AVA ROBOTICS

Web App User's Guide

v5.1

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About Ava

Ava allows you to visit a distant location and provides the necessary infrastructure for a highly collaborative environment. All you do is choose where in the remote location you want to go, then Ava will autonomously travel there and start a video conference connection. Through Ava, you will be able to interact with people and move about the distant location as if you were physically there.

There are two video conferencing modes that may be used, depending on the video conferencing options available to you:
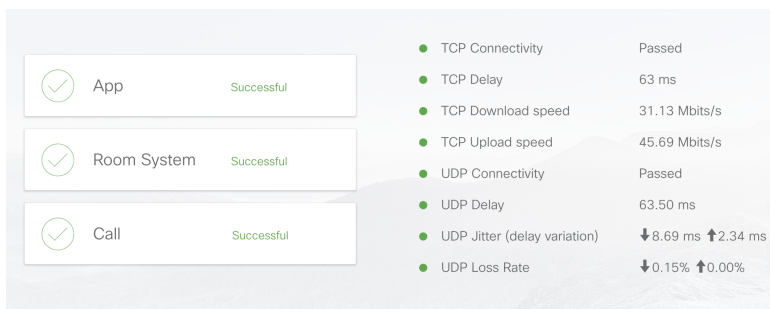
- Integrated video: video conferencing is provided in the Ava app
- Split video: the Ava app is used for controlling the session and Ava's movement, while a separate dedicated video conferencing endpoint is used for video conferencing.

Getting Ready

In order to teleport using Ava from your PC or Mac, you will need the following:

- A Windows PC or a Mac with a web browser, and camera and microphone that can be used in a video call.
- An Internet connection with sufficient speed for a two-way video conferencing session and open ports to prevent the firewall from blocking the connection.

  If in doubt, try mediatest.webex.com; a good connection will produce a consistent throughput of at least 5 Mbps upload and download, and will pass all the checks for App and Call. Example below:

✓ App	Successful	● TCP Connectivity	Passed	
		● TCP Delay	63 ms	
✓ Room System	Successful	● TCP Download speed	31.13 Mbits/s	
		● TCP Upload speed	45.69 Mbits/s	
		● UDP Connectivity	Passed	
✓ Call	Successful	● UDP Delay	63.50 ms	
		● UDP Jitter (delay variation)	↓8.69 ms ↑2.34 ms	
		● UDP Loss Rate	↓0.15% ↑0.00%	

Logging In

To request a teleport session, you need an account which will give you access to the proper sites. You will get this login information from your IT administrator or, in some cases, from Ava Robotics directly.

Open the Ava Web App from the web link provided. This link will be in the format https://<org ID>.ava8.net.

On the login page, enter the username and password.

- Username: *as provided*
- Password: *as provided*

If you are asked to allow notifications, agree. This allows you to receive notifications about session start and end times even if the web browser is minimized.

When you have successfully logged in, you will be directed to the Ava application window. Here, there are options to request an immediate teleport session or view calendar to schedule a future session. Both of these teleportation options are explained in detail in the following sections of this document.

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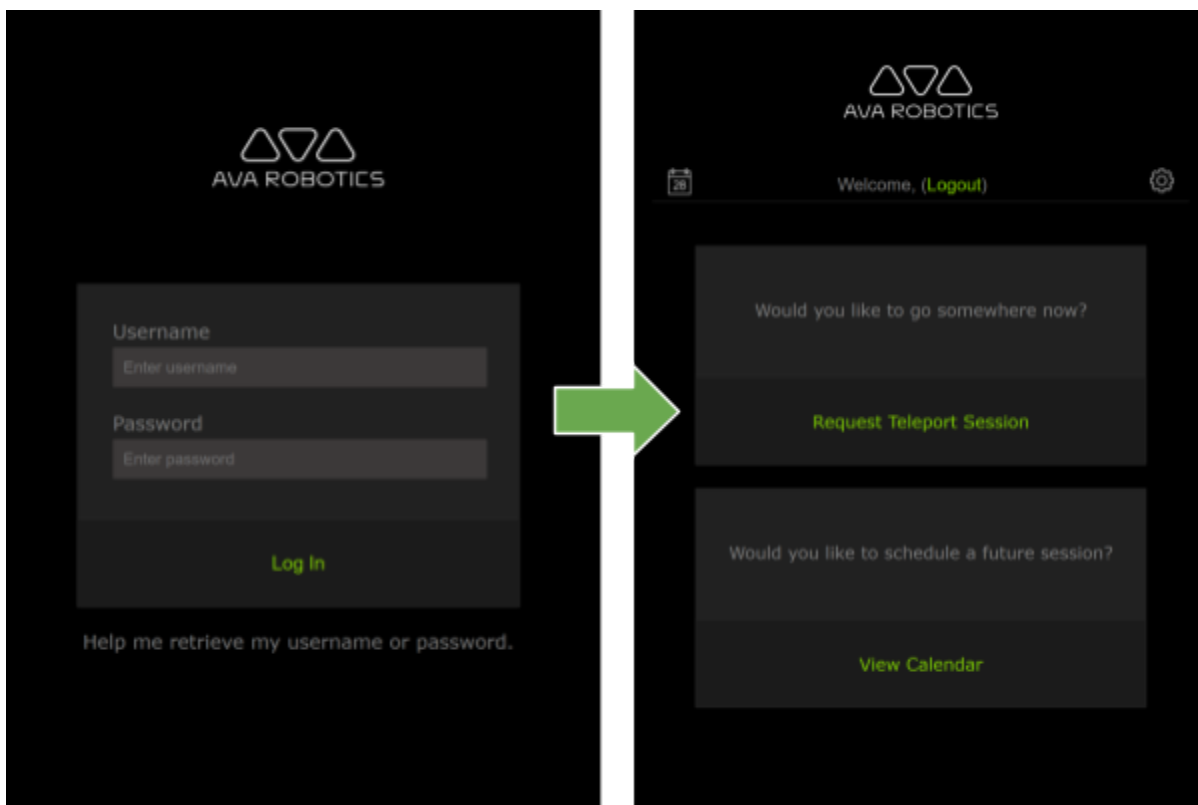
Starting a Session

There are two available options for a teleportation session with Ava. You can start an immediate session or schedule a future session.

Immediate Session (Teleport Now)

To start a teleport session immediately, tap **Request Teleport Session** to begin. This will bring you to a page where you are able to select your destination from a dropdown menu of available locations. If no Avas are currently available at a location, all destinations under will be grayed out and *No Availability* will be displayed next to the site.

There are two options for the video endpoint of a call: integrated video and split video. Both options are explained in this document.

Once you have selected the teleport location and where you would like to be called, click **Check In** to begin.
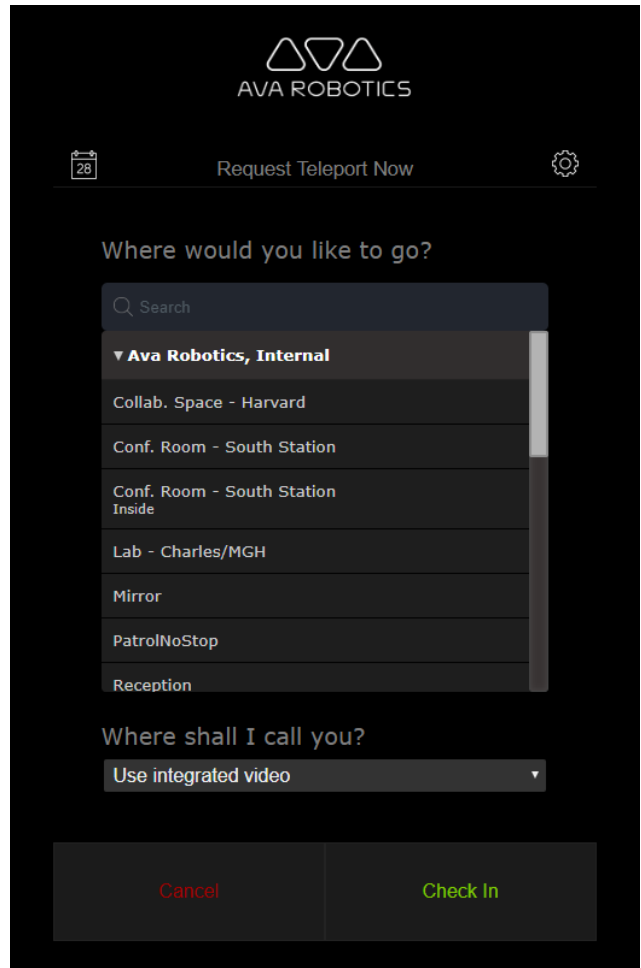
Starting a Scheduled Session

When a session has been scheduled, the main screen will always display the time of your next

teleport session. Tap [i] to see session details, edit, or delete the session.

Ava becomes available 10 minutes before a scheduled session begins. At this time, you will be asked where you would like to be called. If you have more than one video endpoint, you can select the desired endpoint using the dropdown menu.
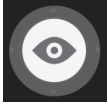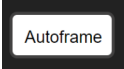
Once you have decided where you would like to be called, click **Check In** to begin.
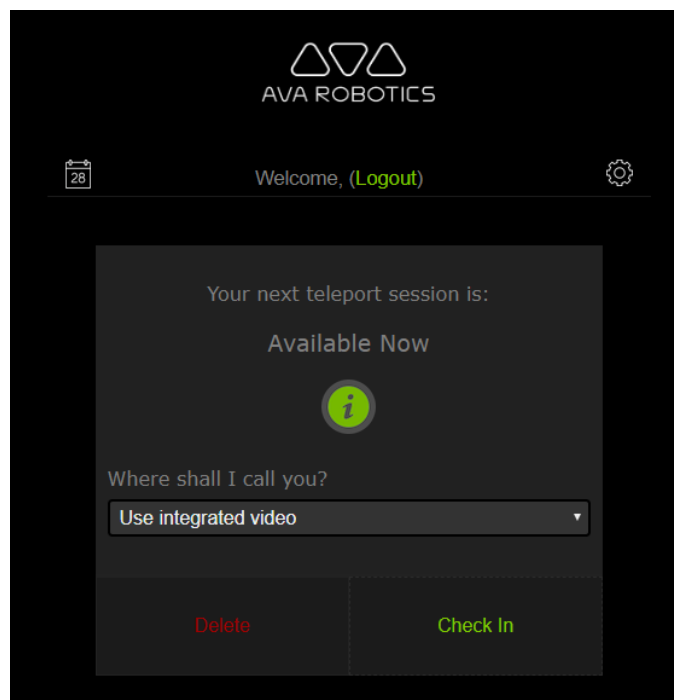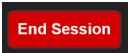
The Control Panel

While in a session, the Control Panel displays all user controls. The screen will look different depending upon the video endpoint being used, however control functions are the same in both integrated and split video.

The following table describes all the functionalities of the Control Panel.

Icon	Function
	Drag the view joystick up and down to look in either direction. Drag left and right to rotate the Ava in that direction.
	Click and hold for peripheral view (PV). Release and the view will return to the starting point.
	Click to hold a zoom in and out. From normal zoom, zooming out will enter and hold PV mode.
Reset	Click to rest the camera zoom and tilt to default values.
Autoframe	Click to initialize Autoframe behavior and have Ava adjust camera view to best frame people in the view.*
	Drag the movement joystick center to move in that direction, release to stop moving. Use the arrows to sidestep left or right.
	Click to display/hide the site map. Map symbols are:
	Shows Ava's position on the map. The point indicates the direction you are facing. Green when Ava is stationary, gray when traveling.
	A pre-programmed destination on the map. Double click or click and hold to make Ava move to this destination.
	Menu on the upper left of the map to manage view. From top to bottom: ➔ Click to locate Ava in map ➔ Zoom in ➔ Zoom out

	Click to stand or sit.
	Remote volume control, the control bar allows you to control how loud Ava will reproduce your voice. When video is integrated into the Ava app, the microphone icon serves as audio privacy (mute) function.
	In Integrated Video, the video control menu is to the top of the video feed. ➔ On the left, Turn video on/off ➔ On the right, Turn self view on/off Icons will turn red when set to 'off'.
End Session	Click to end your session. A session can also be ended by clicking **End Session** in the Session Lobby.

*Autoframe may not be available in your region. Please consult your Ava representative for more information.

Keyboard Equivalents

There are also keyboard equivalents for these functions. Keyboard equivalents will only work if you have clicked to be in the black control panel box.

Note for Mac Users: keyboard equivalents use the 'Command' key, not Ctrl.

Note for Windows Users: if the 'Shift' button is clicked 5 times continuously or pressed for over 8 seconds, Windows will prompt to disable sticky keys. For a better experience, consider disabling the sticky keys.

Look Commands		Move Commands	
Camera tilt up	Ctrl + Up Arrow	Move forward	Up Arrow*
Camera tilt down	Ctrl + Down Arrow	Move backward	Down Arrow
Rotate left	Left Arrow*	Side step left	Ctrl + Left Arrow
Rotate right	Right Arrow*	Side step right	Ctrl + Right Arrow
Camera Commands		**Miscellaneous**	
PA Scan	Space bar	Sit	Ctrl + L ****
Zoom In	'=' key	Stand	Ctrl + O ****
Zoom Out	'-' key	Mute video**	Ctrl + V
Reset Camera	Ctrl + R	Mute Audio**	Ctrl + M ****

Autoframe***	Ctrl + F	Volume Up and Down	']' and '[' keys
		Toggle Map	Ctrl + Z

* Include 'Shift' with the key command to rotate or move at an increased speed
** Integrated video calls only
*** Autoframe may not be available in your region. Please consult your Ava representative for more information.
**** For Safari, the browser may execute browser-related functions with these keys

Session Details

Click the **Session Details** button to open a panel where you can extend your session time, change video endpoints (if you have multiple), enable/disable obstacle avoidance, and select a different destination.

- The default session length is one hour. To extend a session, click on the button to add 15 minutes as many times as needed to reach the desired session duration.
- If your video call is degraded or has dropped, you can click on **Reconnect Video Call** to re-initiate it.
- Turn obstacle avoidance off by unchecking the box, for example to push a chair out of the way. Ava will move very slowly if this option is checked.
- To go to a destination just click on the desired location. This is the equivalent of double clicking a number on the map, but allows you to search for a destination name.
- If your account has access to multiple locations, you can scroll further down to request changing locations. Since you will be changing robots, your session will temporarily disconnect and then you will be prompted to resume the session at the new location.
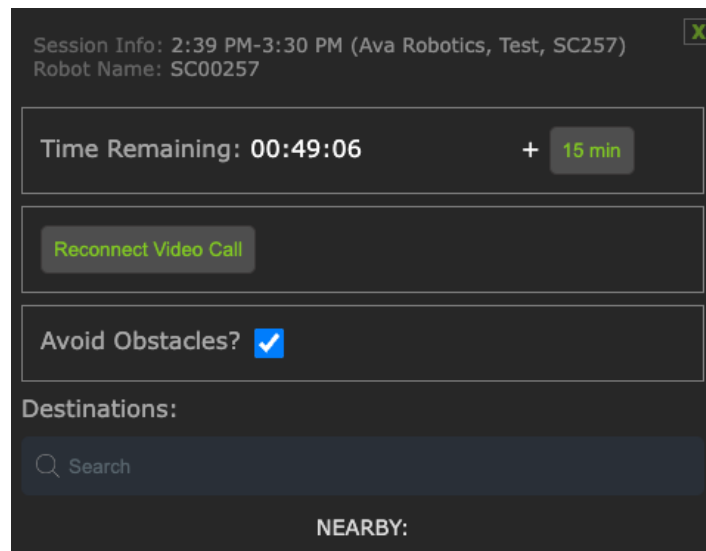
In Session - Integrated Video

When you start a session, you will be brought to a map screen where you are notified of the teleport status in a pop up. While Ava is traveling to the specified destination this pop up will say "teleport will be available shortly". When Ava is traveling you can click **Start Now** or wait until Ava is at the destination. When you are ready, click **Go** to enter the session.

If it is your first time logging in, you will get a pop-up asking to allow the App to use your microphone and camera. Allow both for the application to work properly.

When using integrated video, the Control Panel will display video in the app and controls will be along the lower portion of the screen.
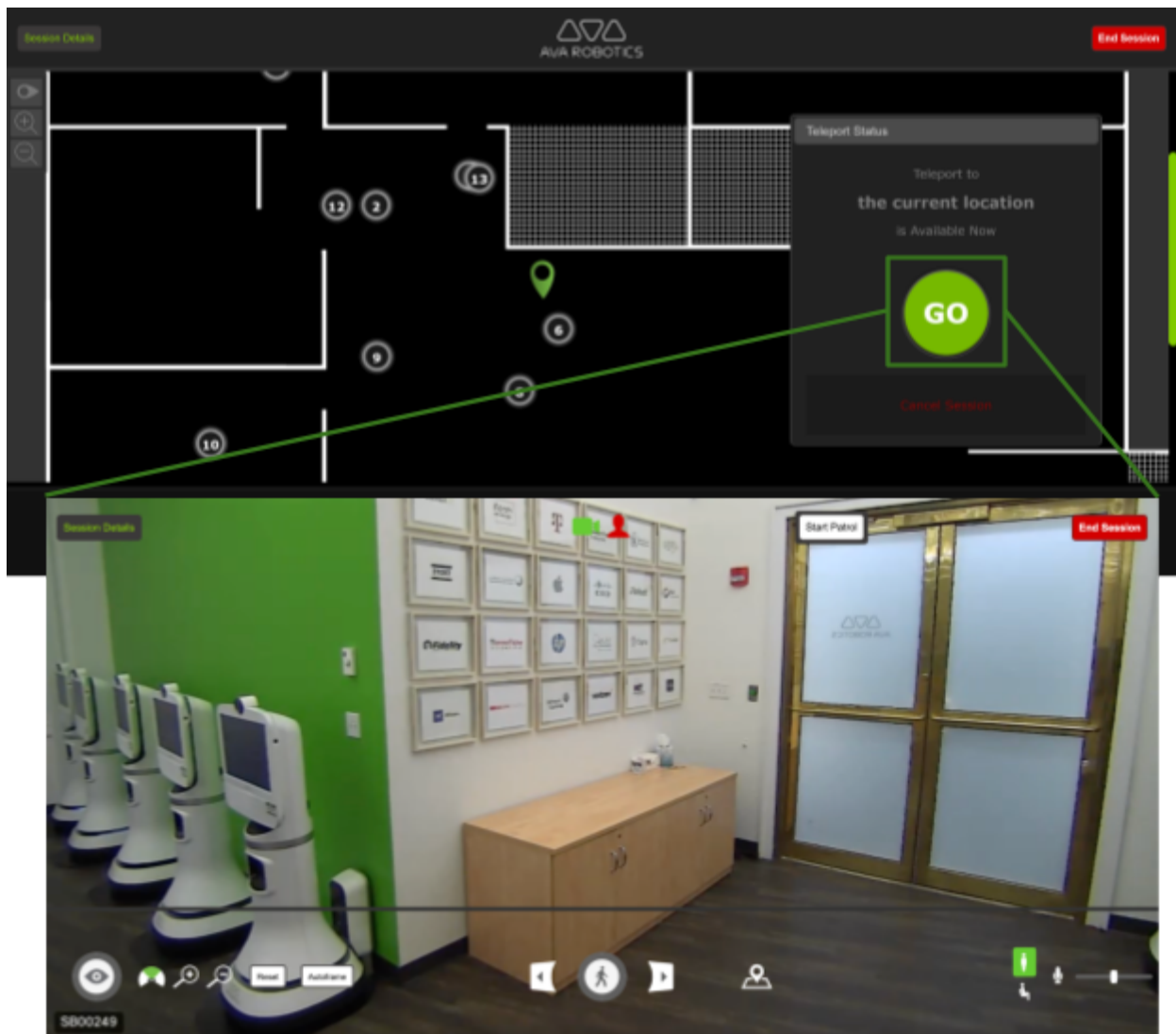
Focus on Point

When video is displayed in the app, the Focus on Point feature allows you to select a point in the image and have Ava center its view on this point. To exercise this feature, click and hold on the point you want to center on view. An orange indicator will appear at the selected point, and when you release your click Ava will orient itself.

The orange indicator looks like this:

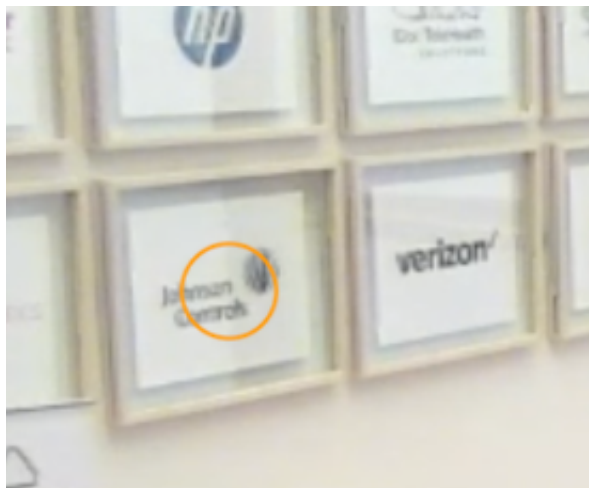To cancel the action, drag the cursor away then release the click.

In Session - Split Video

Split video allows for use of a separate app for the video call, while using the Ava app for controls. This can be used in several scenarios such as bringing an Ava into a collaborative meeting with a tool such as Webex, Zoom or Microsoft Teams, or when you have a dedicated high-quality desktop video endpoint such as a Cisco Desk Pro or Poly Studio P21.

To use Split Video, a video endpoint address must be specified when the Ava session call is started. This address usually has a format similar to an email address, such as <conference ID>@<service domain>. Here are some examples of where to find this address for your call:

-   For a conference call (Webex, Zoom), typically the meeting invite will indicate the address for "Using a Video System".
-   For a high-quality desktop endpoint, your address should be visible in the Settings Menu for the system.

You can enter the video address into your profile in the app Settings from the home page, or you can enter it manually at the time you are starting the Ava session.

Once is a split session, the video and audio call is exclusively with the separate app that you

are using. The Ava App will not have access to Ava's video or audio. Thus, video and audio privacy control is performed on the collaboration app or device, not in the Ava app.

The controls in the Ava App will be the same as with integrated video, except that the map view will take most of the space in the user interface. Below is an illustration of this set up with the video call into a collaboration app.
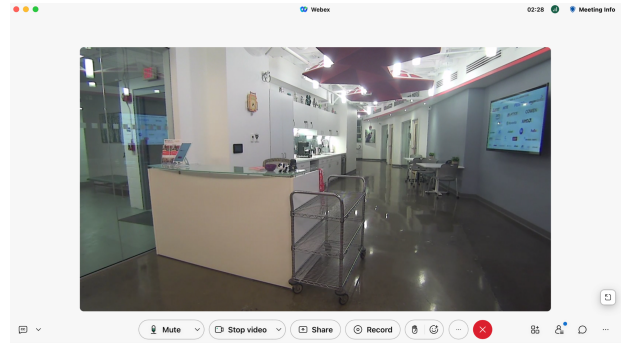
Scheduling a Session

To schedule a session, tap **View Calendar** on the app's main page. This will take you to a calendar screen which can be viewed by month, week, or day. Navigate to the desired date and double-click to bring up the **Edit Reservation Details** dialog. Here you can select a destination and change the date, time, and duration. The default session duration is one hour.

Click **Schedule** when the details are correct and a confirmation dialog will appear. If the details are not correct, click **Edit** to return to the reservation dialog. Otherwise, enter a session name to be displayed in the calendar and click **Confirm.** The teleport session will now be displayed in your calendar.

If an Ava is not available for that location, date, and time the app will display *"No robots available to satisfy request"*. In this case, you will need to change the time you are scheduling a session for.
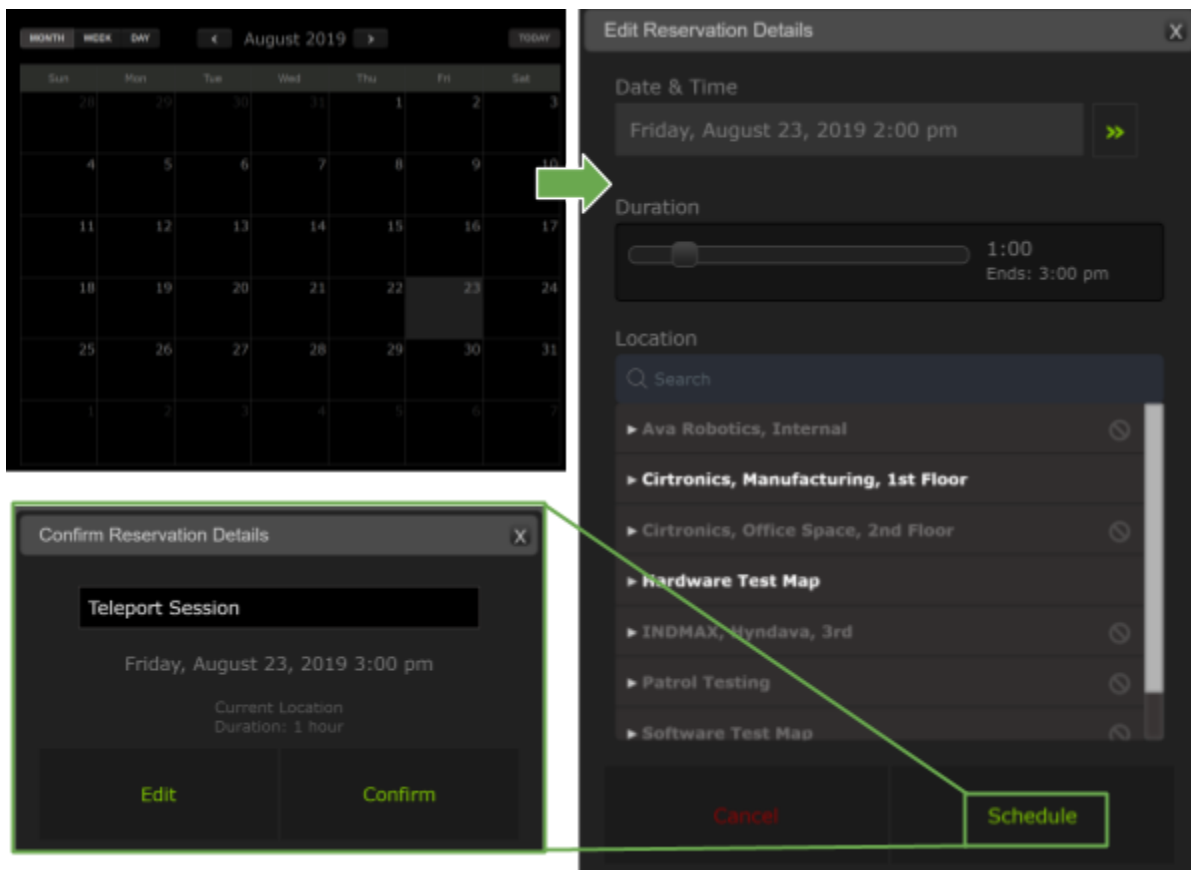
Once a session is in the calendar, tap the session to view details, edit information, or delete the teleport session. **Note:** once a scheduled session starts, if you click **End Session**, that session will be removed from the calendar and you will be unable to resume the session.

Settings

Tap the ⚙ icon and select **Settings** on the home page to view and **Close** to exit. You cannot change settings while you are in a session.

Under Account Information, you can view your username and email address and change your password.

The Account tab is also where you can add or change video addresses. The video address should be the SIP address of the system you want to call into. Your default address is in white.

The Teleport Preferences allow you to configure the end session alert. An end session alert is both a visible dialog and an audible signal. The audible signal does not sound if the device's sound has been muted. The default alert interval is 5 minutes.

Tap **Logout** to exit the app and bring up the login screen.
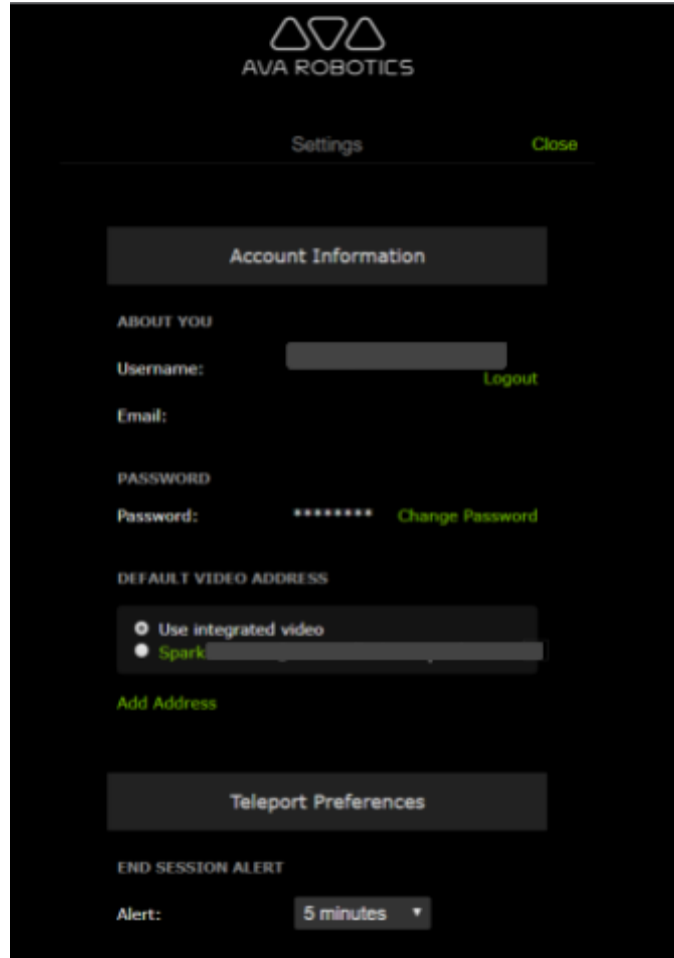
Automated Patrols

When the optional Patrol feature is enabled, buttons to start and stop the patrol will be present. When Patrol is activated, the Ava will move autonomously to a series of locations configured in the space. At each location, the Ava may perform an action (such as a 360 degree rotation) and/or pause for a set amount of time, depending on configuration applied by the administrator.

To start a patrol, click on the Start Patrol button.
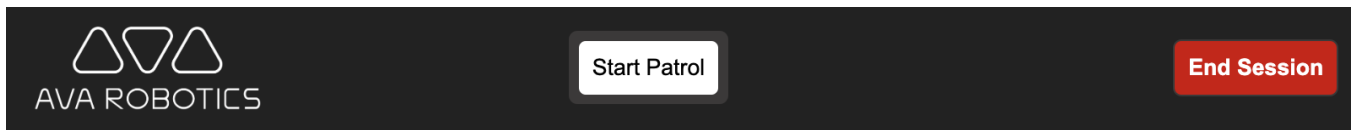
To stop a Patrol, click on the Stop Patrol button. The Patrol will also stop if you exercise any manual control over the robot's position (such as joystick, selecting a location, etc.) Camera controls (camera zoom, engaging peripheral view and Reset) and stand/sit do not stop the Patrol.
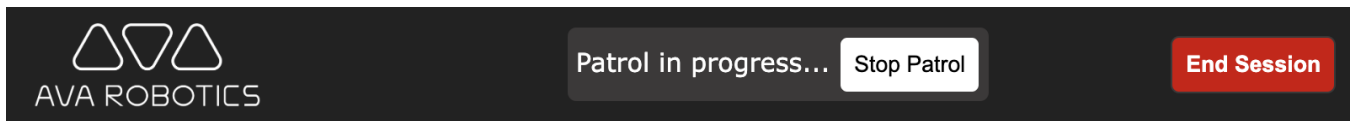
Tips

Tips for Attending a Scheduled Session

Best practice is to check in some time before your meeting is due to start. You can check into a meeting within 10 minutes of the session start (if Ava is not in use) and up to 15 minutes after the scheduled start. After 15 minutes, Ava becomes available for use by others. If the Ava was in use prior to your session, the **Check In** control is not displayed until the Ava is no longer in session.

Sometimes Ava encounters an obstacle on the way to a session destination. In that case, an alert will pop-up informing you about this. You can start the session by clicking the **Go** button and see what is causing the obstruction.

Once you are in a session, you may need to leave the Ava App to do something else on your computer. If you do, your video conference remains connected. You can re-enter the App at any time to change your view of the room or move around the space. If the meeting ends early, remember to re-enter the App and end the session. Otherwise the Ava will stay in place, unavailable to other users until the scheduled end of session time.

Adding Time to a Session

Sessions are always timed. You can add time to your session in Session Details. Any time added is guaranteed for your session.

Your session will automatically be extended in 15 minute increments if your Ava app is active and the Ava you are using is not reserved by another user.

If your session is about to end because it cannot be extended, you will be alerted via a dialog box.

Using an External Camera/Microphone

Camera and microphone input are a part of the web browser configuration. To change the camera/mic input being used, use the browsers settings.

In Chrome, browse to Settings > Advanced > Privacy and Security > Site Settings. In other browsers, look for the equivalent setting.

Troubleshooting

Can't Log In

If the app says "Login information is invalid", please check your credentials. You can use the "Help me retrieve my username and password" option if needed.

If the app logs you out right after a login, please verify that cookies are enabled since the Ava app uses cookies to maintain a login active.

Please note that you can have a login active on only one device at a time. Logging in on a second device causes the first device's login to be terminated.

Ava Isn't Accessible

If you are starting a Teleport Now session and cannot select a destination it means no Ava's are currently available. This could be due to:

- All Ava's at the desired site are in session with other users
- Ava(s) at desired site not having sufficient battery power to be dispatched for a session
- Ava reporting faults or losing connection to the Ava Cloud Service

If during a session you see the message "*Ava is not currently accessible,*" it means that Ava is no longer connected with the Cloud Service. Ava will repeatedly try to reconnect, please wait a few minutes to see if connection resumes. Should the connection not resume, contact your IT administrator or Ava Support.

Video and Audio Issues

No Video and/or Audio Established (Integrated Video)

After hitting GO to start the video call, if video and audio don't come up, try again in case it was a temporary problem with the network. If the problem persists, please try the following based on your symptoms:

Symptom	Possible Cause	Testing and Solving
Video and audio do not connect, and after around 40 seconds you have a message stating "App	Your network's firewall is blocking data transmission ports for video and audio.	To confirm: Test https://mediatest.webex.com Test from a different network

detected an error in connecting the video call"		(e.g. a cellular hotspot) to see if that works To resolve: work with your IT team on network requirements
	Your laptop has a built-in firewall blocking audio and video	To confirm: Test https://mediatest.webex.com To solve: work with your IT team on application requirements for your laptop
You receive a warning from the app that your camera and/or microphone are not detected	Your webcam and/or microphone are not plugged into your computer	Check if your webcam is plugged in.
	Your webcam and/or microphone are unresponsive	Unplug and plug your camera or microphone again, or restart the computer
Call is initiated but you have a message stating "Unable to retrieve local media"	Your camera is being used by another application	Click on the End button. Check other apps (such as video calling apps) and close them. Then try again.
	Camera or mic may be blocked for this site in your browser	Click on End button and then edit browser settings to allow use of camera and microphone. (In Chrome, browse to Settings > Advanced > Privacy and Security > Site Settings > Permissions. Make sure for the Ava website, the Camera and Microphone permissions are set to 'Allow'. Then try again. In other browsers, look for the equivalent setting.)
Call connects but soon disconnects	Your network may not have the necessary bandwidth to support the video call	To test: https://mediatest.webex.com or https://speedtest.net. To solve: use a different network, or work with your IT department.

Poor Video Quality

Follow these steps when troubleshooting for poor image quality:

1. Check your network to make sure you have sufficient network bandwidth. You can test with https://speedtest.net or https://mediatest.webex.com. Ava recommends a minimum of 5 Mbps of bandwidth in each direction
2. When video quality is poor, try to determine if the problem:
    a. Only happens when robot is traveling
    b. Occurs only in certain parts of the building
    c. Consistently happens

    Once you have narrowed down when video quality is a problem, contact Ava Support.