

Divisible Workspaces

CoE Blueprint for Pro Series Microphones

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What is a “Divisible Workspace”?

Commonly referred to as:

- Training Rooms
- Flex Spaces
- Split / Combine Spaces
- Briefing Rooms

Usually two, three, or four identical spaces located beside each other with **removable** or **collapsible** walls

Common for divisible rooms to also be used as Executive / Board spaces and for Town Halls



“Current” Solutions



Great Results ...

A screenshot of a GitHub repository page. The repository name is `gve-sw/gve_devnet_divisible_conference_rooms_webex_devices_macros`. The page shows basic repository statistics: master branch, 1 Branch, 1 Tags. The title "Simplified" 1+1 Macro" is displayed prominently below the repository details.

“Simplified” 1+1 Macro

A screenshot of a GitHub repository page. The repository name is `gve-sw/gve_devnet_n_way_divisible_conference_rooms_webex_devices_macros`. The page shows basic repository statistics: master branch, 1 Branch, 1 Tags. The title "N-Way Multi-Room Macro" is displayed prominently below the repository details.

N-Way Multi-Room Macro



... Hard work to get right

Divisible Workspace Blueprint

Leverages Cisco Pro Series Microphones, Catalyst Switches and Cisco Video Devices to provide a simplified, easy to deploy, scalable blueprint for Divisible Workspaces.

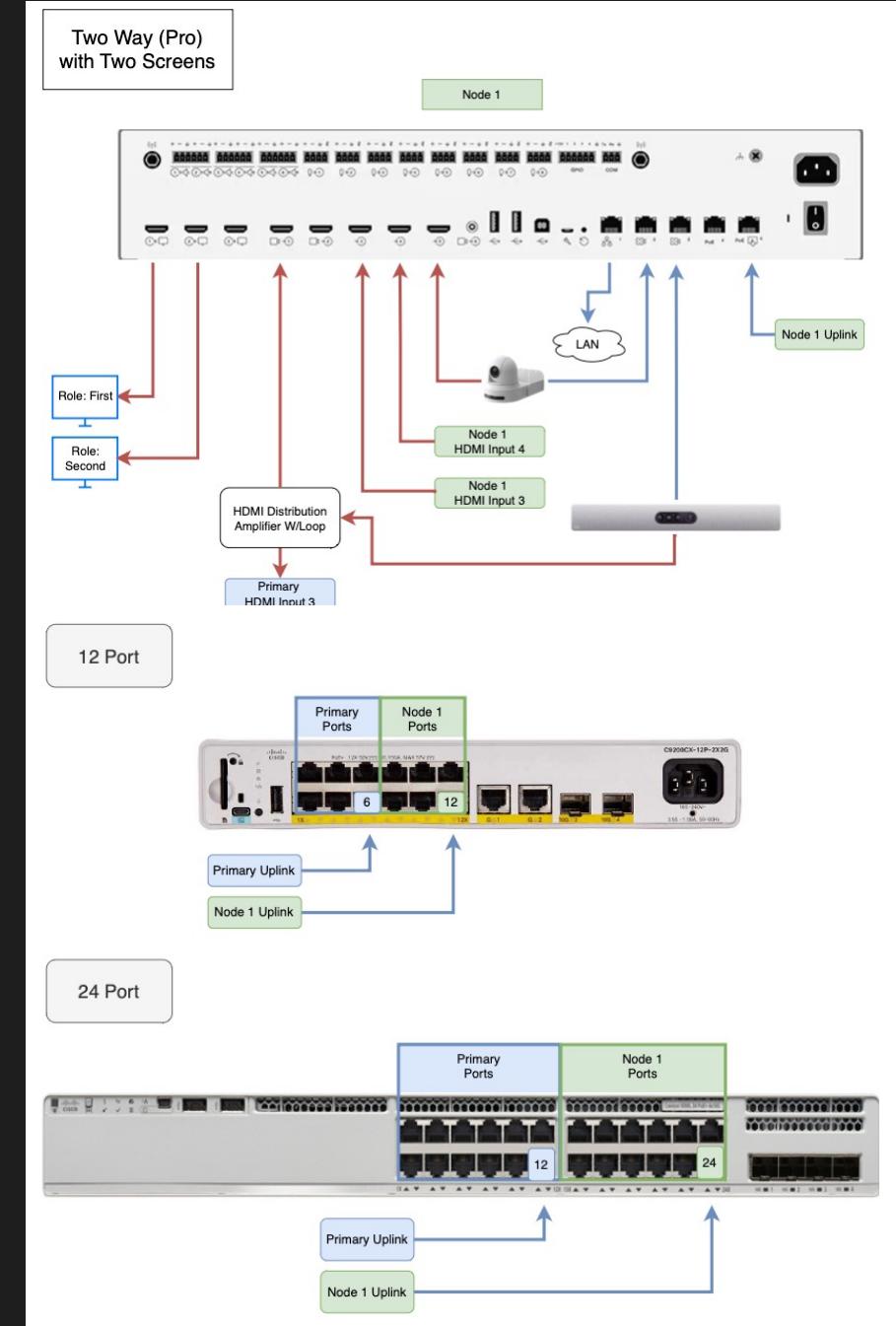
We support Two-Way and Three-Way designs!

All the documentation available on GitHub:

<http://cs.co/dwsblueprint>

Join the “Community” Space:

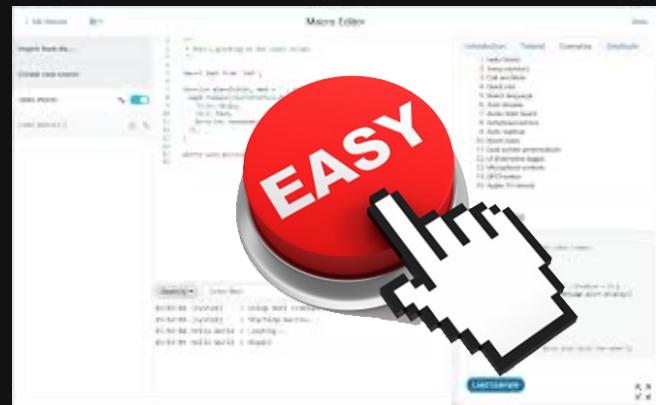
https://eurl.io/#nakTe_Vn3



What's Different?

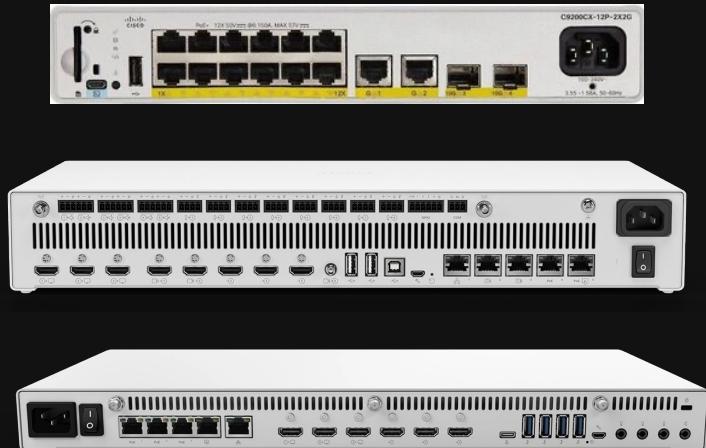
No Macro Interaction / Knowledge Required

The blueprint provides a simplified deployment where the administrator does **not** need to configure Macros at all!



Versatile Deployments

Repeatable, scalable offerings with tested reference designs based on select switch and codec combinations.



Built for Cisco IP Peripherals

Supports Table Microphone Pro and Ceiling Microphone Pros.



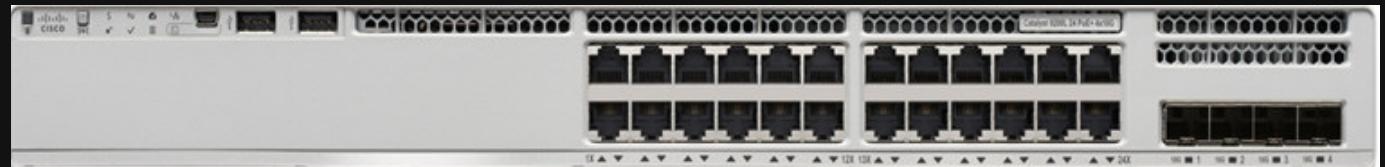
Supported Switches

The following switch models are supported:

- C9200CX-8P-2X2G
- C9200CX-12P-2X2G
- Catalyst 9200 24 Port Models*
- Catalyst 9300 24 Port Models*

We are using RESTCONF APIs to make configuration changes to the switch.

C1K series do **not** have a REST API.



Network Essentials (-E) is [recommended](#) for the blueprint.

*Tested SKUs will be published to the GitHub Repository

Control Hub Visibility

< Workspaces

 **DWS Primary**
Meeting Room • Capacity: 24 people

Overview Scheduling Meetings

Devices

-  Cisco Room Kit Pro
 - Issues • 
-  C9200CX-12P-2X2G
 - Online • 
-  Cisco Ceiling Microphone Pro
 - Online
-  Cisco PTZ 4K
 - Online

< Devices

 **C9200CX-12P-2X2G**

- Online • Control System • Device platform: 

Overview History

Details

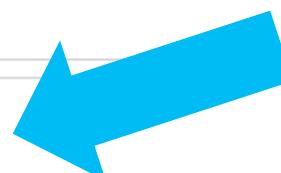
Control System	None Type	Verification 
FJC272221JU	Unknown Serial number	Connection Type

Link Local Switch Visibility in Control Hub under the Primary Codec

Control Hub Alerting

Issues & Information

- ⚠️ **Cisco Ceiling Microphone Pro offline**
a month ago (April 6, 2025)
- ⚠️ **Cisco Table Microphone Pro offline**
a month ago (April 6, 2025)
- ⚠️ **Cisco Room Kit Pro No control system connected**
4 days ago (April 29, 2025)



Link Local Switch “Disconnected” warnings in Control Hub under the Primary Codec

Quick FAQ

No TAC Support

A “tested” art of the possible design

Cisco Pro Microphones Only

Third party IP microphones not supported for Audience Mics

Speaker Reinforcement Compatible

Provides automatic Pro Series microphone ducking

Not MTR Compatible

Relies on xAPI Commands not available in MTR

No Cross View or Extended Reach

Only 1 Quad camera and 1 PTZ supported per room

“Standard” Room Type Only

Cannot be mixed with Classroom, Briefing or PandA

Tested on Room OS 11.30+ (& 26)

Blueprint will not be tested on each release

Two and Three Way Only

Larger configurations out of scope

Still a “Custom” Macro

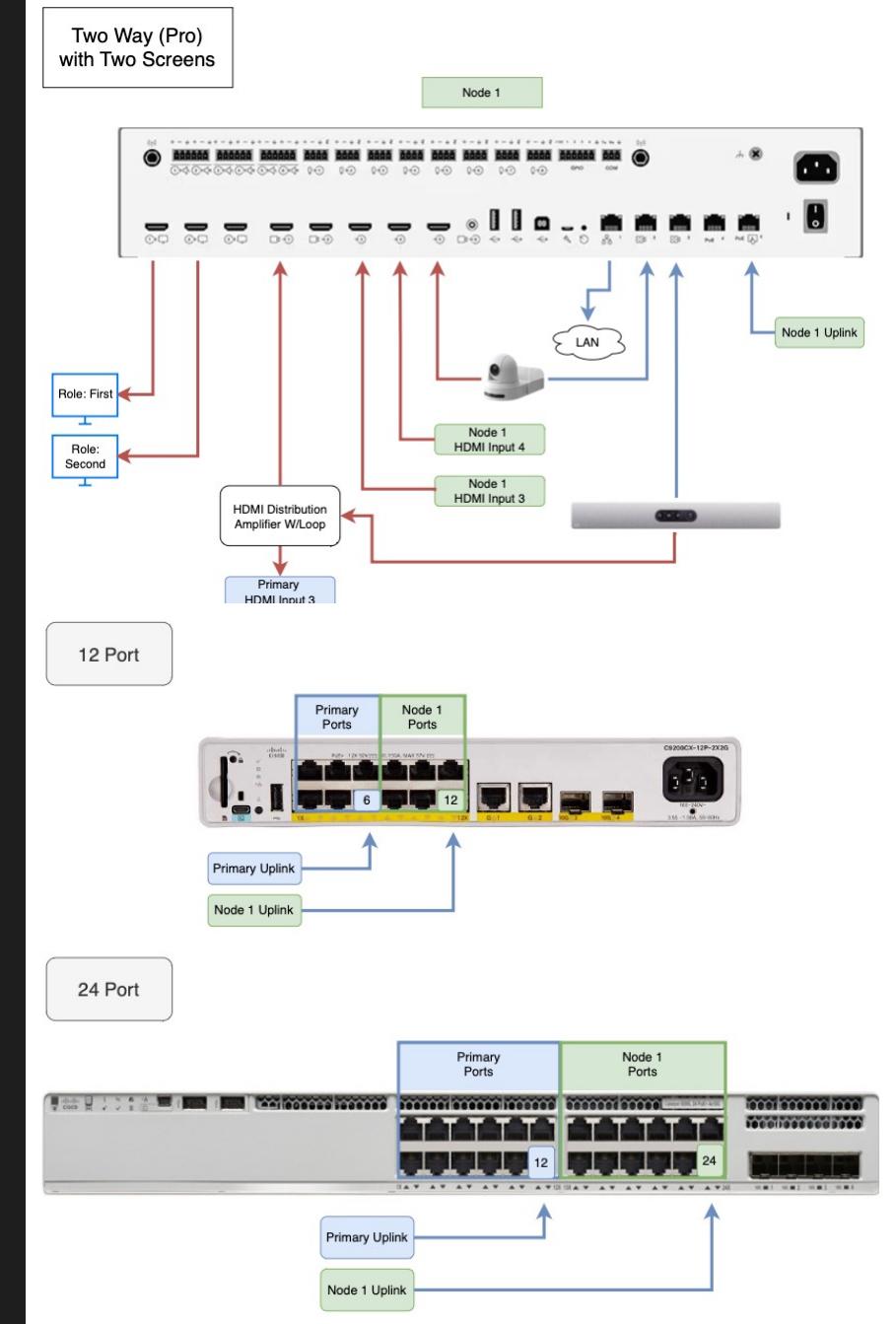
Can be modified by partners & customers as needed

Setup: Physical Installation

Installation guidance for cabling is provided in the Blueprint GitHub repository for Single Screen and Dual Screen Setups and variants based on the selected Codec models.

The Macros will validate the proper installation of cabling, interfaces and the Switch before finalizing the configurations and initializing.

Please ensure your connections match the diagrams!



Setup: Switch Configuration

We have leveraged the capabilities of the Catalyst 9K switches to boot from USB to load a standardized and predictable base line configuration.

This configures the switch to have all ports configured as access ports in pre-defined VLANs, Portfast enabled, a static IP address (169.254.1.254) and RESTCONF API access enabled.

Setup Steps:

- Load the correct ciscortr.cfg onto USB Key
- Wire all connections as instructed in the diagrams
- Power up Switch
- Switch will be fully configured in 6 minutes



USB key needs to be:

- 4 GB (if > 4gb... partitioned)
- formatted to FAT32

Cloud Registration Setup

Setup: Control Hub

The screenshot shows the webex Control Hub interface. On the left is a sidebar with navigation links: Overview, Alerts center, MONITORING (Analytics, Troubleshooting, Reports), MANAGEMENT (Users, Groups, Locations), WORKSPACES (selected), Devices, Apps, Account, Organization settings, SERVICES (Messaging, Meetings, Calling, Contact Center, Connected UC, UCM Cloud, Hybrid). At the bottom of the sidebar is a logo for 'Company Ltd'. The main area is titled 'Workspaces' with tabs for Workspaces, Insights, Integrations, and Settings. It shows a search bar, filter buttons for Select filters and Filter locations, and a message indicating 11 workspaces in total. A large 'Add workspace' button is visible. Below this is a table listing workspaces:

Name	Location	Type	Capacity	Scheduling	Calling	Actions
A workspace	Cisco Norway, Fl...	Desk	7	Calendar (Microsoft)	Call on Webex (1:1...)	⋮
ALT Sprint Space	Cisco Penn 1 Ne...	Meeting room	9	Calendar (Microsoft)	Call on Webex (1:1...)	⋮
SJC Auditorium	Cisco Building 1...	Auditorium	64	Calendar (Microsoft)	Call on Webex (1:1...)	⋮
NYC Cloud team corner	Cisco Penn 1 Ne...	Meeting room	9	Calendar (Microsoft)	Call on Webex (1:1...)	⋮
OSL Quiet Space Booth	Not set	Not set	Not set	None	None...	⋮
NYC Cloud team corner	Cisco Penn 1 Ne...	Meeting room	9	Calendar (Microsoft)	Call on Webex (1:1...)	⋮

Create your Workspaces and
Register the Devices

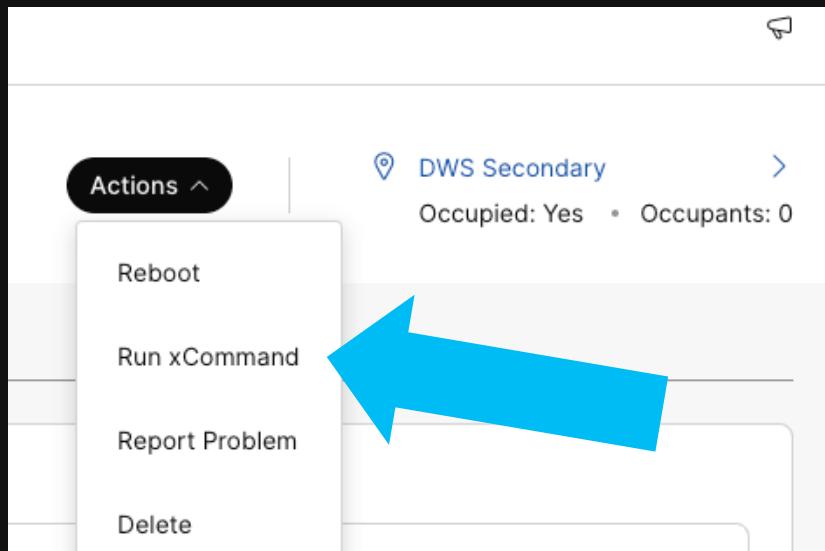
Setup: Device Configuration Templates

The configuration template is used to apply some settings needed on both Codecs prior to the Macro installation.

The screenshot shows the 'Templates' section of the Cisco Webex interface. A specific template named 'Divisible Workspaces' is selected. The 'General' section describes the template as setting required configuration settings for Divisible Workspaces and contains a link to its description. It also shows that there are 5 configurations. The 'Details' section provides information about the last edit (03/27/2025 by Mark Lula) and creation (02/28/2025 by Mark Lula). Below these sections is a table listing five configuration items with their current values:

Configuration	Value
HttpClient > AllowInsecureHTTPS	(Default) → True
HttpClient > Mode	(Default) → On
Macros > Mode	(Default) → On
Video > Input > CameraConfigMode	(Default) → Auto
Macros > EvaluateTranspiled	(Default) → False

Setup: Add a Local User to Secondary Codec



Select Run xCommand under actions within the Devices Page of the Secondary Codec.

The screenshot shows the 'Run xCommands' interface. It includes a search bar, a list of categories like 'Time', 'UserInterface', 'UserManagement' (which is highlighted with a blue border), and 'UserPresence'. To the right, there's a sidebar with 'GetState' and a main area for 'UserManagement > User' with options 'Add', 'Delete', and 'Get'. A large blue arrow points from the text below to the 'UserManagement' category in the list.

Select UserManagement > Add

Setup: Add a Local User to Secondary Codec

This user will be used for cross codec state changes. The role must be set to Admin to enable the setup wizard to save Macros.

Arguments
* indicates a required field

Role *	<input checked="" type="checkbox"/> Admin <input type="checkbox"/> Audit <input type="checkbox"/> User <input type="checkbox"/> Integrator <input type="checkbox"/> RoomControl
ClientCertificateDN	string
Active	True
Username *	YOUR USERNAME
Passphrase *	YOUR PASSWORD
YourPassphrase	string
ShellLogin	Select an option
PassphraseChangeRequired	False

Setup: Load Wizard Macro 1/2

Open the Primary Codec's Device Page

Configurations

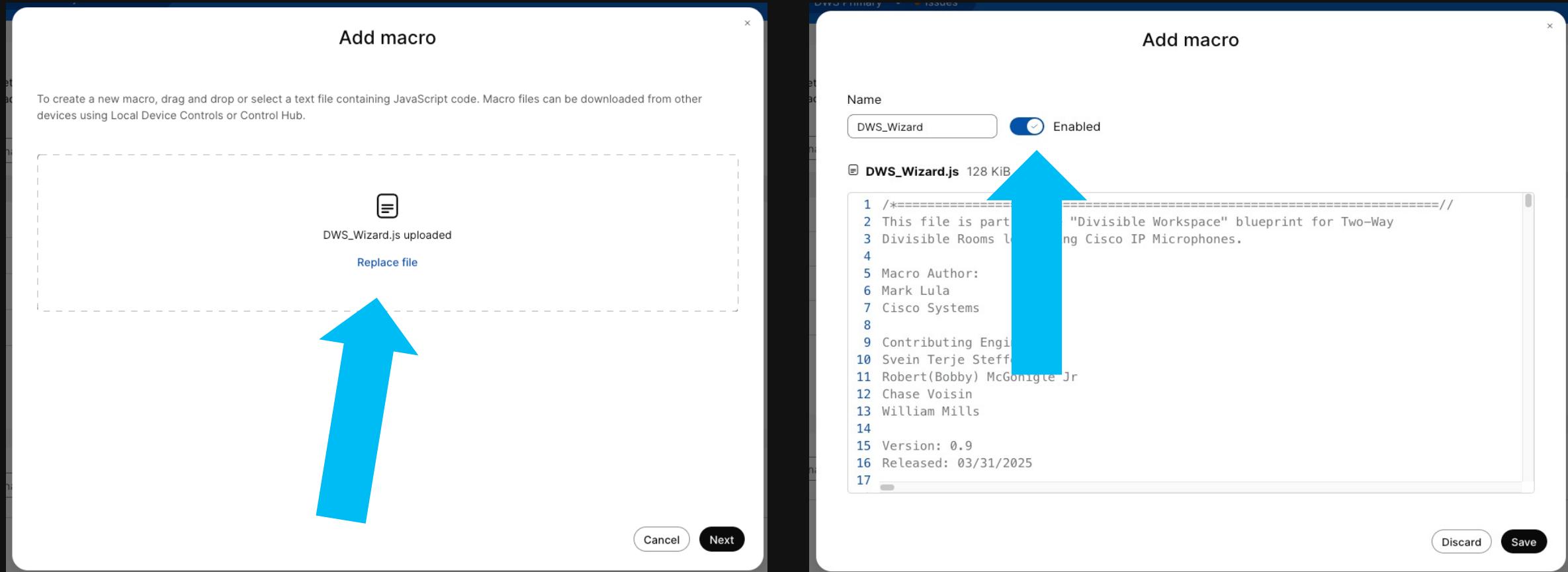
- All configurations
- Configuration templates
- Digital signage
- Navigator persistence
- Macros

Macros are snippets of JavaScript code that run on the video device, customizing its behavior.
Access the full Macro Editor in the device's [Local Device Controls](#)

Search by name 4 macros Refresh Add macro

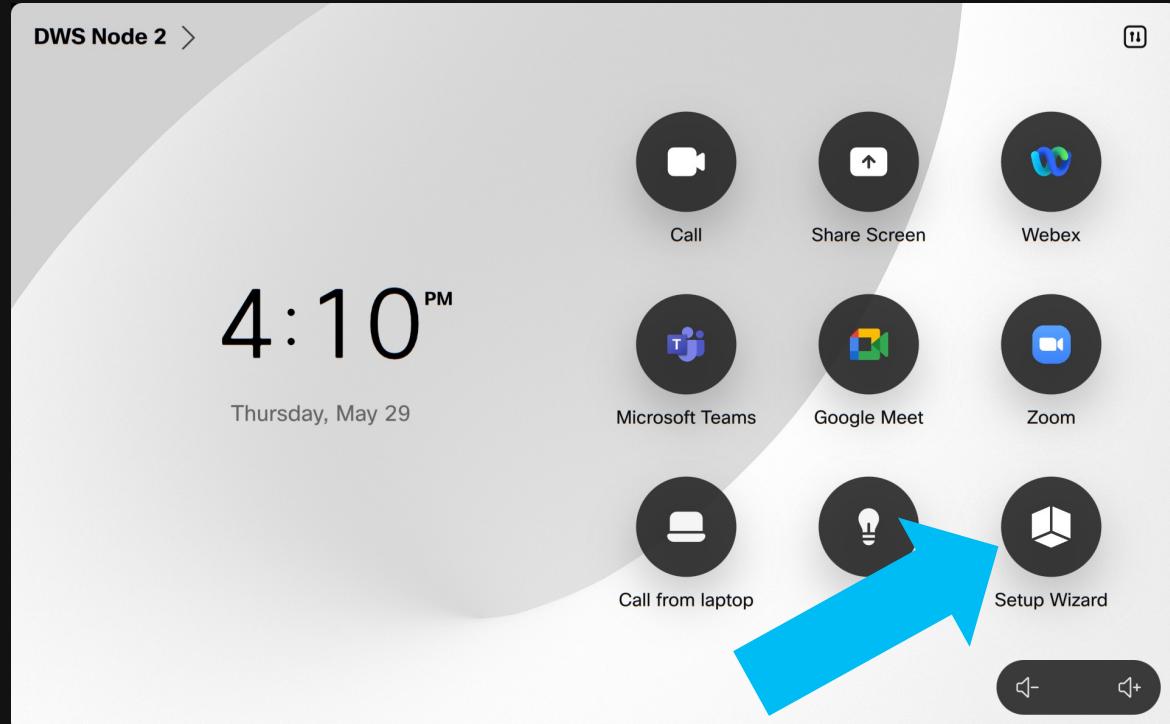
Name	Status	Change ⓘ	Diagnostics ⓘ

Setup: Load Wizard Macro 2/2

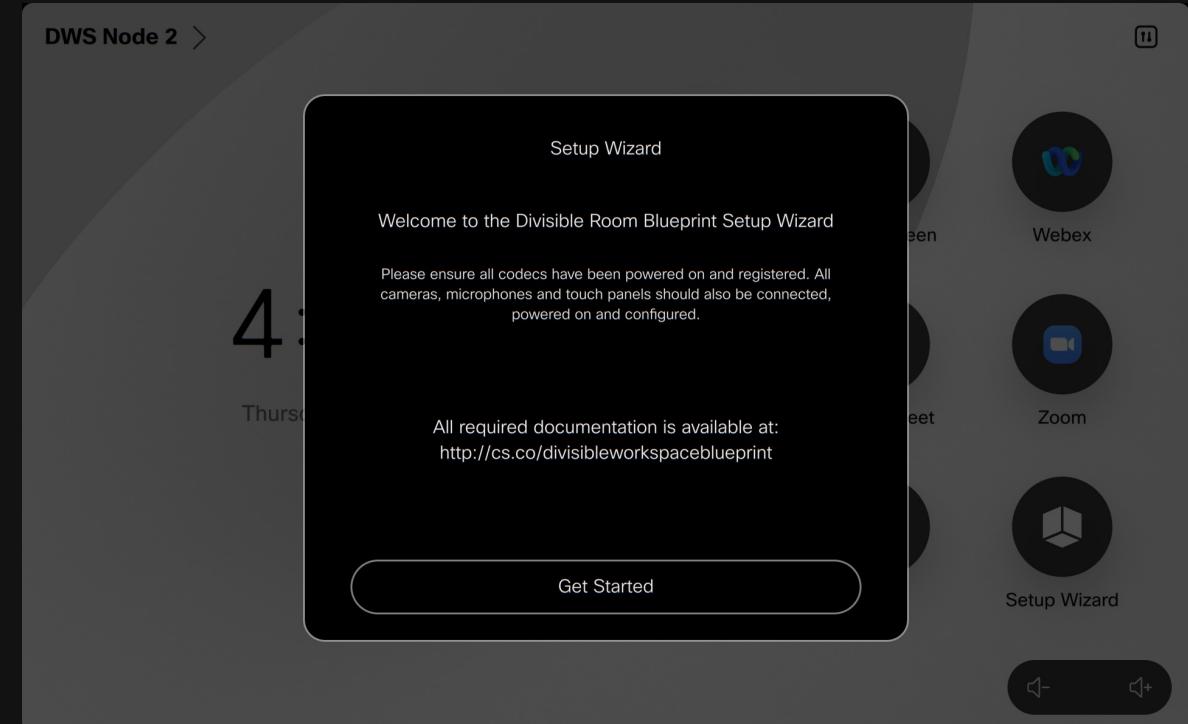


"DWS_Wizard" Macro published on the GitHub Repository
No Macro Configuration Required!

Setup: Setup Wizard



Select “Setup Wizard”

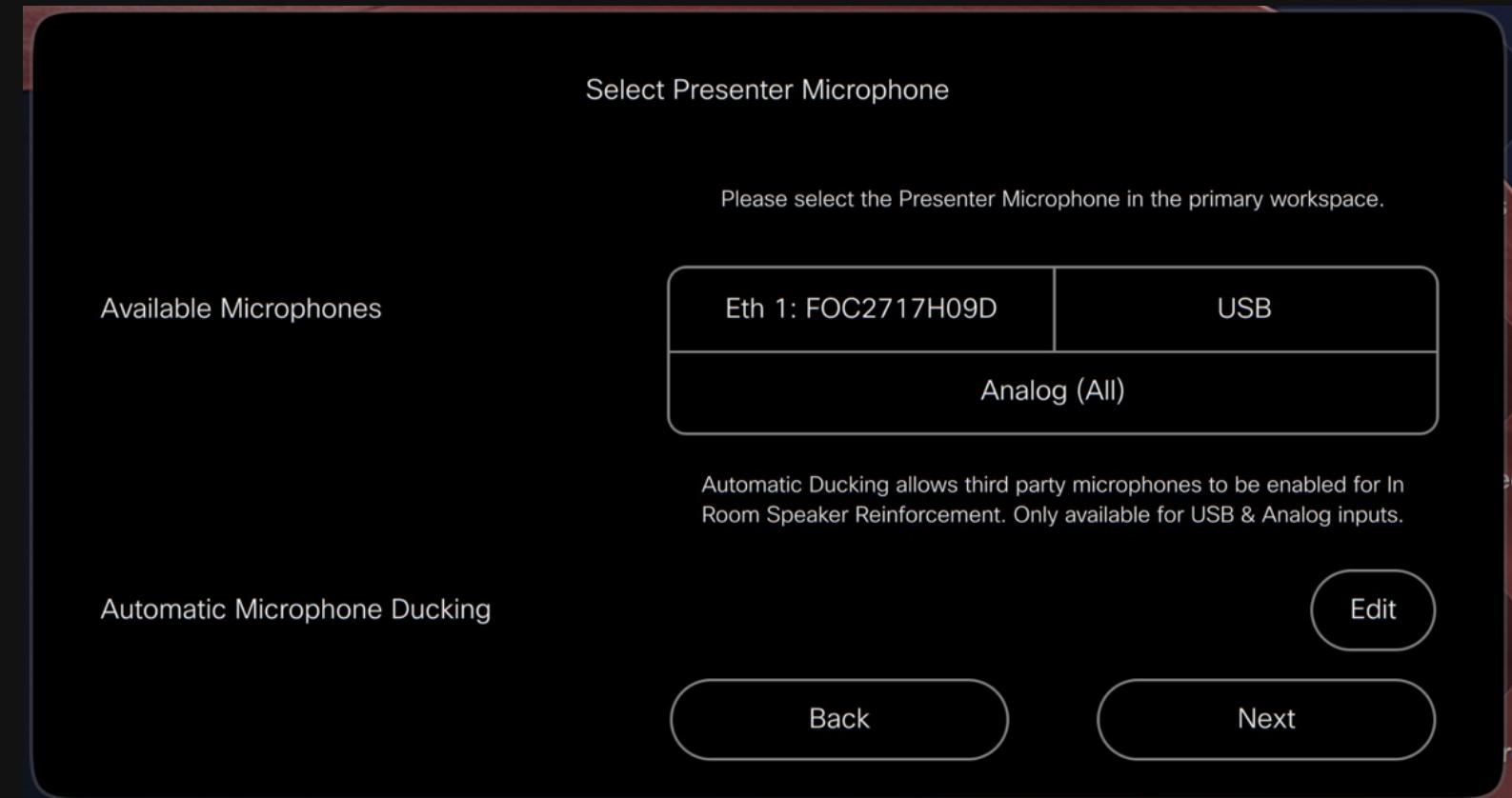


Complete Each Step

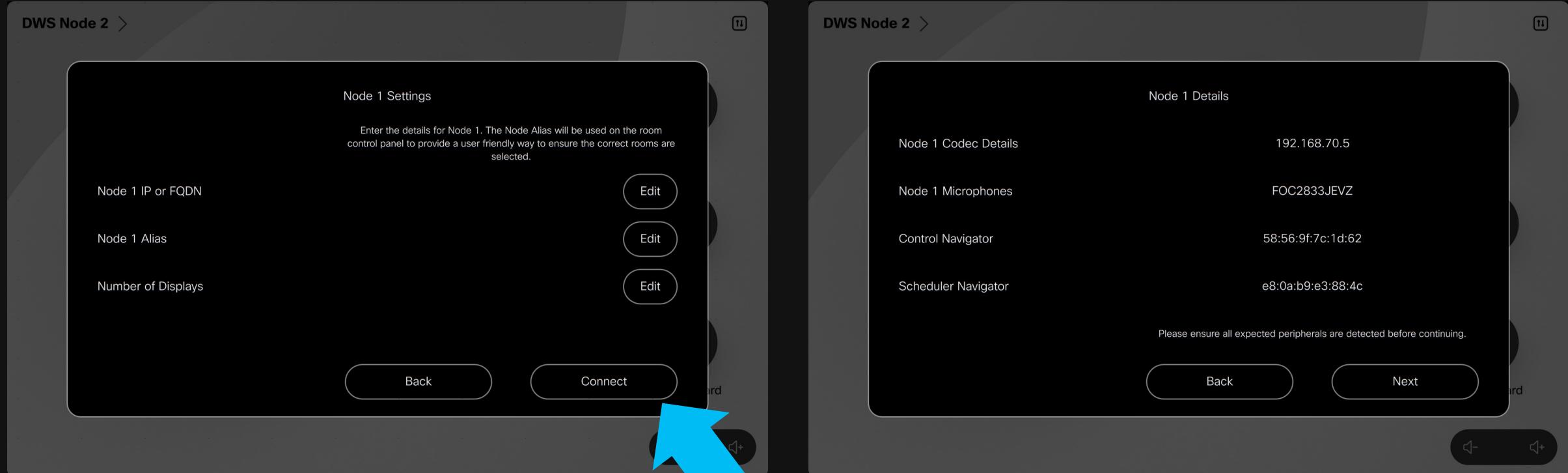
Setup: Presenter Microphone with Automatic Microphone Ducking

In deployments where third-party microphones are being used to enable Presenter Reinforcement within the Divisible Workspaces, you can now enable Automatic Microphone Ducking!

Automatic ducking will provide automated gain control of the Cisco Pro series microphones to eliminate any double capture or echo from amplified audio of the presenter.



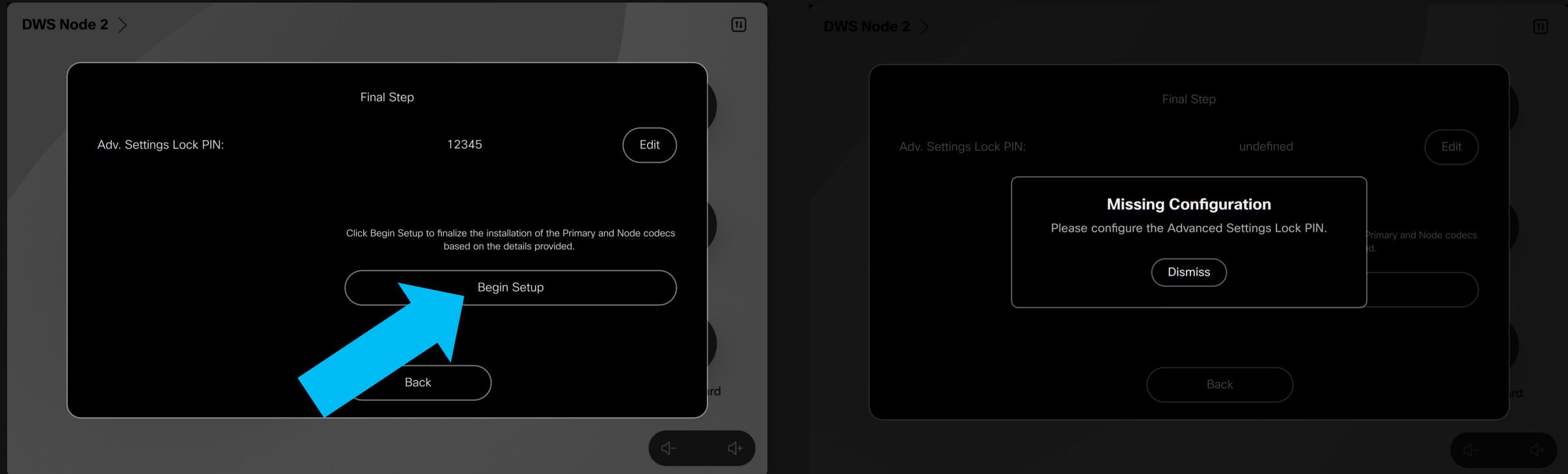
Setup: Auto Detect Peripherals



Enter the Node Codec Information

Connects & gathers details automatically

Setup: Setup Wizard



Once Completed, Click “Begin Setup”

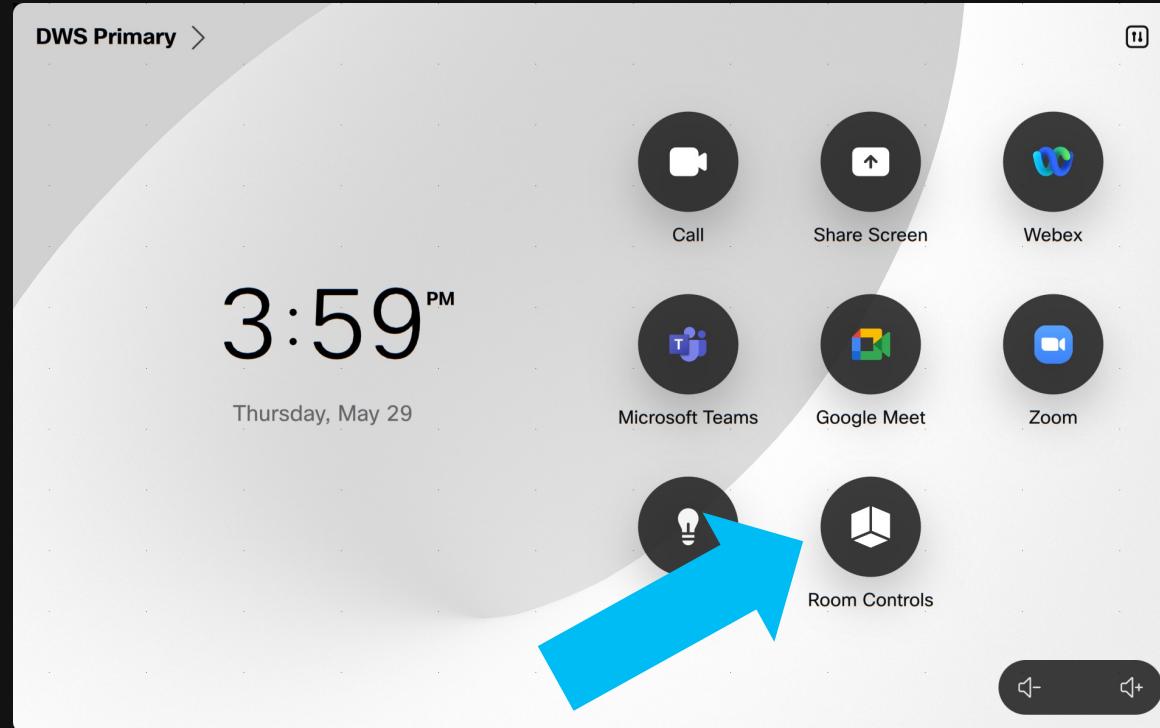
The Wizard will validate your entries!

Setup: Presenter Track & Microphone Calibration

Once you've completed the Divisible Workspace Setup, you should perform the following actions in both spaces in “Split Mode:

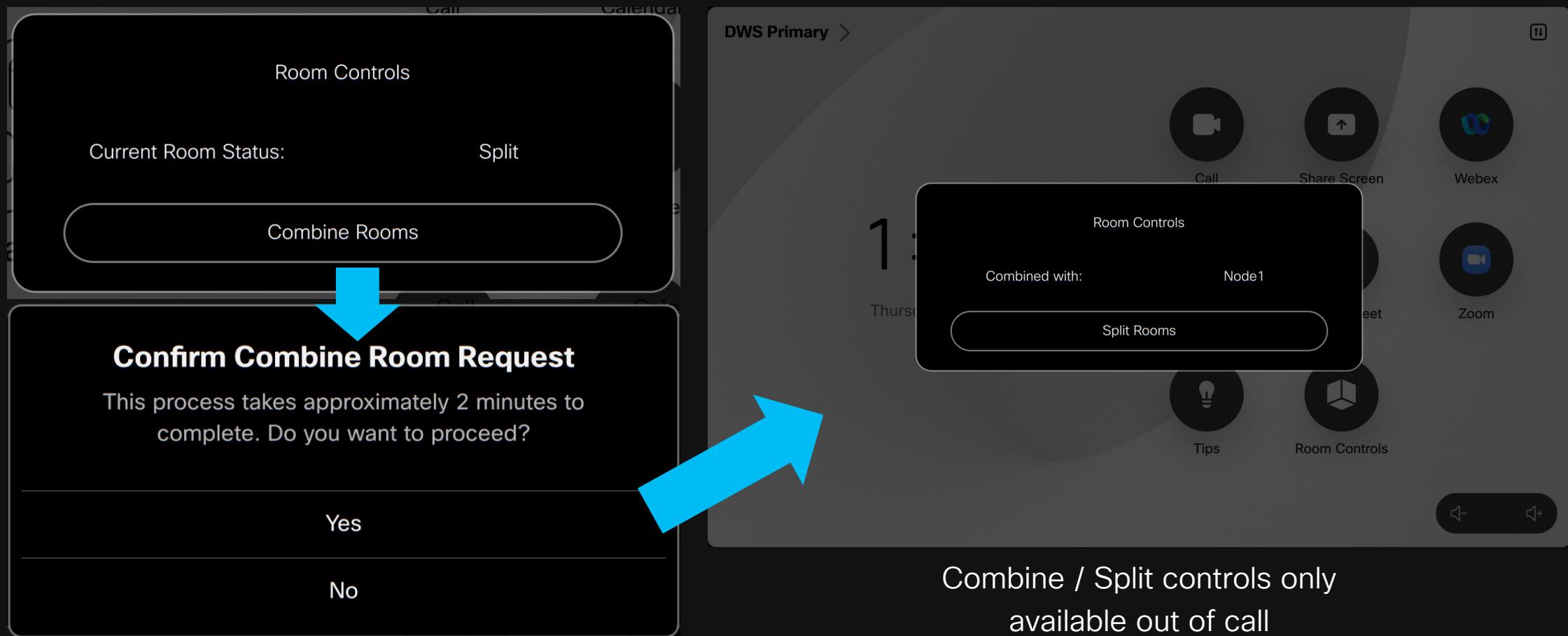
- Setup Presenter Track:
<https://help.webex.com/en-us/article/9ur0g6/Set-up-PresenterTrack-for-Board-and-Room-Series>
- Run the “Speaker Track using external Microphones” wizard:
https://www.cisco.com/c/dam/en/us/td/docs/telepresence/endpoint/camera/SpeakerTrack_using_external_microphones.pdf
- If required, Set your Exclusion Zones:
<https://marklula.github.io/Advanced-Exclusion-Zone-Builder/>

Operation: “Room Controls” Button



Home Screen

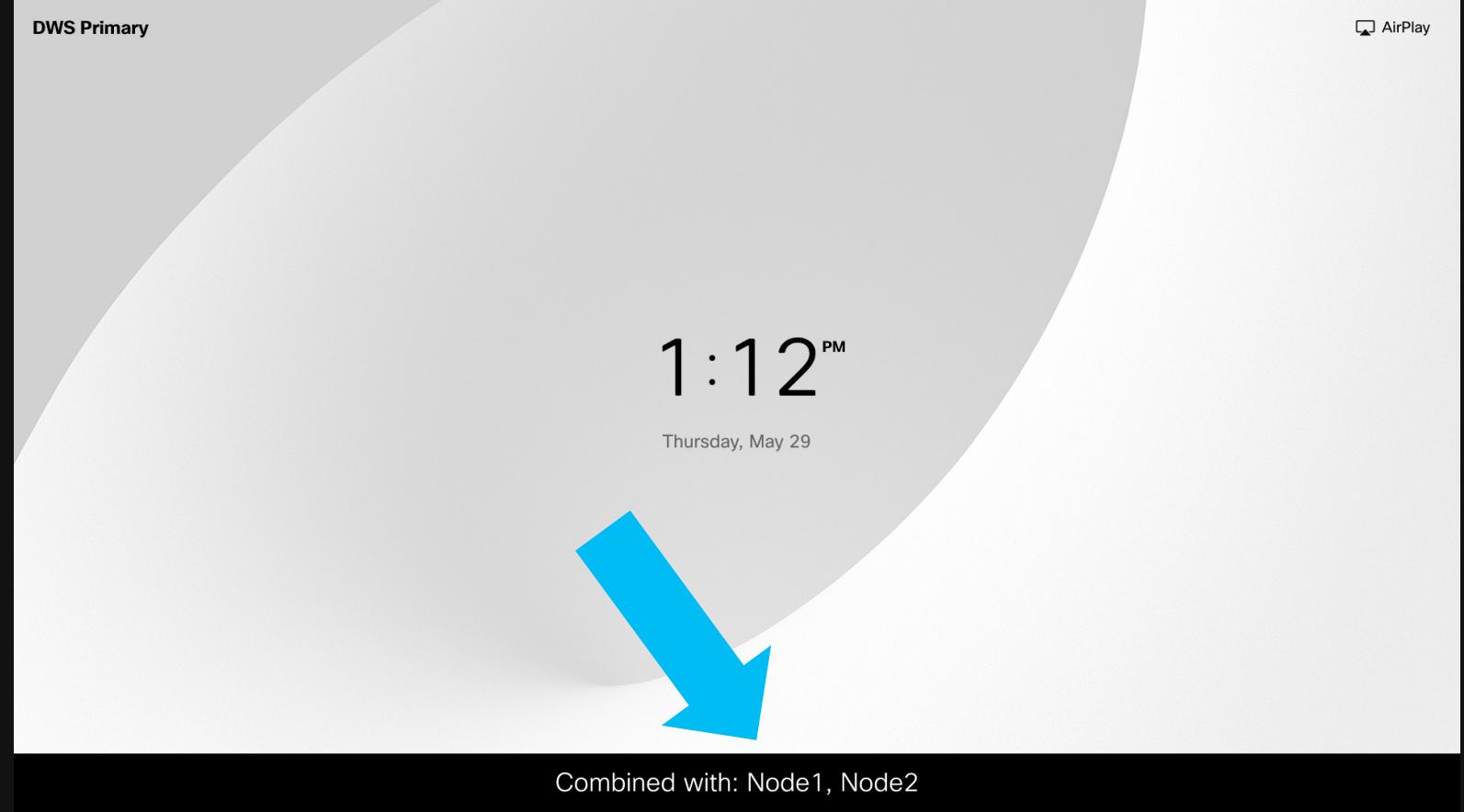
Operation: Change States



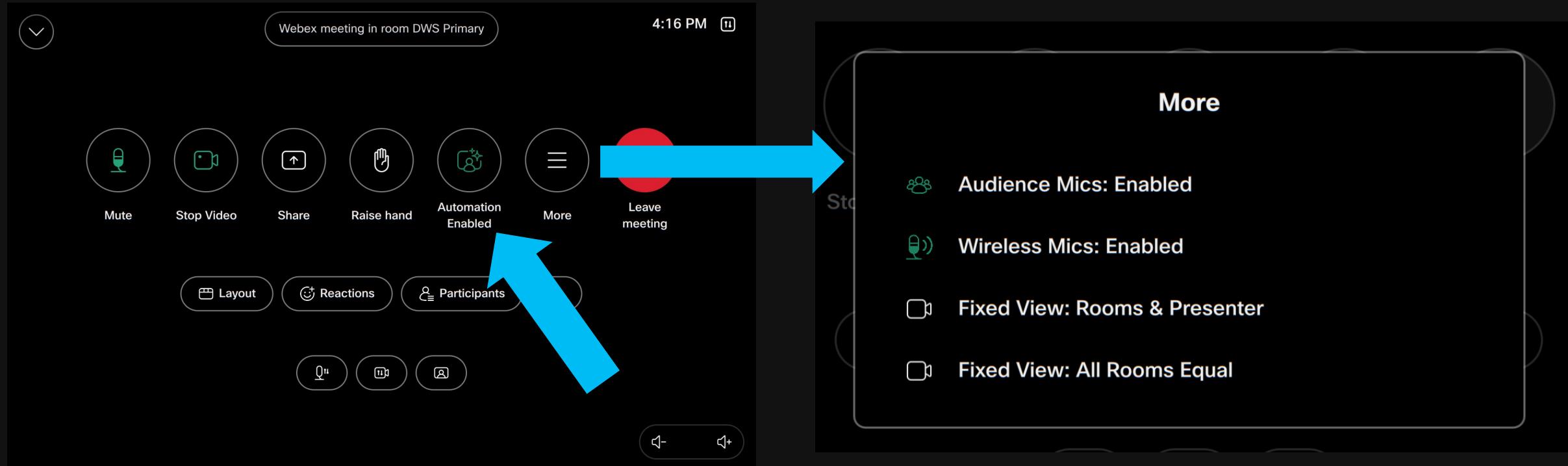
Operation: Combined State

A banner will be added to all displays of the combined workspaces to give the end user a visual cue that they are combined. The alias name of the node workspaces will be auto populated.

The banner can be enabled or disabled via a configuration setting.

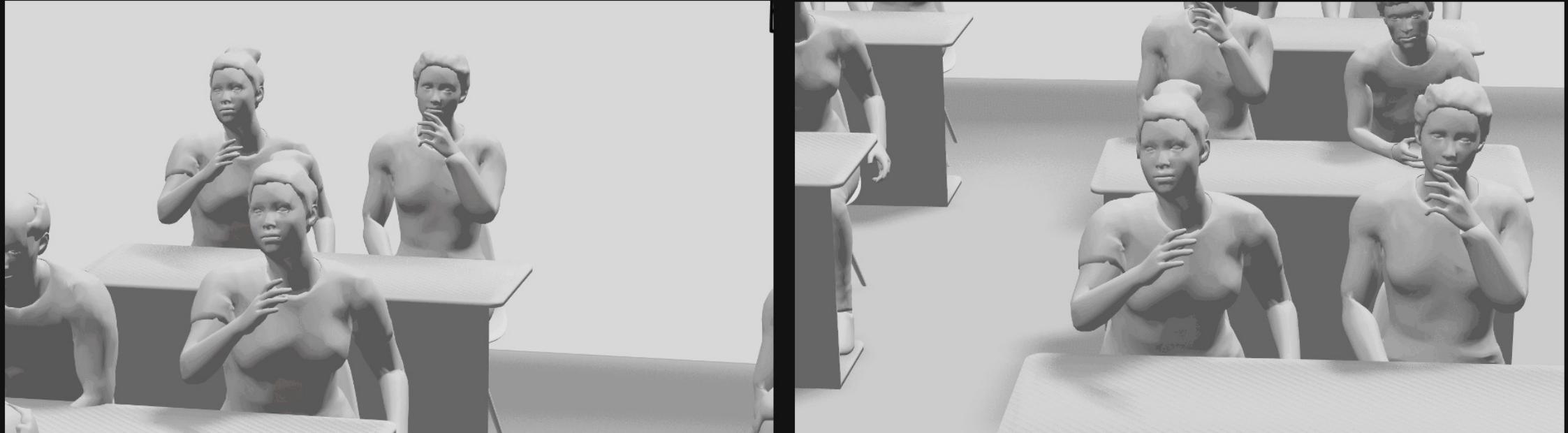


Operation: In Call Features

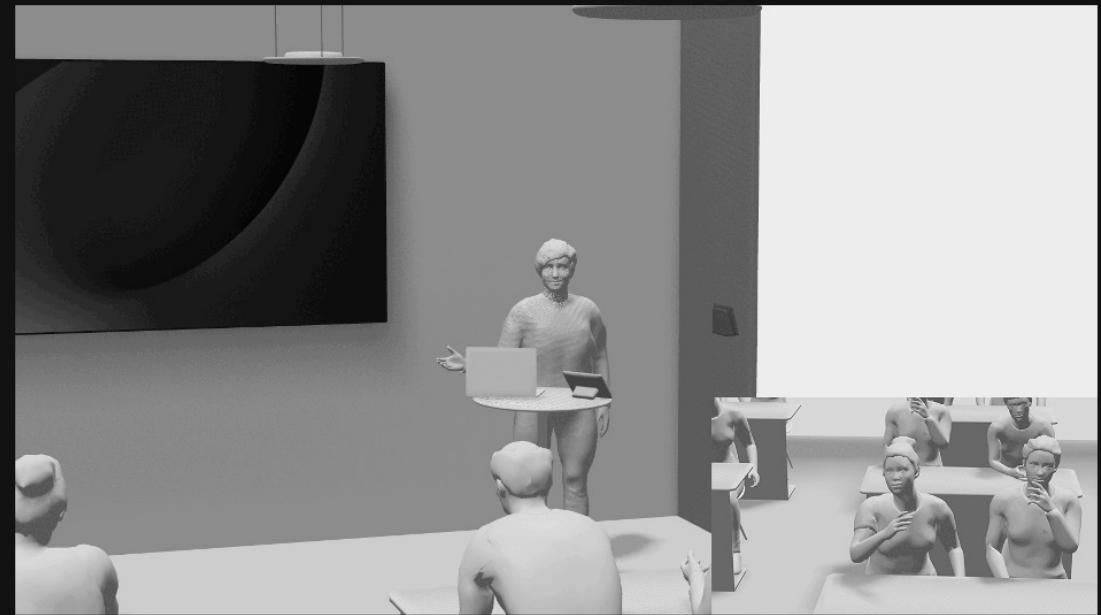


All functions exist as “native-esque” buttons during a call

Operation: Automation Enabled w/o Presenter

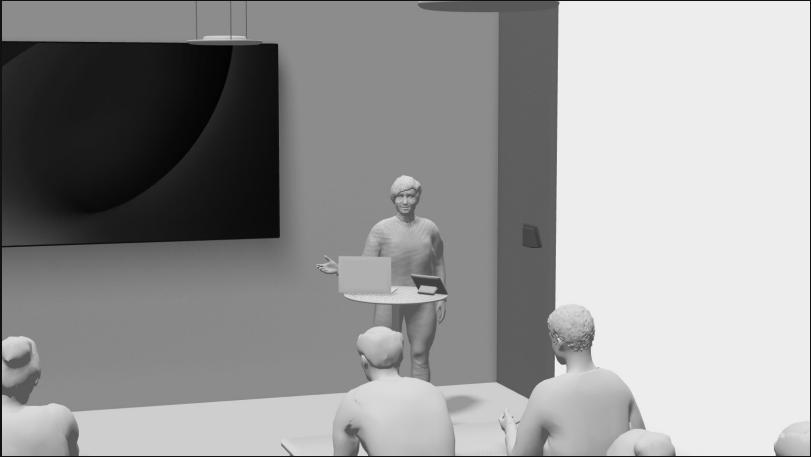


Operation: Automation Enabled w/Presenter

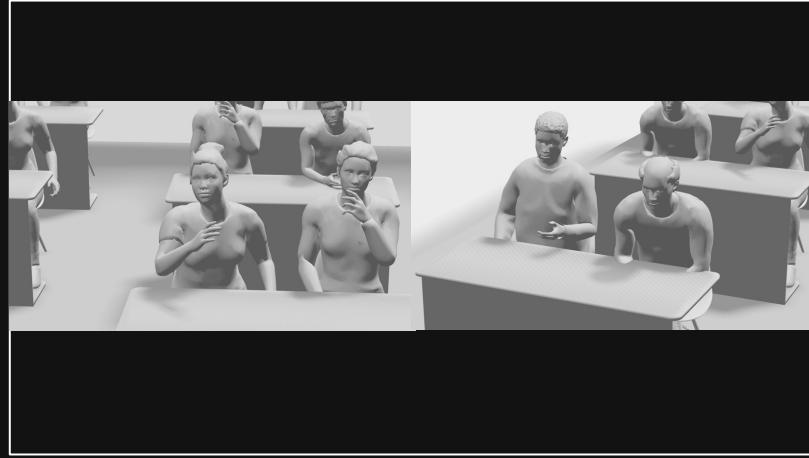


Fixed / Single Camera Modes

Presenter



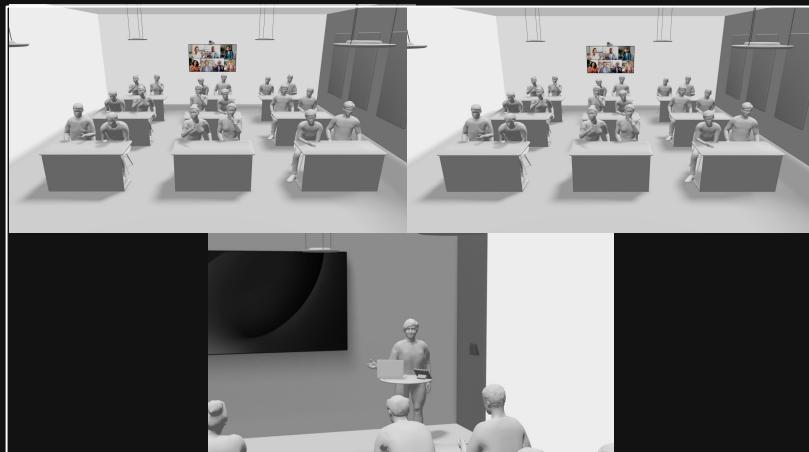
All Rooms Equal



Single Camera



Rooms & Presenter



Operation: Advanced Settings

The Advanced Settings panel provides the ability to change the default automation mode, adjust primary room output delay and tweak the “trigger” thresholds of the audience microphones.

This panel is protected by a PIN Code set during setup.

Control panel

Advanced Settings

Default Camera Automation Mode On [Edit](#)

Primary Audio Output Delay (ms) 0 [-](#) [+](#)

Microphone "High" Thresholds

Primary Audience Mics 28 [-](#) [+](#)

Node 1 Audience Mics 34 [-](#) [+](#)

Node 2 Audience Mics 37 [-](#) [+](#)

[Apply Configuration](#)

[Device settings](#)

