

ZoomOSC v5 Documentation

v5.0.0

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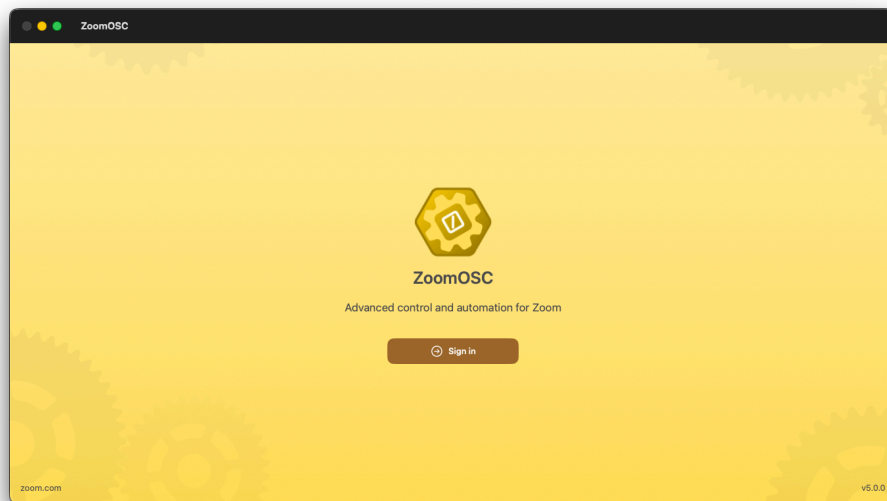
Installation and Accounts

Sign in with Zoom - Adding the App to your Account

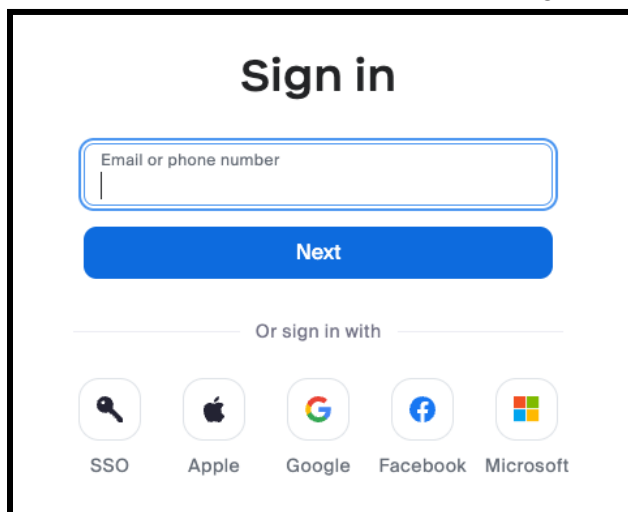
ZoomOSC has an online sign-in button which allows you to use your Zoom account to log into the app. Signing in allows ZoomOSC to start and join meetings on behalf of the signed in account, access the display name and other account details, and join Zoom Meetings, Zoom Webinars, and Zoom Events.

To sign into ZoomOSC:

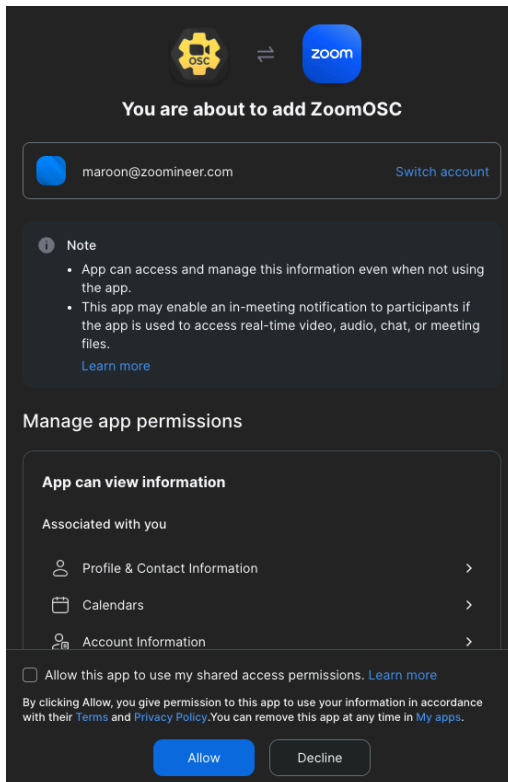
1. Launch ZoomOSC
2. Click the "Sign In" button



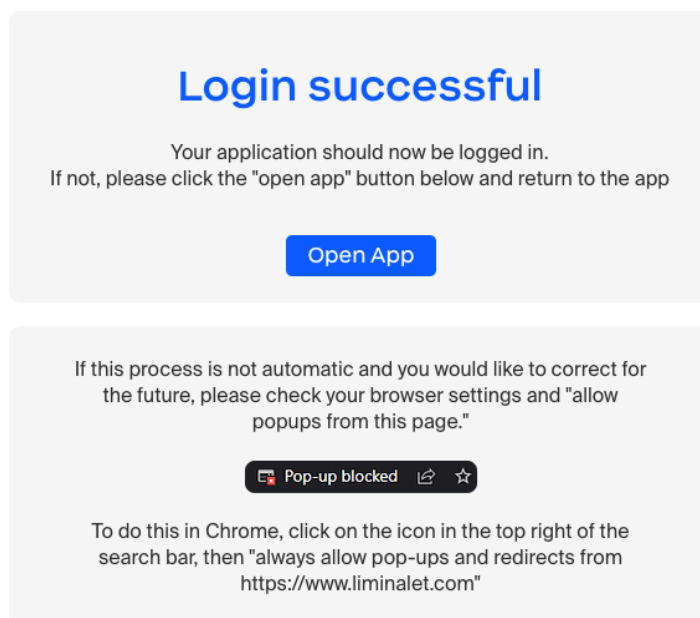
3. You will now be presented with a Zoom login webpage to sign into.

A screenshot of the Zoom login webpage. The page has a white background. At the top, it says "Sign in" in a large, bold, black font. Below that, there is a text input field with the placeholder text "Email or phone number". Below the input field, there is a blue button with the text "Next". Below the button, there is a horizontal line with the text "Or sign in with" in the center. Below the line, there are five circular icons representing different sign-in methods: SSO (a key icon), Apple (an Apple logo), Google (a Google 'G' logo), Facebook (a Facebook 'f' logo), and Microsoft (a Microsoft logo). Below each icon, the corresponding name is written: "SSO", "Apple", "Google", "Facebook", and "Microsoft".

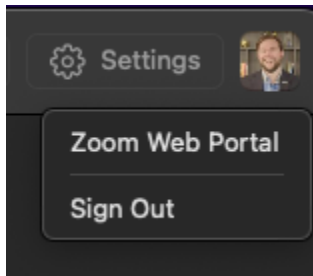
4. If this is the first time you have logged into ZoomOSC, you will be prompted to add ZoomOSC to your Zoom account after signing in. Click Allow.



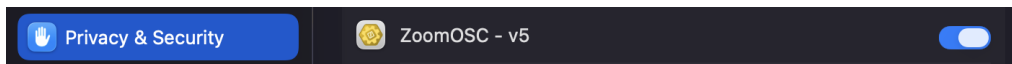
5. This page should redirect you to the liminalet.com login success page where you should proceed to connect to ZoomOSC by opening the app from the button on the page, or automatically via a deeplink if permitted



6. If the above steps are successful, you will be logged into ZoomOSC. You will see your profile image in the top right corner of ZoomOSC where you can view your account in the Zoom Web Portal or sign out.



7. ZoomOSC uses your camera and microphone in meetings. It also uses network permissions for OSC traffic. Give ZoomOSC access in your System Settings to enable these features when prompted.



Enterprise Provisioning

Are you a business/enterprise end-user? You may need to contact your IT department to allow ZoomOSC to be added to your Zoom account, depending on how your organization is configured. IT can add ZoomOSC to your organization at:

<https://marketplace.zoom.us/apps/PPTayXkwQEaaLkHHyKaQtA>

Removing ZoomOSC from your Zoom Account

Login to your Zoom Account and navigate to the Zoom App Marketplace.

- Click Manage > Added Apps or search for the "ZoomOSC" app.
- Click the "ZoomOSC" app.
- Click "Remove".

Licensing for ZoomOSC

ZoomOSC is activated when signed in with a Zoom account that has the Zoom Enhanced Media add-on license assigned. Additionally, you can also activate ZoomOSC by signing in with a Zoom account that is an active Hub Host or Hub Owner on the Zoom Webinars and Events platform.

If you don't sign in, or you sign in with a Zoom account that does not meet the requirements, ZoomOSC will remain in Trial Mode.

Activate ZoomOSC with a Zoom Enhanced Media license

ZoomOSC is included in the Zoom Enhanced Media add-on license along with the rest of the Liminal Apps at no additional cost. Once an Enhanced Media license is purchased, assign it to the user in your Zoom organization who will then be able to sign into ZoomOSC for product activation. ZoomOSC can join any Meeting, Webinar, or Event that the signed-in user is entitled to join, even if they take place on a different account.

For more information on the Enhanced Media license option for Liminal Apps, please see: https://support.zoom.com/hc/en/article?id=zm_kb&sysparm_article=KB0085055

Activate ZoomOSC with a Zoom Webinars and Events Hub

Zoom Events and Zoom Webinars Plus license holders can create Hubs on the events.zoom.us website to manage their organization's access to license features. Under the Team tab of the Hub page, the Hub Owner can add additional Hub Hosts from within their organization. The Hub Owner and all Hub Hosts are able to activate ZoomOSC by signing into the app. ZoomOSC can join any Meeting, Webinar, or Event that the signed-in user is entitled to join, even if they take place outside of the Zoom Events platform or account.

For more information on the Zoom Events Hub license option for Liminal Apps, please see: https://support.zoom.com/hc/en/article?id=zm_kb&sysparm_article=KB0083982

Trial Mode

If ZoomOSC is not activated, it will operate in Trial Mode. While in this mode, the app is fully configurable, but ZoomOSC will be unable to join Zoom Meetings, Webinars, or Events.

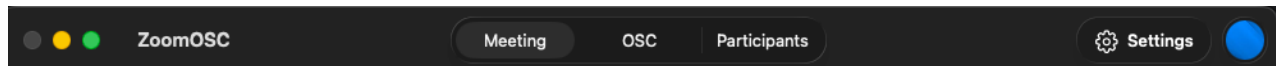
Using the Application

At a high-level, the following process is a general approach to using ZoomOSC:

1. Sign in
2. Join a meeting
3. Configure relevant OSC network settings
4. Send OSC commands to ZoomOSC from a 3rd party app
5. Receive OSC commands from ZoomOSC in a 3rd party app

Caution: ZoomOSC is a highly customizable application, so it is essential to test your exact configuration and workflow before using the app in a live production environment.

Global Navigation, Controls, and App Menu



The top of the app contains buttons for global app navigation and key controls. On macOS Tahoe and later, these options will have a different styling based on the Liquid Glass design system. Some options may also adjust style based on window size.

Window Management

The 3 standard macOS window management buttons are present at the top left of the app, with the exit button disabled to reduce the risk of one-click exits. Additionally, while minimizing the ZoomOSC window is possible, it is not recommended for best performance.

Global Navigation

You can access the Meeting, OSC, and Participants controls via buttons at the top of the app.

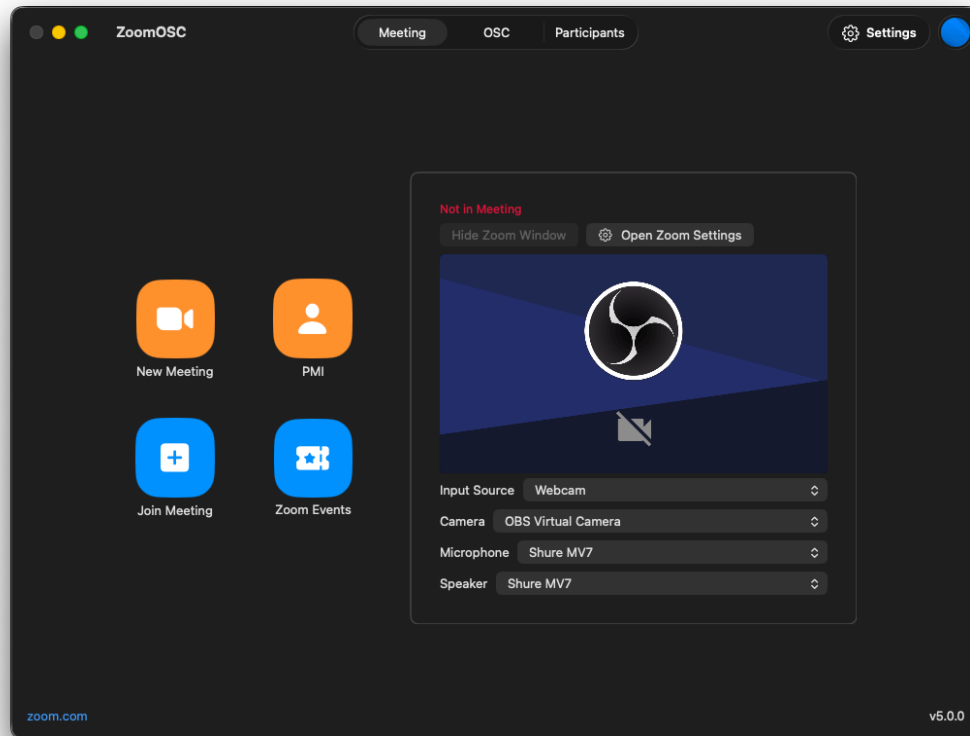
Settings Access

The main settings window of ZoomOSC is accessible via a button located next to the profile picture of the signed-in user on the top right corner of the app.

App Menu

At the top of macOS, there is a menu bar that shows options for ZoomOSC when the app is in-focus. There are several useful options in these menus, including the controls for exporting and loading app configurations, clearing the app cache, accessing the logs, and exiting the app.

Meeting Tab

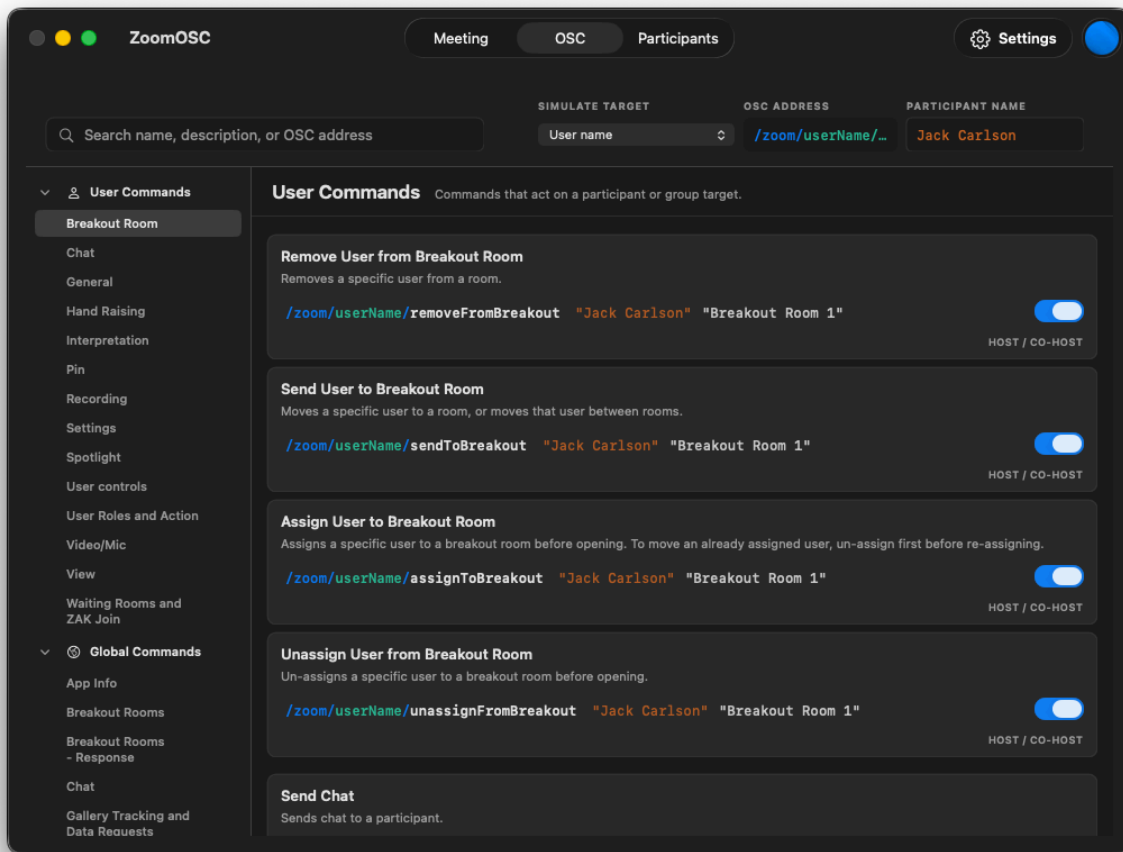


After signing into the app, you are free to join Meetings, Webinars, and Events from any account that the signed-in user is allowed to join. Start a new meeting, start your personal meeting, or join a meeting. Use the device dropdowns to quickly adjust device settings before joining the meeting. You can also open the Zoom Settings window from this tab.

Once you have joined a meeting, adjust your device settings, just as you would in a normal Zoom meeting. If breakout rooms have been enabled by the host, you can view and join breakout rooms. You can toggle the visibility of the Zoom meeting window from this tab.

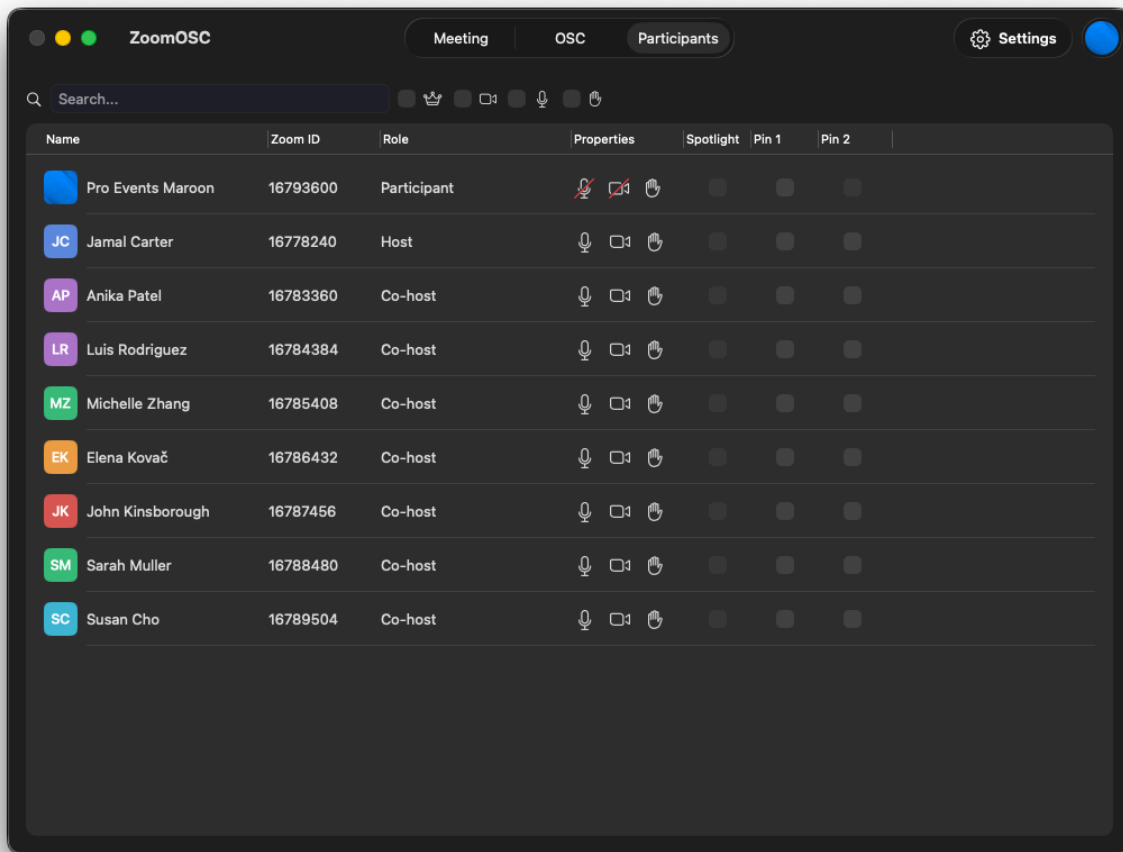
Input sources for the camera can be toggled between system devices (webcams), NDI, Blackmagic Desktop Video, or AJA NTV2 devices. Direct NDI and hardware input act as a raw camera feed to Zoom, without passing through a virtual camera. Video previews for the return feed to Zoom can be disabled in Settings.

OSC Tab



The OSC Tab displays an interactive, searchable table showing all commands supported in this version of ZoomOSC, organized by category, alongside information for what the command does, how to structure it, and any prerequisites. The edit button on each command card opens an interactive mode where values and value types can be edited. Copy buttons are also available on each card. A simulator has been added for viewing examples of constructing commands with different target types and values. Each card contains an enablement toggle, allowing OSC inputs and outputs to be individually set to on or off states, helping reduce unnecessary traffic or exposure. Some commands that directly trigger an output have a linked command element to jump between the related commands.

Participants Tab



Name	Zoom ID	Role	Properties	Spotlight	Pin 1	Pin 2
 Pro Events Maroon	16793600	Participant	  	☐	☐	☐
 Jamal Carter	16778240	Host	  	☐	☐	☐
 Anika Patel	16783360	Co-host	  	☐	☐	☐
 Luis Rodriguez	16784384	Co-host	  	☐	☐	☐
 Michelle Zhang	16785408	Co-host	  	☐	☐	☐
 Elena Kovač	16786432	Co-host	  	☐	☐	☐
 John Kinsborough	16787456	Co-host	  	☐	☐	☐
 Sarah Muller	16788480	Co-host	  	☐	☐	☐
 Susan Cho	16789504	Co-host	  	☐	☐	☐

The Participants Tab displays a routing table where you can quickly search for participants.

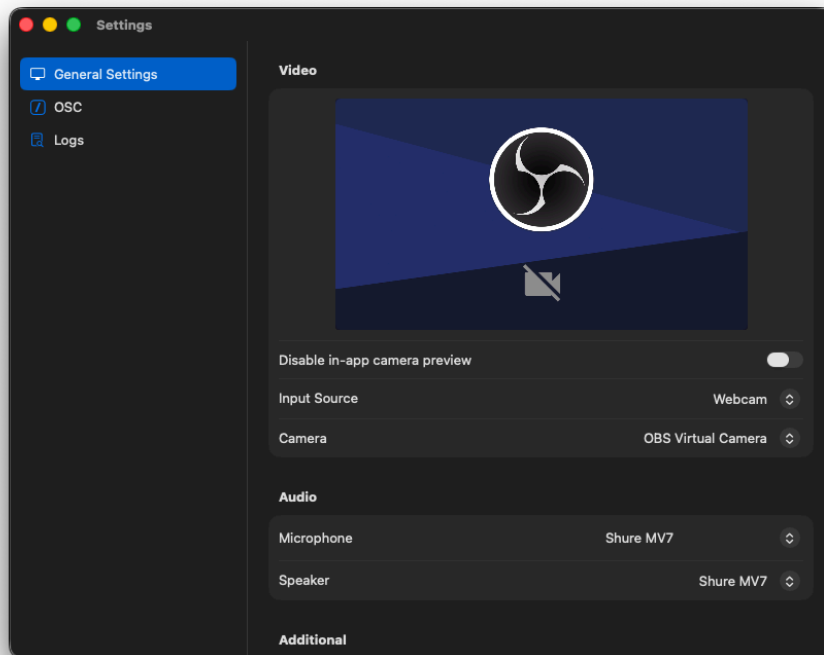
The search bar at the top of the page allows you to type in the name of a participant to find them. Next to the search bar, there are a set of icons representing different filters that can reduce the options in the list.

The table contains a row for each participant in the meeting, displaying their profile image (if available) as well as their display name. Clicking a box in allows you to pin or spotlight the participant.

Settings Overview

The Settings window can be opened by clicking the Settings button at the top right of the main ZoomOSC window. There are several categories for settings, accessed via navigation on the left-hand side of the Settings window.

General Settings

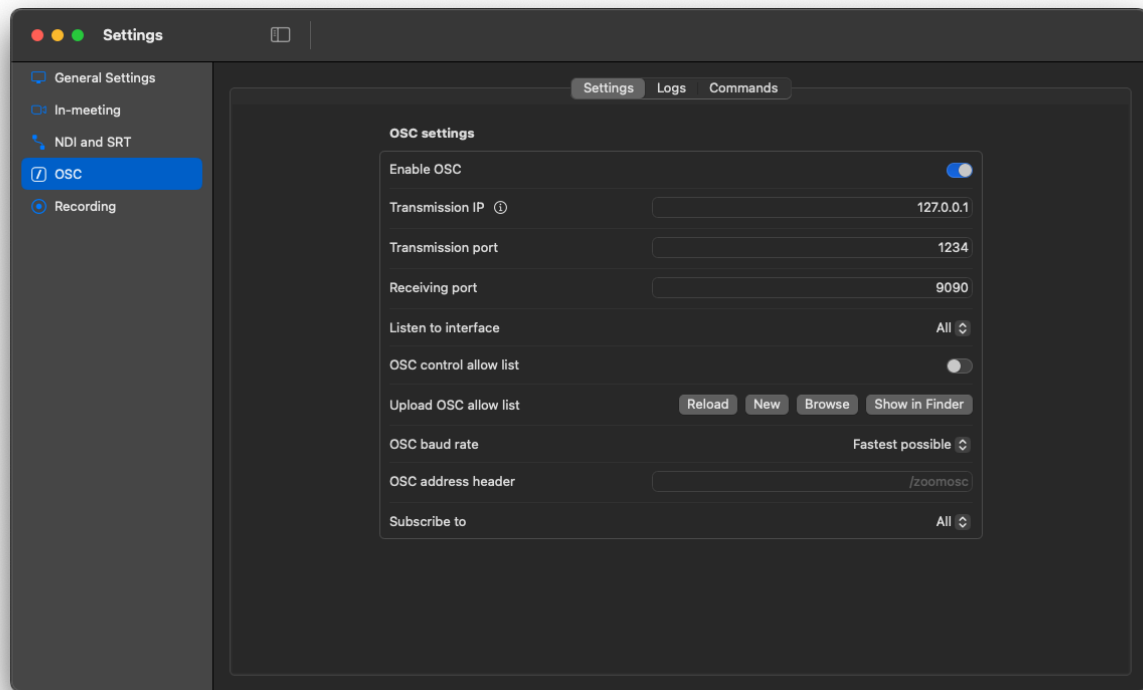


The General Settings category contains in-meeting settings.

The In-meeting Settings section contains controls for adjusting the camera, microphone, and speaker to use with Zoom. This section also has a shortcut to reaching the Zoom settings menu and a toggle for disabling video return previews. There is also a setting for automatically returning to Gallery View after ZoomOSC spotlights a participant, which can be useful when relying on Gallery Index OSC commands.

OSC Settings

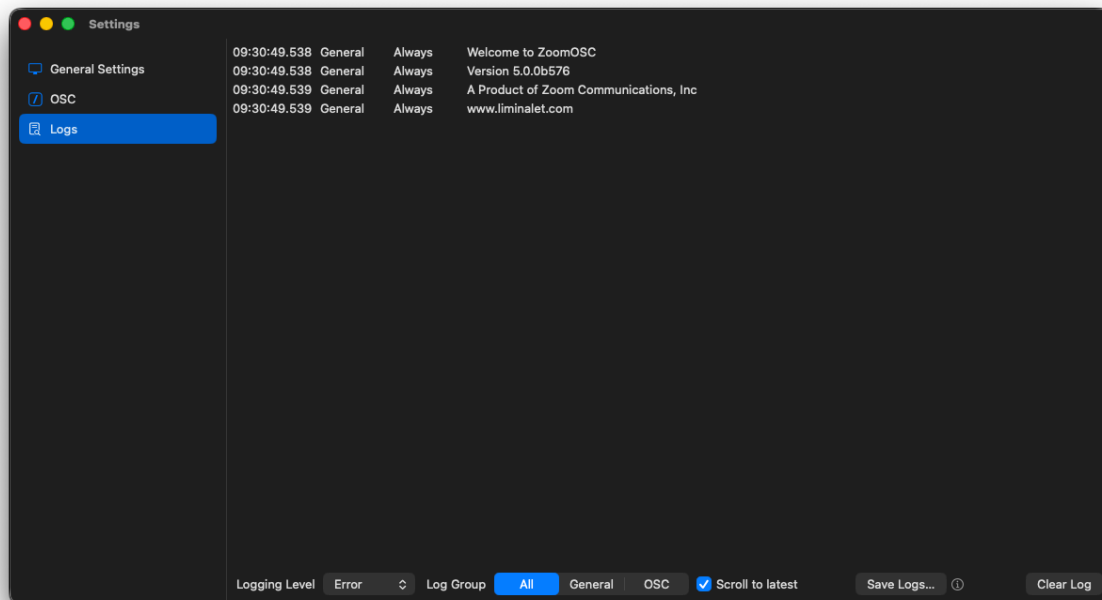
Within the Settings page of ZoomOSC, you may adjust the settings for OSC control by clicking on the OSC Controls tab in the left-hand panel navigation. Below is the main Settings area for OSC:



Enable OSC	When enabled, the application will listen for incoming commands and transmit outgoing commands
Transmission IP	The IP address where ZoomOSC will send outgoing commands
Transmission Port	The network port where the ZoomOSC will send outgoing commands
Receiving Port	The network port where the ZoomOSC will listen for incoming messages
Listen to interface	Select the network interface to use for incoming commands, or “All” for all interfaces.
OSC Control Allow List	Restrict which devices are allowed to send OSC commands to ZoomOSC via a list of IP addresses. ZoomOSC will only allow control from these IPs on the selected interface(s).
Upload OSC Allow List	Configure a .txt file containing the IP addresses to use for the Allow List, one per-line.

OSC Baud rate	The maximum speed ZoomOSC will transmit OSC messages
OSC Address Header	Customize the prefix string on ZoomOSC's OSC outputs to differentiate between devices sending to the same receiver
Subscribe To	Determine which group of participants to monitor for sending out OSC events

Logs



The Logs tab shows internal information about the app in a scrollable view.

Logs are categorized and filterable in a number of severity levels: Verbose, Info, Warning, Error. Selecting a logging level will show all logs categorized with that severity level or above. Errors indicate a behavior that may create an adverse effect on the app. Warnings indicate that a behavior may or may not have a negative impact on the app functionality depending on the context. Info logs are passive notices about app functionality. Verbose logs show granular information about most app events.

Logs are also grouped into All, General, and OSC categories, which can be selected from a toggle at the bottom of the window. Logs can be saved to a file, which is useful when working with support to diagnose an issue.

Performance

Minimum Requirements

ZoomOSC is supported on macOS 14 (Sonoma), macOS 15 (Sequoia), and macOS 26 (Tahoe). ZoomOSC is only available for Macs using Apple Silicon (M1 or later).

We recommend installing Blackmagic Desktop Video Setup version 15 or later for best performance and device compatibility with ZoomOSC v5. The minimum requirement is 14.3.

Best Practices

We recommend treating the computer running ZoomOSC like an appliance. We advise against running other applications at the same time as ZoomOSC to ensure that sufficient resources are available to the rendering process, and recommend industry-standard practices around using general purpose computers in live production environments (such as deeply testing exact use case configurations ahead of time, carefully evaluating OS updates in advance, etc.).

There are several optimization features on macOS that can interfere with live video processing in ZoomOSC. We advise against minimizing the app while running live outputs. In addition, using multiple virtual desktops with ZoomOSC is currently not supported, and may cause the return feed to Zoom or some of the outputs from ZoomOSC to freeze.

Ensuring the Mac is adequately cooled is important when running sustained loads like ZoomOSC. Passively cooled devices like the MacBook Neo or MacBook Air, or devices placed in locations without adequate airflow, are not recommended as their performance may degrade as the system heats up.

While not always required, it can be helpful to restart ZoomOSC in-between sequential meetings or productions. In addition, the Clear Cache feature should be used when moving between versions of the application on the same system, or whenever there is a suspected issue.

OSC Controls

ZoomOSC has an Open Sound Control (OSC) API for integration with show control and automation systems. ZoomOSC contains the full API Command List of ZoomOSC, which offers both input and output commands.

Understanding ZoomOSC Commands

ZoomOSC adds a bi-directional Open Sound Control (OSC) interface to Zoom. Commands can be sent to the ZoomOSC app from third party hardware and software devices to control Zoom,

and ZoomOSC can communicate back to those products with information about the Zoom meeting.

camelCase will be used in the documentation, but should not be enforced by the protocol, for example: zoomOSC, zoomOsc, and zOoMoSc should all be equivalent. OSC commands are implemented in multiple parts, but only two will be documented as the rest are inferred by the implementation of the OSC spec itself based on these two:

- An OSC address is the slash-delimited part of an OSC message
- The OSC payload is the list of arguments that follow after the address

A single whitespace will be used in the documentation to separate an OSC address from its payload argument(s). The use of "quotes" in the article may indicate a string parameter, but the quotes are not expected to be inside the actual strings received by the software. The use of ../ indicates that there are unspecified components of the address before the shown component. The use of ... indicates that there are unspecified arguments included in the payload.

The application's OSC messages can be divided into 3 major categories:

1. **User Commands** require targets, which can be either users/participants or groups.
2. **Global Commands** do not use targets, and control general meeting or application settings.
3. **Outputs** are the OSC messages that come out from ZoomOSC, containing useful information. Some outputs are triggered by events of subscribed participants, whereas others are triggered by a User or Global command and thus provide a response.

ZoomOSC interacts with Open Sound Control as UDP and allows UTF-8 characters in OSC strings.

Here is an example ZoomOSC message:

/zoom/userName/videoOn "Andy Carluccio"

The address is delimited with "/" (in this case, the address is **/zoom/userName/videoOn**).

The payloads follow the address and are delimited with whitespace. ZoomOSC payloads can be ints, floats, or strings. Multi word strings can be enclosed in quotes to pass as a single argument. Please reference the user manual for the control software you are using to determine how that program constructs and/or parses OSC.

Constructing ZoomOSC Commands

To send a message to ZoomOSC, you must construct an address. **Every ZoomOSC Input starts with /zoom**

After /zoom, you may select a “target type” for the user you want to act on. The available target types are below:

../userName	{str userName}	A single zoom username, case sensitive and including spaces. Multiple participants with the same name will revert the target to the first participant it finds with that name
../galleryIndex	{int galleryIndex}	The zero-indexed position of the participant in the gallery
../zoomID	{int zoomID}	Integer is randomly assigned when a participant joins, and will change if they leave and rejoin.
../pID	{str persistentID}	A UUID string is generated when a participant joins and has persistence between breakout room, waiting room, and brief meeting disconnections
../me	N/A	Passes the self-user as the target

Instead of calling a target type, you can pass one of the below group macros as an alternative:

../all	Everyone in the Zoom call
../panelists	All webinar panelists
../attendees	All webinar attendees

Another type of group macro is exclusionary - it takes one of the above group identifiers and modifies it with who should not be included in the target. These exclusionary groups must be used alongside a standard target type. For example:

/zoom/allExcept/me would call the user action on everyone in the meeting except for the self user. Below are the exclusionary group macros:

../allExcept/[Target_Type]	Everyone in the Zoom call except the targets specified
../panelistsExcept/[Target_Type]	All webinar panelists except the targets specified
../attendeesExcept/[Target_Type]	All webinar attendees except the targets specified

Finally, it is also possible to define a custom group of users by using the /users keyword followed by the target type that will be used to designate the members of the group:

../users/[Target_Type]	Target users from a specified group
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ZoomOSC Example Commands

/zoom/userName/chat “Andy” “Hello!”	Send a “Hello” chat to user named Andy
/zoom/allExcept/userName/videoOff “Joe”	Turn off the video for everyone in the meeting except for the user named Joe
/zoom/users/galleryIndex/addPin 2 6 8 3	Create a multipin from the participants of gallery indices 2, 6, 8, and 3
/zoom/users/zoomID/addSpot 58387672 48394821 48271291	Create a multi spotlight from several participants by using their zoomIDs

ZoomOSC - OSC Control Settings

Within the Settings page of ZoomOSC, you may adjust the settings for OSC control by clicking on the OSC Controls tab in the left-hand panel navigation. Below is the main Settings area for OSC:

OSC Command List

All commands are documented in the in-app OSC Command Browser.