Help & Documentation

Version 1.2.0

Installation and Accounts

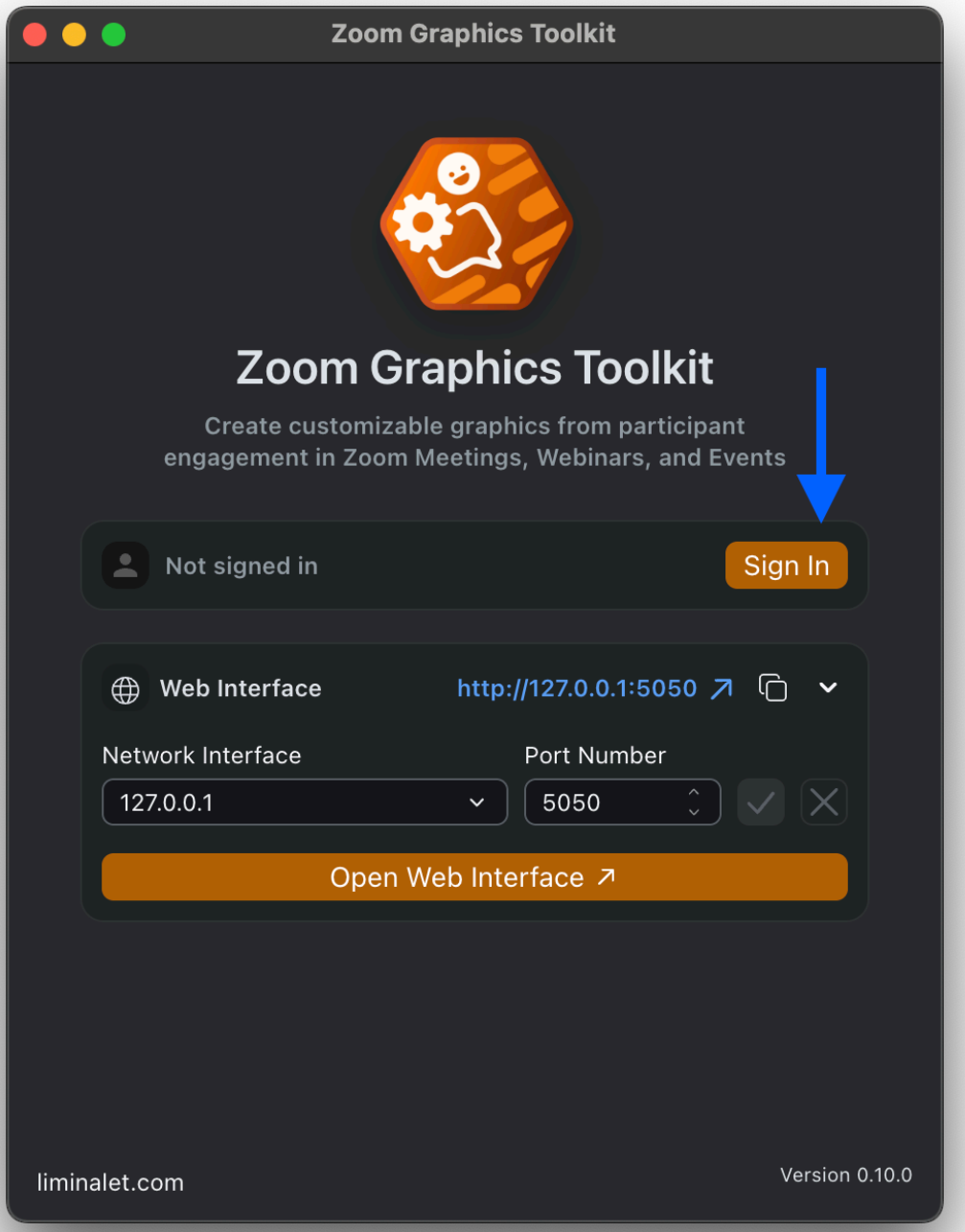
Sign in with Zoom - Adding the App to your Zoom Account

The Zoom Graphics Toolkit has an online sign-in button which allows you to use your Zoom account to log in to the app. Signing in allows the Zoom Graphics Toolkit 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.

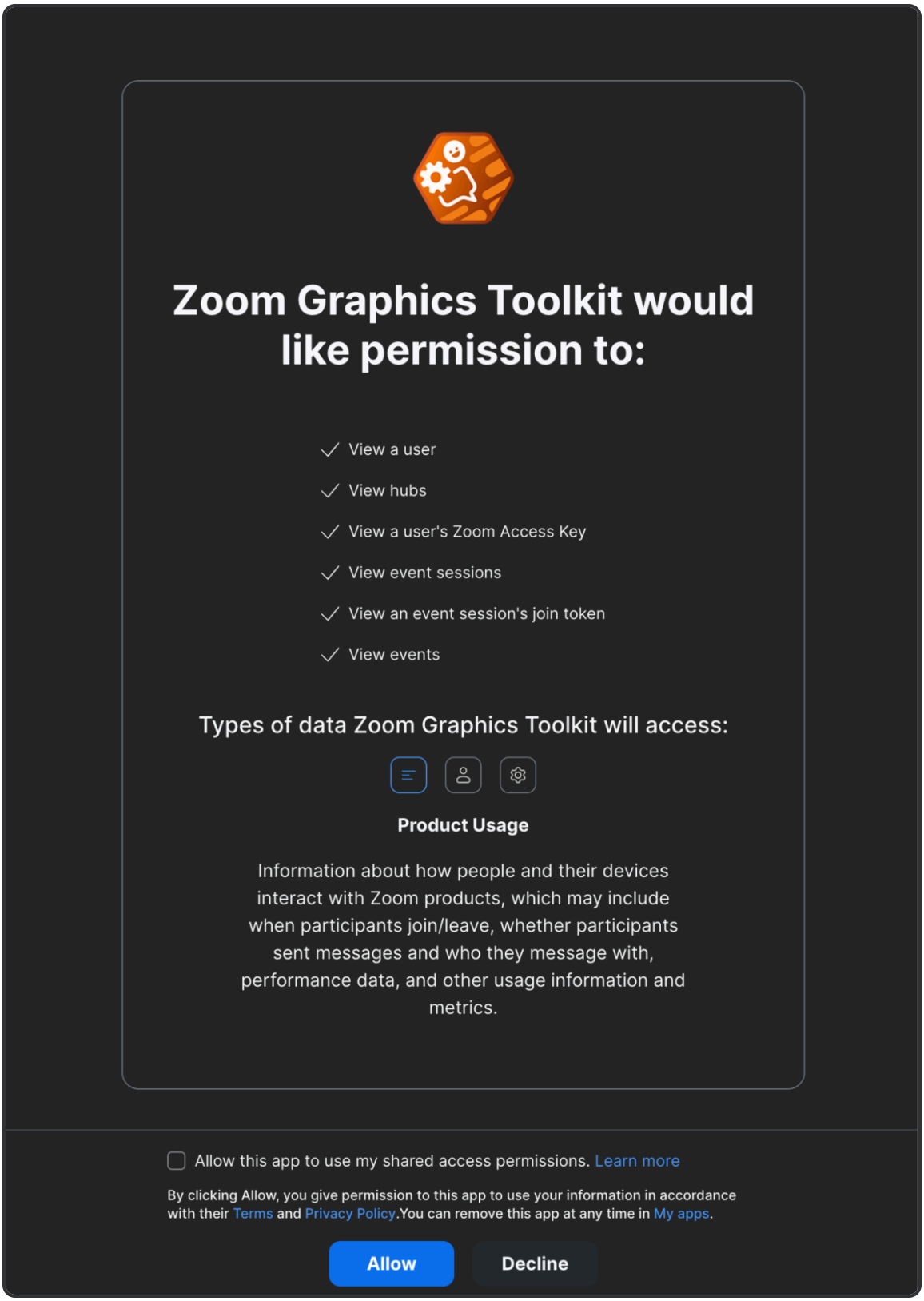
The Zoom Graphics Toolkit is activated when signed in with an account that is an active Hub Host or Owner on the Zoom Events platform. Otherwise, if you don't sign in or sign in with a Zoom account that does not meet the requirements, the Zoom Graphics Toolkit will remain in Trial mode. Please see the licensing section below for more details.

To sign into the Zoom Graphics Toolkit:

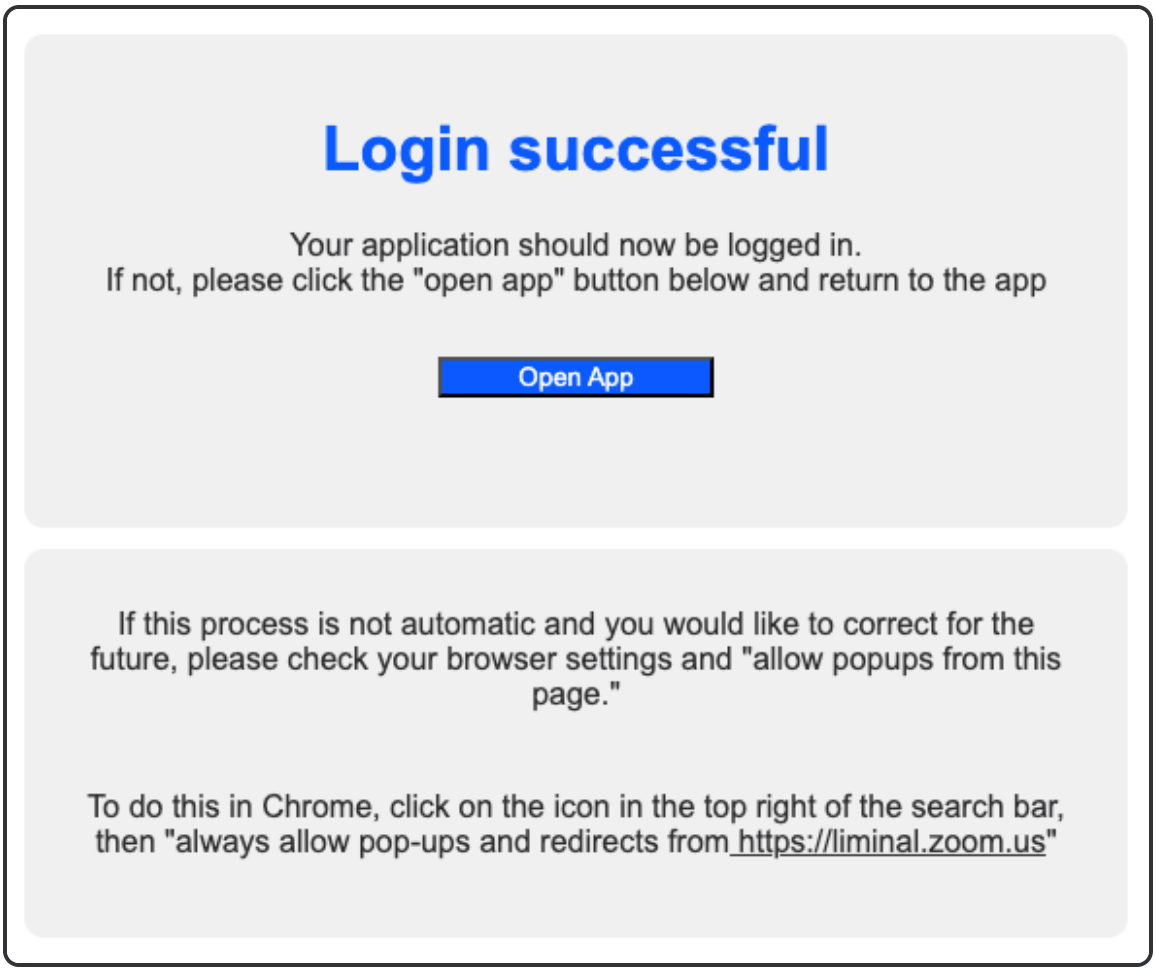
1. Launch the Zoom Graphics Toolkit.
2. Click the "Sign In" button:



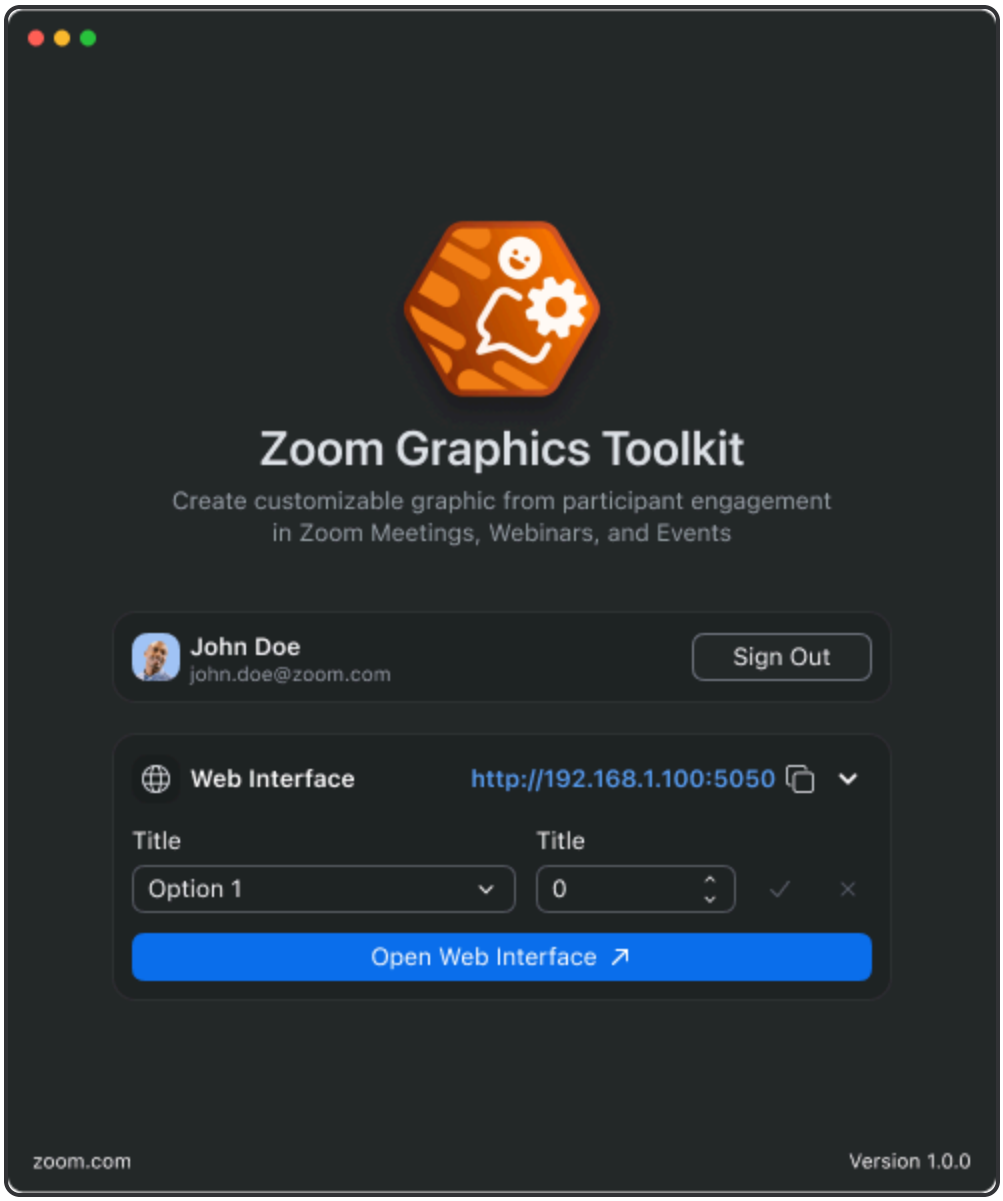
3. You will now be presented with a Zoom website to log in to your Zoom account. If this is the first time you have logged in to the Zoom Graphics Toolkit, you will be prompted to add the Zoom Graphics Toolkit to your Zoom account. Click Allow.



4. This page should redirect you to the liminal.zoom.us login success page where you should proceed to connect to the Zoom Graphics Toolkit by opening the app from the browser



5. If the above steps are successful, you will be logged into the Zoom Graphics Toolkit. You will see your profile image in the middle of the Zoom Graphics Toolkit where you can sign out.



6. The Zoom Graphics Toolkit uses your camera and microphone in meetings. Give the Zoom Graphics Toolkit 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 the Zoom Graphics Toolkit to be added to your Zoom account, depending on how your organization is configured. IT can add the Zoom Graphics Toolkit to your organization at https://marketplace.zoom.us/apps/Cprrh0dYQBSfXnOtzpwvZg

Removing the Zoom Graphics Toolkit from your Zoom Account

Log in to your Zoom account and navigate to the Zoom App Marketplace.

- Click Manage > Added Apps or search for the "Zoom Graphics Toolkit" app.
- Click the "Zoom Graphics Toolkit" app.
- Click “Remove”.

Licensing for the Zoom Graphics Toolkit

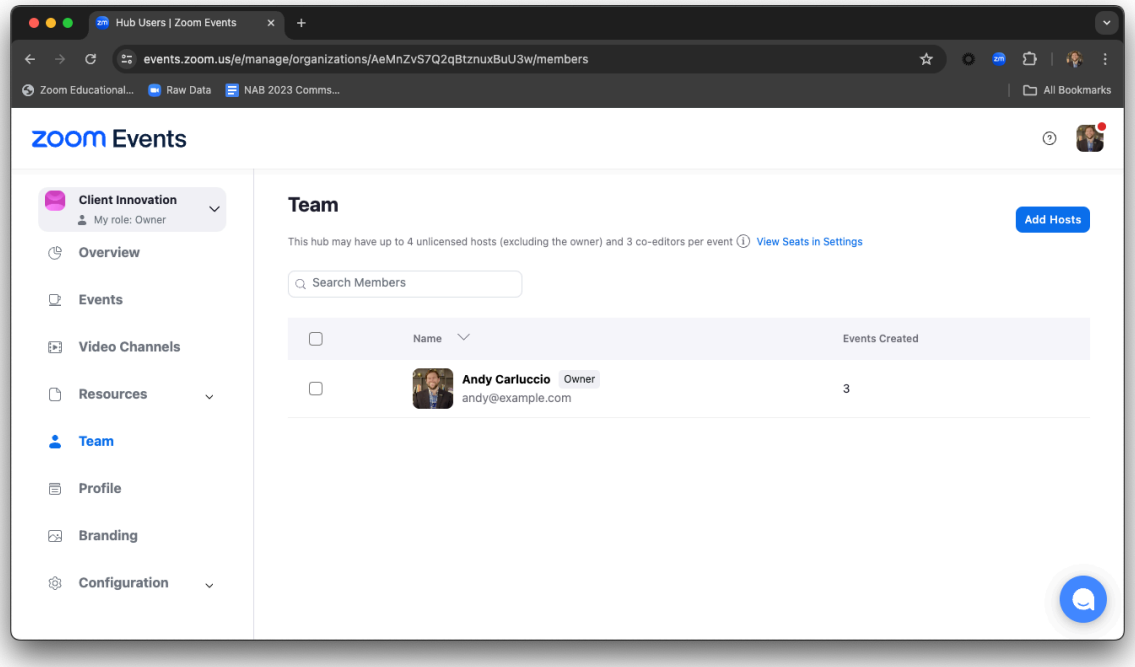
The Zoom Graphics Toolkit is activated when signed in with a Zoom account that has the Zoom Enhanced Media add-on license assigned. Additionally, you can also activate the app by signing in with a Zoom account that is an active Hub Host or Hub Owner on the Zoom Webinars and Events platform. If you don’t sign in, or you sign in with a Zoom account that does not meet the requirements, The Zoom Graphics Toolkit will remain in Trial Mode.

Activate The Zoom Graphics Toolkit with a Zoom Enhanced Media license

The Zoom Graphics Toolkit 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 The Zoom Graphics Toolkit for product activation. The app 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

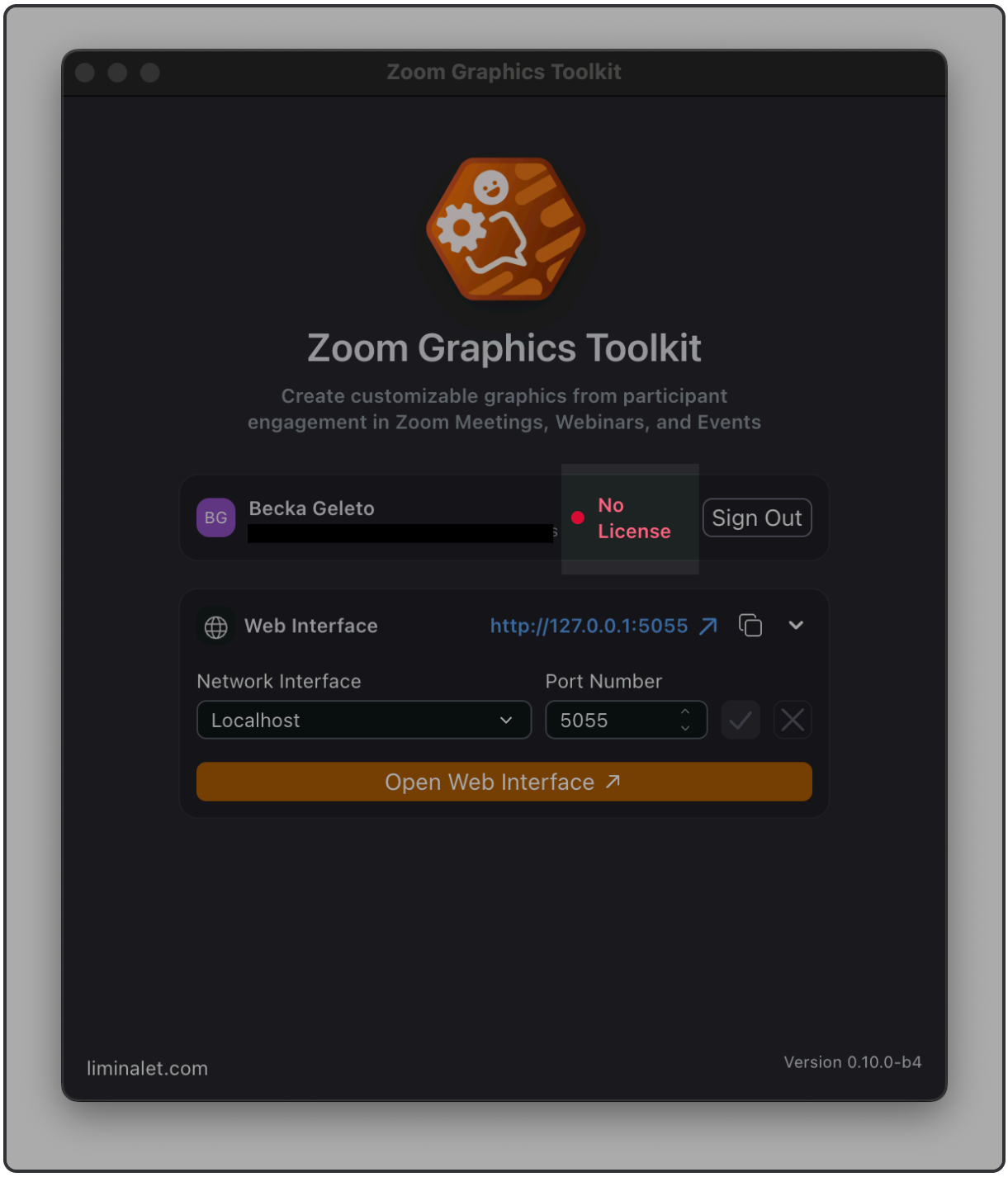
Activate The Zoom Graphics Toolkit with a Zoom Webinars and Events Hub

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 The Zoom Graphics Toolkit by signing into the app. The app 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 The Zoom Graphics Toolkit is not activated, it will operate in Trial Mode. While in this mode, the app is fully configurable, but it will be unable to join Zoom Meetings, Webinars, or Events.



App Interface

The app consist of three main function sections: sign in (previously described), network settings, and launching the web-based GUI

Network Settings

The network settings area allows you to configure connection parameters including IP addresses and ports.

- Network Interface Selection
  - The list of network interfaces will contain at least the *localhost* interface (127.0.0.1) and the *all* interface (0.0.0.0)
  - By default, the network interface will be set to localhost with the port number 5050
- Port configuration
  - Default port is 5050
  - It can be customized as needed

Launching the Interface

To access the web-based GUI:

- Click the “Open Web Interface” button
- This will launch the web-based GUI using your configured network settings

Open Web Interface ↗

Access Control

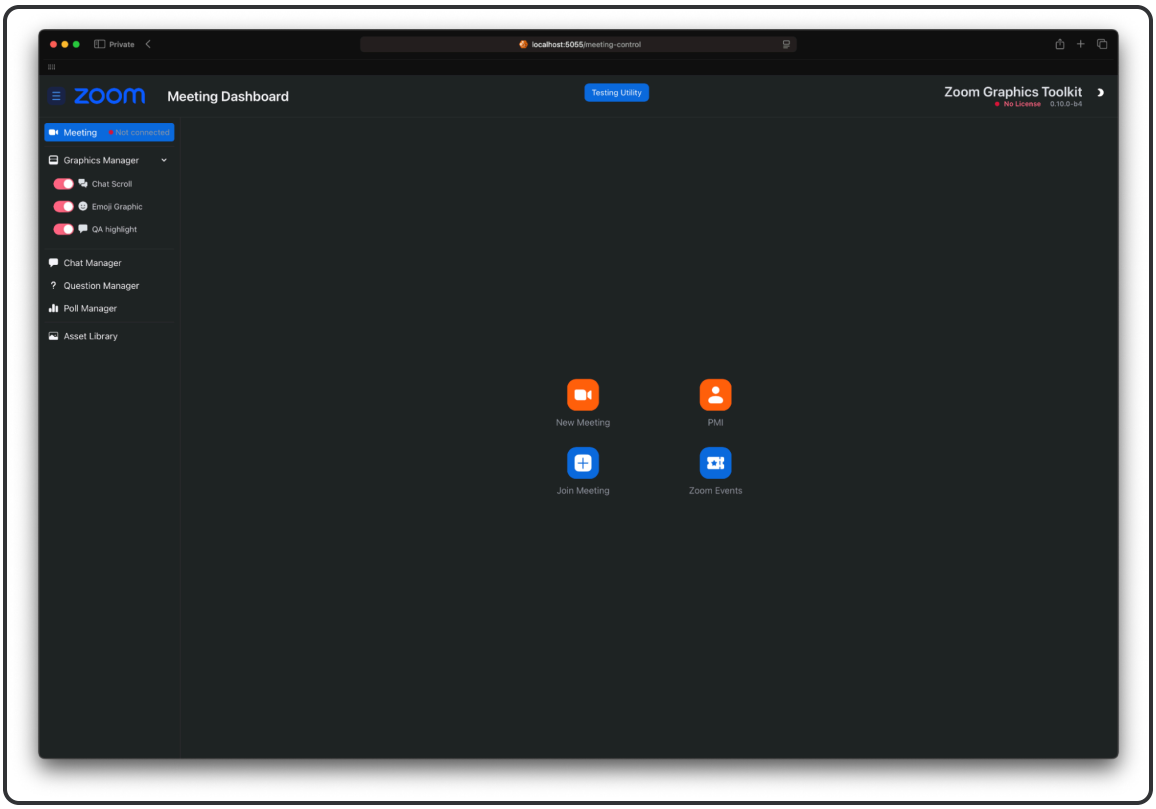
- When using the app on LAN, a code is required to access the web-based GUI. This is designed to protect the app from unauthorized access. By default, an 8-digit code is generated for you. However, a custom code may be input and saved for future use.
- Once authorized, sensitive information is encrypted when transferred between the web interface and the native application.
- There are two stages of DoS protection:

- If a user fails to input the code correctly 10 times in a row, their IP will be blocked for 30 minutes
- If there are 100 failed access code entries across all users, access for new users will be blocked until the host manually enables it

Meeting Dashboard

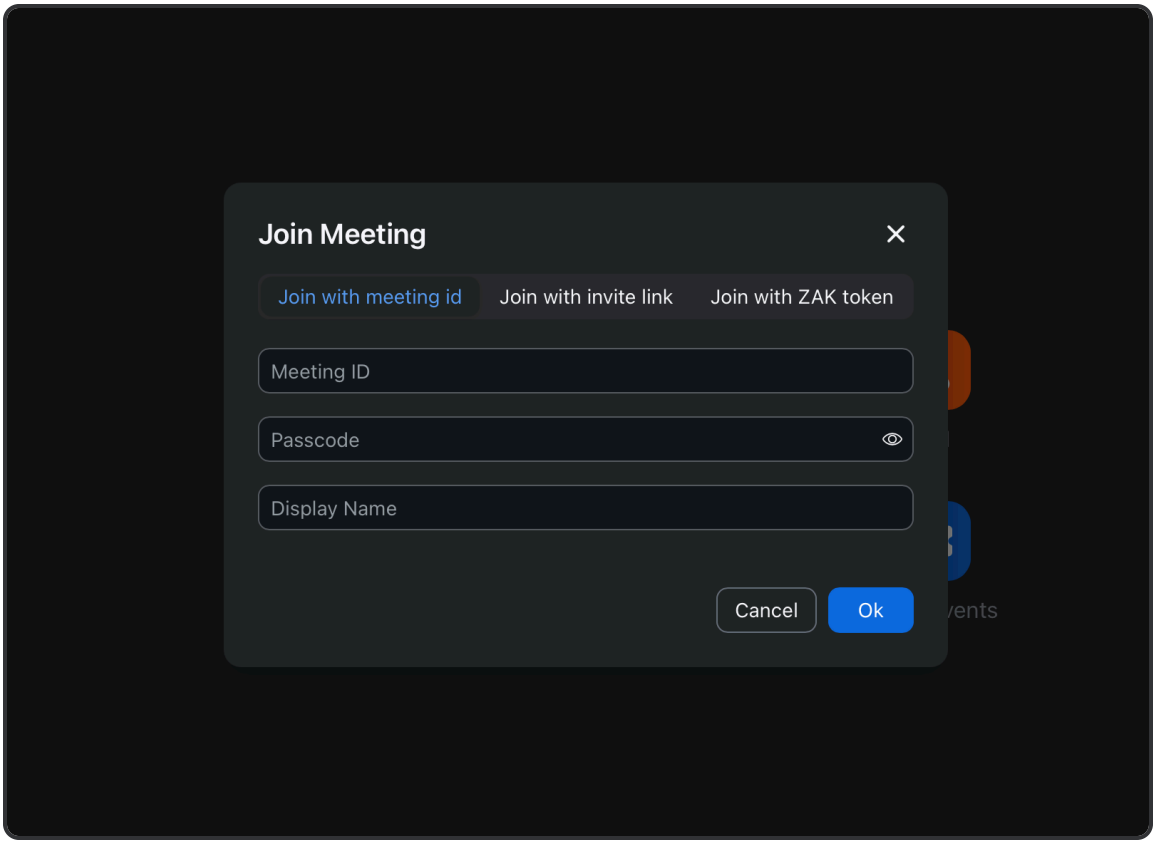
You can start or join a meeting from the Meeting Dashboard. Here you will find buttons for 4 options

- “New Meeting”: Allows you to start a new meeting with your Zoom account.
- “PMI”: This will start and join your personal Zoom meeting.
- “Join Meeting”: This will open a dialog where you can enter the information of a currently active meeting you would like to join.
- “Zoom Events”: This will open a dialog that presents a list of Zoom Events and Sessions that you are hosting or attending.

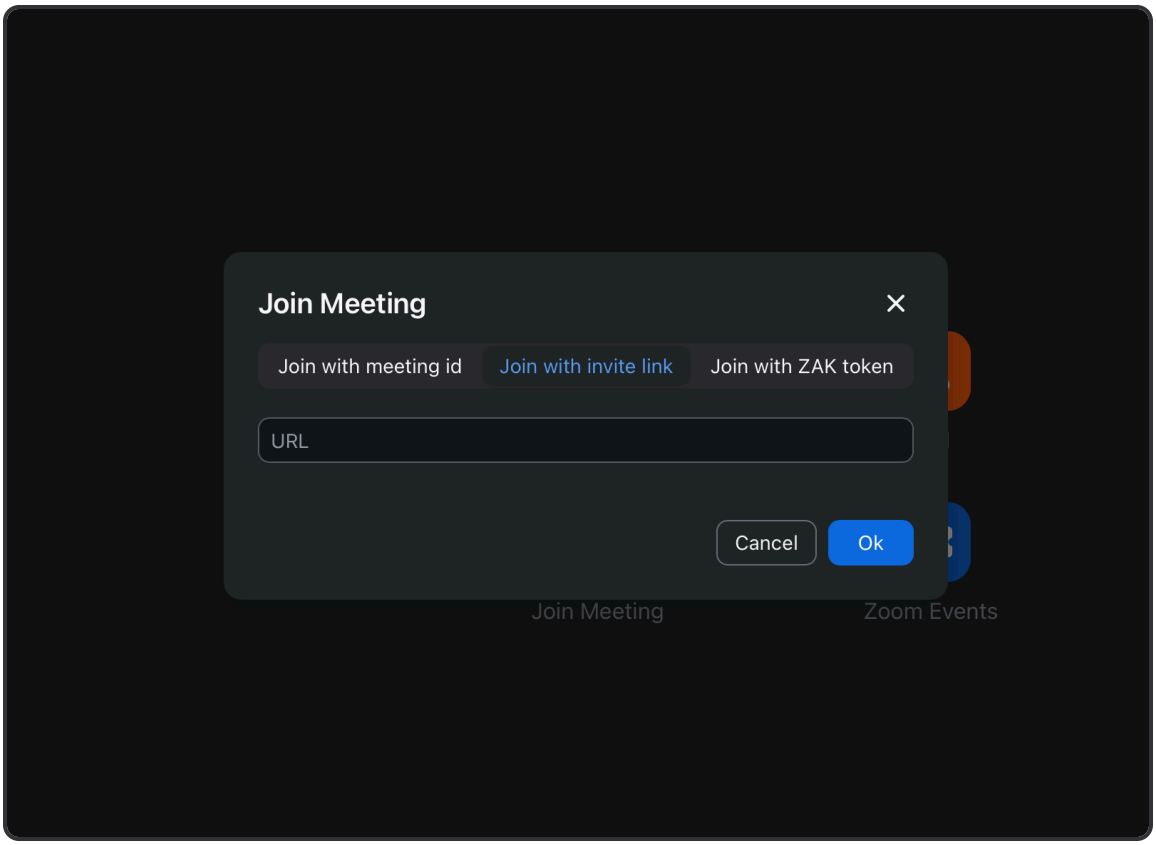


When using the Join Meeting option, you are presented with three options:

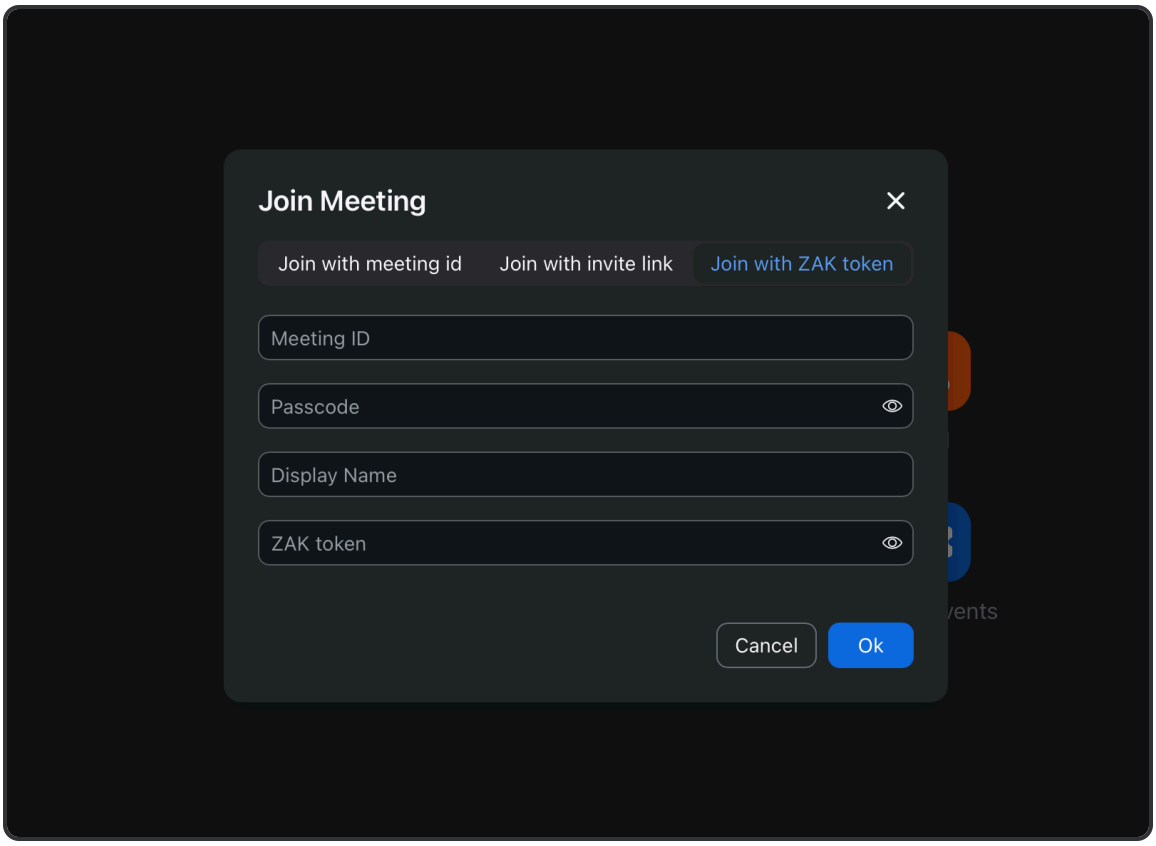
- Join with meeting id: Requires you to provide a meeting ID and passcode to the meeting you are trying to join.



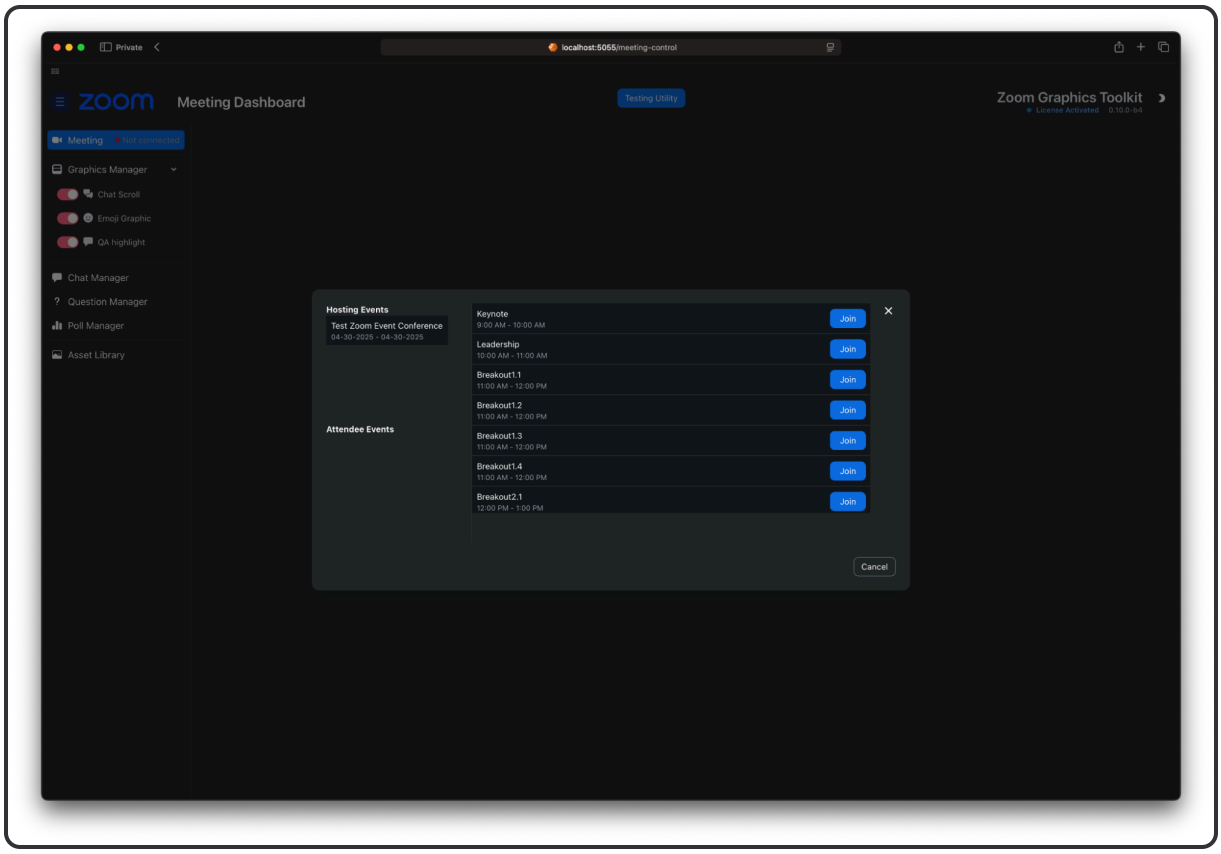
- Join with invite link: Requires you to provide an invite link to the meeting you are trying to join.



- Join with ZAK token: Similar to “Join with meeting id” but allows you to provide a different ZAK token than the one automatically retrieved from your account

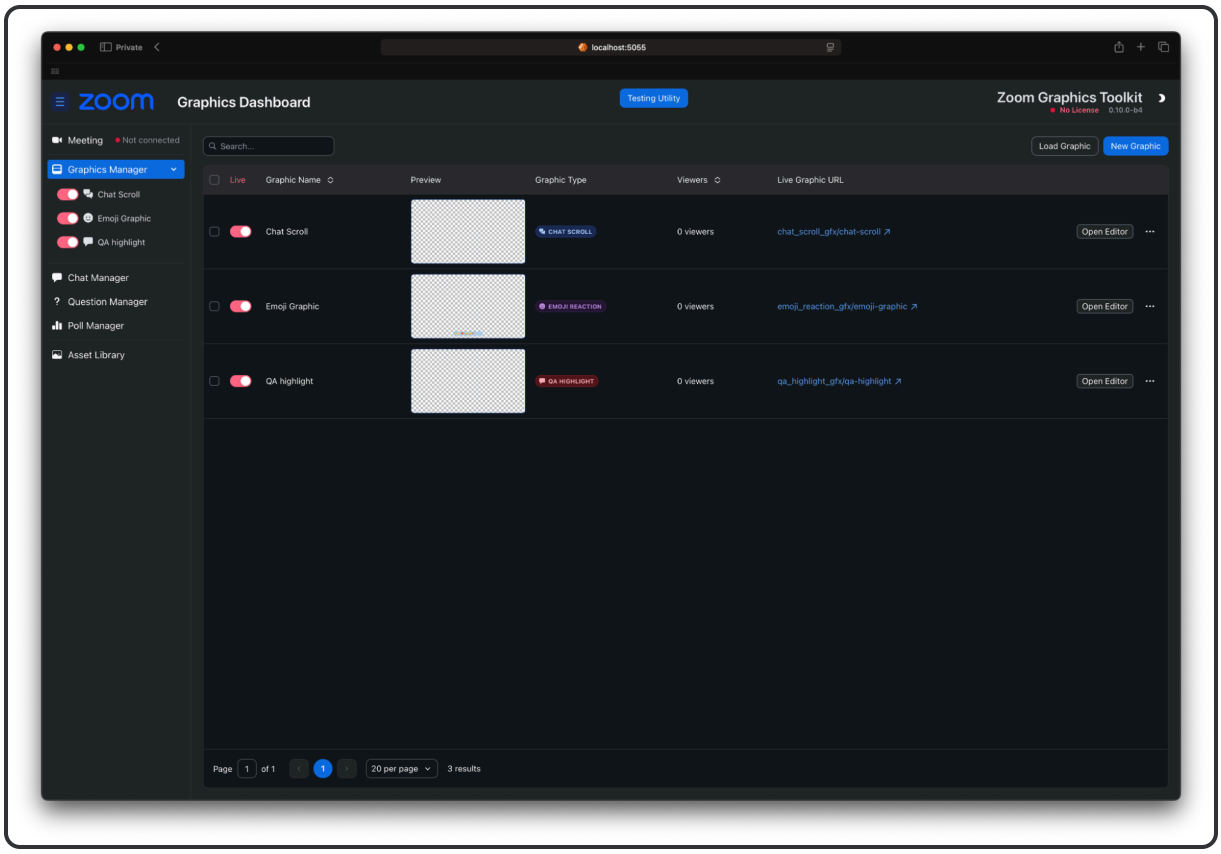


You can also join sessions in Zoom Events by clicking the ‘Zoom Events’ button in the meeting dashboard. You will get the following dialog when clicking the button



On the left side you can see two sections, “Hosting Events” and “Attendee Events”. The “Hosting Events” section lists the events that your account will be hosting and “Attendee Events” lists the events that your account is scheduled to attend. Clicking on the event items listed under those sections will show you a list of sessions within those events that you can join.

Graphics Manager



The Graphics Manager tab allows you to create, import, or delete graphics. Each row in the table corresponds to an individual graphic.

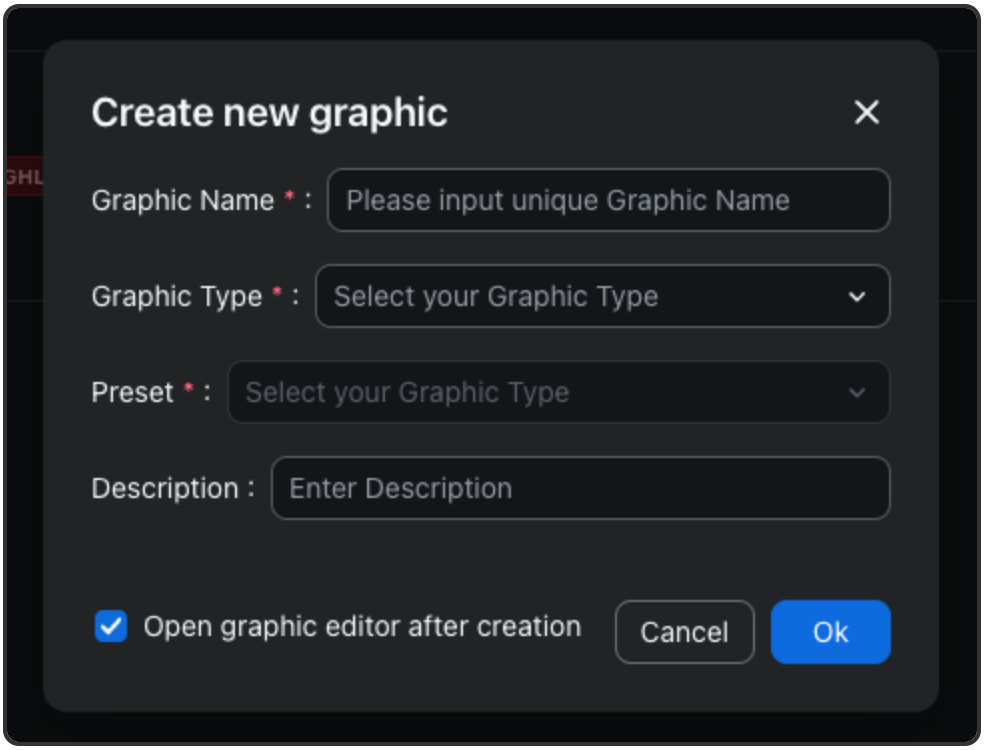
- The toggle button labeled Live next to the Graphic Name will trigger the active or inactive state of the graphic.
- Preview is available to see a small representation of what is being played on that graphic.
- Graphic Type describes which form of data visualization is used, such as Chat Scroll, Poll Results, QA Highlights, Counter, Participant List, or Combiner.
- Viewers count reports the number of downstream receivers of the graphic as measured by how many copies of the web page for the graphic are open.
- Live Graphic URL and corresponding hyperlink represent the address of the web page where the graphic can be found. This URL should be provided to the downstream video mixing tools that need to import the graphics.
- Open Editor button will open the Graphics Editor

- The three dots at the end of the row open a sub-menu where you can Delete, Export, or Save Current Style as Preset

The Load Graphic button will open a file picker where you can load a preset file for a graphic, which includes its type, properties, and design.

The New Graphic button will open a dialogue from which a new graphic can be created.

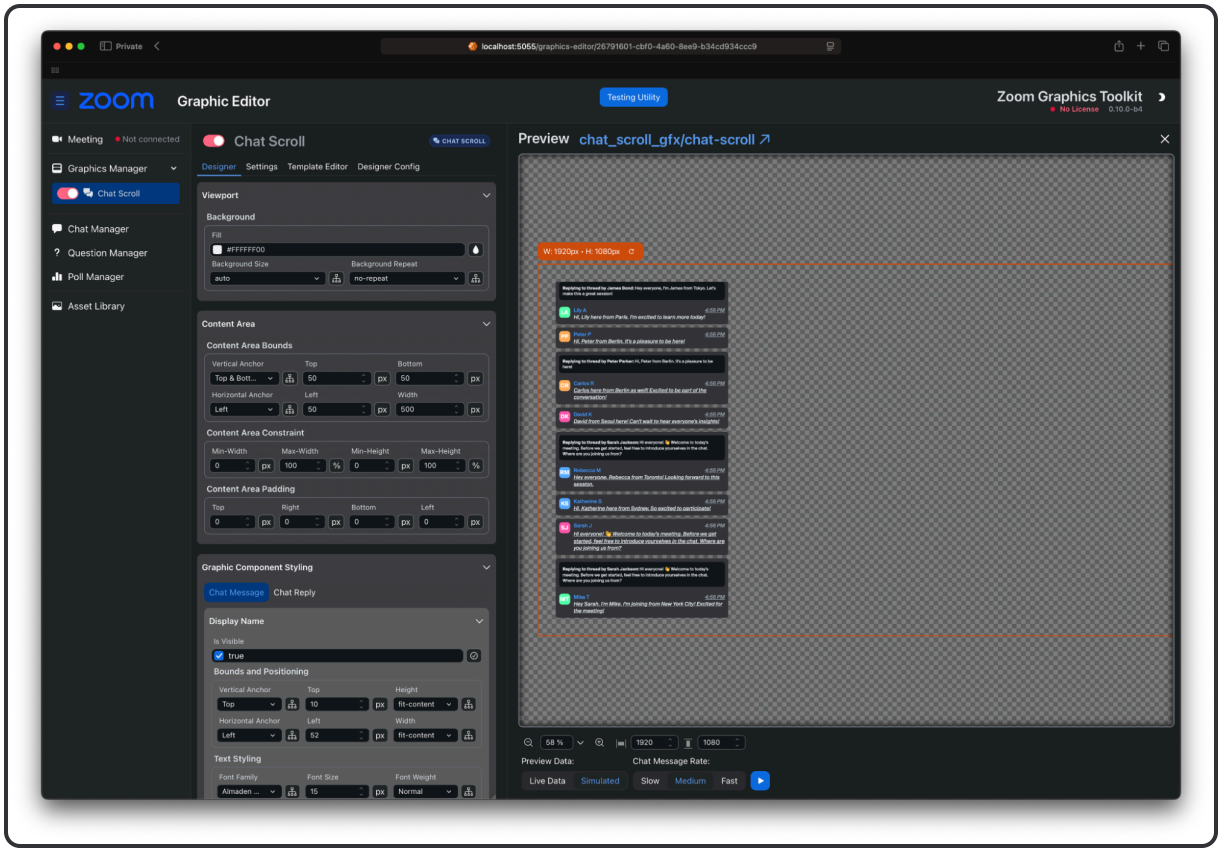
- The Graphic Name will be used to identify the graphic elsewhere in the app.
- The Graphic Type indicates the basic behavior and data sources used by the graphic.
- The Preset option allows you to select from predefined HTML/CSS combinations for out-of-the-box functionality.
- The Description can be used to provide additional details about the graphic.



The name of the graphic will impact the URL generated for the graphic, so if the address has been pre-determined for compatibility with a receiver system or tunnel, please be sure to use the correct graphic name.

The **Combiner** is a graphic type that layers several of your other existing graphics and images into a single output, instead of consuming meeting data directly. It's created separately from the New Graphic flow above: click the **New Combiner** button, next to New Graphic, to open the Create New Combiner dialog. This dialog presents a gallery of Combiner templates — pre-arranged layouts of graphic and image slots — which can be filtered to All Templates, Zoom Templates, or My Templates. Select a template, give the Combiner a name and optional description, and create it. A Combiner's three-dots row menu also includes **Export Combiner** and **Save As Template**, letting you turn it into a reusable template of your own. See the Combiner Graphic Type page in the Programmer's Guide for full details.

Graphics Editor



The Graphics Editor is where the style controls of a graphic are managed. It can be accessed by clicking on a graphic name from the left-hand navigation menu, clicking on the Open Editor button in the row for a graphic in the Graphics Manager tab, or by clicking Ok after ticking the box to open the graphics editor after creation when creating a new graphic.

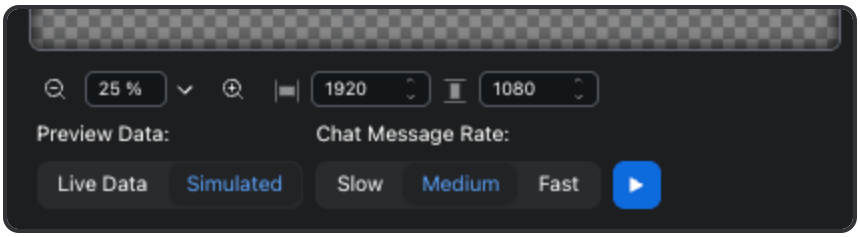
The Graphic Editor contains the following 4 tabs:

- **Graphic Designer Tab:** Here you can customize the look and feel of the graphic by adjusting the properties available for the graphic such as dimensions, positioning, color, and various other properties of different components within the graphic.
- **Graphic Settings Tab:** The behavior of graphics can be customized by the user in various ways depending on the graphic type. For example, in an emoji graphic, you can set rate limits on the maximum number of emojis to show per second. In a chat scroll graphic you can filter the messages that are shown based on which participants sent them. There are also global settings such as animation duration and delays.
- **Template Editor Tab:** This is primarily a tool for a technical designer to edit the HTML and CSS of the graphic with a real-time previsualization of their changes.
- **Designer Config Tab:** This allows advanced users to edit the form that is presented in the Graphic Designer Tab should they want to expose customizations they have made to the HTML or CSS templates through a UI-based editor.

Some graphic types tailor these tabs. The **Counter** graphic uses its Graphic Settings tab to choose which counters appear, set their order, set the polling interval, and control the manual Elapsed Time stopwatch. The **Participant List** graphic uses its Graphic Settings tab to choose the list type, sorting, polling interval, and (for webinars) whether to exclude attendees. The **Combiner** graphic replaces the standard tabs with a single **Combiner** tab for arranging the graphics and images it layers together. Details for all three are in the Programmer's Guide.

Details on programming new graphics using this page are available in the Programmer's Guide.

The Graphic Editor also contains tools to change the view of the preview window and to simulate data for testing new graphics, located below the preview window on the right side of the page.



Every graphic type has its own **simulator tools**, tailored to the kind of data it displays.

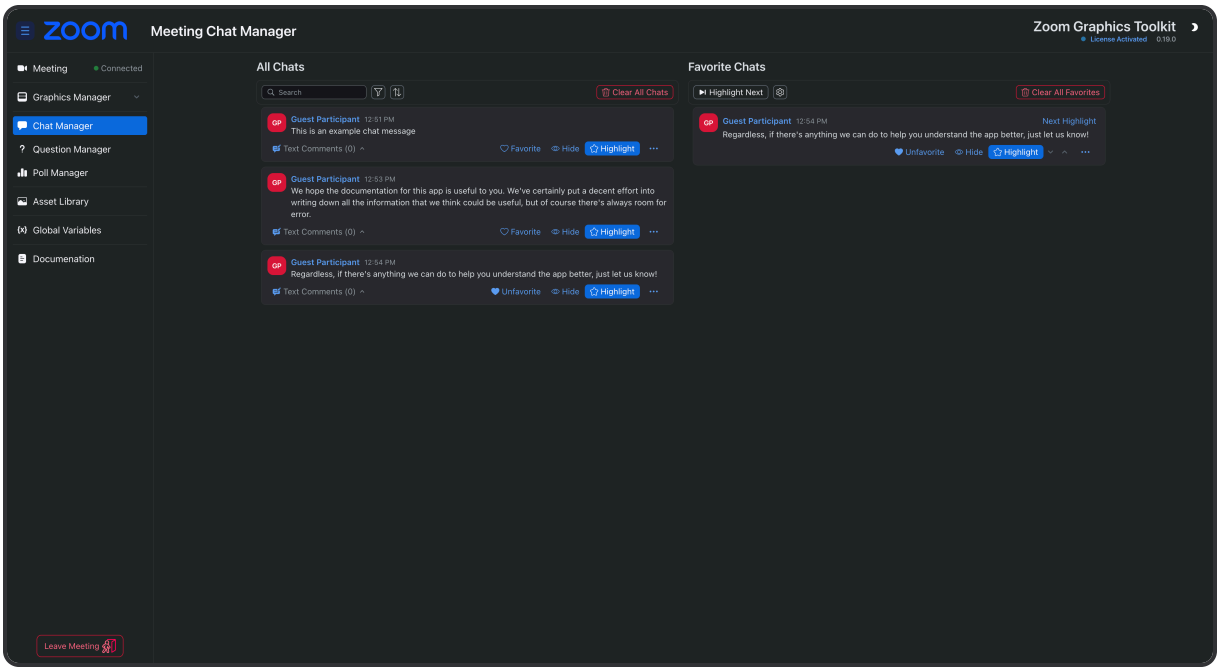
All graphic types have a **Preview Data** selector that allows you to toggle between live data and simulated data to display on the graphic. There is also a checkbox at the bottom of the tools section that allows you to **show simulated data on live output**. This displays simulated data both within the graphics editor and on the external graphic page.

Other simulator tool options are as follows:

- **Chat Scroll**
  - Chat Message Rate: how fast simulated chats will be received (Slow / Medium / Fast).
- **Chat Highlight**
  - Chat Message Length: how long simulated chat highlights will be (Short / Medium / Long).
- **QA Scroll**
  - Question Rate: how fast simulated questions will be received (Slow / Medium / Fast).
- **QA Highlight**
  - Question Length: how long simulated question highlights will be (Short / Medium / Long).
- **Poll Results**
  - Number of Poll Choices: how many choices the simulated poll has (2–10).
  - Response Quantity: how many responses for the simulated poll (None / Low / Medium / High).

    - Response Rate (Ms): how frequently simulated responses arrive, in milliseconds.
    - Visualization Method: the type of poll results graph to be displayed (Bar Chart, Pie Chart).
- **Active Speaker Name Tag**
    - Simulated Name: the name shown on the simulated name tag.
- **Emoji Reactions**
    - Reaction Rate: how fast simulated emoji reactions will be received (Slow / Medium / Fast / Very Fast / Super Fast).
- **Closed Captions**
    - Caption Type: simulate a Single Speaker, or a Conversation between multiple speakers.
- **Counter**
    - Activity Level: the relative size of the simulated meeting, which scales the simulated counter values (Small / Medium / Large).
- **Participant List**
    - Number of Participants: how many simulated participants to generate (1–50).
    - Session Type: simulate a Meeting or a Webinar, which changes role labels and enables webinar-specific behavior.
- **Combiner**
    - Manage All Simulations: control the live or simulated data and start or stop the simulators of every component graphic at once.

Chat Manager



The Chat Manager tab allows you to control the content of all chat-related graphics. It is a two-column interface that divides the incoming chat between the live messages of the meeting and the messages that you have Favorited.

All Chats Column

The All Chats column will display all chat messages as they arrive. There are several filter options in the top navigation bar of this column:

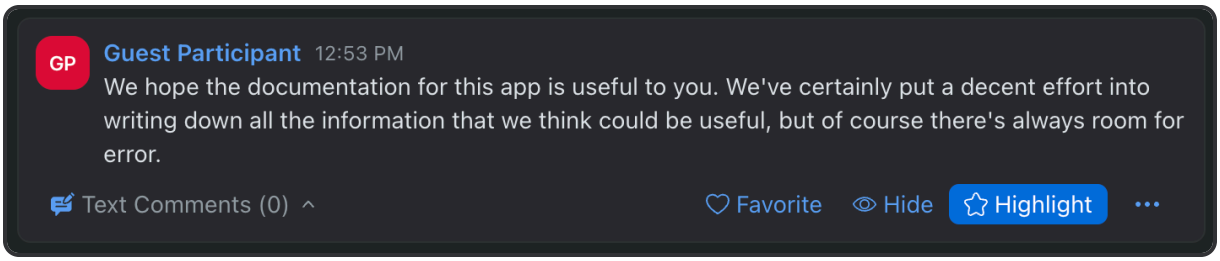
- The Search Bar allows you to type to filter down the list of messages so it is easier to locate a specific chat.
- The Filter Button allows you to only display messages of a given minimum or maximum length. This can be helpful if you know that your graphic style is best suited for a specific message length, or if you wish to filter out short greetings or excessively long messages from your moderation view.
- The Order Toggle will change the order of the messages so that they are listed from newest to oldest or oldest to newest.
- The Clear All Chats button will remove all chats from this column (but NOT from the Zoom chat itself). **Chats cannot be restored to the app after being cleared.**

Favorite Chats Column

The Favorite Chats column will display a list of all chat messages that have been Favorited. This list is helpful for controlling when to highlight specific chats on the graphic by focusing your attention to a curated list. There are several playout controls in this column:

- The Highlight Next button will highlight the next chat message in the list. It may also unhighlight a previous message if the number of maximum concurrent highlights has been reached.
- The Gear button contains additional settings
  - Reset Highlight History will remove the previously-highlighted status of chat messages so that they can be automatically highlighted again
  - Clear Highlights will remove all highlights from the graphic
  - Maximum Highlight Count is the maximum number of concurrent highlights that can be featured on the graphic at the same time.
- Clear All Favorites will Unfavorite every message in the list

Chat Card



A message from the Zoom Chat is represented as a Chat Card within the Graphics Manager. The Card contains the content of the message, information about the sender, as well as controls for managing the message within the app.

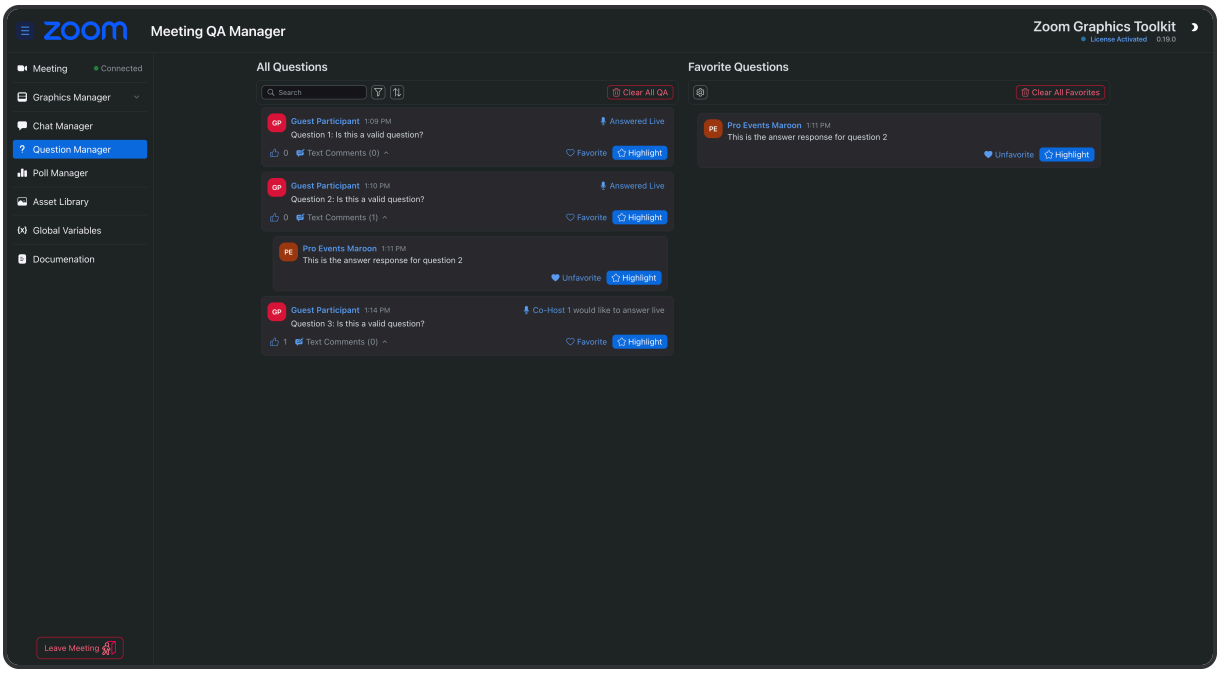
- The name of the sender, their Zoom profile picture (or initials of their Zoom name if no profile picture is available), the time the message was received, and the content of the message are displayed on the Chat Card.

- The Favorite button will place a copy of the message in the Favorite Chats column. When clicked, this button will become Unfavorite, which can be used to remove a message from the Favorite Chats column.
- The Highlight button will send the message to the Chat Highlights graphics. When clicked, this button will become Unhighlight, which can be used to remove a message from the Chat Highlights graphics.
- The Hide button will remove the message from appearing in Chat Scroll graphics. When clicked, this button will become Show, which can be used to re-introduce a message to the Chat Scroll graphics.
- The Three Dots button will reveal a Delete Chat button, which will attempt to remove the message from the Zoom Chat itself, but can only be used in meetings where this feature is available and additionally requires that the co-host user role be granted to the participant representing the Zoom Graphics Toolkit in Zoom.
- The Expand button will show any threaded replies to the message from Zoom Chat. It changes to Collapse which clicked to hide the replies.

There are additional badges that are shown on a Chat Card depending on its state:

- Highlighted indicates that the message is currently being presented on a Chat Highlight graphic. Highlighted messages will also have blue Chat Cards.
- Next Highlight indicates that the message will be Highlighted when the Highlight Next button is used.
- Previously Highlighted messages will be displayed as a greyed out Chat Card.

Question Manager



The Question Manager tab allows you to control the content of all Q&A-related graphics. It is a two-column interface that divides the incoming Questions between all the available Q&A submissions and the Questions or Answers that you have Favorited.

In Zoom, the host/co-host can control the visibility of Q&A submissions to the rest of the participants. If attendees cannot see Q&A from others, then the Zoom Graphics Toolkit participant in Zoom must be promoted to co-host in order to see the Q&A data.

All Questions Column

The All Questions column will display all questions and answers as they arrive. There are several filter options in the top navigation bar of this column:

- The Search Bar allows you to type to filter down the list of Q&A so it is easier to locate a specific item.
- The Filter Button allows you to only display Q&A of a given minimum or maximum length. This can be helpful if you know that your graphic style is best suited for a specific length, or if you wish to filter out short greetings or excessively long Q&A data from your moderation view.

- The Order Toggle will change the order of the items so that they are listed from newest to oldest or oldest to newest.
- The Clear All QA button will remove all Q&A data from this column (but NOT from the Zoom Q&A itself). **Q&A data cannot be restored to the app after being cleared.**

Favorite Questions Column

The Favorite Questions column will display a list of all questions or answers that have been Favorited. This list is helpful for controlling when to highlight specific questions or answers on the graphic by focusing your attention to a curated list. There are several playout controls in this column:

- The Gear button contains additional settings
  - Clear Highlights will remove all highlights from the graphic
  - Maximum Highlight Count is the maximum number of concurrent highlights that can be featured on the graphic at the same time.
- Clear All Favorites will Unfavorite every QA item in the list

Question Card

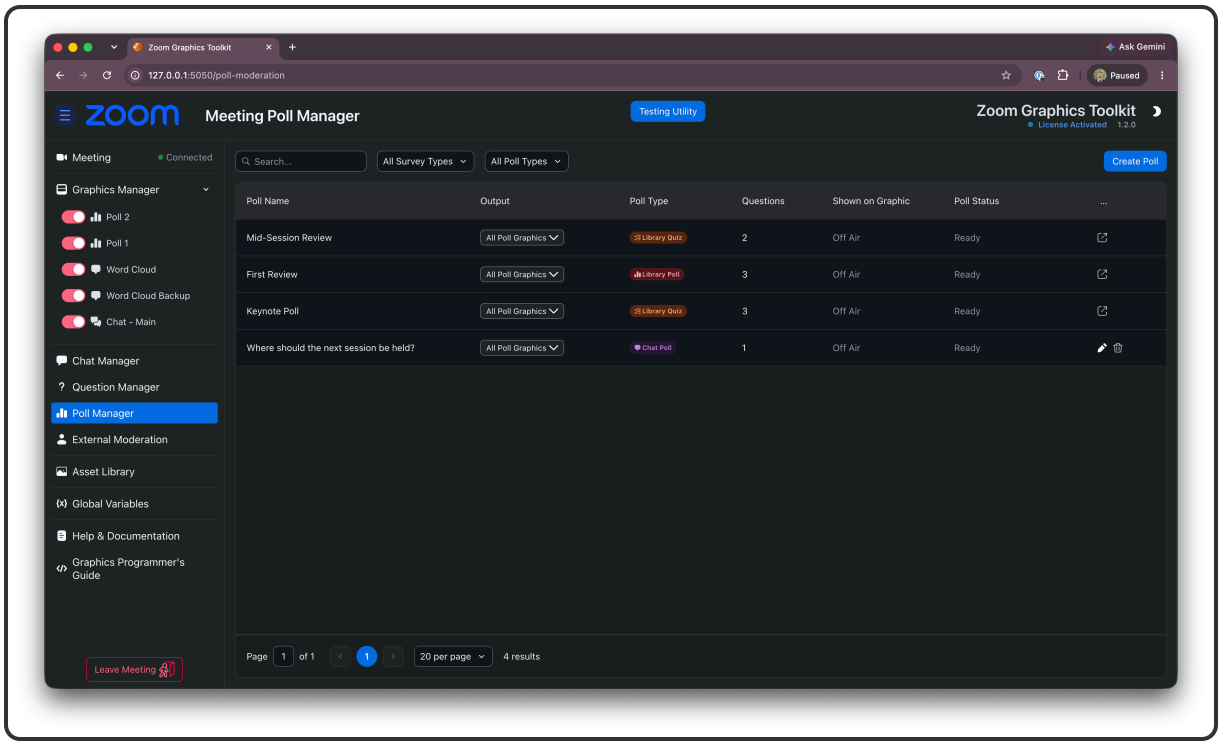
A question from the Zoom Q&A system is represented as a Question Card within the Graphics Manager. The Question Card contains the content of the question or answer, information about the sender, as well as controls for managing the question or answer within the app.

- The name of the sender, the initials of their Zoom name, the time the question or answer was received, and the content of the message are displayed on the Question Card.
- The Favorite button will place a copy of the message in the Favorite Chats column. When clicked, this button will become Unfavorite, which can be used to remove a message from the Favorite Chats column.
- The Highlight button will send the message to the Question Highlights graphics. When clicked, this button will become Unhighlight, which can be used to remove a message from the Question Highlights graphics.
- The Expand button will show any text answers submitted for a question. It changes to collapse when clicked to hide the answers.

There are additional badges that are shown on a Question Card depending on its state:

- Upvotes displays a number corresponding to the number of votes a question has received in Zoom. Note that the ability to vote on questions is determined by the Zoom settings of the Q&A feature.
- Has Live Answer indicates that a question was marked for Answer Live
- Answering Live indicates a question is currently being answered live and notes the name of the participant who is answering it

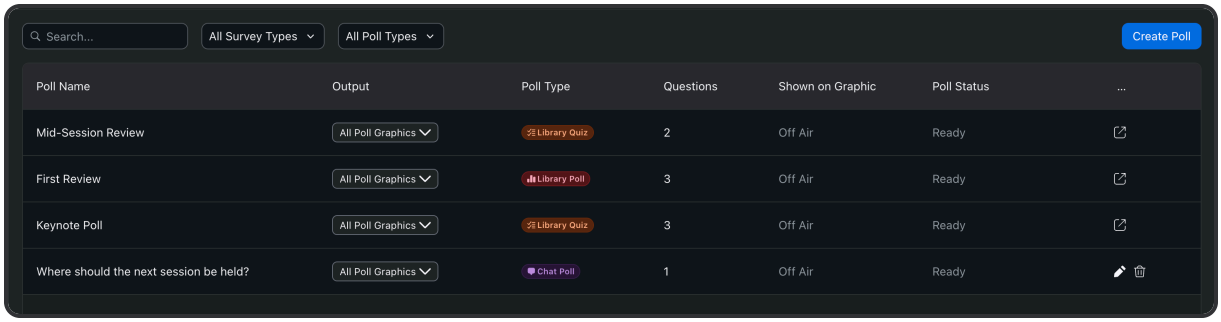
Poll Manager



The Poll Manager tab allows you to control the content of all Poll-related graphics. It is a table-based interface that lists all of the polls available to the meeting and shows a list of questions and playout controls for a selected poll.

In Zoom, polls can be configured either at the account level in a Library or during the meeting as a Meeting Poll. Both are available to list in the app, but the Zoom Graphics Toolkit participant must be a host/co-host in order to view all of the polls.

Poll Table



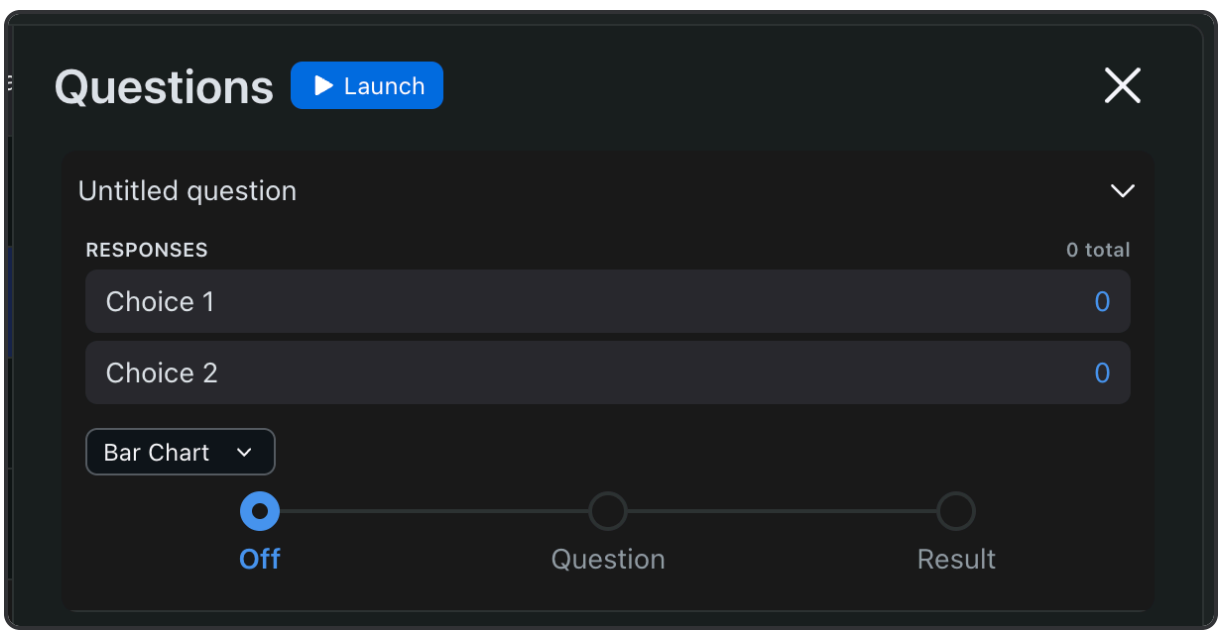
The Poll Table lists all of the polls available to the meeting from the perspective of the Zoom Graphics Toolkit participant. Clicking on a row in the table will select the

poll and display its Questions and playout controls on the right-hand side of the app.

- The Poll Name is determined in the Zoom client or the Zoom web portal as the title of the poll
- The Poll Type refers to the origin of the Poll being a Library Poll or a Meeting Poll
- The Questions field shows how many questions are contained within the Poll
- Graphic Status indicates if a Question inside the Poll is being displayed on a Poll Graphic
- Poll Status is synced with the state of the Poll in Zoom (e.g. In Progress, Ended, etc.).

Using the top options above the Poll Table, it is possible to search or filter to find specific Polls.

Questions Menu



The Questions Menu lists all of the Questions inside a Poll and indicates their response status. At the top, the "Launch" button will start the poll in the meeting. The menu also contains the playout controls for the data to be routed to the Poll

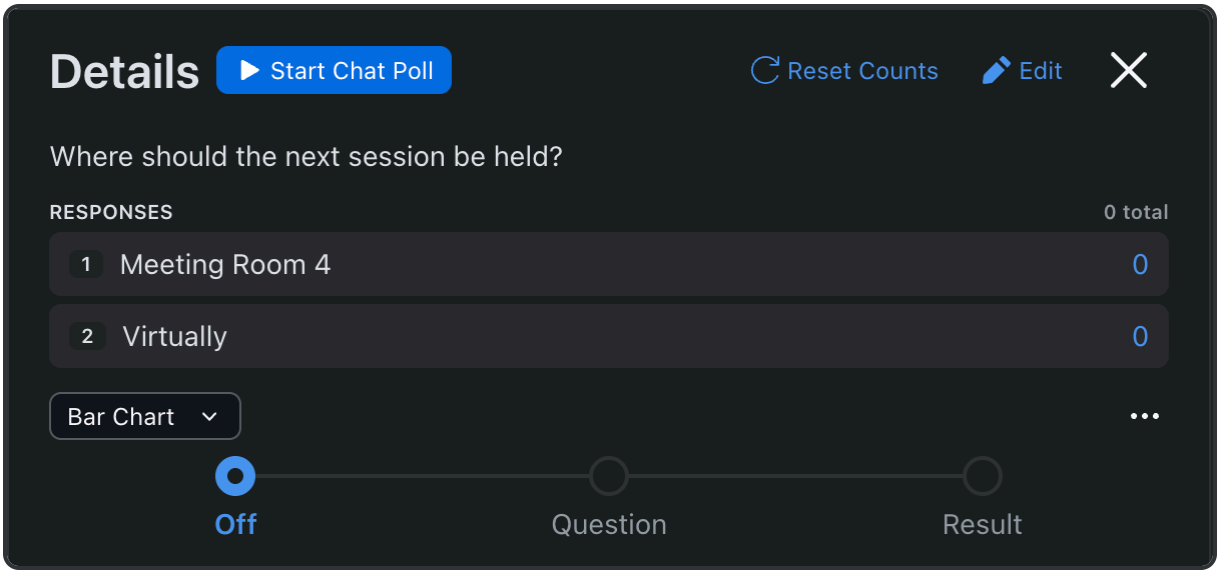
Graphics. Each Question is presented on its own card with the following controls and labels:

- The question title and content
- The total number of responses received
- The per-choice response totals
- A graphic style selector (bar or pie chart)
- A stepper to control what is output on graphics

Only 1 Question can be shown at a time in the current Poll Graphic implementation. Showing a second Question without hiding the first will cause the first Question to be automatically hidden.

Only 'Single Select' and 'Multi Select' are supported for the Poll Graphic at this time.

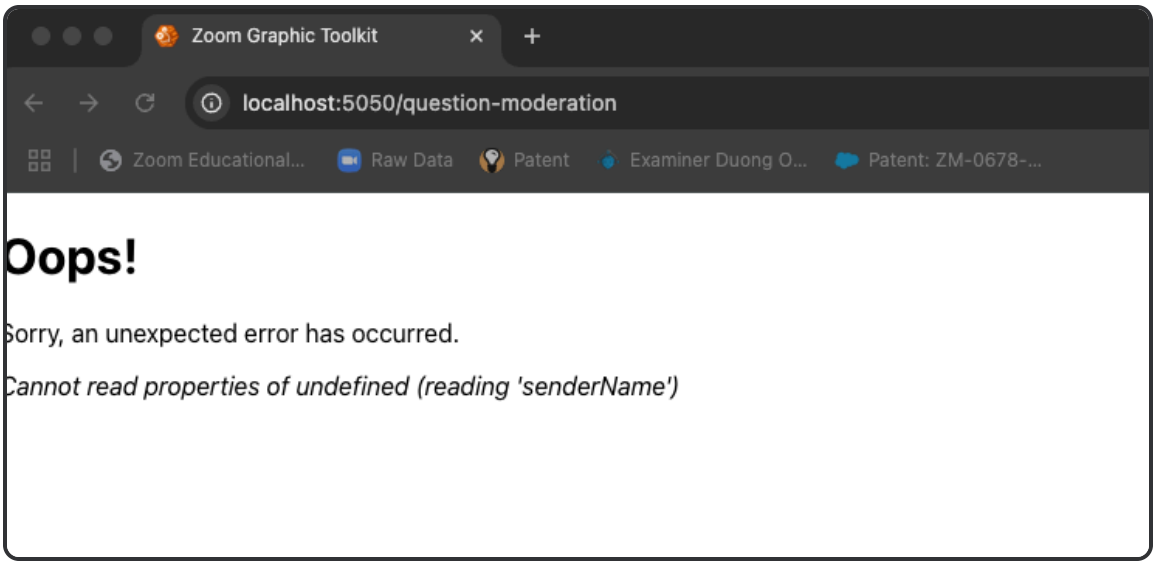
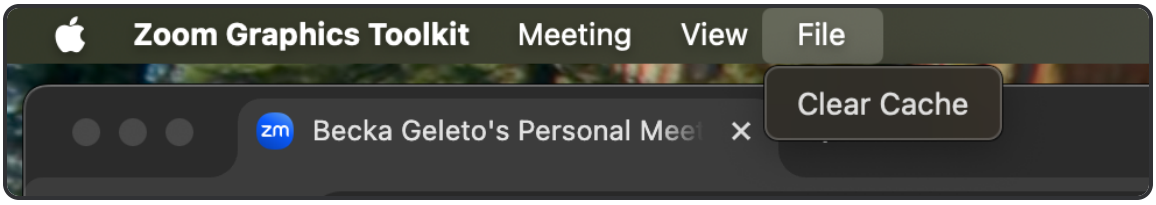
Chat Polls



Chat Polls offer the ability to create tally responses from messages sent in the meeting chat. Currently, survey and quiz types are supported. A custom chat message can be configured, which will be sent in the meeting when the Chat Poll begins.

Tips

- If you ever get a white "Oops!" page, just refresh it. The interface should come right back.



- If you experience issues where the app is not showing data after joining a meeting as host/cohost, try clearing the cache in the menu bar. This will however also delete any custom graphics you may have worked on though so consider exporting them first if you want to avoid losing those changes.