The bridge to possible

Cisco Video Devices for Microsoft Teams

Zero to fully deployed in 60 minutes (live demo)

Charlie Thorpe – TME
Davide Preti - TME

BRKCOL-2185

Cisco Webex App

Questions?

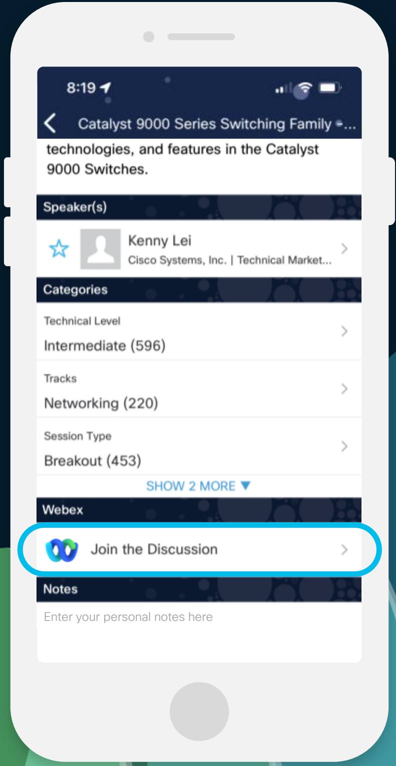
Use Cisco Webex App to chat
with the speaker after the session

How

1. Find this session in the Cisco Live Mobile App
2. Click “Join the Discussion”
3. Install the Webex App or go directly to the Webex space
4. Enter messages/questions in the Webex space

Webex spaces will be moderated
by the speaker until June 7, 2024.

https://ciscolive.ciscoevents.com/
ciscolivebot/#BRKCOL-2185



8:19

Catalyst 9000 Series Switching Family ...

technologies, and features in the Catalyst 9000 Switches.

Speaker(s)

Kenny Lei
Cisco Systems, Inc. | Technical Market...

Categories

Technical Level
Intermediate (596)

Tracks
Networking (220)

Session Type
Breakout (453)

SHOW 2 MORE ▼

Webex

Join the Discussion

Notes

Enter your personal notes here

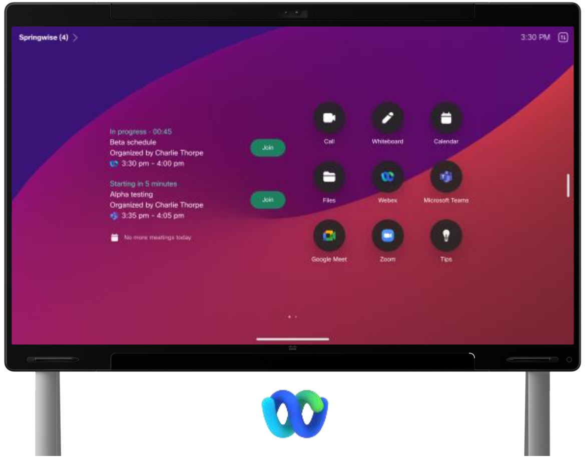
Agenda

- Introduction and fundamentals
- Provisioning
- On-boarding
- Meeting Experiences
- Conclusion

Introduction and fundamentals

Giving our customers additional flexibility and choice

RoomOS experience



Springwise (4) >

3:30 PM

In progress · 00:45
Beta schedule
Organized by Charlie Thorpe
3:30 pm - 4:00 pm

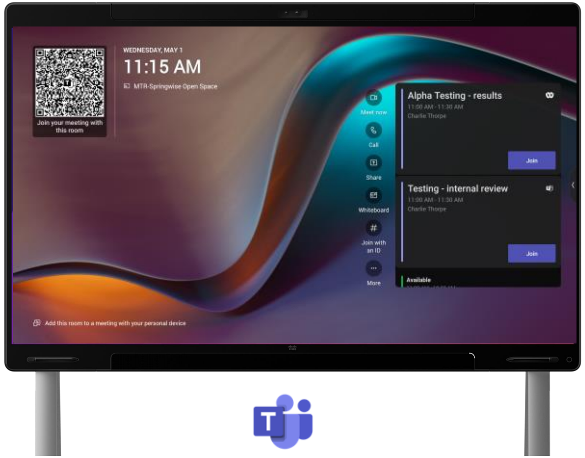
Starting in 5 minutes
Alpha testing
Organized by Charlie Thorpe
3:35 pm - 4:05 pm

No more meetings today

Includes native Webex Meetings and Events
with interop support for Microsoft Teams, Google, and Zoom

OR

Teams experience



Join your meeting with this room

WEDNESDAY, MAY 1
11:15 AM
MTR-Springwise Open Space

Alpha Testing - results
11:00 AM - 11:30 AM
Charlie Thorpe

Testing - internal review
11:00 AM - 11:30 AM
Charlie Thorpe

Available

Add this room to a meeting with your personal device

Includes native Microsoft Teams
Support for Webex Meetings[1], Events[2] and Zoom[3]

Same device, powered by Cisco RoomOS

[1] Native (with CH registration) or DGJ
[2] Native (with CH registration) only
[3] DGJ

Cisco Devices Certified for Microsoft Teams Rooms

Secure RoomOS environment

RoomOS is the OS running on Cisco Collaboration devices.

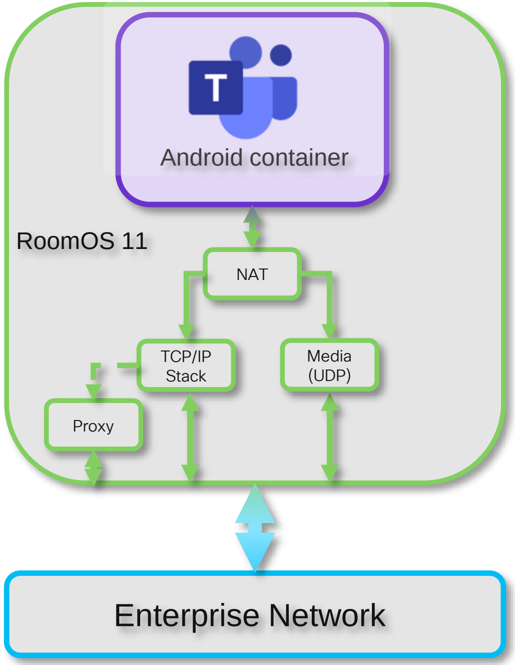
- Purpose built for real-time collaboration and security

Microsoft Teams Rooms on Android is not visible to the network layer

- Android 11/Android 12 is containerized on top of RoomOS
- Network traffic is handles by RoomOS
  - Single IP Stack to network (RoomOS)
  - Single MAC address per device (RoomOS)
  - Single wireless configuration (RoomOS)

RoomOS updates include updates to the secure Android container

- Updating of Android is not a customer commitment as this is taken care of through the RoomOS updates.



Cisco devices for Microsoft Teams Rooms

Video Bars and Kits

Room Bar

Integrated video bar appliance designed for simple, flexible and cost-effective video-enablement of small workspaces

Certified for Microsoft Teams

Room Bar Pro

Bringing together the best of both worlds with easy-to-deploy, AI-powered meetings scaled to the medium workspace

Certified for Microsoft Teams

Room Kit EQ

Powerful room kit with the Quad Camera, AI-powered Codec EQ, and smart room peripherals for medium to large workspaces

Certified for Microsoft Teams

Room Kit Pro

Advanced room kit with the Quad Camera, the powerful Codec Pro, and smart peripheral options for very large workspaces and specialist AV environments

Certified for Microsoft Teams

Cisco devices for Microsoft Teams Rooms

Integrated Systems

Desk Pro

All-in-one video conferencing and digital whiteboarding for jump rooms and huddle spaces

Certified for Microsoft Teams

Board Pro

All-in-one video conferencing and digital whiteboarding for small to medium workspaces and ideation spaces

Certified for Microsoft Teams

Room Kit EQX

Dual-screen system supporting immersive audiovisual experiences like Front Row. Bring your own screens (65”-75”), premium frame design and multiple mounting options. Spatial sound and noise removal. Ideal for premium workspaces

Certified for Microsoft Teams

Cisco devices for Microsoft Teams

Teams Display and Teams Panel

Coming soon

Desk Pro

All-in-one video conferencing and digital whiteboarding for Personal workspaces, Hotdesking and Focus Spaces

Coming soon

Room Navigator

Room booking panel for workspaces

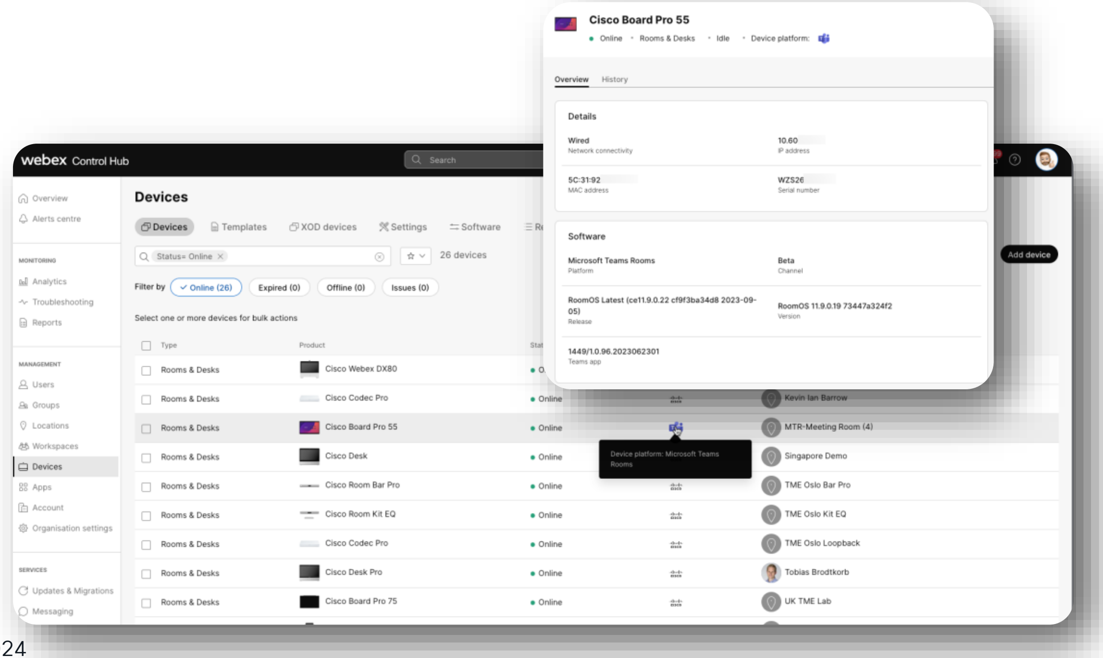
Control Hub registration

Device inventory, management, and monitoring in Control Hub

Access to the full value of Control Hub alongside Microsoft Teams Admin Center

Workspace environmental and occupancy metrics

Macros*, UI extensions* and Cloud API access



Devices

Status= Online ✕

26 devices

Filter by ✓ Online (26) | Expired (0) | Offline (0) | Issues (0)

Select one or more devices for bulk actions

	Type	Product	Stat		
□	Rooms & Desks	Cisco Webex DX80	● O		
□	Rooms & Desks	Cisco Codec Pro	● Online		Kevin Ian Barrow
□	Rooms & Desks	Cisco Board Pro 55	● Online		MTR-Meeting Room (4)
□	Rooms & Desks	Cisco Desk	● Online		Singapore Demo
□	Rooms & Desks	Cisco Room Bar Pro	● Online		TME Oslo Bar Pro
□	Rooms & Desks	Cisco Room Kit EQ	● Online		TME Oslo Kit EQ
□	Rooms & Desks	Cisco Codec Pro	● Online		TME Oslo Loopback
□	Rooms & Desks	Cisco Desk Pro	● Online		Tobias Brodtkorb
□	Rooms & Desks	Cisco Board Pro 75	● Online		UK TME Lab

Device platform: Microsoft Teams Rooms

Cisco Board Pro 55

● Online · Rooms & Desks · Idle · Device platform:

Overview | History

Details

Wired Network connectivity	10.60 IP address
5C:31:92 MAC address	WZS26 Serial number

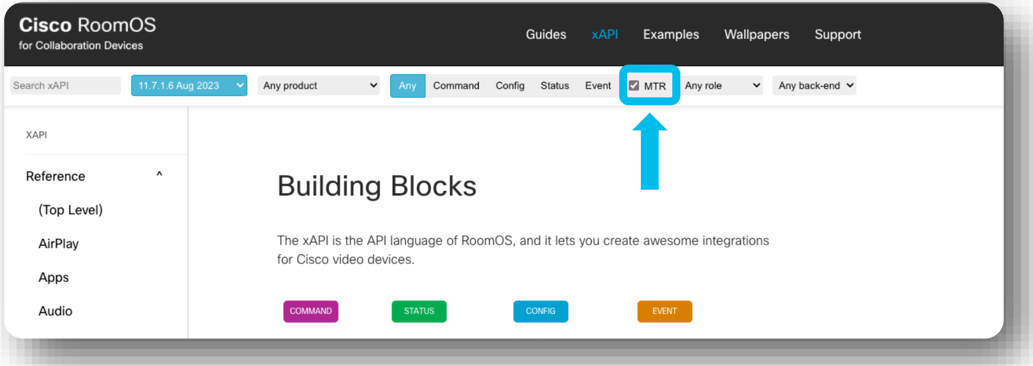
Software

Microsoft Teams Rooms Platform	Beta Channel
RoomOS Latest (ce11.9.0.22 cf9f3ba34d8 2023-09-05) Release	RoomOS 11.9.0.19 73447a324f2 Version
1449/1.0.96.2023062301 Teams app	

* Control Hub registration optional after RoomOS May 2024

Macros

- Support is there in RoomOS today
  - Not every xAPI is supported when running Microsoft Teams Rooms
  - Event based macros supported
- https://roomos.cisco.com
  - MTR filter available to show xAPI’s that are applicable when supporting Microsoft Teams Rooms



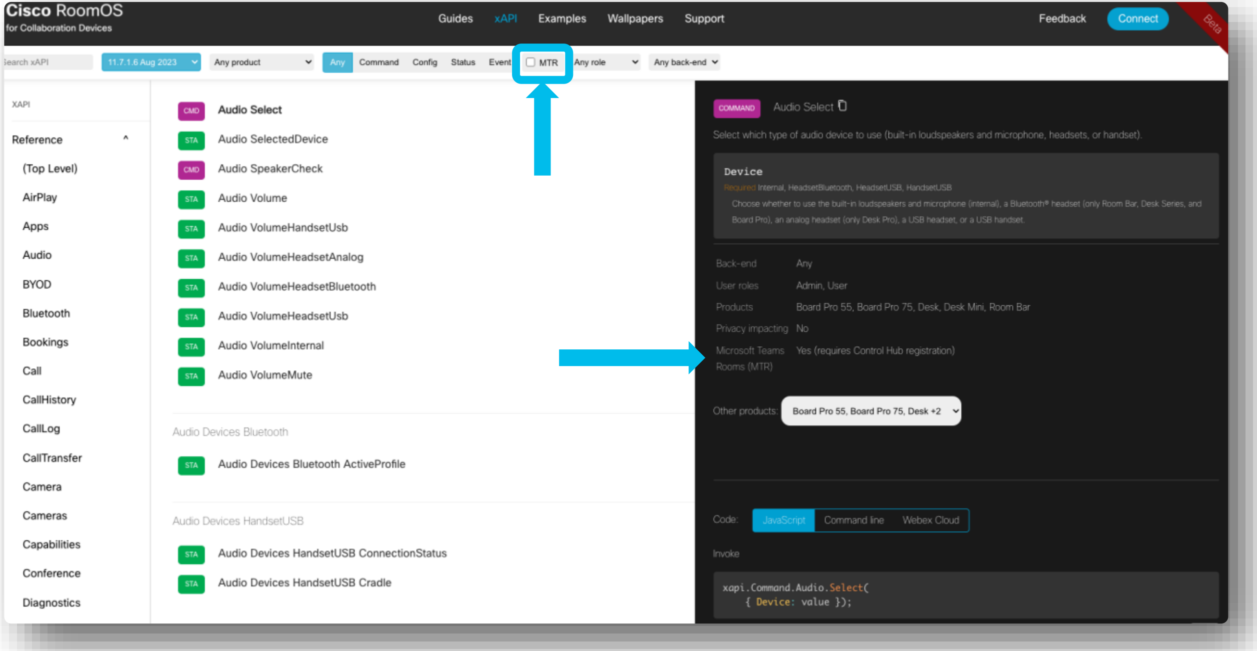
Building Blocks

The xAPI is the API language of RoomOS, and it lets you create awesome integrations for Cisco video devices.

RoomOS xAPI Availability

When reviewing roomos.cisco.com API's, only those xAPI's that have Microsoft Teams Rooms (MTR): Yes status will be visible when MTR filter is applied.

Please note that you do need to be Control Hub registered prior to RoomOS May 2024 to be able to use xAPIs and SSH



CMD Audio Select
STA Audio SelectedDevice
CMD Audio SpeakerCheck
STA Audio Volume
STA Audio VolumeHandsetUsb
STA Audio VolumeHeadsetAnalog
STA Audio VolumeHeadsetBluetooth
STA Audio VolumeHeadsetUsb
STA Audio VolumeInternal
STA Audio VolumeMute

Audio Devices Bluetooth

STA Audio Devices Bluetooth ActiveProfile

Audio Devices HandsetUSB

STA Audio Devices HandsetUSB ConnectionStatus
STA Audio Devices HandsetUSB Cradle

COMMAND Audio Select

Select which type of audio device to use (built-in loudspeakers and microphone, headsets, or handset).

Device
Required Internal, HeadsetBluetooth, HeadsetUSB, HandsetUSB
Choose whether to use the built-in loudspeakers and microphone (internal), a Bluetooth® headset (only Room Bar, Desk Series, and Board Pro), an analog headset (only Desk Pro), a USB headset, or a USB handset.

Back-end	Any
User roles	Admin, User
Products	Board Pro 55, Board Pro 75, Desk, Desk Mini, Room Bar
Privacy impacting	No
Microsoft Teams Rooms (MTR)	Yes (requires Control Hub registration)

Other products: Board Pro 55, Board Pro 75, Desk +2

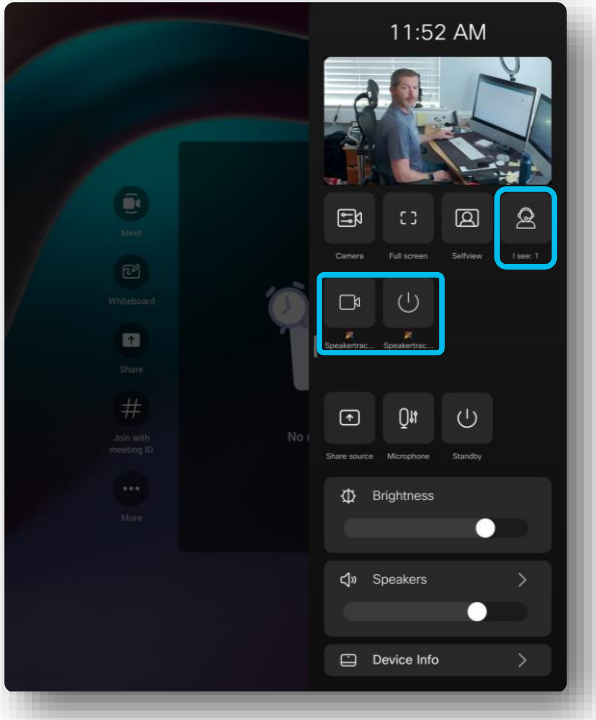
Code: JavaScript Command line Webex Cloud

Invoke

```
xapi.Command.Audio.Select(
   { Device: value });
```

UI Extensions

- Allows for the end user to be able to invoke and action (for example, close the shades or turn on the light)
- UI Extensions are limited to being visible within the Control Panel of the device.
    - Control Panel is visible by swiping in from the right had side of the main screen on the Desk Pro and Board Pro and swiping in from the right-hand side of the Room Navigator paired with the Room Bar/Room Bar Pro/Room Kit EQ/Room Kit EQX/Room Kit Pro/Board Pro.



Control Hub provisioning

Provisioning a Cisco Collaboration device to Control Hub is an optional but highly recommended step when deploying the Microsoft Teams Rooms experience.

There are many benefits that the ‘dual registration’ brings. These include

- Native Webex meeting join from scheduled calendar invite
- Workspace analytics in Control Hub – environmental and occupancy
- Synchronous Configuration management
- Additional software update options (Advanced Software Control and Beta software channel options)
- Cloud API access
- Bulk configuration and Template configuration

Workspace and 16-digit activation code are created in the same way that you would for a fully Control Hub registered device.

- Room registration license is required for device registration to both Control Hub and Teams Admin Center.
- For customers who do not have a Flex agreement, A-DEVICE-PACKAGE offer available to support device registration.

For your reference

Management Capabilities

Microsoft Teams Admin Center and Webex Control Hub

	MTR on Android (no Control Hub registration)	MTR on Android (with Control Hub registration)
Device Inventory	Limited	✓
Device Configuration	Limited	✓
Software Upgrade	Limited	✓
Device Alerts	✗	✓
Meeting Metrics & Analytics	Teams Admin Center only	Teams Admin Center and Control Hub
Macros	Partial* >RoomOS May 2024	Partial*
UI Extensions	Yes – Available in Control Panel only >RoomOS May 2024	Yes - Available in Control Panel only
API Integrations	Yes >RoomOS May 2024	✓
Device Metrics & Analytics	✗	✓
Room Metrics & Analytics	✗	✓
Native Webex Meetings	✗	✓
Environmental Metrics	✗	✓

* Full set of Macros supported in RoomOS only mode. ** UI extensions fully supported in RoomOS only mode.

Provisioning

Provisioning

Fundamentals

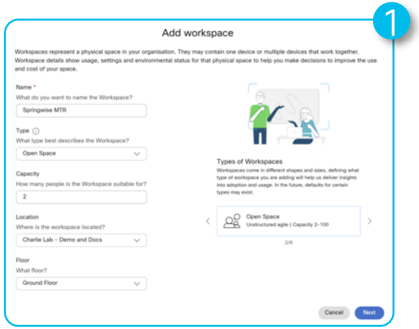
Cisco video devices that support the Microsoft Teams experience have the capability to be registered in both Microsoft Teams Admin Center and Webex Control Hub.

Before a Cisco video device can be registered, the appropriate account for the Cisco video device needs to be provisioned in:

- Microsoft 365 admin center (required)
- Webex Control Hub (optional but highly recommended) to provide support for:
  - Advanced software options
  - Device alerts and device management
  - Bulk device configuration and template provisioning
  - Workspace Analytics
  - Macro support (xAPI and UI Extensions) <RoomOS May 2024
  - Native Webex meeting join

Creating device activation code

Control Hub, as simple as 1, 2, 3, 4



Add workspace

Workspaces represent a physical space in your organisation. They may contain one device or multiple devices that work together. Workspace details show usage, settings and environmental status for that physical space to help you make decisions to improve the use and cost of your space.

Name *
What do you want to name the Workspace?
Springwise MTR

Type ⓘ
What type best describes the Workspace?
Open Space

Capacity
How many people is the Workspace suitable for?
2

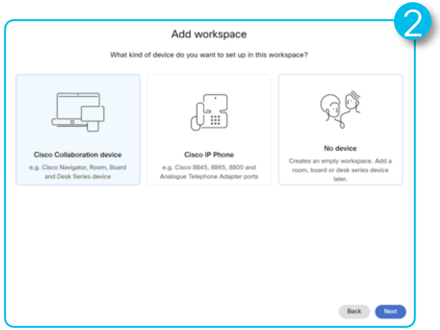
Location
Where is the workspace located?
Charlie Lab - Demo and Docs

Floor
What floor?
Ground Floor

Types of Workspaces
Workspaces come in different shapes and sizes, defining what type of workspace you are adding will help us deliver insights into adoption and usage. In the future, defaults for certain types may exist.

Open Space
Unstructured agile | Capacity 2-100
2/6

Add a workspace in Control Hub. Provide required detail and press Next



Add workspace

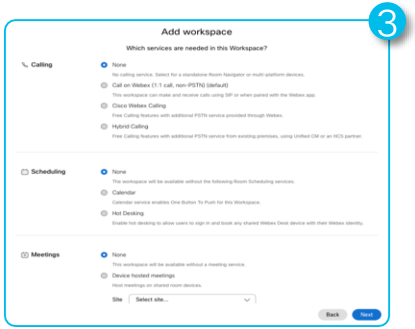
What kind of device do you want to set up in this workspace?

Cisco Collaboration device
e.g. Cisco Navigator, Room, Board and Desk Series device

Cisco IP Phone
e.g. Cisco 8845, 8865, 8800 and Analogue Telephone Adapter ports

No device
Creates an empty workspace. Add a room, board or desk series device later.

Select Cisco Collaboration device and press Next



Add workspace

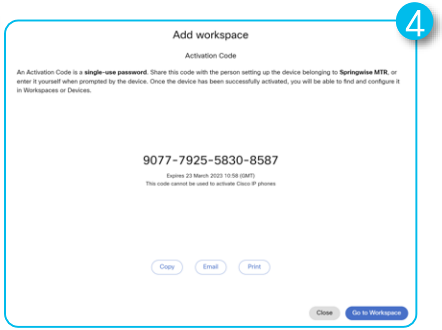
Which services are needed in this Workspace?

Calling
● None
No calling service. Select for a standalone Room Navigator or multi-platform devices.
○ Call on Webex (1:1 call, non-PSTN) (default)
This workspace can make and receive calls using SIP or when paired with the Webex app.
○ Cisco Webex Calling
Free Calling features with additional PSTN service provided through Webex.
○ Hybrid Calling
Free Calling features with additional PSTN service from existing premises, using Unified CM or an HCS partner.

Scheduling
● None
The workspace will be available without the following Room Scheduling services.
○ Calendar
Calendar service enables One Button To Push for this Workspace.
○ Hot Desking
Enable hot desking to allow users to sign in and book any shared Webex Desk device with their Webex identity.

Meetings
● None
This workspace will be available without a meeting service.
○ Device hosted meetings
Host meetings on shared room devices.
Site: Select site...

Select 'None' in the calling section. Leave the other options as the defaults and press Next



Add workspace

Activation Code

An Activation Code is a **single-use password**. Share this code with the person setting up the device belonging to **Springwise MTR**, or enter it yourself when prompted by the device. Once the device has been successfully activated, you will be able to find and configure it in Workspaces or Devices.

9077-7925-5830-8587

Expires 23 March 2023 10:58 (GMT)
This code cannot be used to activate Cisco IP phones

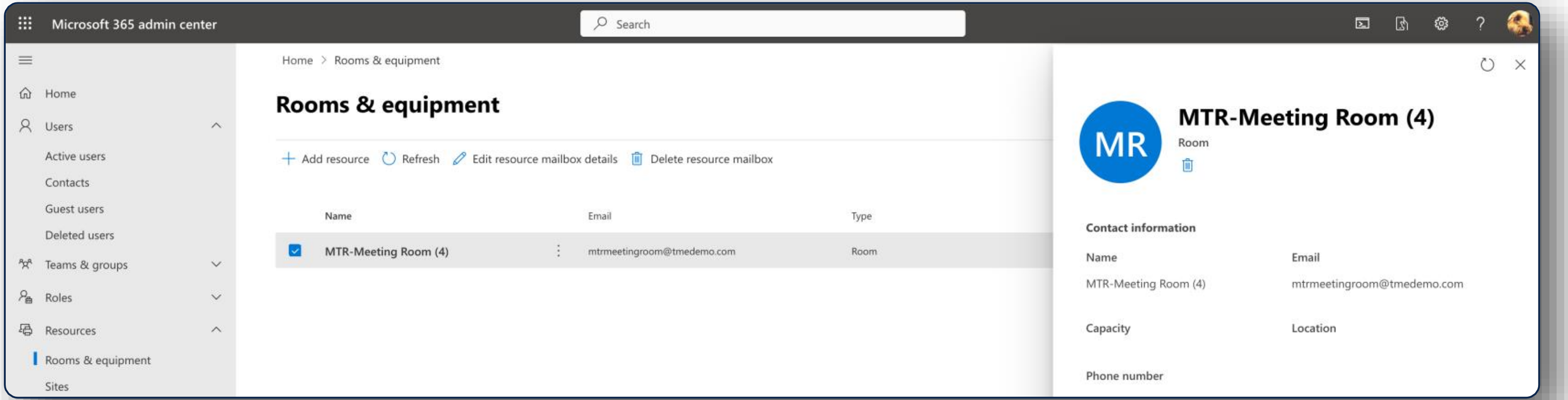
Take the registration code and enter it into the device at the Register to Control Hub screen

Account Provisioning

Microsoft 365 admin center

Cisco video devices that are to be registered to Microsoft Teams and operate as a Microsoft Teams Rooms device will need a resource account created in Microsoft 365 admin center.

Microsoft 365 resource accounts consist of a mailbox and a Teams account that are dedicated to a specific resource, in this case, the specific resource will be the Cisco video device.



Rooms & equipment

Name	Email	Type
☑ MTR-Meeting Room (4)	mtrmeetingroom@tmedemo.com	Room

MTR-Meeting Room (4)
Room

Contact information

Name
MTR-Meeting Room (4)

Email
mtrmeetingroom@tmedemo.com

Capacity

Location

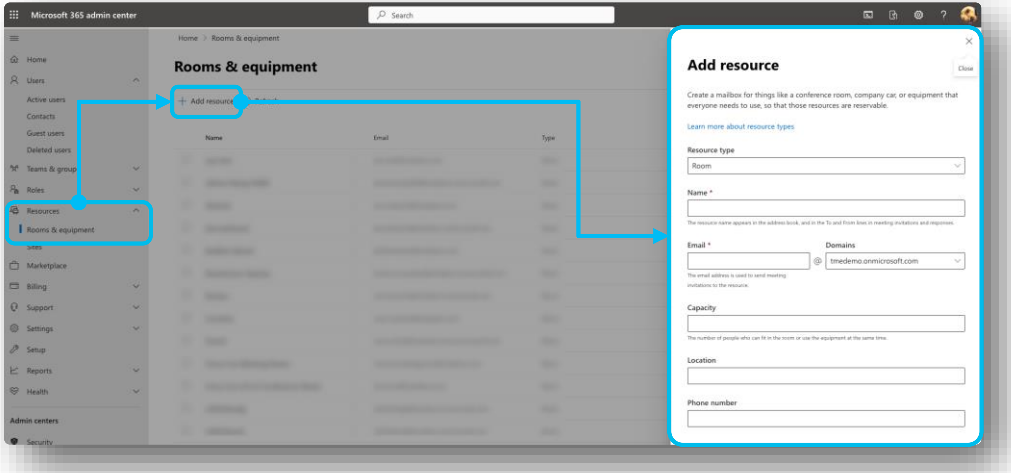
Phone number

Resource Account – account creation

Microsoft 365 admin center

Your starting point in most instances will be Microsoft 365 admin center.

- Sign in to admin.microsoft.com with you admin credentials
  - `Resources` in the left panel and then `Rooms & equipment`.
  - Select `Add resource` to create a new account and provide the relevant details.



Add resource

Create a mailbox for things like a conference room, company car, or equipment that everyone needs to use, so that those resources are reservable.

Learn more about resource types

Resource type: Room

Name *

The resource name appears in the address book, and in the To and From lines in meeting invitations and responses.

Email * @ Domains: tmedemo.onmicrosoft.com

The email address is used to send meeting invitations to the resource.

Capacity

The number of people who can fit in the room or use the equipment at the same time.

Location

Phone number

Resource Account – mailbox settings

Microsoft Exchange

By default, when resource accounts are created with the following settings:

- Allow repeat meetings
- Automatically decline meetings outside of the following limits:
  - Booking window (days): 180
  - Maximum duration (hours): 24
- Automatically accept meeting requests

You can edit these settings via the Edit booking options link when you are creating the resource account.

Best practice for the resource account that a Microsoft Teams Room is to use is to set the password to never expire.

- If password used has an expiry timer set, once timer expires, the Microsoft Teams Room will automatically sign out of its resource account and will not be usable until it is signed back in.

Resource Account – mailbox properties

Microsoft PowerShell

As mentioned in the previous slide, there are some default settings that are configured. You should also be aware that in general, there are a set of default properties that apply to resource mailboxes when they are configured. You can improve your Microsoft Teams Rooms experience by customizing how the resource mailbox responds and how it processes the meeting request. Exchange Online PowerShell is used to modify the following properties:

- **`AutomateProcessing`**: - allows the resource mailbox to receive and process the meeting request without the need for human intervention (for example proxy controlled). Default setting is `AutoAccept`.
- **`AddOrganizerToSubject`**:– The meeting organizer is not added to the subject line of the meeting request. Default setting is `$true`. If set to `$false`, organizer is not added to subject line.
- **`DeleteComments`**:– Decides whether text in the message body of the meeting request is retained or deleted. If you require externally generated Teams Meetings requests and/or you need to support meetings request that are for a Webex or Zoom meeting, you need to set the parameter to `$false`. By default, this is set to `$true`.

Resource Account – mailbox properties

Microsoft PowerShell

- **`DeleteSubject`**: - Decides whether the subject of the meeting request is kept. By default this is set to `$true`. If you want the subject of the meeting to be shown, this value needs to be set to `$false`
- **`ProcessExternalMeetingMessages`**: - Specifies whether to process meeting requests that originate outside of the Exchange organization. By default, this defaults to `$false`. This would mean that:
  - Meeting requests generated for a Microsoft Teams Meeting or a Webex meeting or a Zoom meeting that are originating from a user's mailbox within the Exchange organization would be processed and accepted. For example, if I sent the request from my Outlook app by generating a meeting request and including the resource account in to the ‘To’ line.
  - Meeting requests generated for a Microsoft Teams Meeting or a Webex meeting or a Zoom meeting that do not originate from within your Exchange organization would not be processed and accepted. For example, if I sent a meeting request for a Webex meeting and I invited the resource account directly from the Webex site meeting creation page. The request would not be accepted as the invite would not have been generated from within your Exchange organization.
  - Changing the parameter to `$true` would mean that meeting requests originating outside of your Exchange organization would be processed and accepted.

Resource Account – mailbox properties

Microsoft PowerShell

- **`RemovePrivateProperty`**: - Specifies that if the Private flag has been set by the meeting organizer in the original meeting request, that this remains as specified. Default value is `$true`. If the private meeting flag needs to be preserved (so the meeting stays private), then the value needs to be changed to `$false`.

The below is a working example

-
  ```
  Set-CalendarProcessing -Identity “<resourcename>” -AutomateProcessing AutoAccept –
  AddOrganizerToSubject $false -DeleteComments $false -DeleteSubject $false -RemovePrivateProperty
  $false -ProcessExternalMeetingMessages $true
  ```

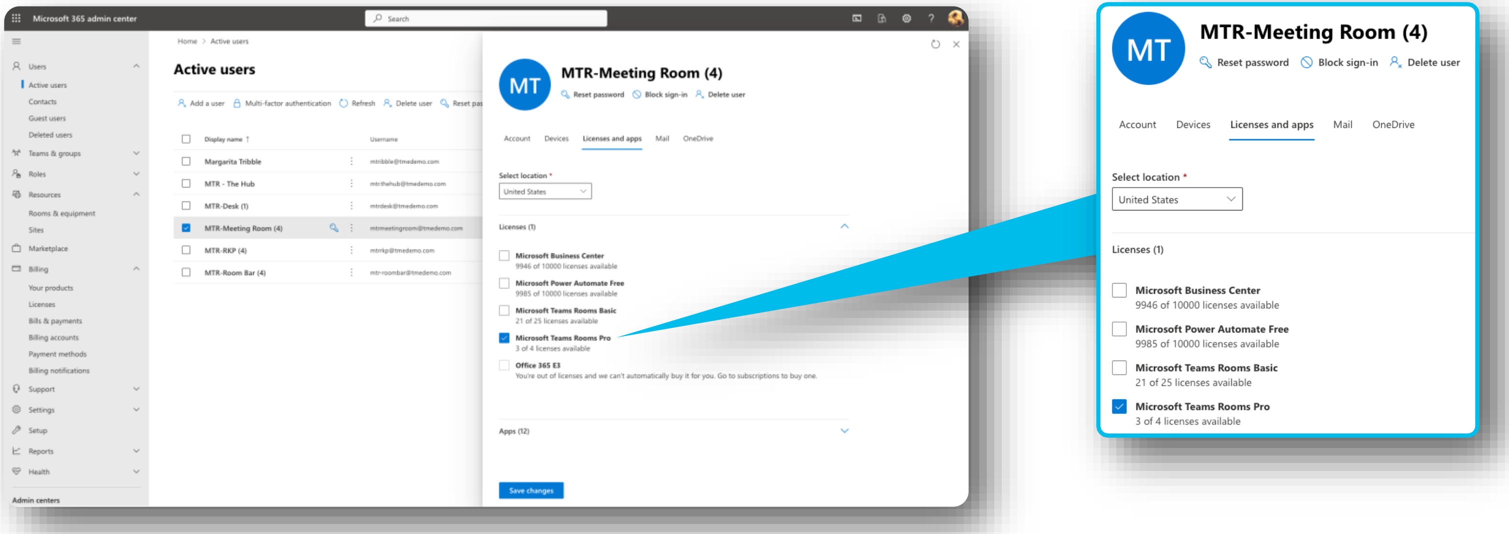
- Good to also add in

-
  ```
  -AddAdditionalResponse $true -AdditionalResponse “This is a Microsoft Teams Meeting room powered
  by a Cisco collaboration device!”
  ```

Resource Account – meeting room license

Microsoft 365 admin center

Once the resource has been created, a Microsoft Teams Room Basic or Pro license will need to be assigned. End user accounts (for example E1, E3 or E5) are not supported.



Active users

	Display name ↑	Username
□	Margarita Tribble	mtribble@tmedemo.com
□	MTR - The Hub	mtr.thehub@tmedemo.com
□	MTR-Desk (1)	mtrdesk@tmedemo.com
☑	MTR-Meeting Room (4)	mtrmeetingroom@tmedemo.com
□	MTR-RKP (4)	mtrrkp@tmedemo.com
□	MTR-Room Bar (4)	mtr-roombar@tmedemo.com

MT MTR-Meeting Room (4)

Select location * United States

Licenses (1)

□ **Microsoft Business Center**
9946 of 10000 licenses available

□ **Microsoft Power Automate Free**
9985 of 10000 licenses available

□ **Microsoft Teams Rooms Basic**
21 of 25 licenses available

☑ **Microsoft Teams Rooms Pro**
3 of 4 licenses available

□ **Office 365 E3**
You're out of licenses and we can't automatically buy it for you. Go to subscriptions to buy one.

Apps (12)

MT MTR-Meeting Room (4)

Select location * United States

Licenses (1)

□ **Microsoft Business Center**
9946 of 10000 licenses available

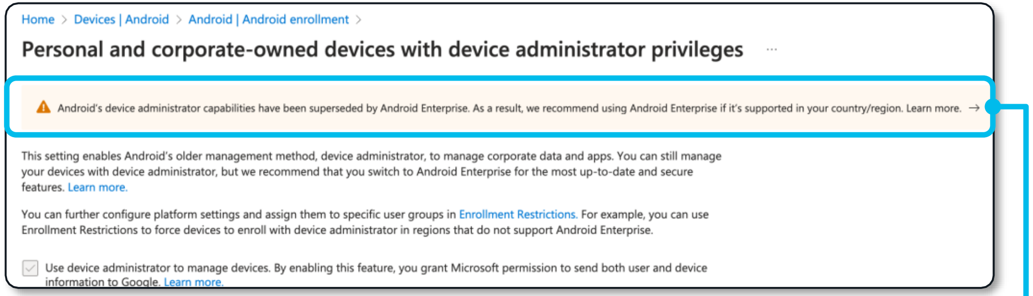
□ **Microsoft Power Automate Free**
9985 of 10000 licenses available

□ **Microsoft Teams Rooms Basic**
21 of 25 licenses available

☑ **Microsoft Teams Rooms Pro**
3 of 4 licenses available

Intune

Android Device Administrator



Home > Devices | Android > Android | Android enrollment >

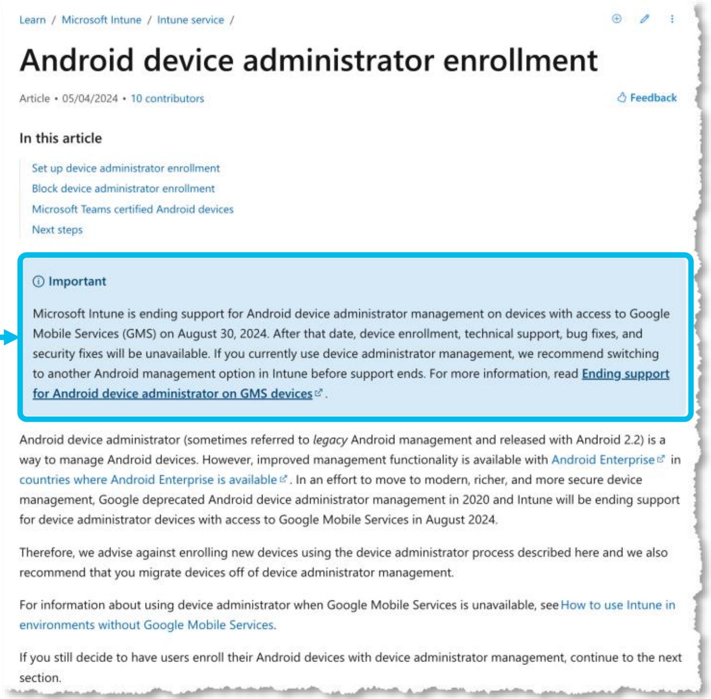
Personal and corporate-owned devices with device administrator privileges

Android's device administrator capabilities have been superseded by Android Enterprise. As a result, we recommend using Android Enterprise if it's supported in your country/region. Learn more. →

This setting enables Android's older management method, device administrator, to manage corporate data and apps. You can still manage your devices with device administrator, but we recommend that you switch to Android Enterprise for the most up-to-date and secure features. Learn more.

You can further configure platform settings and assign them to specific user groups in Enrollment Restrictions. For example, you can use Enrollment Restrictions to force devices to enroll with device administrator in regions that do not support Android Enterprise.

☑ Use device administrator to manage devices. By enabling this feature, you grant Microsoft permission to send both user and device information to Google. Learn more.



Learn / Microsoft Intune / Intune service /

Android device administrator enrollment

Article • 05/04/2024 • 10 contributors

Feedback

In this article

- Set up device administrator enrollment
- Block device administrator enrollment
- Microsoft Teams certified Android devices
- Next steps

ⓘ Important

Microsoft Intune is ending support for Android device administrator management on devices with access to Google Mobile Services (GMS) on August 30, 2024. After that date, device enrollment, technical support, bug fixes, and security fixes will be unavailable. If you currently use device administrator management, we recommend switching to another Android management option in Intune before support ends. For more information, read Ending support for Android device administrator on GMS devices.

Android device administrator (sometimes referred to *legacy* Android management and released with Android 2.2) is a way to manage Android devices. However, improved management functionality is available with Android Enterprise in countries where Android Enterprise is available. In an effort to move to modern, richer, and more secure device management, Google deprecated Android device administrator management in 2020 and Intune will be ending support for device administrator devices with access to Google Mobile Services in August 2024.

Therefore, we advise against enrolling new devices using the device administrator process described here and we also recommend that you migrate devices off of device administrator management.

For information about using device administrator when Google Mobile Services is unavailable, see How to use Intune in environments without Google Mobile Services.

If you still decide to have users enroll their Android devices with device administrator management, continue to the next section.

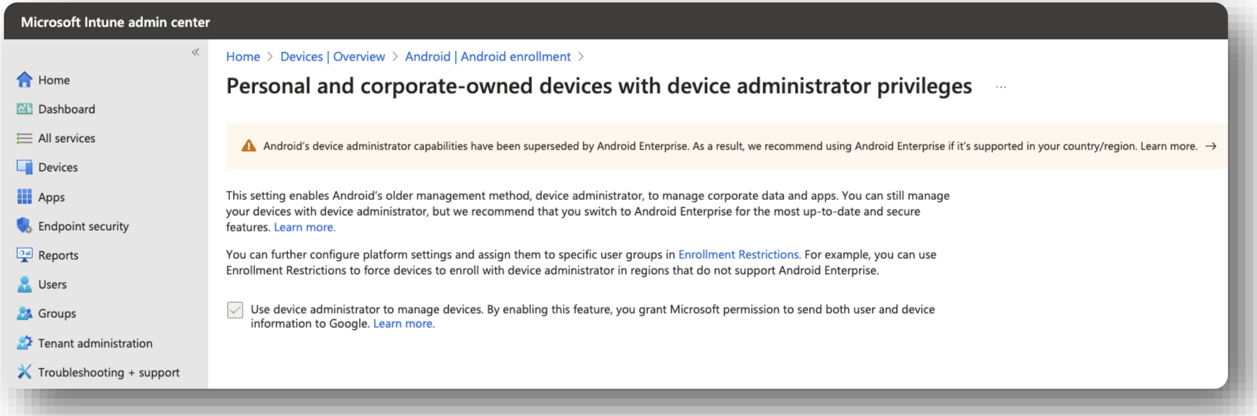
Many of you will have seen this and perhaps stopped at this point…perhaps not 100% sure what to do!

Microsoft Intune

Android Device Administration and Enrollment

Intune needs to be setup correctly to manage Android based Microsoft Teams Rooms devices.

- As of today, Microsoft only support the legacy Android Device Administrator Management for MTRoA devices. This uses an older and depreciated set of Android API's for device management.
- Microsoft is moving to a Next Gen Management platform using Android Open Source Project (AOSP) Enrollment Profiles. This is not currently available today.



Microsoft Intune admin center
Home
Dashboard
All services
Devices
Apps
Endpoint security
Reports
Users
Groups
Tenant administration
Troubleshooting + support
Home > Devices | Overview > Android | Android enrollment >

Personal and corporate-owned devices with device administrator privileges

Android's device administrator capabilities have been superseded by Android Enterprise. As a result, we recommend using Android Enterprise if it's supported in your country/region. Learn more. →

This setting enables Android's older management method, device administrator, to manage corporate data and apps. You can still manage your devices with device administrator, but we recommend that you switch to Android Enterprise for the most up-to-date and secure features. Learn more.

You can further configure platform settings and assign them to specific user groups in Enrollment Restrictions. For example, you can use Enrollment Restrictions to force devices to enroll with device administrator in regions that do not support Android Enterprise.

☑ Use device administrator to manage devices. By enabling this feature, you grant Microsoft permission to send both user and device information to Google. Learn more.

Microsoft Intune

Android (AOSP) corporate-owned user-less devices

What we know so far…

- Applicable to devices that do not support Google Mobile Services
- Intended to be shared by more than one user
  - Will require an ‘enrollment profile’ to be created before device can be enrolled.
  - AOSP policies will need to be created for the Microsoft Teams Rooms Android devices. The policies should be created before taking new firmware update to ensure the devices work as intended after the migration.
- Migration to AOSP profiles *should* be invisible to users.

Policies

Conditional Access Policies – Android DA

These are typically things that would provide access to resources on the condition that a certain policy or certain policies are met.

- Examples of policies that Microsoft Teams Rooms on Android support
  - User Identity – Ensure only certain accounts can log into a Microsoft Teams Room
  - Device Platforms – Ensure the resource account can only login if the device is on Android or Windows
  - Locations – Only allow devices to login if they meet certain location requirements
  - Compliance – Require the device to be Compliant per policy

Policies

Compliance Policies – Android DA

Compliance Policies are more to ensure that the devices meet certain minimum requirements related to the device depending on the policy rules in place.

Compliance Policies can be used to just inform administrators of non-compliance, or the can be used to block or quarantine.

- Examples of policies that Microsoft Teams Rooms on Android support include:-
  - Root – Is the device Rooted?
  - OS Version – Define and set a minimum/maximum version of Android OS support
  - Encryption – Require the device to have Encrypted Storage
  - USB Debug – Block USB Debugging

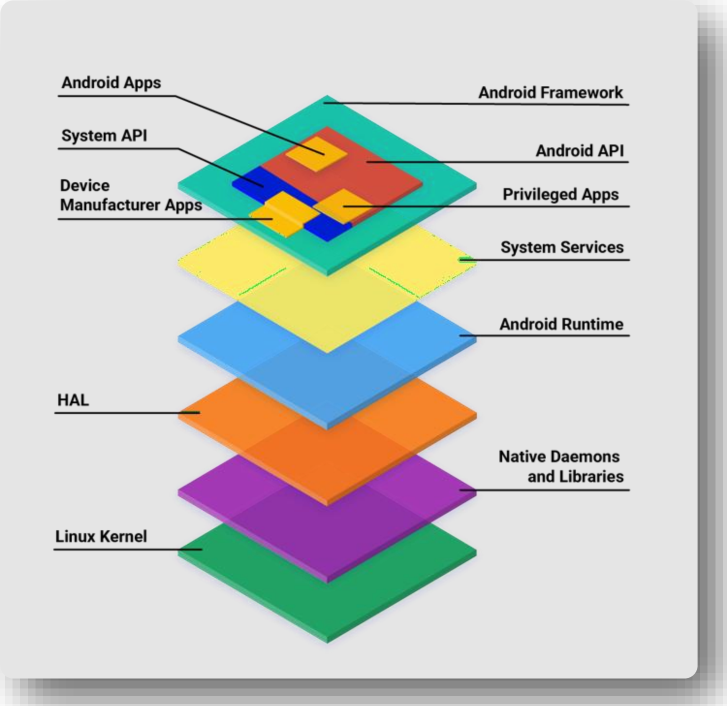
  It is expected that additional compliance policies will become available when Microsoft move to Next Gen Management platform.

Security Considerations

Microsoft Teams Rooms on Android

Android Container

- Built on Android AOSP
  - Android is an open source operating system for mobile devices and a corresponding open source project led by Google. This site and the Android Open Source Project (AOSP) repository offer the information and source code needed to create custom variants of the Android OS, port devices and accessories to the Android platform, and ensure devices meet the compatibility requirements that keep the Android ecosystem a healthy and stable environment for millions of users.
- RoomOS updates and Android updates will always be 1:1 – Meaning they will be released together. We sign all RoomOS builds today and will also be signing the Android release so that only approved apps can be installed.
- Microsoft apps can be updated by Microsoft or Cisco. This is because we build in the Microsoft Applications to our release and the signing key from these apps are unique to Microsoft so that only they are able to update their apps directly.
- We remove all applications not relevant or required for operation and no other applications are allowed to be installed.
- Our existing PSIRT process requires us to be open about any known vulnerabilities including those discovered in Android. We will be patching those as they arise.
- No current documentation on our builds or patches due to being a Cisco developed Android build.



Security Considerations

Microsoft Teams Rooms on Android

- Resource Accounts:
  - Do not enforce password expiration
  - Do not enforce multi-factor authentication through another device (push notification, text, phone call etc), instead leverage known location and/or device compliance as the second factor to secure accounts.
- Conditional Access:
  - Resource accounts should be excluded from user CA policies and have unique policies created to ensure the resource accounts are locked down appropriately
  - Consider device filters to apply your CA policies
- Local Device security:
  - Ensure all local administrative passwords are changed during setup

For your reference

Licensing

Microsoft Teams Room Basic VS Pro

MTR Basic

Provides core meeting experience

Up to 25 single screen systems in the organization.

Includes:

- Scheduling
- Joining meetings
- Content sharing
- Collaborative whiteboarding

MTR Pro

If more than 25-devices are needed, Pro licenses are needed for the additional systems.

Pro licenses include all the features of MTR Basic licenses but also add:

- Support for dual screen systems
- Large gallery view, Front Row view
- Split gallery across two screens
- Support for joining meetings across Teams clouds (ie worldwide/GCC)

Just because an MTR Pro license supports a feature, it does not automatically mean it is supported with MTR on Android!

For your reference

Reference links

- What’s new with Microsoft Teams Rooms for Android
- What’s New in Microsoft Teams Devices (complete list of updates)
- Microsoft 365 Roadmap for planned and released Microsoft Teams Rooms features
- Teams Blog for insights into new and upcoming features and announcements for Microsoft Teams, including Microsoft Teams Rooms
- Feature Comparison between MTRoW and MTRoA (includes Commercial, GCC and GCC-High)

On-boarding

What?

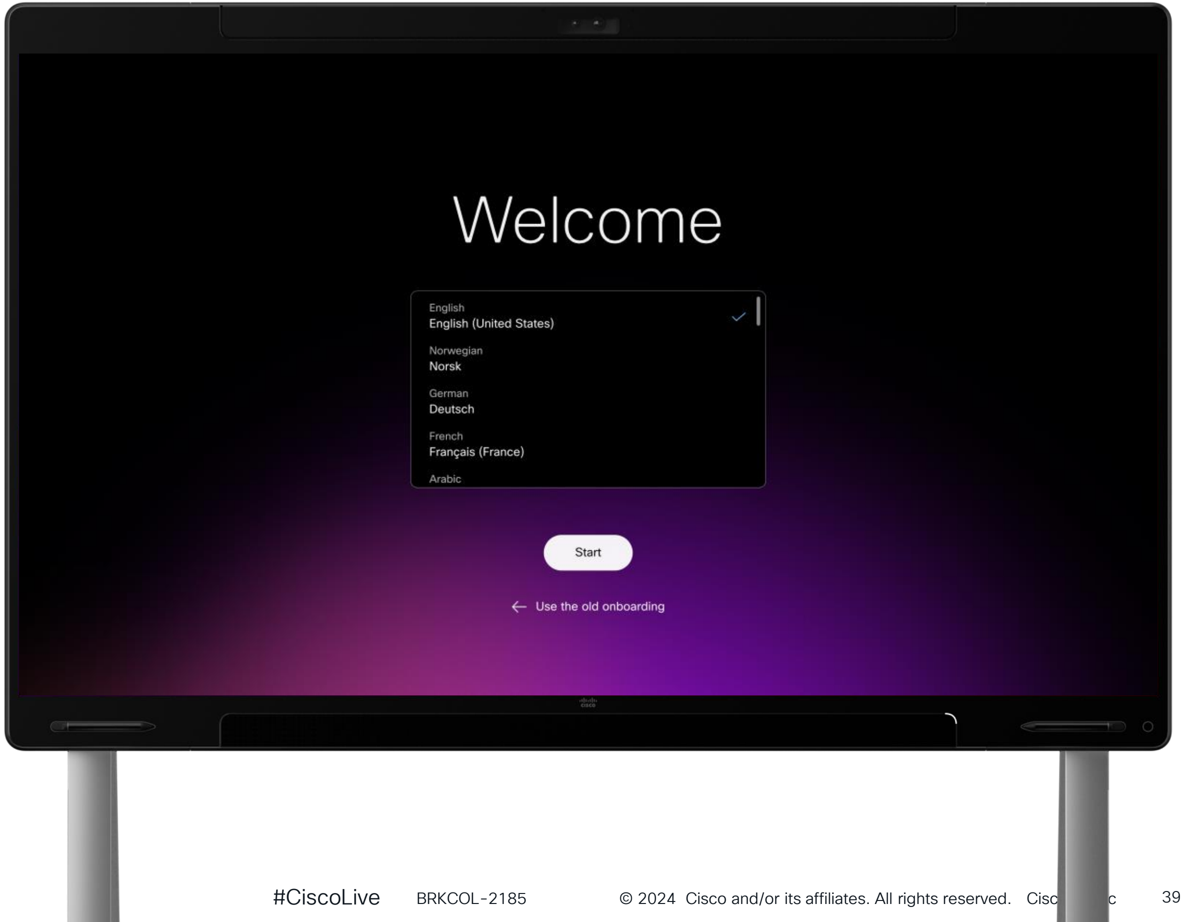
We are going to show the on-boarding of the following:

- Registration of Cisco Room Bar and Room Navigator. These items will be registered to both Control Hub and Teams Admin Center.
- Conversion of a Cisco Desk Pro registered to Control Hub and conversion to MTR!

Live demo - Onboarding

On-boarding flow

Initial setup screen allows the language of the device to be selected.



Welcome

English
English (United States) ✓

Norwegian
Norsk

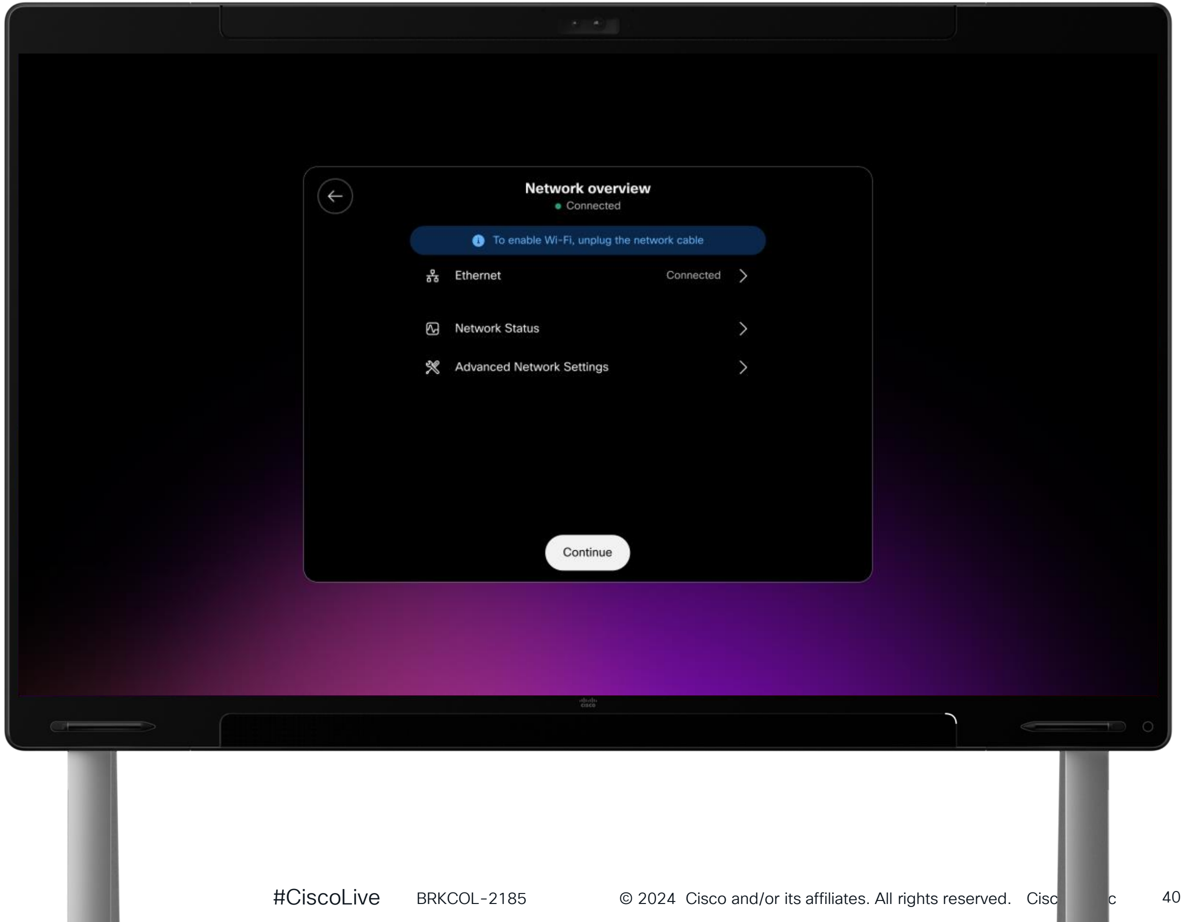
German
Deutsch

French
Français (France)

Arabic

On-boarding flow

Network overview provided to detail connected network interface and also the options to change settings if needed via Advanced Network Settings menu.



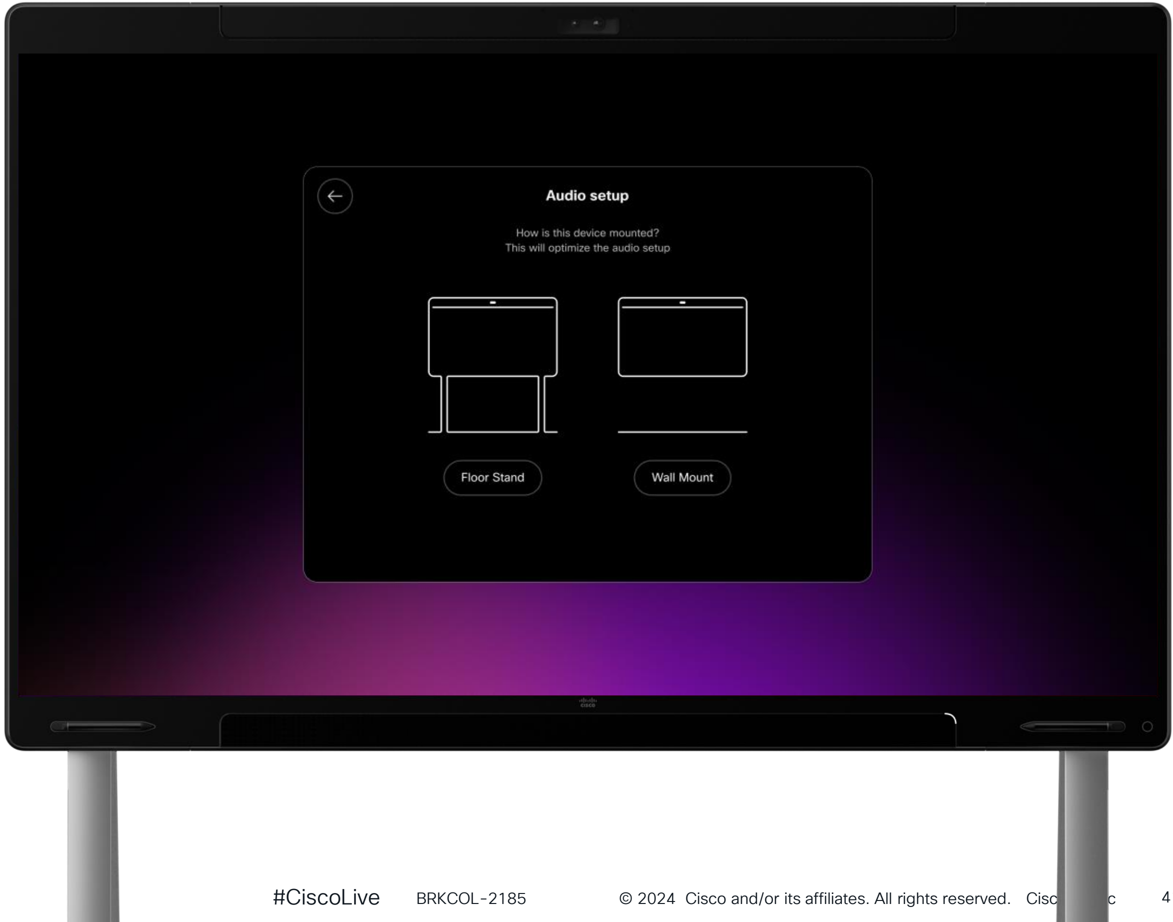
Network overview
● Connected

To enable Wi-Fi, unplug the network cable

On-boarding flow

For the Cisco Board Pro, the audio is tuned based upon floor stand or wall mount.

For devices such as Room Bar Pro, you will see video as well as audio setup screens during the setup process.

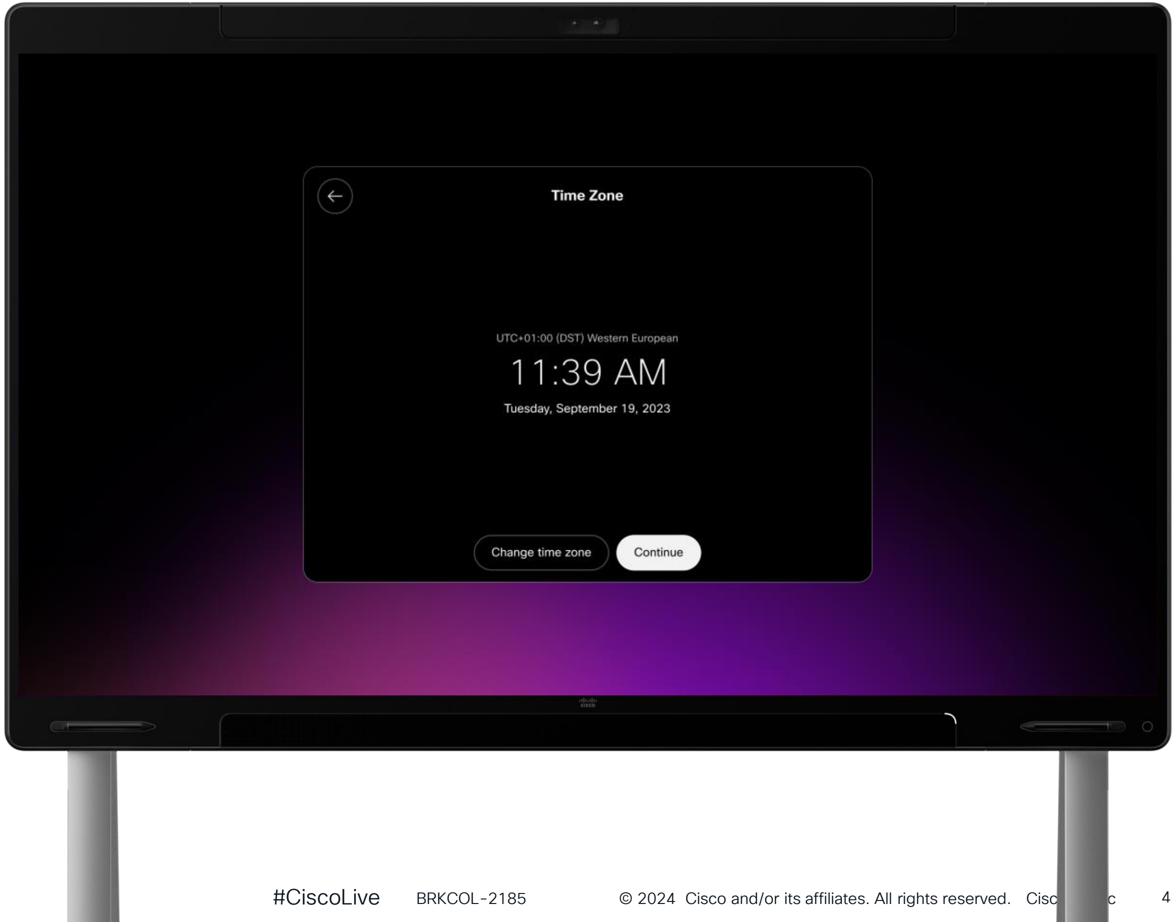


Audio setup

How is this device mounted?
This will optimize the audio setup

On-boarding flow

Option to select Cisco collaboration device time zone and also time format (12H/24H).



Time Zone

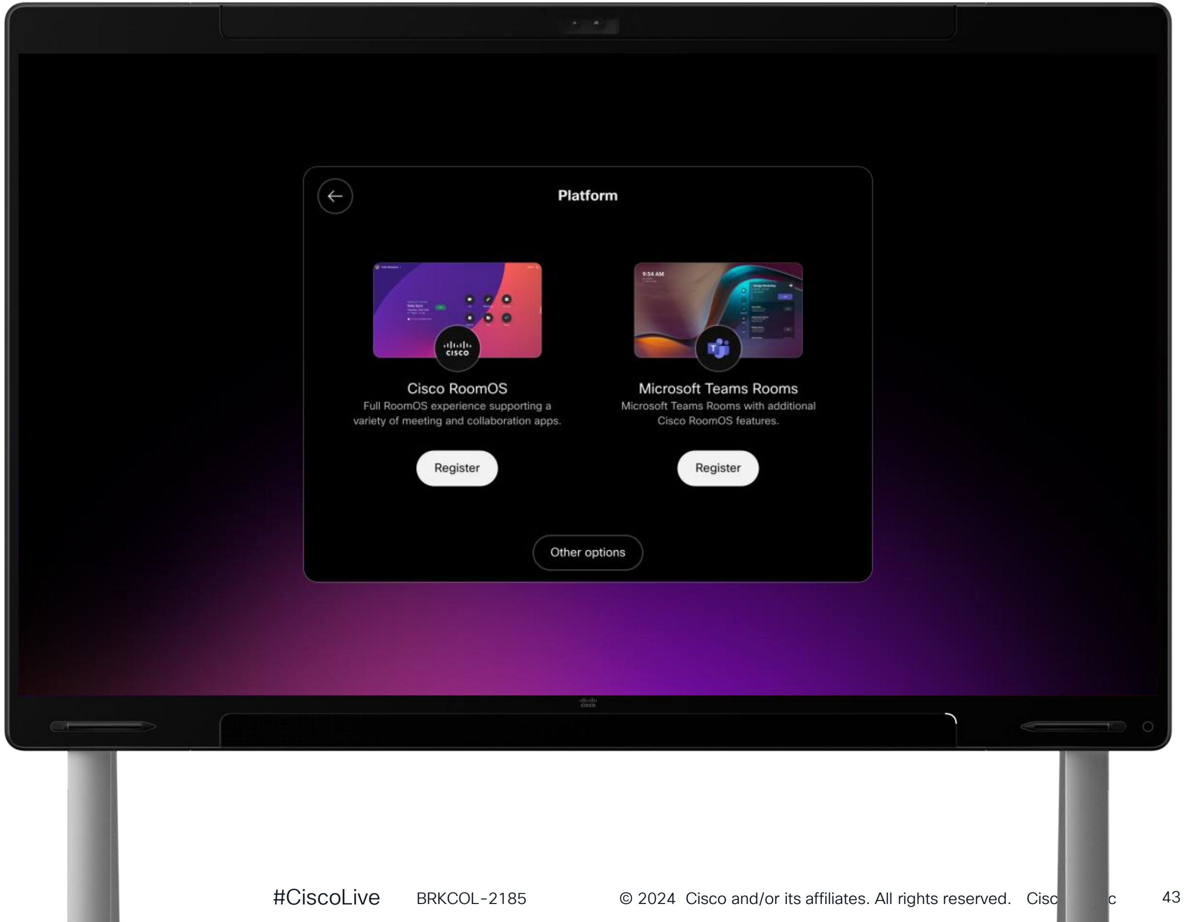
UTC+01:00 (DST) Western European

11:39 AM

Tuesday, September 19, 2023

On-boarding flow

Option to pick which platform the Cisco collaboration device is to be registered with.



Platform

Cisco RoomOS

Full RoomOS experience supporting a variety of meeting and collaboration apps.

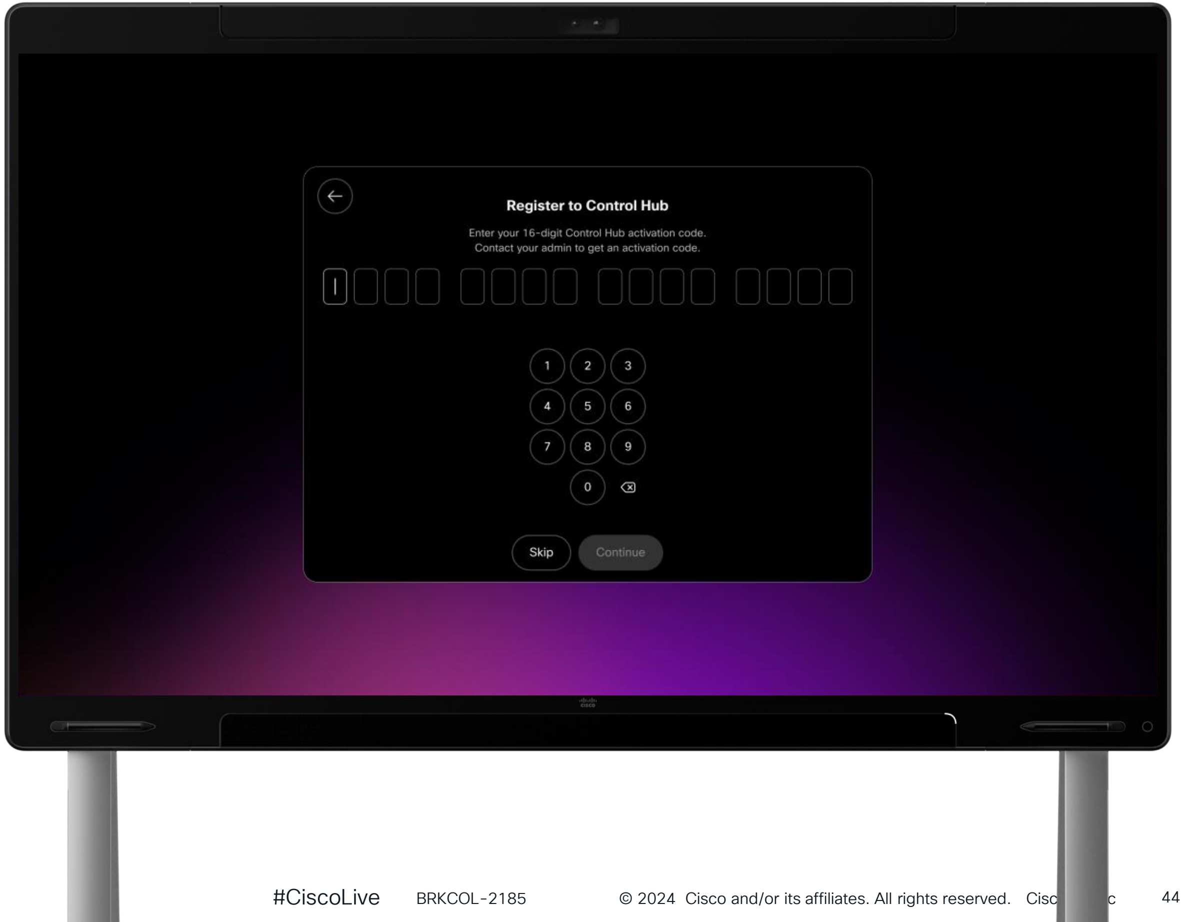
Microsoft Teams Rooms

Microsoft Teams Rooms with additional Cisco RoomOS features.

On-boarding flow

Microsoft Teams and Control Hub registration

Control Hub registration is presented. This is an optional step (but highly recommended). Enter the 16-digit registration code generated in Control Hub.
If not required, 'Skip' button can be used.



Register to Control Hub

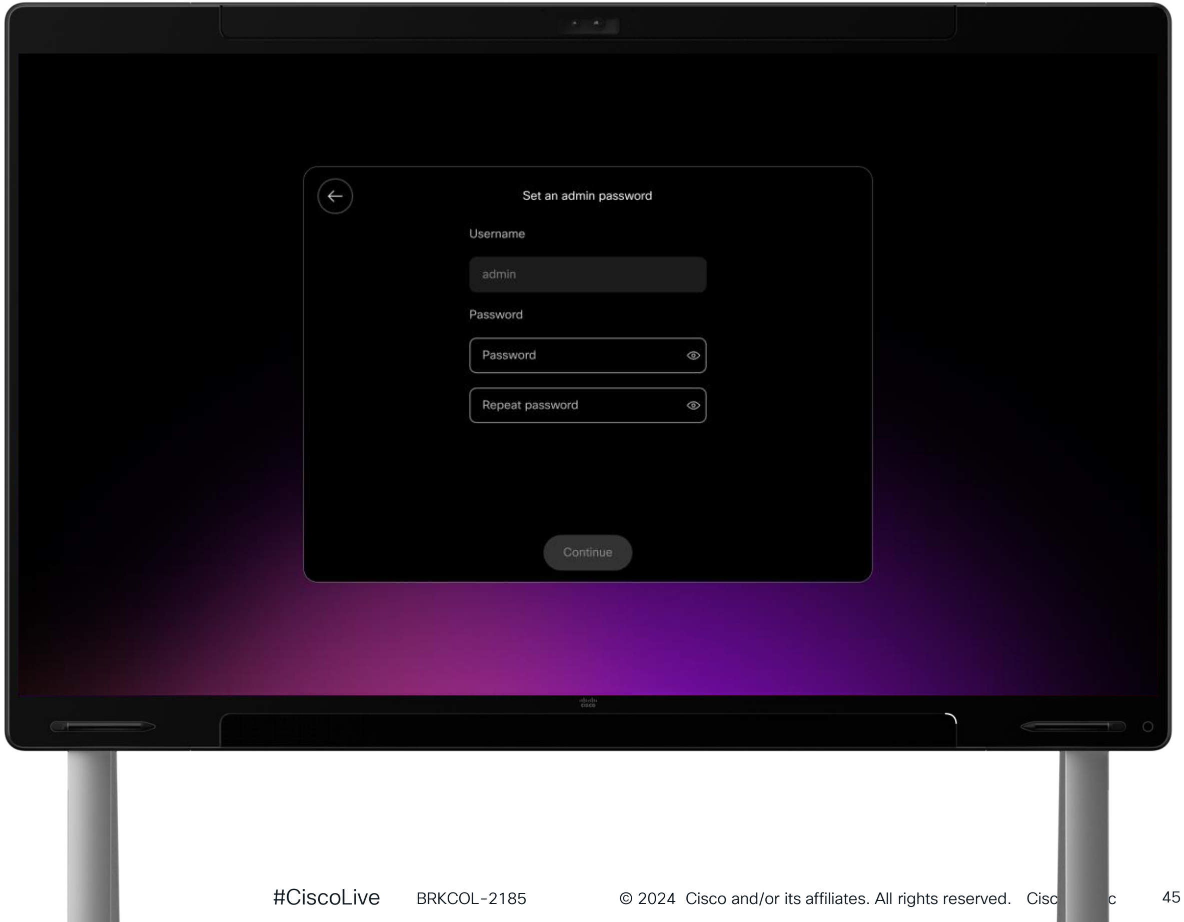
Enter your 16-digit Control Hub activation code.
Contact your admin to get an activation code.

On-boarding flow

If the ’Skip’ button has been used in the previous screen, you will be required to set (and repeat) an admin password.

This will allow for an admin to log into the WebUI of the Cisco collaboration device.

It can be changed from Teams Admin Center and a later stage.



Set an admin password

Username

admin

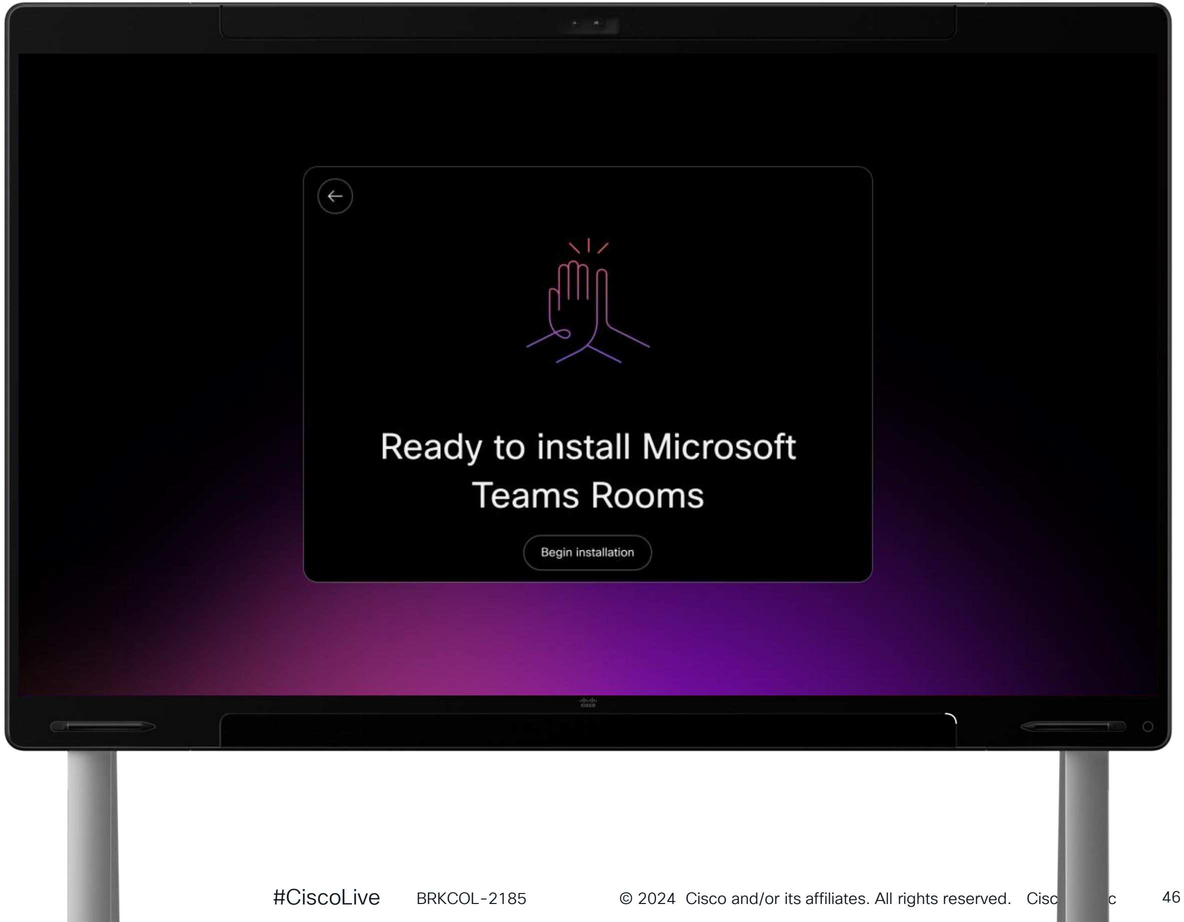
Password

Password

Repeat password

On-boarding flow

Once the Cisco collaboration device has been registered to Control Hub (or the step has been skipped), Microsoft Teams Rooms is ready to install.



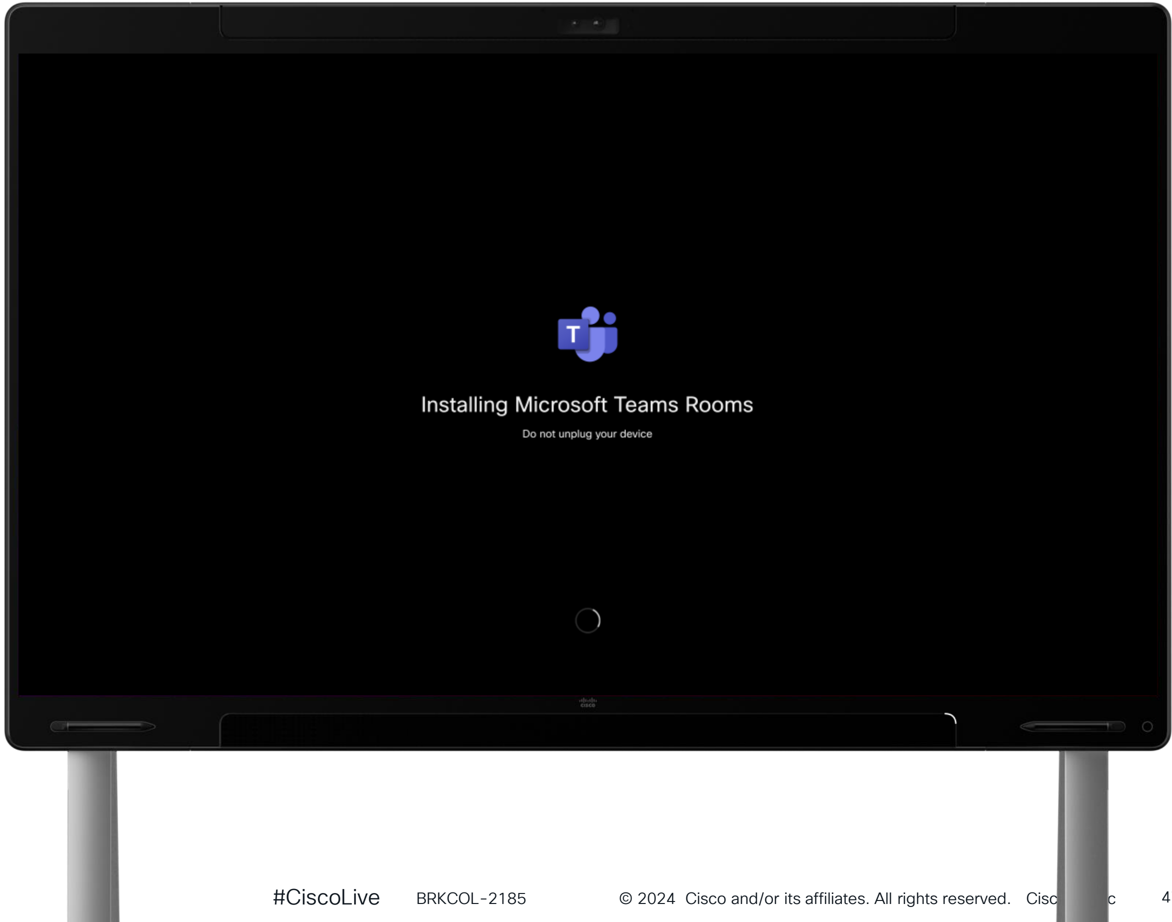
Ready to install Microsoft Teams Rooms

Installation flow

The Microsoft Teams Room application will start to install to the Cisco collaboration device.

The application will install into a container sitting on top of RoomOS 11.

Once installed, the Cisco collaboration device will provide the relevant information to complete the sign-in to Microsoft Teams.


Installing Microsoft Teams Rooms

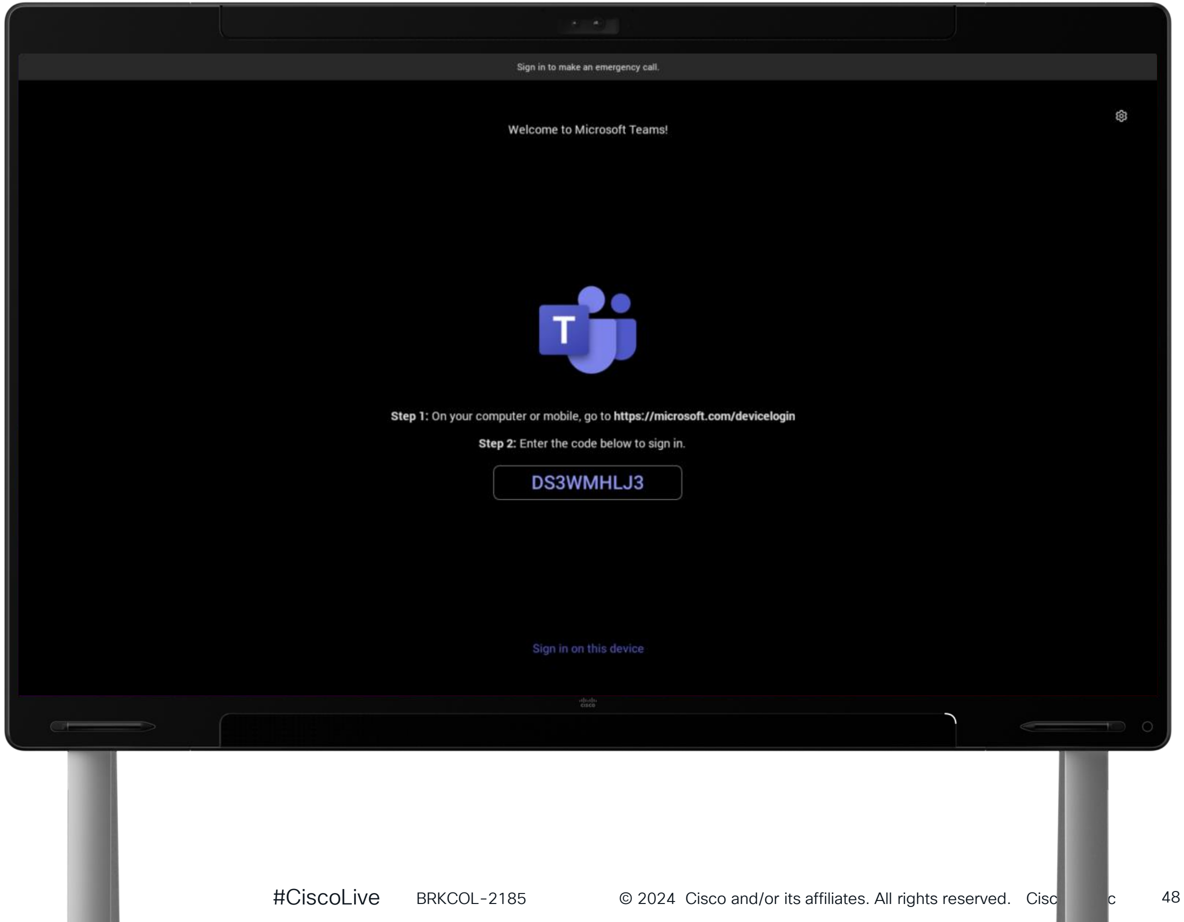
Do not unplug your device

Activating Microsoft Teams

Once installation has completed, the Welcome to Microsoft Teams screen will be seen.

From here the Cisco collaboration device can complete registration either through:

- Visiting microsoft.com/devicelogin
    - Enter the activation code
    - Authenticate using the room resource credentials
- Logging in on the device
    - Tap ‘sign in on this device’
    - Authenticate using the room resource credentials



Sign in to make an emergency call.

Welcome to Microsoft Teams!

Step 1: On your computer or mobile, go to **https://microsoft.com/devicelogin**

Step 2: Enter the code below to sign in.

DS3WMHLJ3

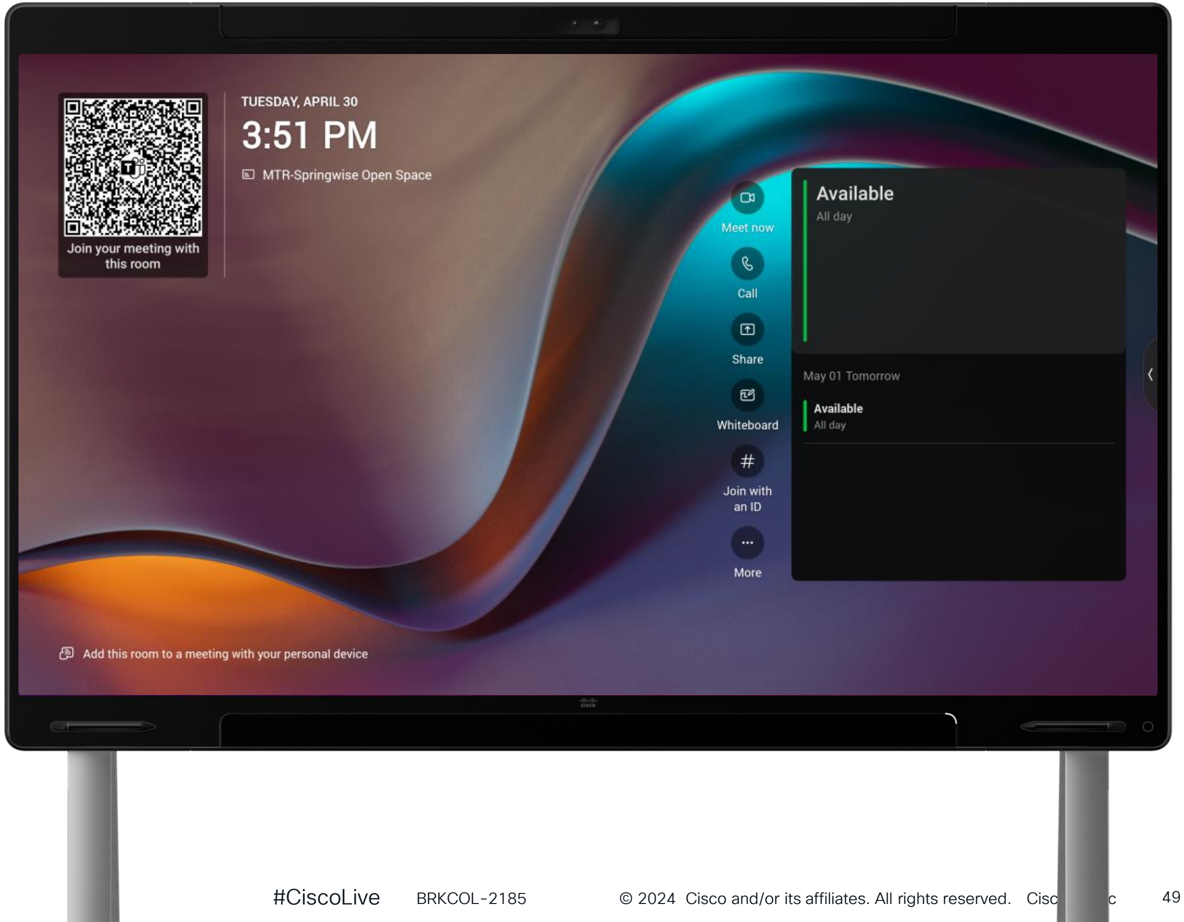
Sign in on this device

Successful activation

Once successfully logged in, the Cisco collaboration device will display the Microsoft Teams Rooms home screen.

The homescreen will provide access to :

- Meet Now
- Call
- Whiteboard
- Share
- Join Teams Meeting with meeting ID#
- More
- Volume control
- Device settings



Join your meeting with this room

TUESDAY, APRIL 30

3:51 PM

MTR-Springwise Open Space

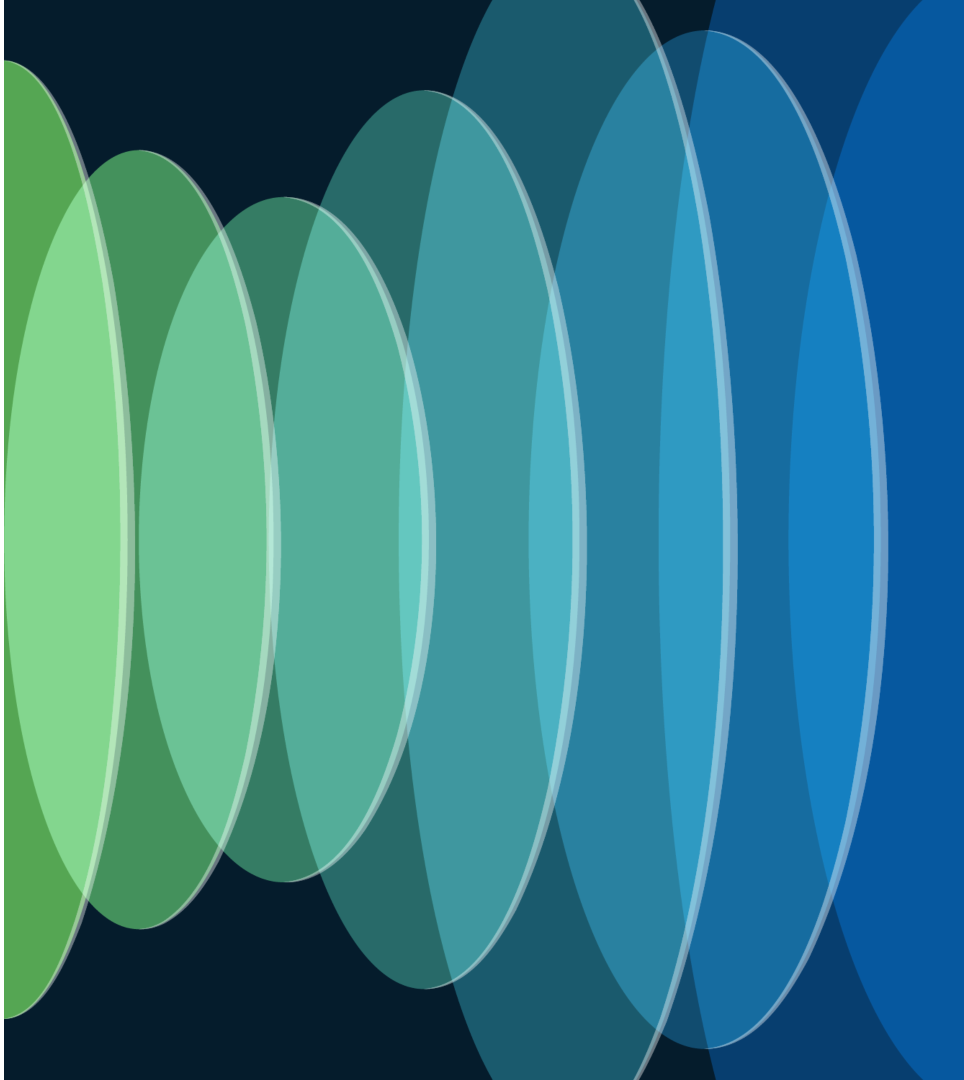
Available
All day

May 01 Tomorrow

Available
All day

Add this room to a meeting with your personal device

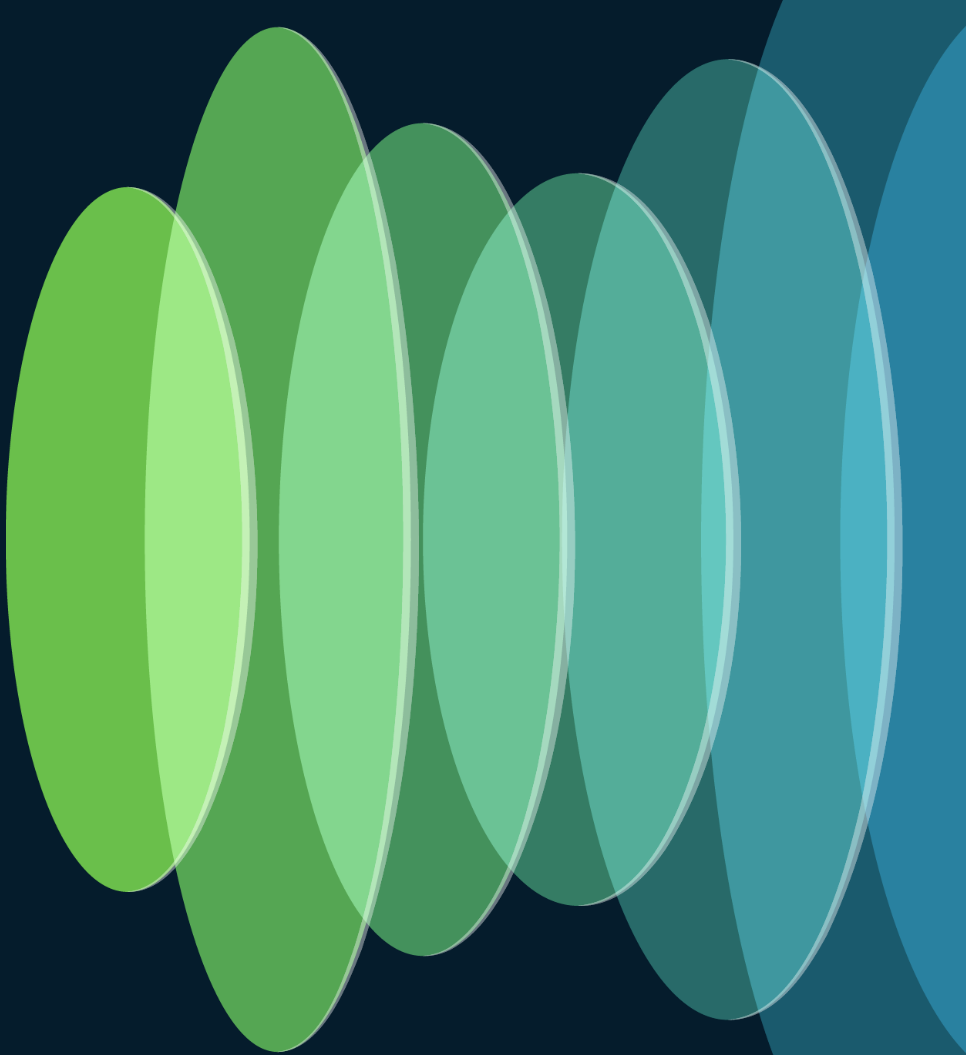
Conversion to MTR of Control Hub registered device!



API Usage

- To convert an existing device registered to Control Hub, a single command can be used to start the conversion.
  - Will maintain device registration in Control Hub
  - Will maintain existing analytics settings
  - Will maintain existing workspace
  - Control Hub will update to reflect that the device is now configured for Microsoft Teams Rooms
- And the command is...
  - `xCommand MicrosoftTeams Install Name: MicrosoftTeamsRooms`

Meeting experience



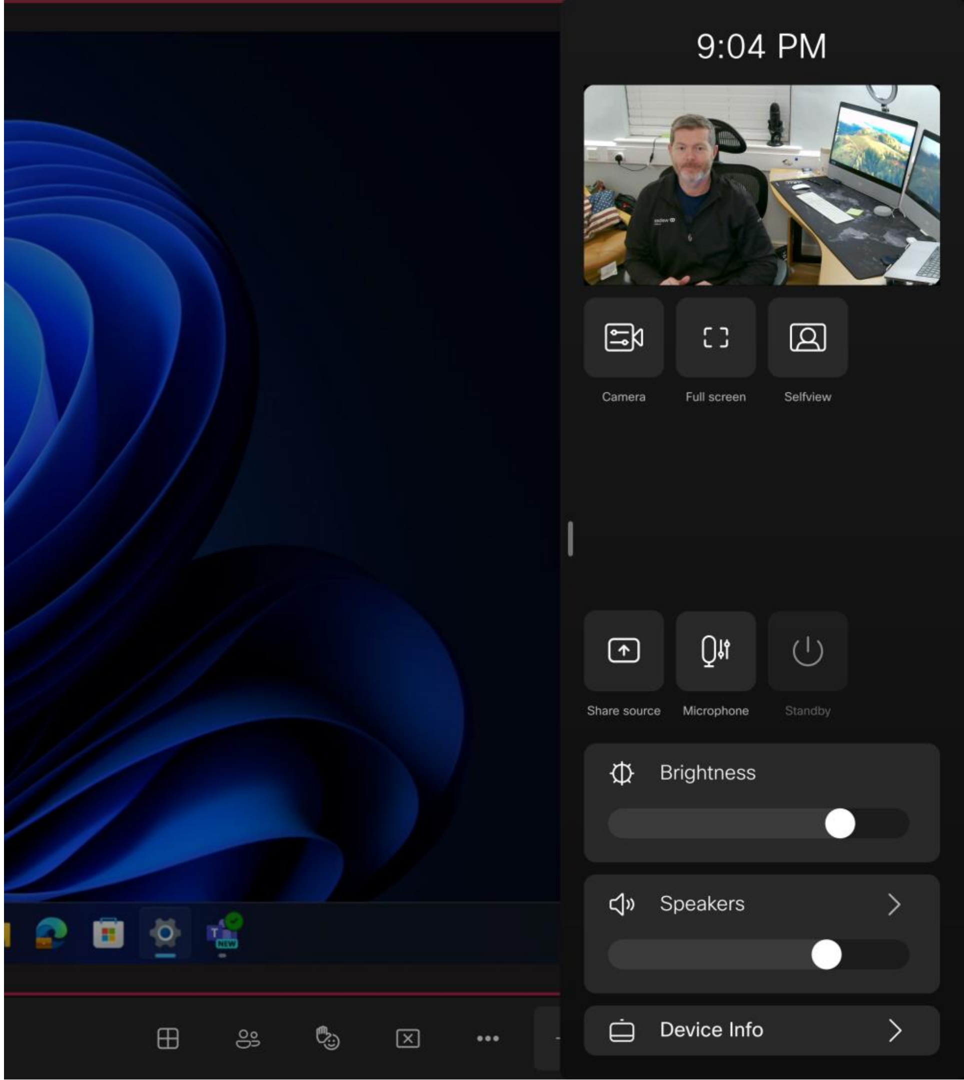
Access RoomOS 11 camera and audio settings

Access to RoomOS 11 AI features:

- Camera intelligence
- Audio intelligence
- Background replacement (Cisco Desk Pro only)

When in a:

- Microsoft Teams meeting
- Webex meeting
- Zoom meeting
- BYOD meeting (USB Passthrough)



Camera intelligence

Cisco Desk Pro:

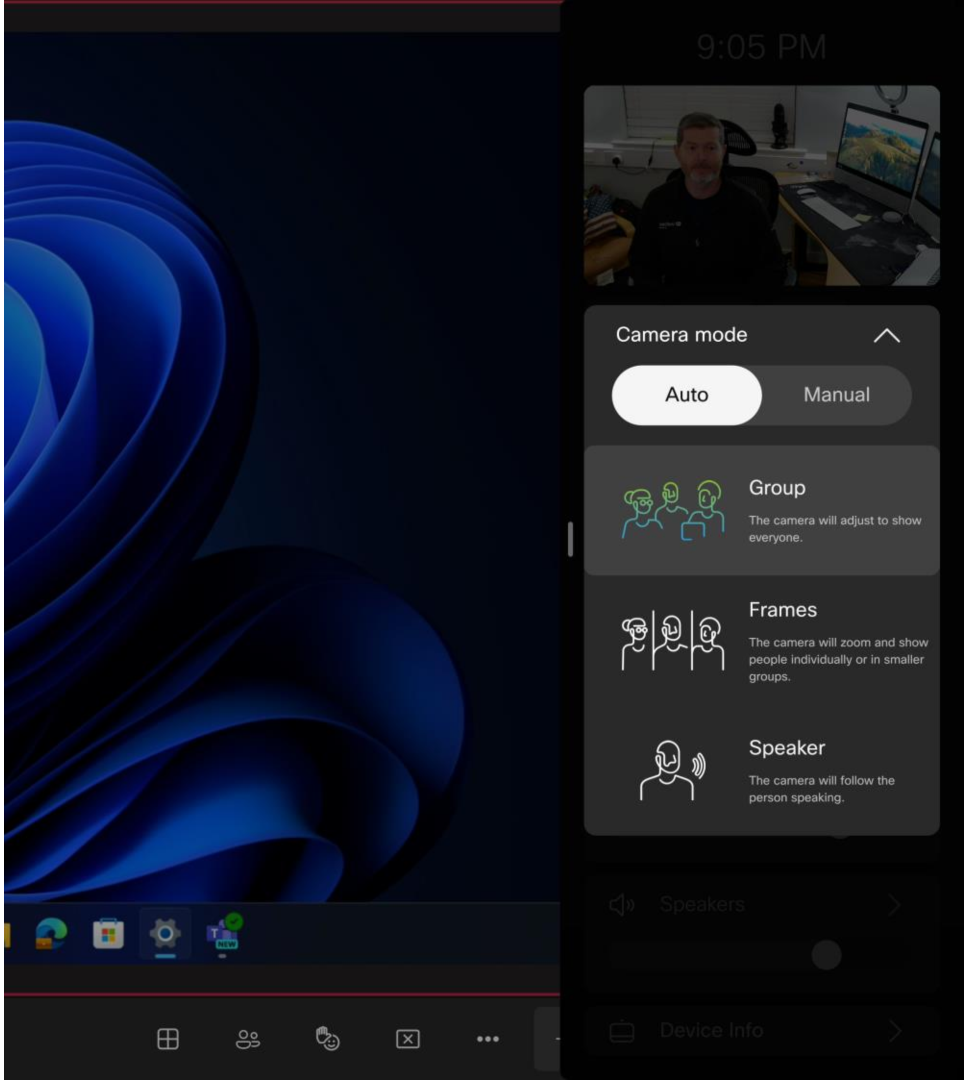
- Best View

Cisco Board Pro, Board Pro G2, Room Bar, Room Bar Pro, Room Kit EQ, Room Kit EQX and Room Kit Pro:

- Group
- Frames
- Speaker

All of the above

- Meeting Zone
- Manual mode
- PTZ controls



9:05 PM

Camera mode

Auto | Manual

Group
The camera will adjust to show everyone.

Frames
The camera will zoom and show people individually or in smaller groups.

Speaker
The camera will follow the person speaking.

Speakers

Device Info

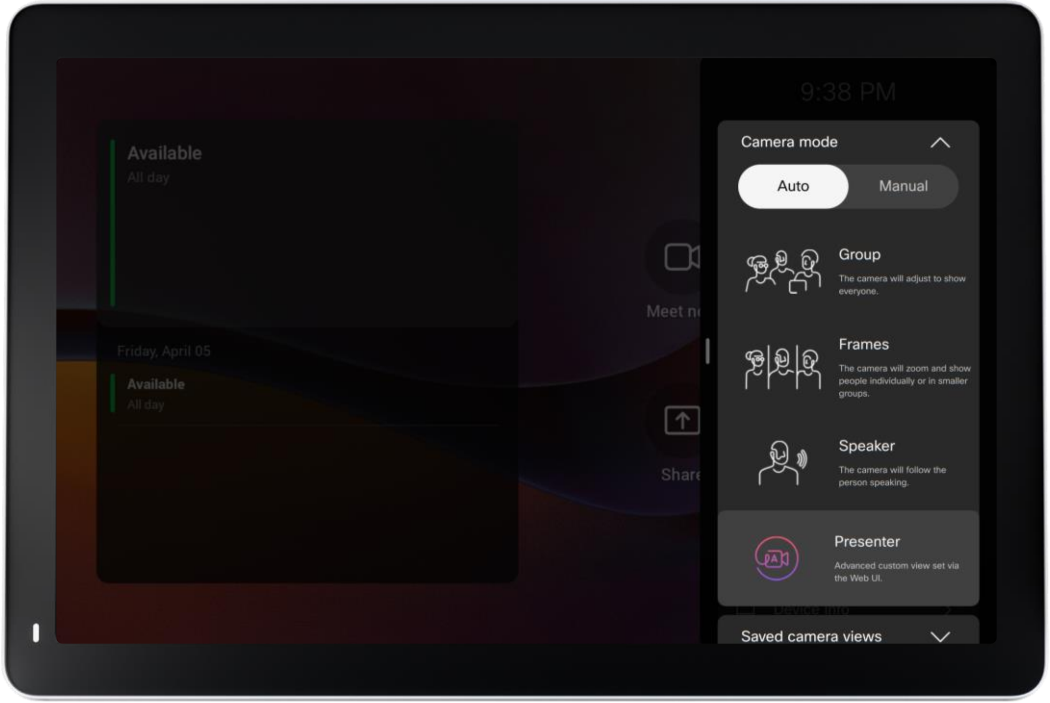
Camera intelligence from Room Navigator

Room Navigator support:

- Cisco Room Bar, Room Bar Pro
- Cisco Room Kit EQ/EQX, Room Kit Pro
- Cisco Board Pro/Board Pro G2

Camera modes available:

- Group (best view)
- Frames
- Speaker
- Presenter (on supported systems)
- Cross View (EQ bases systems only)
- Camera presets



Camera mode

Auto | Manual

Group
The camera will adjust to show everyone.

Frames
The camera will zoom and show people individually or in smaller groups.

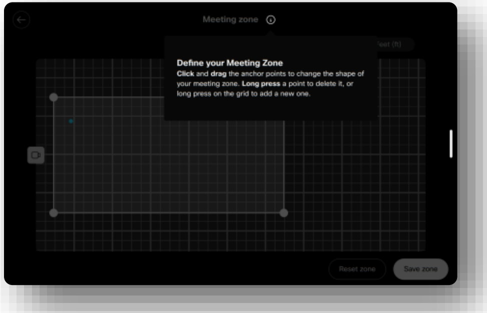
Speaker
The camera will follow the person speaking.

Presenter
Advanced custom view set via the Web UI.

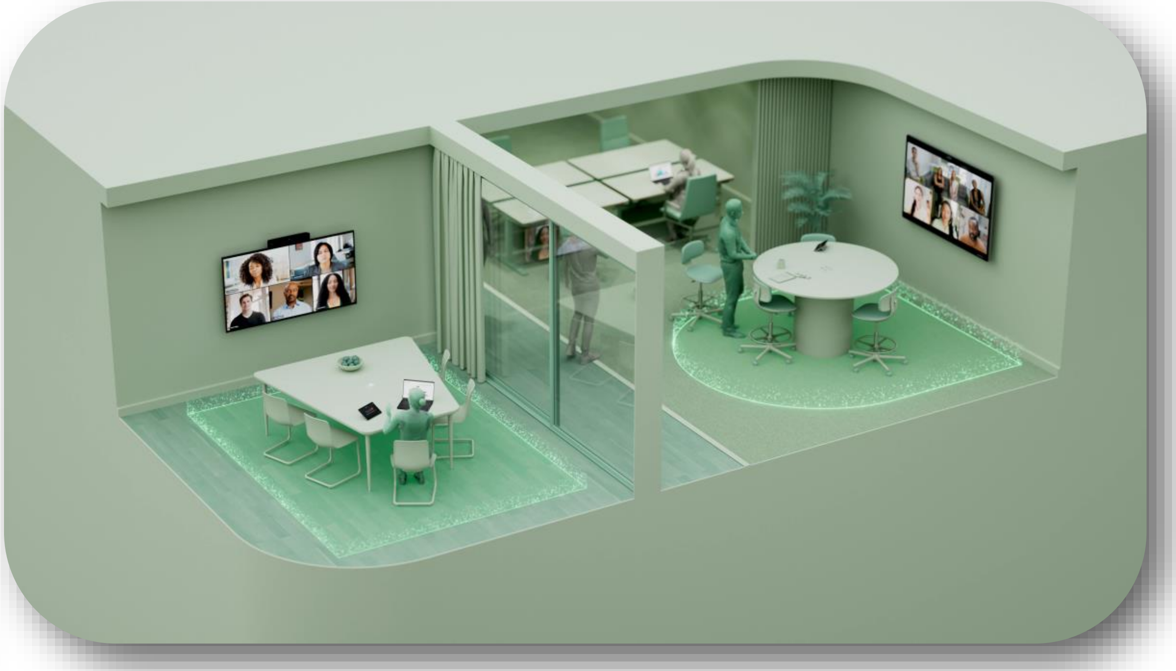
Cinematic Experiences

Meeting Zone

- Enable efficient, distraction-free meetings in open spaces and glass-walled meeting rooms by only framing and tracking people in the meeting.
- Manually set boundaries via the underlying RoomOS UI
- When Meeting Zone is configured, People Count detection and analytics will only include those detected within the configured zone.



Define your Meeting Zone
Click and **drag** the anchor points to change the shape of your meeting zone. **Long press** a point to delete it, or long press on the grid to add a new one.

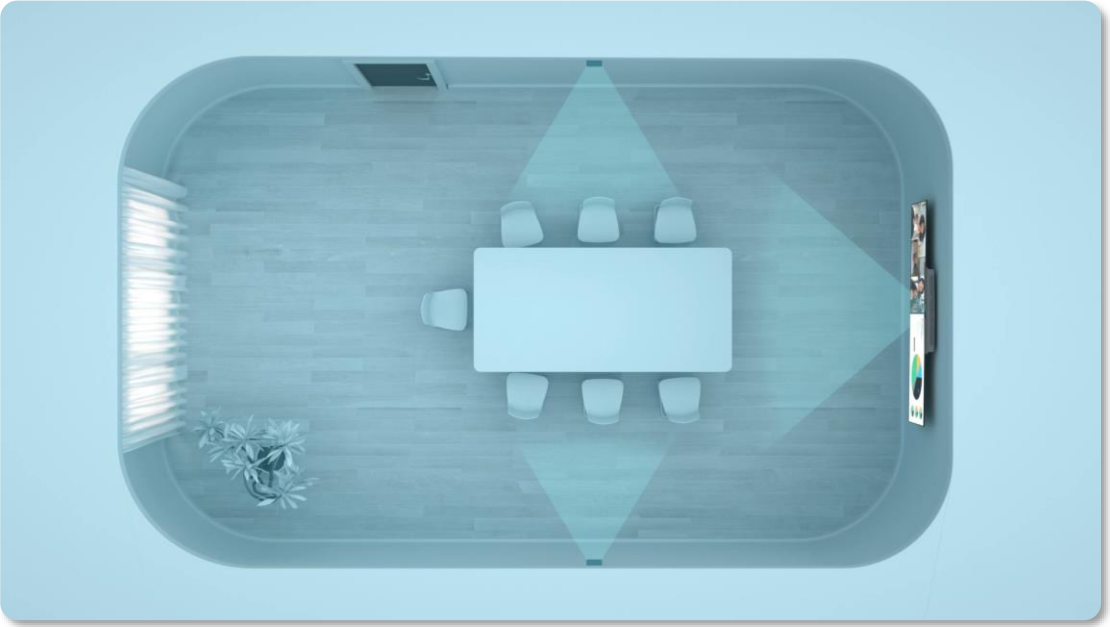


Cross-View

AI-driven feature bringing cinematic views to meetings using:

- One ‘main’ Quad Camera at the front of the room.
- Two PTZ4K ‘side-cameras’ covering the long edges of the meeting room table
- ‘Array’ of Cisco Table Microphone Pros. The Table Microphone Pro is an essential piece of equipment for this setup. The Array is used together with the cameras for locating active speakers.

All intelligence related to camera switching and control is run locally on the device, meaning that Cross-View will work in Microsoft Teams Meetings as well as native Webex meetings.



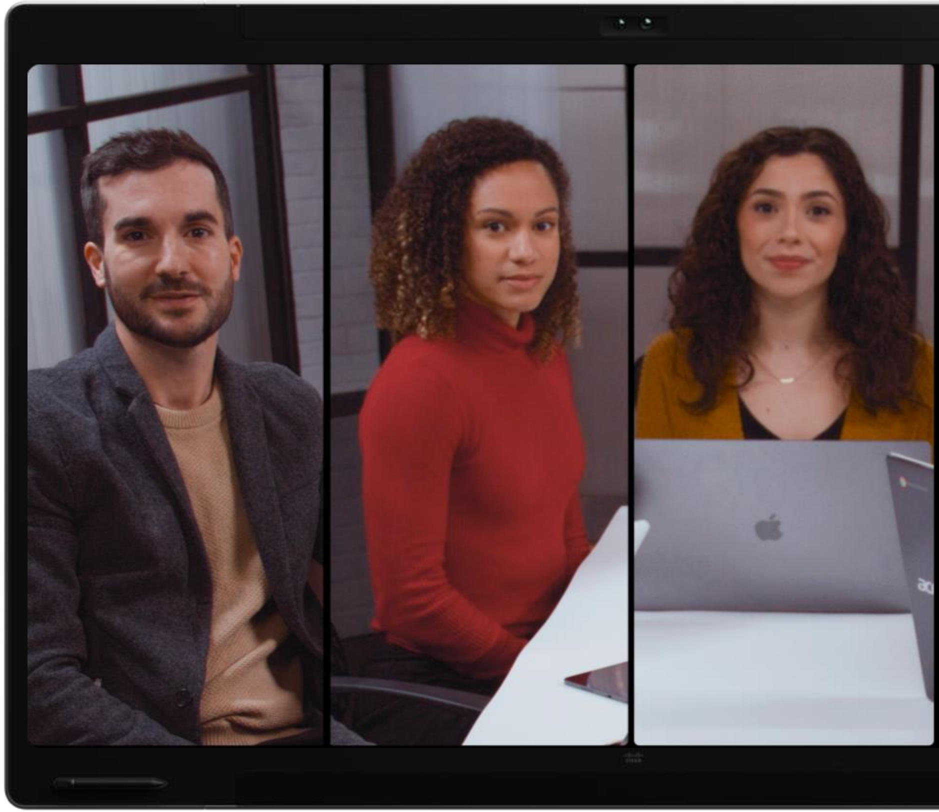
Frames

Frames is a camera mode that captures a meeting room by sending an enhanced view of the people

- Leaves out blank space and makes people larger, allowing for a better view of facial expression and body language
- Adapts dynamically to capture people in individual frames or as groups if they are sitting close
- If there are more than four people in the room they'll be grouped into frames, or the device switched automatically to a Group view that shows everyone present

All processing is done with the device camera and Frames can therefore be sent to any call or meeting

- Microsoft Teams
- Webex
- Zoom



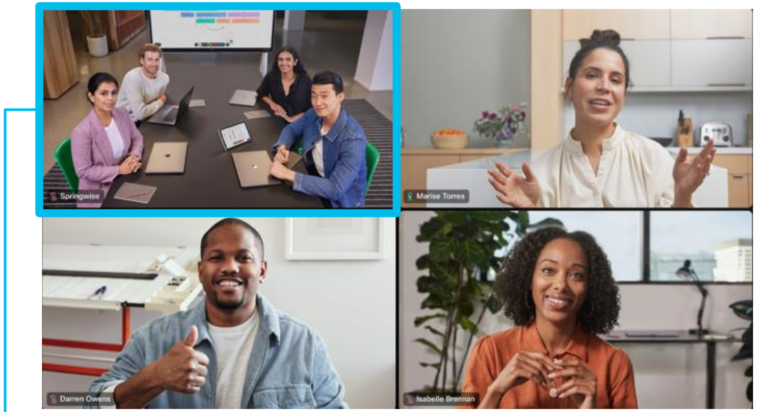
People Focus

People Focus is an enhancement to layouts, in Webex meetings, that creates a more equal, efficient, and effective video layout

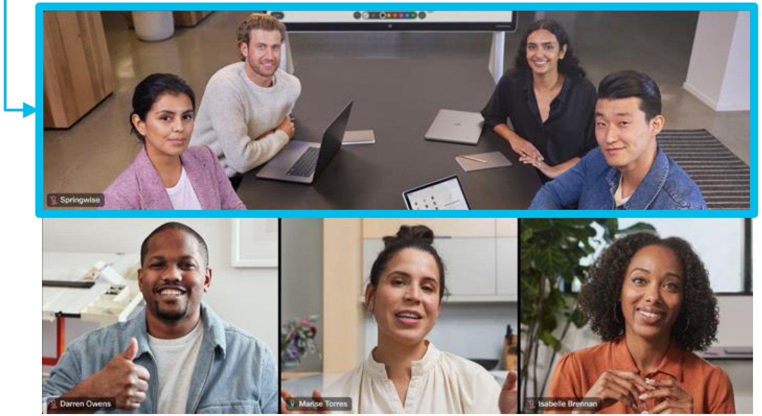
- Dynamically optimizes the layout to use all available screen space
- Even with people joining from room devices in the office, laptops on the go, and personal desk devices at home

People Focus leverages camera intelligence metadata from supported remote participants to enhance the local layout

Requires dual registration to Teams Admin Center and Control Hub – Native webex experience only (not Direct Guest Join)



Without People Focus



With People Focus

For your reference

Cinematic Views support matrix

	RoomOS Only	Microsoft Teams Rooms without Control Hub registration	Microsoft Teams Rooms with Control Hub registration
Frames	Yes	Yes	Yes
PeopeFocus	Yes when in a native Webex meeting	No	Yes when in a native Webex meeting
Meeting Zone	Yes	Yes	Yes
Cross-View	Yes	Yes	Yes
Presenter Track	Yes	Yes	Yes
Presenter and Audience	Yes	No	No
Campfire	Yes	No	No

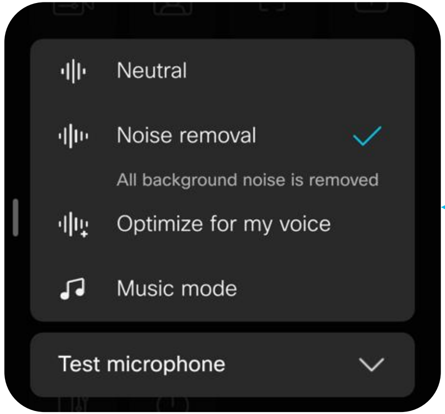
For your reference

Cinematic Views device support matrix

	Desk Pro	Room Bar/ Room Bar Pro	Room Kit EQ/ Room Kit EQX	Room Kit Pro	Board Pro/ Board Pro G2
Frames	Send – no Receive - yes	Send – yes Receive - yes	Send – yes (required Quad camera) Receive - yes	Send – yes (required Quad camera) Receive - yes	Send – yes receive - yes
PeopeFocus	Yes when in a native webex meeting	Yes when in a native webex meeting	Yes when in a native webex meeting	Yes when in a native webex meeting	Yes when in a native webex meeting
Meeting Zone	Yes	Yes	Yes	Yes	Yes
Cross-View	Send – no Receive - yes	Send – no Receive - yes	Send – yes (required Quad Camera, 2 x PTZ4K plus min of 3 x Table Mic Pro's) Receive - yes	Send – no Receive - yes	Send – no Receive - yes
Presenter Track	No	No – Room Bar Yes – Room Bar Pro	Yes (Cannot currently have Cross-View and Presenter Track configured at same time (roadmap))	Yes	Yes
Presenter and Audience	No	No	No	No	No
Campfire	No	No	No	No	No

Noise removal

Noise removal settings can be access from the audio device settings.



Neutral

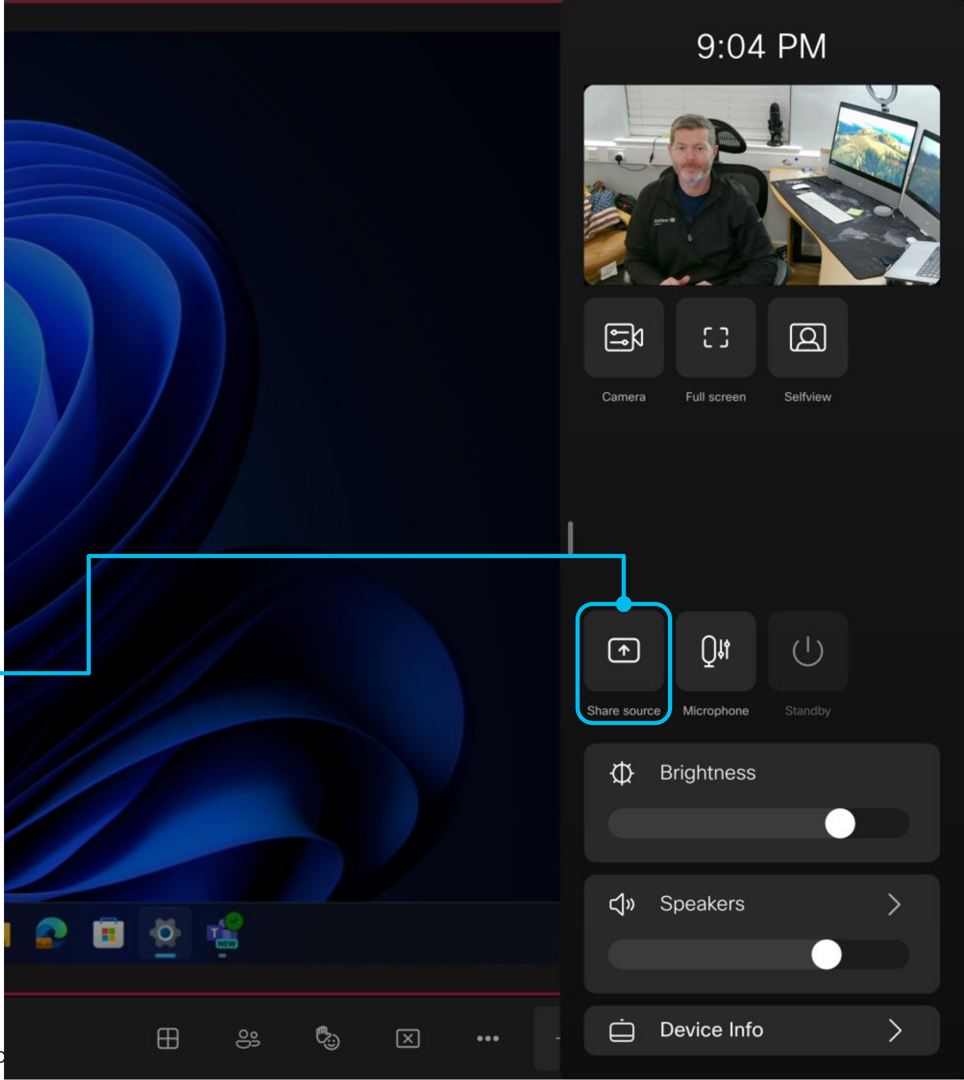
Noise removal ✓

All background noise is removed

Optimize for my voice

Music mode

Test microphone



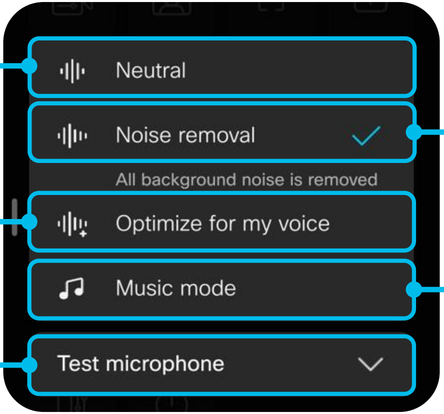
Noise removal

For your reference

Neutral – Noise Removal off

Optimize for my voice* – removes background speech and noise when you are in a noisy environment

Test microphone – allows you to test your microphone before starting a meeting to check if further configuration is required (such as changing noise removal type)



Neutral

Noise removal ✓

All background noise is removed

Optimize for my voice

Music mode

Test microphone

Noise removal – removes background noise such as keyboard typing, doorbells, barking dogs

Music Mode – preserves the microphones original sound when using your computer for audio

*Optimize for my voice is only available on the Board and Desk Series

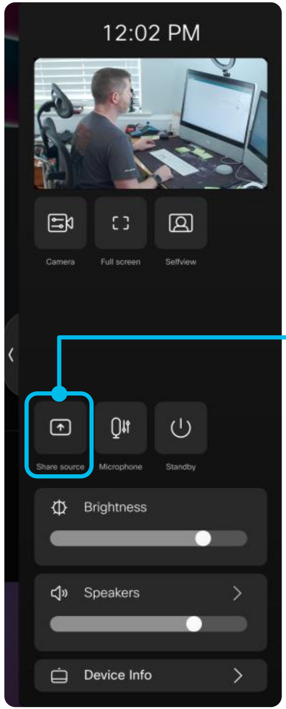
Content sharing

Make content sharing simple with a wide range of wired and wireless options:

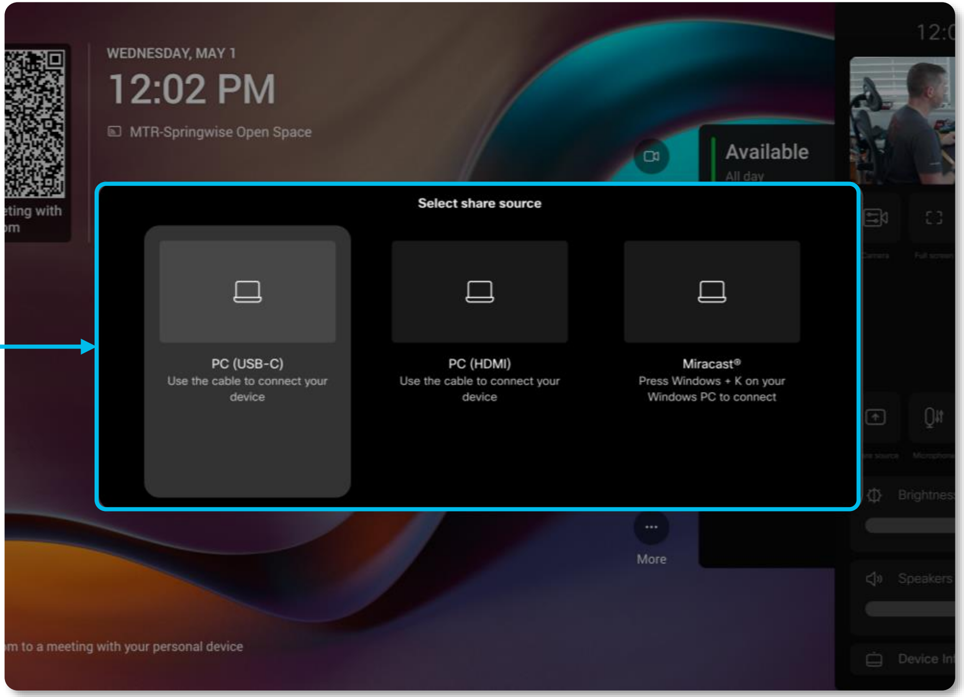
- USB-C
- HDMI
- Miracast® (not supported on non-Radio versions)
- Microsoft Teams Cast

Please note that the Cisco Room Kit Pro does not support USB-C sharing options

Content sharing

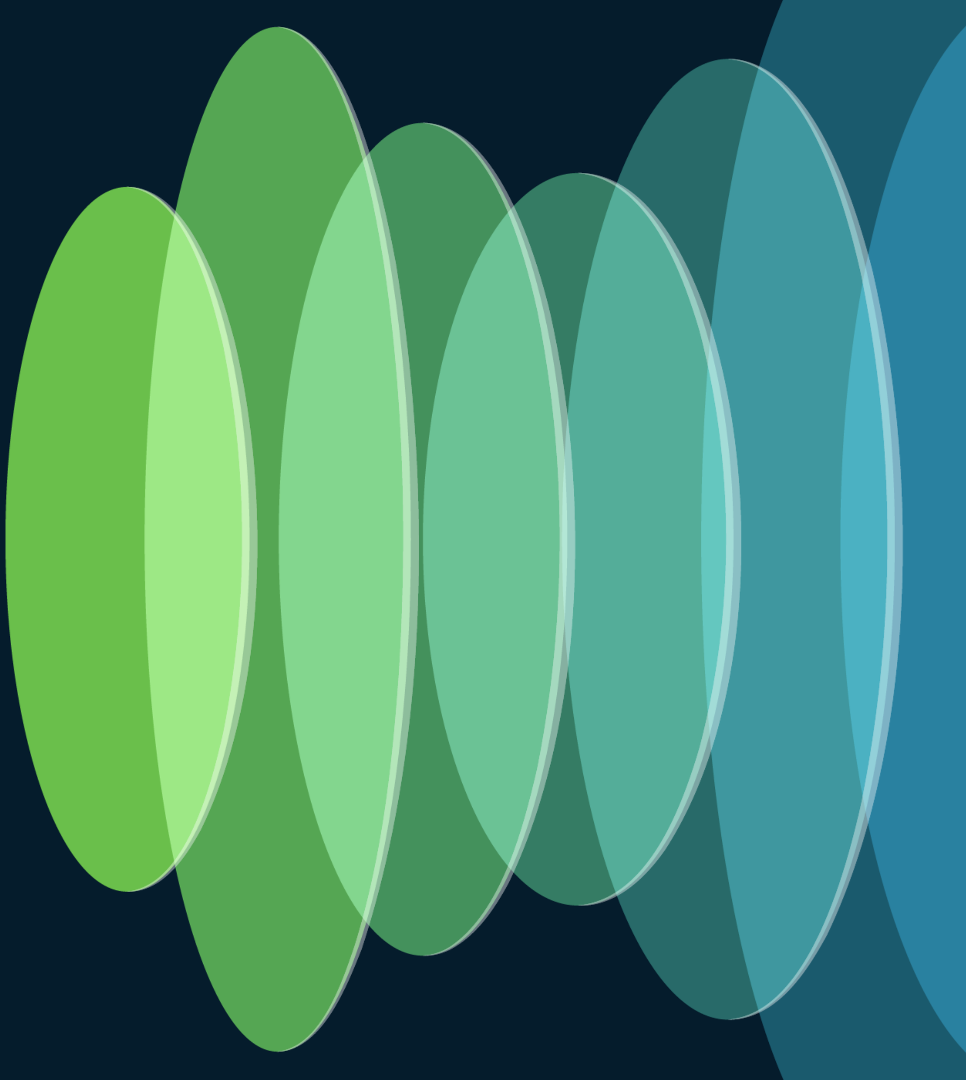


Selecting ‘Share source’ from the side pull menu will allow for the different presentations sources to be displayed either locally on into the active Microsoft Teams meeting.


WEDNESDAY, MAY 1
12:02 PM
MTR-Springwise Open Space
Available
All day
eting with
om
Select share source
PC (USB-C)
Use the cable to connect your device
PC (HDMI)
Use the cable to connect your device
Miracast®
Press Windows + K on your Windows PC to connect
More
m to a meeting with your personal device
12:0
Brightness
Speakers
Device In

Live demo

Conclusions



Conclusions

The deployment of Devices for Microsoft Teams require considerations and planning

- Multiple touchpoints to consider
- Security policies to consider

Device registration requires local hands

- Onboarding wizard
- Activation code (CH)
- Device login (MTAC)

Remember, it is not Plug ‘n Play!

Complete Your Session Evaluations

Complete a minimum of 4 session surveys and the Overall Event Survey to be entered in a drawing to **win 1 of 5 full conference passes** to Cisco Live 2025.

Earn 100 points per survey completed and compete on the Cisco Live Challenge leaderboard.

Level up and earn **exclusive prizes!**

Complete your surveys in the **Cisco Live mobile app.**

Continue your education

- Visit the Cisco Showcase for related demos
- Book your one-on-one Meet the Engineer meeting
- Attend the interactive education with DevNet, Capture the Flag, and Walk-in Labs
- Visit the On-Demand Library for more sessions at www.CiscoLive.com/on-demand

The bridge to possible

Thank you

#CiscoLive

Appendix

Cisco Resource Information

Cisco Network Requirements

The following requirements need to be taken into consideration when the Cisco collaboration device is registered to Control Hub. These requirements are in addition to the Microsoft network requirements as detailed in the previous slide.

Destination port	Protocol	Description
443	TLS	Webex HTTPS signaling – session establishment to Webex services are based on URLs rather than IP addresses
123[1]	UDP	Network Time Protocol (NTP)
53[1]	UDP/TCP	Domain Name System (DNS)
5004 and 9000	SRTP over UDP	Encrypted audio, video and content sharing for when Cisco collaboration device is joining a Native Webex meeting experience
5004	SRTP over TCP	TCP also serves as fallback for encrypted audio, video and content if UDP cannot be used.
443	SRTP over TLS	Fallback transport protocol for encrypted audio, video and content sharing if UDP and TCP cannot be used. Media over TLS is not recommended in production environments

[1] If you are using NTP and DNS services within your enterprise network, then ports 53 and 123 do not need to be opened through your firewall

Cisco Network Requirements

The following requirements need to be taken into consideration when the Cisco collaboration device is registered to Control Hub. These requirements are in addition to the Microsoft network requirements as detailed in the previous slides.

Cisco supports Webex media services in secure Cisco, Amazon Web Services (AWS) and Microsoft Azure data centers. Amazon and Microsoft have reserved their IP subnets for Cisco's sole use, and media services located in these subnets are secured within AWS virtual private cloud and Microsoft Azure virtual network instances. The virtual networks in the Microsoft Azure cloud are used to host servers for Microsoft's Cloud Video Interop (CVI) service.

Configure your firewall to allow access to these destinations Webex IP subnets and transport protocol ports for media streams from Webex apps and devices. UDP is Cisco's preferred transport protocol for media and we strongly recommend using only UDP to transport media. Webex apps and devices also support TCP and TLS as transport protocols for media, but these are not recommended in production environments as the connection-orientated nature of these protocols can seriously affect media quality over lossy networks.

Note: The IP subnets listed below are for Webex media services. Filtering Webex signaling traffic by IP address is not supported as the IP addresses used by Webex are dynamic and may change at any time. HTTP signaling traffic to Webex services can be filtered by URL/domain in your Enterprise Proxy server, before being forwarded to your firewall.

For a full and current list of IP subnets for media services, please see

https://help.webex.com/en-us/article/WBX000028782/Network-Requirements-for-Webex-Services#id_135011

Microsoft Resource Information

Microsoft 365 Network Requirements

Microsoft Office 365 and Microsoft Teams has several network requirements. The links below detail these requirements further. Please note that if the Cisco collaboration device is also registered to Control Hub, there are additional network considerations that are detailed on the following slides.

	Teams Rooms on Android
Microsoft Teams	Required
Microsoft Office 365	Required
Microsoft Intune	Required
Pro Management Portal	Optional
Unauthenticated Proxy	Optional*
QoS	Optional
802.1x	Optional*
Bandwidth Policy	10 Mbps

Supported Conditional Access and Intune Compliance Policies

- Best practices for Conditional Access and Intune compliance
- Supported Conditional Access policies
- Supported Device Compliance policies

Cisco Collaboration devices

Microsoft Teams experience check list

- Mandatory
  - Resource account created: Click here
  - Set Exchange resource account policies: Click here
  - Password expiration disabled: Click here
  - Android device administrator enabled: Click here
  - Meeting room license assigned: Click here
- Optional –
  - Assign a phone number: Click Here
  - AAD security group created for Android MTRs, resource account added to it: Click here
  - Intune compliance policy created and assigned to AAD Group: Click here
  - Conditional access configured (with IP restrictions & device compliance) and assigned to AAD group (exclude from other existing policies): Click here

Licensing

Microsoft

The following licensing options are available.

- Microsoft Teams Rooms – applicable to Cisco Desk Pro, Board Pro, Room Bar, Room Bar Pro, Room Kit Pro and Room Kit EQ
  - Basic
  - Pro
- Microsoft Teams Display – Applicable to Cisco Desk Pro
  - Microsoft Teams Shared Device – Applicable to Cisco Desk Pro if configured as Hot desk
  - Microsoft Office 365 E1/E3/E5 – Applicable to user that the Cisco Desk Pro is configured for.
- Microsoft Teams Panel – applicable to Cisco Room Navigator (stand alone)
  - Microsoft Teams Shared Device

The bridge to possible

Thank you