



Vivoh Multicast App

Installation and Administrator Guide

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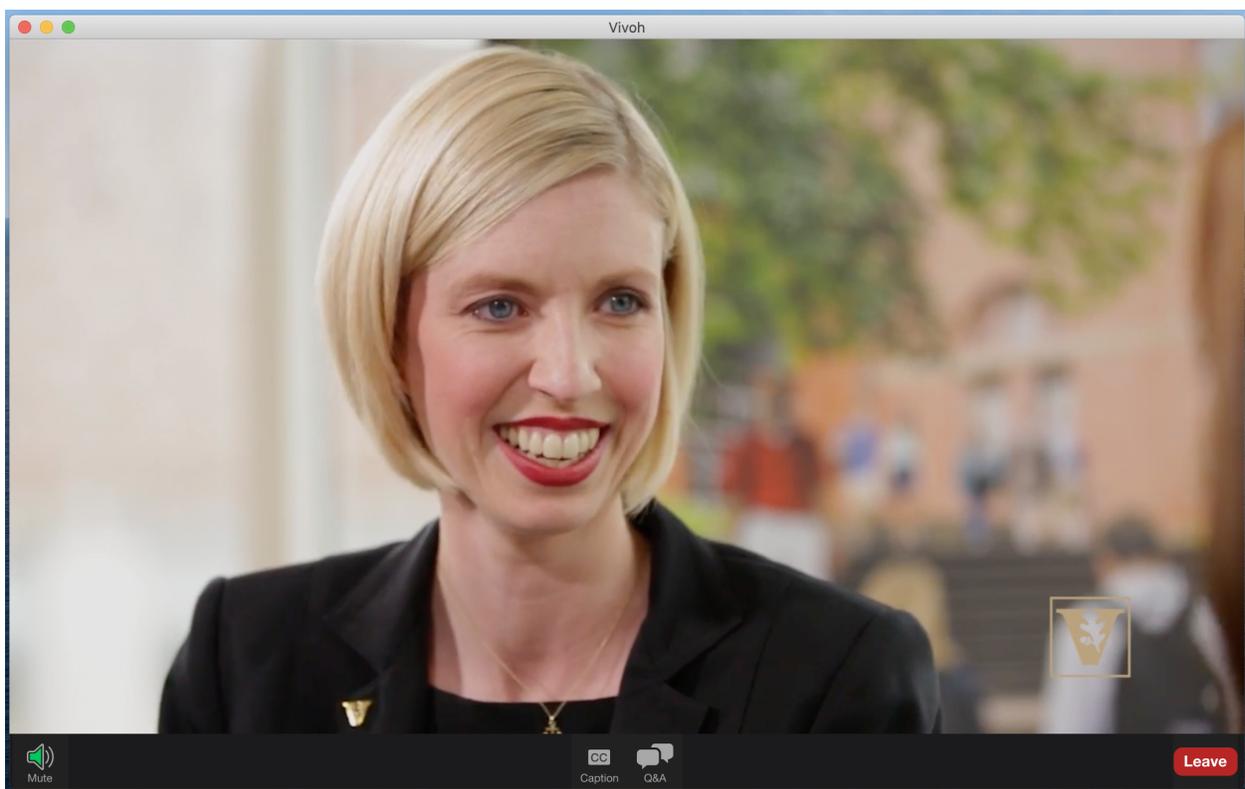
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1: Introducing the Vivoh Multicast App

The Vivoh Multicast App is part of the Vivoh Zoom Multicast Solution which enables IT Service Delivery Managers to provide a seamless way to scale Zoom Webinars for enterprise webcasting using the multicast protocol. Please refer to the Vivoh Zoom Multicast Solution Technical Overview and Requirements for information about how the system works as a whole.

The Vivoh Multicast App enables users to view a Zoom Webinar and participate in messaging for the webinar through integrations with third-party messaging applications, like Sli.do and Poll Everywhere. Users can also view live captioning within the Vivoh Multicast App from third-party captioning providers, like StreamText and Vitac.

IT Service Delivery Managers can choose to enable QA and/or live captioning based upon Rules that can match different sets of users based upon IP address, User Agent, or Webinar ID.



2: Installation Prerequisites

Supported Browsers

To access the Vivoh Multicast App users will use their browser and click on a link to the Vivoh Webinar Manager which will then redirect the user to the Vivoh Multicast App as a helper application. The user's browser must meet the following requirements:

- Windows
 - Internet Explorer 11 and above
 - Firefox 45.0.2 and above
 - Microsoft Edge 44 and above
 - Chrome 49 and above
- MacOS
 - Firefox 45.0.2 and above
 - Chrome 49 and above
 - Safari 10.1.2 and above
- Linux
 - Firefox 45.0.2 and above
 - Chrome 49 and above

Supported Operating Systems

The Vivoh Multicast App is supported by the following:

- Windows 10 and above
- MacOS 10.10 and above
- Ubuntu Linux 14.04 LTS and above

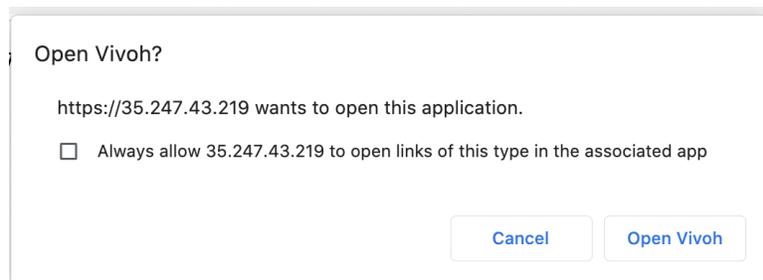
System Requirements

The Vivoh Multicast App requires the following:

- Memory: 4GB of RAM
- Disk: 250MB
- CPU: 3.00 GHz+

3: Installing the Vivoh Multicast App

The Vivoh Multicast App is deployed with an installer for each participants' target OS. The Windows installer is a Vivoh-developer-signed .exe file generated by the NSIS installation packaging tool and the MacOS installer is a Vivoh-developer-signed .dmg file. The Windows installer runs in silent mode for deployment by tools such as SCCM. The installer updates the Windows Registry or the OSX Properties List with a vivoh:// Custom URL Handler. This opens the Vivoh App as a browser helper application from any link on a web page or chat session.



4: Working with the Vivoh Multicast App

The Vivoh Multicast App is launched as a browser helper application from a link that contains the vivoh:// protocol handler. The video source is set with the globalUrl parameter and other parameters are options. These parameters are constructed by the Vivoh Webinar Manager automatically, however, you can launch the Vivoh Multicast App on its own with a simple URL, for example: vivoh://acme?globalUrl=rtp://239.0.0.1:12345. Additional and optional parameters are listed below.

Query Parameters For the Vivoh Multicast App

- globalUrl - The primary parameter for setting the source of the video stream
- failoverUrl - One or more failover sources. Repeat "failoverUrl=" for each.
- ccUrl - A web-based captioning resource. If passed the "CC" button will appear.
- qaUrl - A web-based QA or Chat resource. If passed the "QA" button will appear.
- skin - This can be "zoom", "microsoft", "webex", "google", or "webcast"
- logo - URL to an image file that will show if the skin is set to "webcast"
- headerColor - An HTML color value, or "white", "blue", etc if the skin is set to "webcast"
- appLog - true or false to create Vivoh-App.log in the users' home directory
- jsonLog - true or false to create Vivoh-App.json in the users' home directory

Setting The Vivoh Multicast App Skin Via The Vivoh Webinar Manager

The Vivoh Multicast App is automatically set with a platform-specific skin when an end user webinar URL has a platform-specific route. For example: `https://vivoh.customer.com/webex/123` will launch the App with a Webex skin (if a multicast Rule match succeeds - see the Vivoh Webinar Manager Installation and Administration Guide for information about Rules). The following are examples of each:

- `https://vivoh.customer.com/zoom/123`
- `https://vivoh.customer.com/webex/123`
- `https://vivoh.customer.com/microsoft/123`
- `https://vivoh.customer.com/google/123`
- `https://vivoh.customer.com/webcast/123`

Local INI File Options

The Vivoh Multicast App can be set to override query parameter values by putting any such value in the “vivoh.ini” file in the users’ home directory. In addition to the above parameters, the following extra parameters can be set in this ini file:

- `VERBOSE=[0|1]` - Add more information to the Vivoh-App.log file
- `VIVOH_PIPELINE=[FULL GStreamer PIPELINE]` - Custom Gstreamer pipeline test
- `GST_DEBUG=[1-5]` - Add Gstreamer logging by level to the Vivoh-App.log file
- `QTWEBENGINE_REMOTE_DEBUGGING=[PORT NUMBER]` - Chromium debugging
- `TRACE=[MULTICAST HOST AND PORT NUMBER]` - Multicast packet detection app

Unicast and File-based Source Options

The Vivoh Multicast App will pass globalUrl sources with a “https://” or “file:///” protocol to the QT Media Engine. Playback support is dependent on the OS platform’s multimedia framework. As of this writing, the following URL plays a live HLS stream from Akamai:

```
vivoh://vivoh?globalUrl=https://mcoctobpltc-i.akamaihd.net/hls/live/571329/eight/playlist.m3u8
```

The following URL plays a local MP4 file on a Mac:

```
vivoh://vivoh?globalUrl=file:///Users/erik/Desktop/git/adena.mp4
```

5: Working with Logs and Implementing Analytics

The Vivoh Multicast App enables real-time logging for analytics via a local application log and a performance log which are stored on each user's home directory. Vivoh recommends Splunk for analytics processing and the use of Splunk Forwarder agents to pick up the performance log files that are generated by the Vivoh Multicast App and push these periodically to the central Splunk server. Reports are available via the Splunk interface. The Vivoh App logs to the user's home directory as 'Vivoh-App.log' and 'Vivoh-App.json'. Vivoh-App.json contains an entry each minute with essential analytics data.

Vivoh Multicast App JSON Log Examples:

```
{ "platform": "zoom", "webinar": "12312312", "destination": "vivoh", "date": "2021-11-16T18:07:15.963Z", "ip": "10.10.10.10", "useragent": "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_14_2) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/95.0.4638.69 Safari/537.36" }
```

```
{ "platform": "zoom", "webinar": "12312312", "destination": "zoom", "date": "2021-11-16T18:07:46.295Z", "ip": "::ffff:10.42.0.15", "useragent": "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_14_2) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/95.0.4638.69 Safari/537.36" }
```

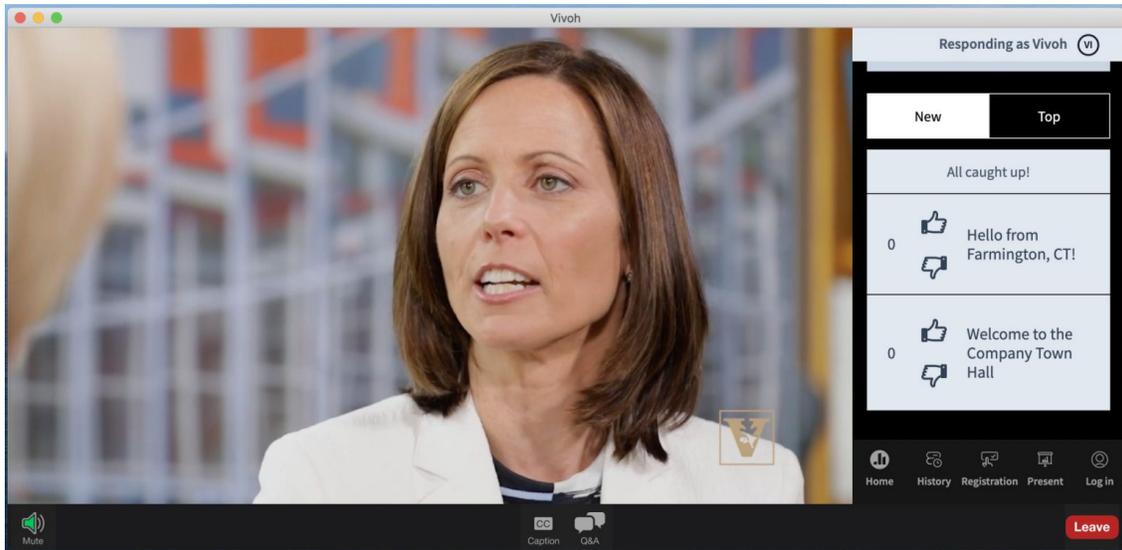
IT Service Delivery Managers can enable and disable each of the log files for all users that access the webinar via the specified Webinar Manager via its Configuration menu. Please see the Vivoh Webinar Manager Installation and Administration Guide for detailed configuration instructions.

6: Working with Messaging

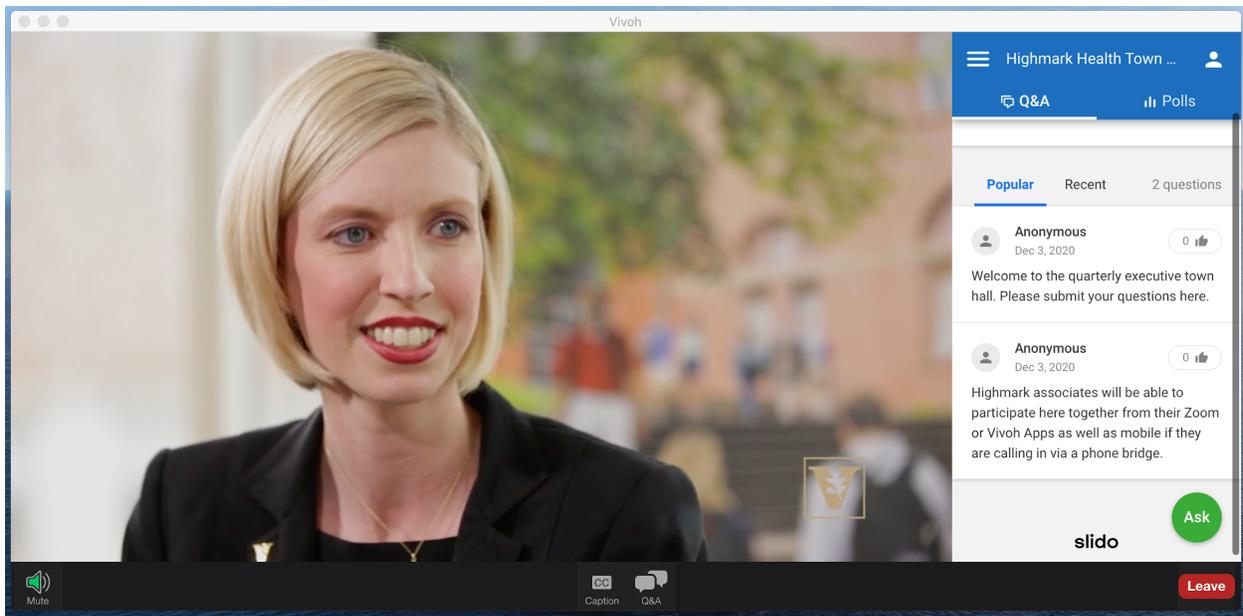
The Vivoh Multicast App enables IT Service Delivery Managers to provide webinar hosts with a way to bring their audience members into existing corporate communications systems for messaging during their live events.

The Vivoh Multicast App has an optional QA button which is configured in the Vivoh Webinar Manager by IT Service Delivery Managers. These can be assigned to specific Webinar IDs as static URLs or can be dynamic with base URLs and a variable for the Webinar ID. For example, [https://messages.company.com/rooms/\\${webinar_id}](https://messages.company.com/rooms/${webinar_id}) where `${webinar_id}` will match the Webinar ID of the Zoom Webinar. This link will open when the user clicks on the QA icon in the App. Please see the Vivoh Webinar Manager Installation and Administration Guide for detailed configuration instructions.

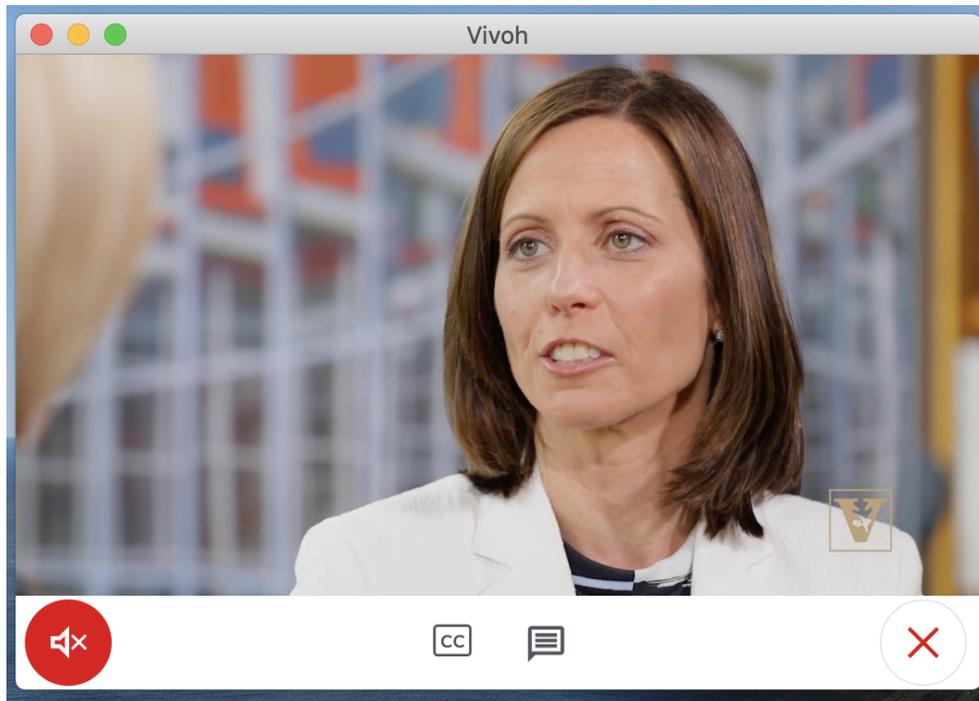
7: Vivoh Multicast App Images



Vivoh Multicast App with Poll Everywhere QA Messaging



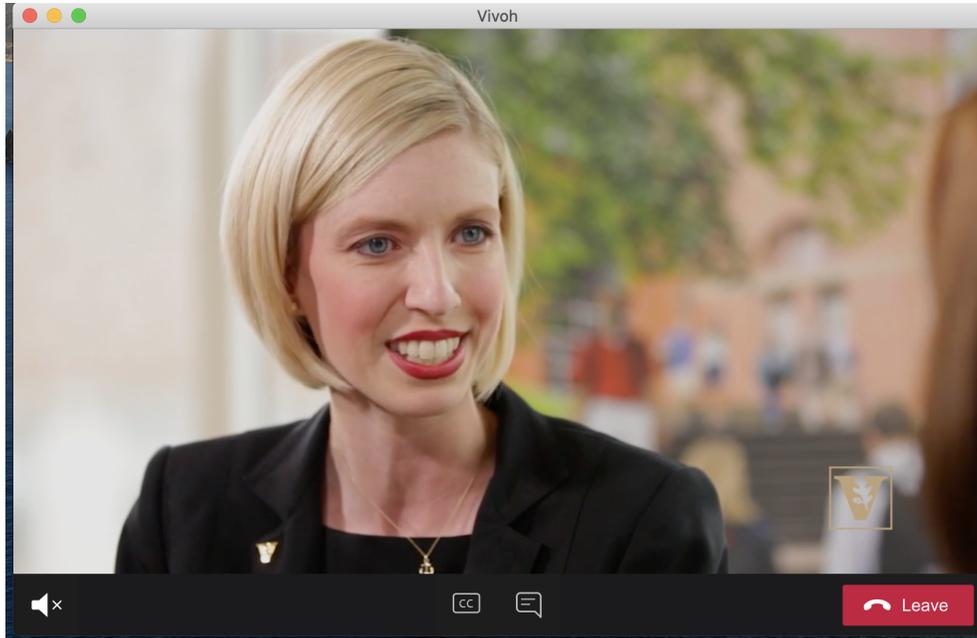
Vivoh Multicast App with Sli.do QA Messaging



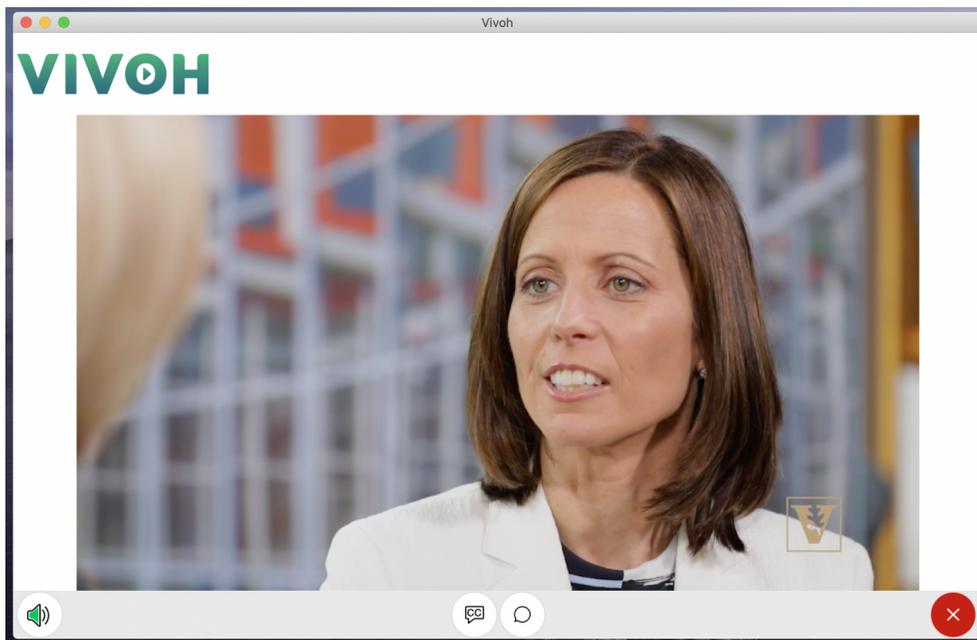
Vivoh Multicast App with a Google Skin Setting



Vivoh Multicast App with a Webex Skin Setting



Vivoh Multicast App with a MS Teams Skin Setting



Vivoh Multicast App with a Webcast Skin Setting