. For notifications about updates to this documentation, you can subscribe to an RSS feed.

update-history-change	update-history-description	update-history-date
<a href="#">Contacts can contain multiple phone numbers and one SIP address (p. 69)</a>	For more information, see <a href="#">Managing Contacts</a> in the Alexa for Business Administrator's Guide.	June 21, 2019
<a href="#">To simplify the process of creating and managing network configurations, you can define network profiles. (p. 69)</a>	For more information, see <a href="#">Managing Network Profiles</a> in the Alexa for Business Administrator's Guide.	May 21, 2019
<a href="#">Send Alexa announcements to one or more rooms. Alexa will wake and speak the announcement that you create. (p. 69)</a>	For more information, see <a href="#">Sending Announcements</a> in the Alexa for Business Administrator's Guide.	May 2, 2019
<a href="#">Use Polycom Trio with Alexa for Business (p. 69)</a>	For more information, see <a href="#">Use Polycom Trio with Alexa for Business</a> in the Alexa for Business Administrator's Guide.	April 16, 2019
<a href="#">Users can ask Alexa to find an available meeting room (p. 69)</a>	For more information, see <a href="#">Managing Conferencing and Room Booking</a> in the Alexa for Business Administrator's Guide.	April 3, 2019
<a href="#">Publish private business skills with Alexa Skill Blueprints (p. 69)</a>	For more information, see <a href="#">Alexa Skill Blueprints</a> in the Alexa for Business Administrator's Guide.	March 27, 2019
<a href="#">Run multiple gateways (p. 69)</a>	For more information, see <a href="#">Running Multiple Gateways</a> in the Alexa for Business Administrator's Guide.	March 15, 2019
<a href="#">Import Devices with the Alexa Companion App (p. 69)</a>	For more information, see <a href="#">Import Your Devices</a> in the Alexa for Business Administrator's Guide.	January 16, 2019
<a href="#">Use the Device Setup Tool for WPA2 Enterprise network security type (p. 69)</a>	For more information, see <a href="#">Run the Device Setup Tool</a> in the Alexa for Business Administrator's Guide.	December 10, 2018

<a href="#">See how Alexa for Business helps your organization by creating usage reports (p. 69)</a>	For more information, see <a href="#">Creating Usage Reports</a> in the Alexa for Business Administrator's Guide.	December 7, 2018
<a href="#">Use Alexa for Business to control your Polycom Group Series systems and join meetings by using your voice. (p. 69)</a>	For more information, see <a href="#">Use Polycom Group Series with Alexa for Business</a> in the Alexa for Business Administrator's Guide.	December 6, 2018
<a href="#">Register an Alexa Voice Service (AVS) device with Alexa for Business by giving access to the Alexa built-in device maker. (p. 69)</a>	For more information, see <a href="#">AVS Permissions</a> in the Alexa for Business Administrator's Guide.	October 24, 2018
<a href="#">Ask Alexa to check whether a room is available, book a room, and tell you who reserved a room (p. 69)</a>	For more information, see <a href="#">Link Alexa for Business to Your Calendar System</a> in the Alexa for Business Administrator's Guide.	October 9, 2018
<a href="#">Use the Device Setup Tool - Beta for WPA2 Enterprise network security type (p. 69)</a>	For more information, see <a href="#">Run the Device Setup Tool</a> in the Alexa for Business Administrator's Guide.	September 24, 2018
<a href="#">Link Alexa for Business to Office 365 with delegate or application permissions (p. 69)</a>	For more information, see <a href="#">Link Alexa for Business to Office 365</a> in the Alexa for Business Administrator's Guide.	August 15, 2018
<a href="#">New deregistered device status (p. 69)</a>	For more information, see <a href="#">Managing Devices</a> in the Alexa for Business Administrator's Guide.	August 3, 2018
<a href="#">Calendar voice restriction and Alexa Smart Scheduling Assistant (p. 69)</a>	For more information, see <a href="#">Require Users to Restrict Calendars to Voice</a> and <a href="#">Instruct Users to Use the Alexa Smart Scheduling Assistant</a> in the Alexa for Business Administrator's Guide.	May 21, 2018
<a href="#">Connect Alexa for Business to your Zoom Rooms system (p. 69)</a>	For more information, see <a href="#">Use Zoom Rooms with Alexa for Business</a> in the Alexa for Business Administrator's Guide.	May 9, 2018
<a href="#">View the network connection status of a device and monitor devices using CloudWatch (p. 69)</a>	For more information, see <a href="#">Managing Devices</a> in the Alexa for Business Administrator's Guide.	April 30, 2018
<a href="#">Password expiration emails (p. 69)</a>	For more information, see <a href="#">Set up Microsoft Exchange Access for Users</a> in the Alexa for Business Administrator's Guide.	April 26, 2018

<a href="#">Various conferencing updates (p. 69)</a>	For more information, see <a href="#">Managing Conferencing</a> in the Alexa for Business Administrator's Guide.	April 10, 2018
<a href="#">Change permissions for a skill (p. 69)</a>	For more information, see <a href="#">Managing Skills</a> in the Alexa for Business Administrator's Guide.	April 6, 2018
<a href="#">Make calls from your shared devices with Alexa for Business (p. 69)</a>	For more information, see <a href="#">Managing Calling</a> in the Alexa for Business Administrator's Guide.	March 28, 2018
<a href="#">Updates to the Device Setup Tool (p. 69)</a>	For more information, see <a href="#">Run the Device Setup Tool</a> in the Alexa for Business Administrator's Guide.	March 26, 2018
<a href="#">Added support for Fuze and Google Hangouts Meet (p. 69)</a>	For more information, see <a href="#">Understanding Alexa-enabled Conferencing</a> in the Alexa for Business Administrator's Guide.	March 16, 2018
<a href="#">Use the Alexa for Business gateway to connect Alexa for Business to your Cisco TelePresence systems (p. 69)</a>	For more information, see <a href="#">Use the Alexa for Business Gateway</a> in the Alexa for Business Administrator's Guide.	February 8, 2018
<a href="#">Assign multiple devices to a room (p. 69)</a>	For more information, see <a href="#">Managing Devices</a> in the Alexa for Business Administrator's Guide.	January 26, 2018
<a href="#">Initial release (p. 69)</a>	Initial release	November 29, 2017