

ZOOMOSC VERSION 4.1.0



ZOOMOSC COMMAND SYNTAX

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.

This document describes the syntax for these OSC commands.

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

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

BEFORE WE START, SOME ADVICE

Liminal has created several additional resources for beginners.

Before reading this document, we highly suggest reviewing two additional resources:

- **The ZoomOSC Beginner's Guide and User Manual** (available from the [resources list](#), and present in your ZoomOSC download)
- **[Liminal's YouTube channel](#)**
 - Specifically, the video "[How to Read ZoomOSC 4 Documentation](#)"
 - There are also quick-start videos for [QLab](#), [Isadora](#), [Companion](#), [TouchOSC](#), and more!

You don't have to learn alone!

There is no need to learn ZoomOSC in isolation; **one of the best parts of the product is the community of users built around it.**

- [Liminal Power Users](#) has **hundreds of ZoomOSC users** with backgrounds in broadcast, entertainment, live theater, film, and more! You can also engage our support team on this Slack group.
- [ZoomOSC Test Kitchen](#), is a **weekly Zoom meeting** where you can ask questions of our developers directly and learn from seasoned ZoomOSC users.
- Other A/V communities including [Office Hours](#) and [AV Educate](#) have featured ZoomOSC's team in the past, and many of their **members use ZoomOSC professionally.**
- **Finally, support directly from our team is always one email away;** drop a note to info@liminalet.com and we'll get back to you as soon as possible!



REFRESHER ON OSC PROTOCOL

ZoomOSC interacts with Open Sound Control as UDP.

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.

Every ZoomOSC Input starts with `/zoom`

Constructing User Command to send to ZoomOSC

To send a message to ZoomOSC, you must construct an address. The sections below are appended to `/zoom` to specify who to call the actions on.

HOW DO YOU TARGET A USER?

After /zoom, you may select a "target type" for the user you want to act on.

The available target types are below.

.../targetID

A single user who is logged by index in the target list. NOTE: For this to succeed, you must have loaded or updated users into target memory before referencing.

{int targetIndex}

.../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

{str userName}

.../galIndex

The zero-indexed position of the participant in the gallery.

{int galleryIndex}

.../zoomID

The zoomID is randomly assigned when a participant joins, and will change if they leave and rejoin.

{int zoomID}

.../galleryPosition [Mac Required]

A single user at a specified gallery position identified by row and column (zero indexed).

{str position in form "row, col" ie "0, 2"}

.../me

Passes self as the target

N/A

TARGET A GROUP OF USERS WITH A MACRO

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

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

EXCLUDE USERS FROM A GROUP MACRO

Another type of group macro is "exclusionary" and must be combined with a target type. For example, **/zoom/allExcept/me/...** would call the user action on everyone in the meeting except for the self user.

.../allExcept/[TARGET TYPE]
.../targetsExcept/[TARGET TYPE]
.../panelistsExcept/[TARGET TYPE]
.../attendeesExcept/[TARGET TYPE]

MAKE A CUSTOM GROUP "FROM SCRATCH"

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

.../users/[TARGET TYPE]



ZOOMOSC COMMANDS

EVERY ZOOMOSC INPUT STARTS WITH **/ZOOM**

EXAMPLES

/zoom/userName/chat "Andy" "Hello!"

Send a "Hello" chat to user Andy

/zoom/targetsExcept/userName/videoOff "Joe"

Turn off video for everyone on the target list except for Joe

/zoom/users/gallery/addPin 2 6 8 3

Create a multipin from the persons of gallery indices 2, 6, 8, and 3

/zoom/targetID/videoOn 7

Request that the user with targetID 7 turn on their video

/zoom/users/zoomID/addSpot 58387672 48394821 48271291

Create a multi spotlight from the persons using the raw zoomID system

/zoom/all/lowerHand

Lower the hands of all users in the Zoom call

How to read the commands:

Command Name

This is a description of the command

Here is an additional note which may give a warning or important information

../commandAddress

{int arg1 | str arg2}

Mac Only **MAC**

Windows Only **WIN**

Paid, Pro Feature **PRO**

Experimental (may have bugs) **BETA**

Please remember that the first arguments of any user action will be the designator for that user. The arguments listed in the spreadsheet are in addition to the user specification arguments and must be attached at the end of the payload list.

USER COMMANDS

VIDEO/MIC COMMANDS

Request Video On Requests to turn on participant video	../videoOn	
Set Video Off Turns off participant video	../videoOff	
Toggle Video Toggles participant video on or off	../toggleVideo	
Mute Mic Mutes participant mic	../mute	
Unmute Mic Requests to unmute participant mic, unless pre-approved consent is given in Zoom settings. ZoomOSC will automatically accept requests to unmute.	../unMute	
Toggle Mic Toggles participant mic on or off	../toggleMute	

SPOTLIGHT COMMANDS (see global commands for clearSpot command)

Spotlight Replaces current spotlight with a new participant spotlight If called on a group, it will only spotlight the last user in the list.	../spot	
Add Spotlight Adds a new participant spotlight to the mutli-spot group	../addSpot	PRO
Un-Spotlight Removes a spotlight from a participant	../unSpot	
Toggle Spotlight Toggles spotlight on or off from a participant	../toggleSpot	PRO

HAND RAISING COMMANDS (see global commands for lowerAllHands command)

Raise Hand Raises Hand	../raiseHand	
Lower Hand Lowers Hand	../lowerHand	
Toggle Hand Toggles the raising or lowering of the hand	../toggleHand	WIN

USER COMMANDS

PIN COMMANDS

(see page 13 for remote pin controls)

Pin Participant Pins a participant	../pin	
Add Pin Adds a new participant pin to the multi-pin group Only Co-Hosts/Hosts. Other participants must be given permission by the host to multi-pin.	../addPin	PRO
Un-Pin Participant Removes a pin from a participant	../unPin	
Pin to Second Screen Pins participant to the second screen	../pin2	
Un-Pin from Second Screen Unpins participant from the second screen	../unPin2	
Toggle Pin First Screen Toggles pin on or off from the first screen	../togglePin	PRO
Toggle Pin Second Screen Toggles pin on or off from the second screen	../togglePin2	PRO
Clear all Pins Clear all pins (from the first display, Zoom itself does not support multipinning on the second display at this time).	../clearPin	PRO

VIEW COMMANDS

Set Gallery View Changes screen to gallery view	../setGalleryView
Set Speaker View Changes screen to speaker view	../setSpeakerView
Next Gallery Page Changes screen to next page of Gallery View	../galleryPageNext
Previous Gallery Page Changes screen to previous page of Gallery View	../galleryPagePrev

USER COMMANDS

USER ROLES AND ACTION COMMANDS

Make Host Makes the defined participant the meeting host	../makeHost	
Make Co-Host Makes the defined participant a meeting co-host	../makeCoHost	
Reclaim Host Reclaims host role if originally the creator of the meeting Only works if you are the original host of the meeting; must be called on self	../reclaimHost	
Revoke Co-Host Revokes co-host permission from participant	../revokeCoHost	
Make Panelist Promotes a webinar attendee to a panelist	../makePanelist	
Make Attendee Demotes a webinar panelist to an attendee	../makeAttendee	
Eject from Meeting Kicks participant from meeting	../eject	
Rename Change the name of a user	../rename	PRO
Allow to Record Permit an attendee to record	../allowToRecord	PRO
Disallow to Record Remove permission for an attendee to record	../disallowToRecord	PRO

CHAT COMMANDS

Send Chat Sends chat to a participant Zoom chat is limited to 1024 characters. This command will send via a direct message to the selected user(s)	../chat {str chat message}
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WEBINARS

Allow Attendee to Speak Allows a webinar attendee to speak	../allowToSpeak	PRO
Disallow Attendee to Speak Disallows a webinar attendee to speak	../disallowToSpeak	PRO

USER COMMANDS

BREAKOUT ROOMS*

Send User to Breakout Room Moves a specific user to a room, or moves that user between rooms	../sendToBreakout {str breakout name int breakout index}	PRO BETA
Remove User from Breakout Room Removes a specific user from a room	../removeFromBreakout {str breakout name int breakout index}	PRO BETA
Assign User to Breakout Room Assigns a specific user to a breakout room before opening. To move an already assigned user, un-assign first before re-assigning.	../assignToBreakout {str breakout name int breakout index}	PRO BETA
Un-assign User from Breakout Room Un-assigns a specific user to a breakout room before opening.	../unassignFromBreakout {str breakout name int breakout index}	PRO BETA

*INFORMATION ON BETA BREAKOUT CONTROLS

The current implementation of breakouts in ZoomOSC is limited by the absence of Global UUID in the Zoom Meeting SDK. However, both internal and external teams have thoroughly tested and seen stable performance. Because there are significant "corner cases" arising from the complexity of breakout rooms, please use with caution and avoid managing breakout rooms both through ZoomOSC and through the UI simultaneously. We strongly encourage complete testing of your exact command flow before production use.

Order of Breakout Room operations:

1. **CREATE** breakout rooms
2. **CONFIGURE** breakout rooms with OSC command
3. **ASSIGN** participants to rooms
4. **OPEN** breakout rooms
5. **SEND/REMOVE** participants from open rooms

WAITING ROOMS

Send User to Waiting Room Sends a specific user to the waiting room if enabled in the meeting	../sendToWaitingRoom	PRO
Admit User from Waiting Room Admits a specific user from the waiting room into the main meeting	../admit	PRO

USER COMMANDS

SCREENSHARE COMMANDS

List Screens Lists all screens available for screenshare	../listScreens	PRO
List Windows Lists all windows available for windowshare	../listWindows	PRO MAC
Start Screenshare Starts a screenshare on defined screen Use the listScreen command first to identify monitor ID or names	../startScreenShare {int screenID str screenName}	PRO
Start Windowshare Starts a windowshare on defined window Use the listWindows command first to identify monitor ID or names	../startWindowShare {int windowID str windowName}	PRO MAC
Stop Share Stops sharing screen, window, camera, or audio	../stopShare	
Start Screenshare (Primary Display) Starts screenshare on primary display only	../startScreenSharePrimary	
Start Sharing Computer Audio (Only) Start "Share Computer Sound" (audio only)	../startAudioShare	PRO WIN
Enable Computer Sound (for Sharing) Enables the computer audio share setting when sharing visual content	../enableComputerSoundWhenSharing	PRO
Disable Computer Sound (for Sharing) Disables the computer audio share setting when sharing visual content	../disableComputerSoundWhenSharing	PRO
Start Sharing Camera Source Starts sharing computer camera source	../startCameraShare	PRO
Advance to Next Camera Share Source Cycle to the next shareable camera source while inside of camera sharing mode	../shareNextCamera	PRO
Enable Video Share Optimization Sets screen share to prefer frame rate over resolution	../enableOptimizeVideo	PRO
Disable Video Share Optimization Sets screen share to prefer resolution over frame rate	../disableOptimizeVideo	PRO
Set Primary Window Size Adjust the primary window to a specific size	../setWindowSize {int width int height}	PRO MAC BETA
Set Primary Window Position Adjust the primary window's position on screen	../setWindowPosition {int x int y}	PRO MAC BETA

USER COMMANDS

SETTINGS COMMANDS

Display Usernames on Videos Displays usernames in the bottom left of participants	../showUserNames	
Hide Usernames on Videos Hides usernames in the bottom left of participants	../hideUserNames	
Show Non-Video Participants Shows non-video participants in gallery	../showNonVideoParticipants	
Hide Non-Video Participants Hides non-video participants in gallery	../hideNonVideoParticipants	
Enable “Original Sound” Enables "original sound" for audio The command will work, but it helps to use the "show original audio" setting in meeting"	../enableOriginalSound	
Disable “Original Sound” Disables "original sound" for audio	../disableOriginalSound	
List All Camera Devices Lists all available camera devices	../listCameraDevices	PRO
List All Mic Devices Lists all available mic devices	../listMicDevices	PRO
List All Speaker Devices Lists all available speaker devices	../listSpeakerDevices	PRO
Set Camera Device Changes camera device Use the listCameraDevices or getCameraDevice command to get the deviceId or index	../setCameraDevice {string deviceId int index}	PRO
Set Mic Device Changes mic device Use the listMicDevices or getMicDevice command to get the deviceId or index	../setMicDevice {string deviceId int index}	PRO
Set Speaker Device Changes speaker device Use the listSpeakerDevices or getSpeakerDevice command to get the deviceId or index	../setSpeakerDevice {string deviceId int index}	PRO

USER COMMANDS

SETTINGS COMMANDS CONTINUED

Get Current Camera Device Lists current camera device in use	../getCameraDevice	PRO
Get Current Mic Device Lists current mic device in use	../getMicDevice	PRO
Get Current Speaker Device Lists current speaker device in use	../getSpeakerDevice	PRO
List Virtual Backgrounds Lists all available virtual backgrounds	../listBackgrounds	PRO MAC
Change Virtual Background Changes virtual background Use the listBackgrounds or the getBackground commands first to identify index or bgName	../setBackground {int index str bgName}	PRO MAC BETA
Get Current Virtual Background Lists current virtual background in use	../getBackground	PRO MAC BETA
Get Mic Level Returns the mic level	../getMicLevel	PRO
Set Mic Level Sets the mic level to a value	../setMicLevel {int 0> 100}	PRO
Get Speaker Volume Returns the system speaker volume	../getSpeakerVolume	PRO
Set Speaker Volume Sets the system speaker volume to a value	../setSpeakerVolume {int 0> 100}	PRO
Enable Mirror Video Mirrors self video	../enableMirrorVideo	PRO
Disable Mirror Video Mirrors self video	../disableMirrorVideo	PRO
Enable HD Video (Setting) Enable the HD Video Setting	../enableHDVideo	PRO
Disable HD Video (Setting) Disable the HD Video Setting	../disableHDVideo	PRO
Set Video Filter Set video filter	../setVideoFilter	PRO MAC BETA

REMOTE USER COMMANDS

To avoid ambiguity when formulating a remote control that itself requires a user to be passed in as an argument, we have created a special set of commands to call the following actions on other participants running ZoomOSC Pro. **Please Note: All Remote User Commands must be used in conjunction with the target type /userName**

REMOTE PIN COMMANDS

Remote Pin Participant Pins a participant for remote user	../userName/remotePin {string name}	PRO
Remote Add Pin Adds a new participant pin to the multi-pin group for remote user Only Co-Hosts/Hosts. Other participants must be given permission by the host to multi-pin.	../userName/remoteAddPin {string name}	PRO
Remote Un-Pin Participant Removes a pin from a participant for remote user	../userName/remoteUnPin {string name}	PRO
Remote Pin to Second Screen Pins participant to the second screen for remote user	../userName/remotePin2 {string name}	PRO
Remote Un-Pin from Second Screen Unpins participant from the second screen for remote user	../userName/remoteUnPin2 {string name}	PRO
Remote Toggle Pin First Screen Toggles pin on or off from the first screen for remote user	../userName/remoteTogglePin {string name}	PRO
Remote Toggle Pin Second Screen Toggles pin on or off from the second screen for remote user	../userName/remoteTogglePin2 {string name}	PRO

REMOTE PIN COMMANDS

Send chat from one remote participant to another participant Send chat message on behalf of a user	../userName/remoteChat {string name} {string chat}	PRO
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Example:

Bill sends the following command to ZoomOSC

/zoom/userName/remoteChat "Frank" "James" "Hey there!"

will send a chat message from Frank to James with the message "Hey there!" if both Bill and Frank are running ZoomOSC Pro and have set the proper remote control parameters to allow this action.

GLOBAL COMMANDS

GLOBAL COMMANDS

Enable Users Unmuting Enables the meeting setting which allows participants to unmute	/zoom/enableUsersUnmute	
Disable User Unmuting Disables the meeting setting which allows participants to unmute	/zoom/disableUsersUnmute	
Mute All mutes all participants except host	/zoom/all/mute	
Unmute All Unmutes all participants	/zoom/all/unMute	
Lower All Raised Hands Lowers all raised hands in the meeting	/zoom/lowerAllHands	
Clear Spotlight Clears all spotlights from meeting	/zoom/clearSpot	PRO
Ping ZoomOSC Sends a ping to ZoomOSC and review a pong response	/zoom/ping {optional any argument to reply}	
Join a Meeting Joins a meeting with OSC arguments	/zoom/joinMeeting {str meetingID} {str meetingPass} {str userName}	PRO
Leave Meeting Leaves current meeting	/zoom/leaveMeeting	PRO
End Meeting Ends current meeting for all	/zoom/endMeeting	PRO
Send Chat to Everyone Sends a chat message to all participants	/zoom/chatAll {str message}	
Eject All Webinar Attendees Ejects all attendees from the webinar	/zoom/ejectAttendees	
Get Webinar Reaction Count Outputs the number of each emoji reaction for the webinar	/zoom/getWebinarReactionCounts	PRO
Reset Webinar Reaction Counters Resets all webinar reaction counters to 0	/zoom/resetWebinarReactionCounts	PRO

GLOBAL COMMANDS

BREAKOUT ROOMS*

Request Breakout Rooms List Commands ZoomOSC to respond with the breakout list Please note: the output OSC message is currently different on mac and win	/zoom/listBreakouts	PRO BETA
Create Breakout Room Creates a breakout room while rooms are closed	/zoom/createBreakout {string breakoutName int bo_index}	PRO BETA
Delete Breakout Room Deletes a breakout room while rooms are closed	/zoom/deleteBreakout {string breakoutName int bo_index}	PRO BETA
Delete All Breakout Rooms Deletes all breakout Rooms	/zoom/deleteAllBreakouts	PRO BETA
Open Breakout Rooms Opens breakout rooms	/zoom/openBreakouts	PRO BETA
Close Breakout Rooms Closes breakout rooms	/zoom/closeBreakouts	PRO BETA
Configure Breakout Rooms Configures breakout room settings, such as timers and duration	/zoom/configureBreakouts {int postCloseSeconds} {int allowChooseBreakout (0=false, 1=true)} {int allowReturnAtWill} {int autoMoveParticipants} {int useTimer} {int closeWithTimer} {int breakoutDurationSeconds}	PRO BETA
Broadcast Message to Breakout Rooms Send a message to all breakout rooms which appears at the top of the attendees screens	/zoom/broadcastToBreakouts {string message}	PRO BETA

*INFORMATION ON BETA BREAKOUT CONTROLS

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Order of Breakout Room operations:

1. **CREATE** breakout rooms
2. **CONFIGURE** breakout rooms with OSC command
3. **ASSIGN** participants to rooms
4. **OPEN** breakout rooms
5. **SEND/REMOVE** participants from open rooms

GLOBAL COMMANDS

RECORDING

Start Local Recording Starts a local recording	/zoom/startLocalRecording
Pause Local Recording Pauses local recording	/zoom/pauseLocalRecording
Resume Local Recording Resumes a local recording after paused	/zoom/resumeLocalRecording
Stop Local Recording Stops local recording	/zoom/stopLocalRecording
Start Cloud Recording Starts a cloud recording	/zoom/startCloudRecording
Pause Cloud Recording Pauses cloud recording	/zoom/pauseCloudRecording
Resume Cloud Recording Resumes a cloud recording after paused	/zoom/resumeCloudRecording
Stop Cloud Recording Stops cloud recording	/zoom/stopCloudRecording

WAITING ROOMS AND ZAK JOIN

Enable Waiting Room Enables waiting room for the meeting	/zoom/enableWaitingRoom	PRO
Pause Local Recording Disables waiting room for the meeting	/zoom/disableWaitingRoom	PRO
Message Waiting Room Sends a message to the waiting room	/zoom/messageWaitingRoom {str message}	PRO
Admit All from Waiting Room Admits all users from the waiting room	/zoom/admitAll	PRO
ZAK Join Meeting Joins a meeting using a ZAK token	/zoom/zakJoin {str zak} {str meetingID} {str name} [optional] {str password}	PRO
ZAK Start Meeting Starts a meeting using a ZAK token. Use 0 for meeting ID to use PMID	/zoom/zakStart {str zak} {str meetingID} {str name} [optional] {str password}	PRO

GLOBAL COMMANDS

MEMORY MANAGEMENT

Update TargetIDs Assigns targetIDs to participants in memory	/zoom/update
Include Appends new participants to memory	/zoom/include
Load from Target List Loads participants from target list file	/zoom/load
Load via OSC Loads participants from OSC arguments	/zoom/load {string userName1} .. {string userNameN}
Save to Target List Saves participants to target list	/zoom/save
Reset Resets application memory containers	/zoom/reset
List* Prints memory to console *Returns list via OSC if subscribed and PRO	/zoom/list

GALLERY TRACKING AND DATA REQUESTS

Gallery Track Mode Changes gallery tracking mode to participantID or zoomID	/zoom/galTrackMode {int participantID = 0, zoomID = 1}
Subscription Level Sets subscription level for user output data. None = 0, TargetList = 1, All = 2, Panelists = 3, OnlyGallery = 4	/zoom/subscribe {int mode}
Request Order of Gallery View Outputs the order of the gallery view	/zoom/getGalleryOrder
Request Order of Spotlights Outputs the order of the participants in a multi-spot group	/zoom/getSpotOrder
Request Gallery Count Outputs the number of participants in the gallery view	/zoom/galCount

OUTPUTS

(uses **/zoomosc/me/..** if originates from own self, **/zoomosc/user/..** otherwise)

User Prefix messages (4) output for all as:

{int targetIndex}, {str userName}, {int galleryIndex}, {int zoomID}

Additional arguments are listed below

Participant Video Turned On Output message when subscribed participant turns video on	/zoomosc/user me/videoOn usual user messages (4)
Participant Video Turned Off Output message when subscribed participant turns video off	/zoomosc/user me/videoOff usual user messages (4)
Participant Muted Output message when subscribed participant mutes audio	/zoomosc/user me/mute usual user messages (4)
Participant Unmuted Output message when subscribed participant unmutes audio	/zoomosc/user me/unMute usual user messages (4)
Active Speaker Changed Output message whenever active speaker changes *on macOS, the user identity is not sent	/zoomosc/user me/activeSpeaker WIN* usual user messages (4)
Spotlight Started Output message when subscribed participant is spotlit	/zoomosc/user me/spotlightOn usual user messages (4)
Spotlight Stopped Output message when subscribed participant is no longer spotlit	/zoomosc/user me/spotlightOff usual user messages (4)
User Role Updates* Output message when user roles have been changed 0 - USERROLE_NONE 1 - USERROLE_HOST 2 - USERROLE_COHOST 3 - UERROLE_PANELIST 4 - USERROLE_BREAKOUTROOM_MODERATOR 5 - USERROLE_ATTENDEE	/zoomosc/user me/roleChanged usual user messages (4), {int role}
User Online Output message when subscribed participant becomes online	/zoomosc/user me/online usual user messages (4)
User Offline Output message when subscribed participant becomes offline	/zoomosc/user me/offline usual user messages (4)
User's Hand Raised Output message when subscribed participant raises hand	/zoomosc/user me/handRaised usual user messages (4), {str message}
User's Hand Lowered Output message when subscribed participant lowers hand	/zoomosc/user me/handLowered usual user messages (4)
Chat Message Received (From) Output message when chat message is received with the message content as an argument	/zoomosc/user me/chat usual user messages (4), {str message}

OUTPUTS

User Rename Event Output message when a rename event occurs (note that the new username will be contained in the user prefix)	/zoomosc/user/me/userNameChanged usual user messages (4) {str oldUserName}	
List of Breakout Rooms Output Output message containing a list of all breakout rooms. Please note that at this time mac and windows send different formatted outputs	/zoomosc/listBreakouts {int index} {str bo_name}	BETA
List Output Output message containing all user data as arguments <ul style="list-style-type: none"> • int targetCount: The number of users in the target list • int listCount: The number of users in the sent list • int userRole: The role of the user • int onlineStatus: Whether the user is online (0 - offline, 1 = online) • int videoStatus: Whether the user's video is on (0 = off, 1 = on) • int audioStatus: Whether the user's mic is on (0 = off, 1 = on) • int handRaised: Whether the user's hand is raised (0 = off, 1 = on) 	/zoomosc/user/me/list usual user messages (4) {int targetCount} {int listCount} {int userRole} {int onlineStatus} {in videoStatus} {int audioStatus} {int handRaised}	PRO
Meeting Status Output message when meeting online or offline status changes	/zoomosc/meetingStatus {int offline = 0, online = 1}	
Ping Reply (Pong) Output reply to a ping command containing information about the ZoomOSC application version and status	/zoomosc/pong {any pingArg (zero if none sent)} {str zoomOSCversion} {int subscribeMode} {int galTrackMode} {int callStatus 0 or 1} {int number of targets} {int number of users in call} {int isPro (1=true, 0=false)}	
Gallery Order Output message with order of gallery view by participant, starting from top left	/zoomosc/galleryOrder {int item0} ... {int itemN}	
Gallery Count Output message with number of participants in the gallery with video on	/zoomosc/galleryCount {int count}	
Gallery Shape Output message with the shape of the gallery in rows and columns	/zoomosc/galleryShape {int rows} {int cols}	MAC
Target ID List Cleared Output message when the target ID list is cleared	/zoomosc/listCleared	

OUTPUTS

Spotlight Order Output message with order of spotlight participants, starting from top left	/zoomosc/spotOrder {int item0} ... {int itemN}
User Emoji Changed Output message when a participant changed their emoji reaction. 1 - Clapping 2 - Thumbs Up 3 - Heart 4 - Joy 5 - Open Mouth 6 - Tada	/zoomosc/user me/emoji changed usual user messages (4) {int emojiID}
User is Speaking Output message with a subscribed participant is speaking	/zoomosc/user me/isSpeaking usual user messages (4)
User Stopped Speaking Output message when a subscribed participant stops speaking	/zoomosc/user me/stoppedSpeaking usual user messages (4)
Webinar Question Asked Output message when an attendee asks a question in a webinar. NOTE - if asked as anonymous, USER PREFIX = -1 / "Anonymous Attendee" / -1 / -1	/zoomosc/user me/askedQuestion usual user messages (4) {str question}
User Joined Waiting Room Output message when a user joins the waiting room	/zoomosc/user me/joinedWaitingRoom usual user messages (4)
User Leaves Waiting Room Output message when a user leaves the waiting room	/zoomosc/user me/leftWaitingRoom usual user messages (4)
Webinar Emoji Reaction Count Output number of emoji reactions by type, listed 1 - Clapping 2 - Thumbs Up 3 - Heart 4 - Joy 5 - Open Mouth 6 - Tada	/zoomosc/getWebinarReactionCounts PRO {int clapping} {int thumbsup} {int heart} {int joy} {int openmouth} {int tada}

OUTPUTS

Mic Devices List Output message containing mic devices information	/zoomosc/user/me/micDevices {int itemIndex}, {int listSize}, {str deviceId}, {str deviceName}, {int isSelected}	PRO
Speaker Devices List Output message containing speaker devices information	/zoomosc/user/me/speakerDevices {int itemIndex}, {int listSize}, {str deviceId}, {str deviceName}, {int isSelected}	PRO
Camera Devices List Output message containing camera devices information	/zoomosc/user/me/cameraDevices {int itemIndex}, {int listSize}, {str deviceId}, {str deviceName}, {int isSelected}	PRO
Virtual Background List Output message containing virtual background information	/zoomosc/user/me/backgrounds {int itemIndex}, {int listSize}, {str backgroundName}	PRO MAC
Windows List Output message containing a list of windows	/zoomosc/user/me/windows {str windowID} {str windowName}	PRO MAC
Screens List Output message containing a list of screens for screenshare	/zoomosc/user/me/screens {str screenID} {str screenName}	PRO
Current Mic Device Output message containing current mic device	/zoomosc/user/me/micDevice {str deviceId} {str deviceName}	PRO
Current Speaker Device Output message containing current speaker device	/zoomosc/user/me/speakerDevice {str deviceId} {str deviceName}	PRO
Current Camera Device Output message containing current camera device	/zoomosc/user/me/cameraDevice {str deviceId} {str deviceName}	PRO
Current Virtual Background Output message containing current virtual background	/zoomosc/user/me/background {str bgID} {str bgName}	PRO MAC
Current Video Filter Output message containing current video filter	/zoomosc/user/me/filter {str filterID} {str filterName}	PRO MAC
Mic Level Output message with mic level	/zoomosc/micLevel {int 0..100 level}	PRO
Speaker Volume Output message with speaker volume	/zoomosc/speakerVolume {int 0..100 volume}	PRO
Waiting Room User List Output message containing a list of participants in the waiting room	/zoomosc/waitingRoomUserList usual user messages (4)	



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