

## Objective

This application guide describes how to upload video files and manually score them to generate tabulated data including behavior durations, counts, and latencies.

Common use cases include: coding complex animal behaviors in laboratory or naturalistic settings, coding human behavior as part of psychology research, or coding human behavior as part of market research / user behavior studies.

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## 1. Creating an Account

To get started you will need a BehaviorCloud account. Set up an account at the [BehaviorCloud](#) website using your institutional/company email address. You will receive an email prompting you to validate your email address and sign in to your new account.

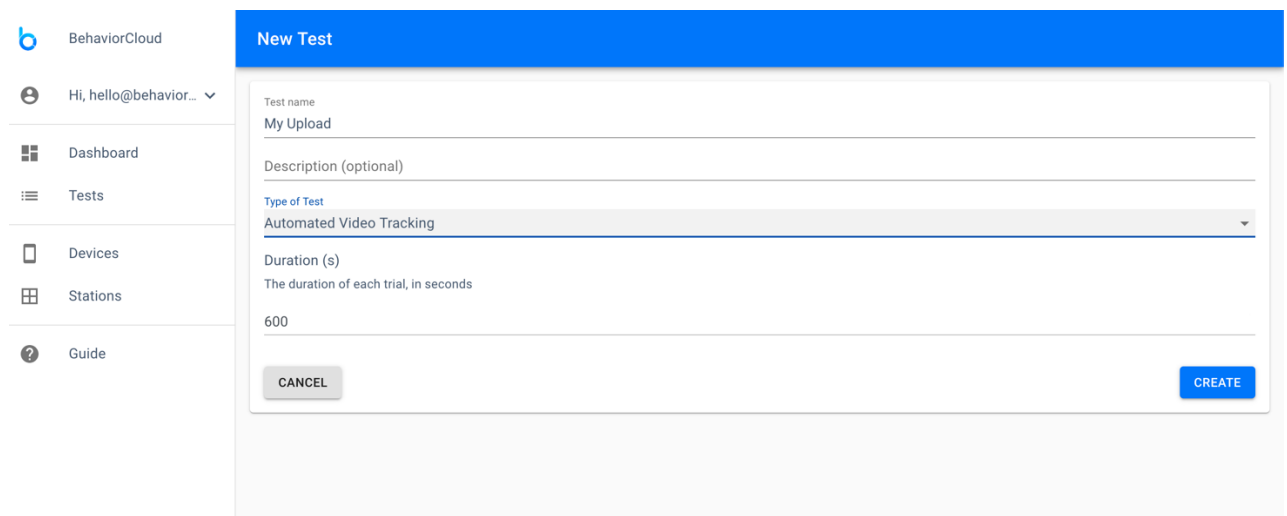
## 2. Uploading Video

### a. Supported Video Formats

BehaviorCloud supports the upload of most major video formats; however, large files such as 4k or HD video will take significantly more time to upload. If you have 4k or HD video, or if you experience long upload times, we recommend transcoding your files to a lower resolution or frame rate to accelerate upload and analysis times. Time to upload other files will vary depending on size and the current level of traffic on our servers. Feel free to get your uploads started and then log out and come back later.

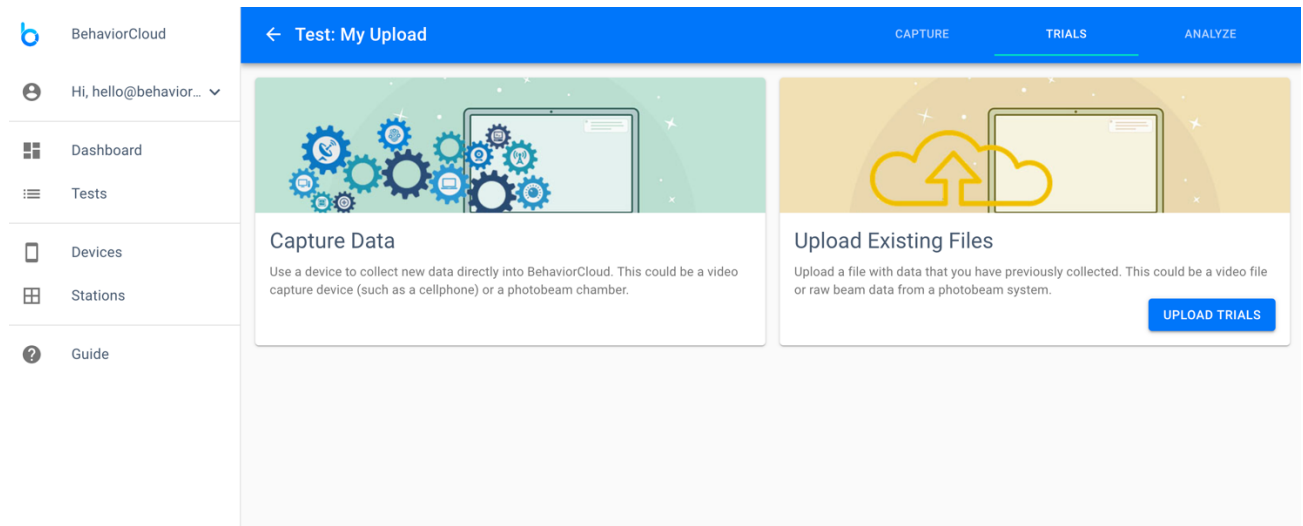
### b. Uploading Video

Log in to your BehaviorCloud account and navigate to Tests. Click Create Test. Enter a name for your new test and select your primary analysis strategy from the dropdown menu – in this case, Automated Video Tracking. Enter the duration of your trials in seconds.

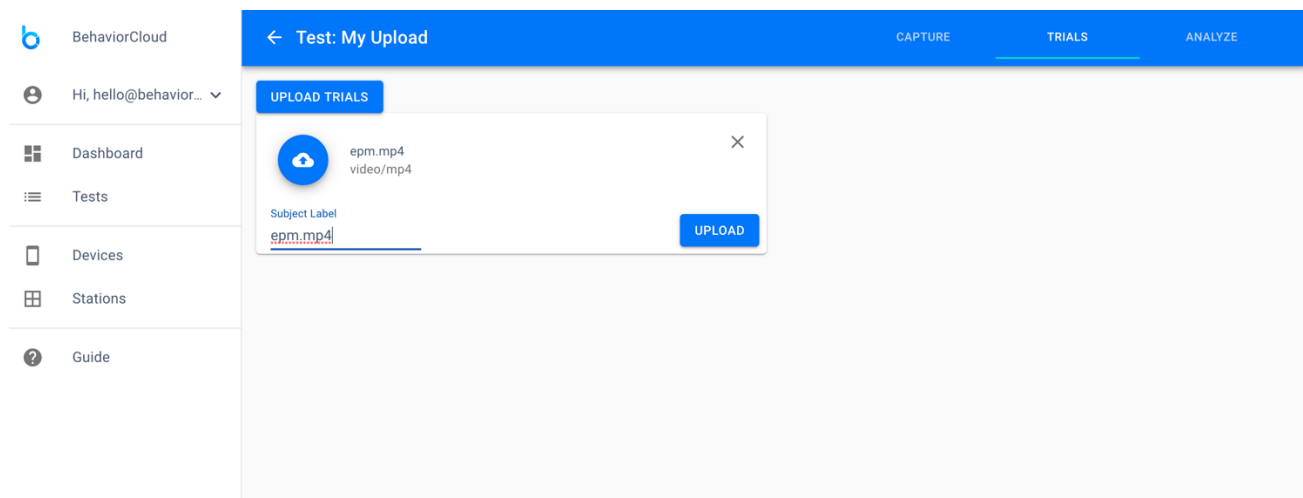


The screenshot shows the BehaviorCloud web interface. On the left is a sidebar with the BehaviorCloud logo, a user profile 'Hi, hello@behavior...' with a dropdown arrow, and navigation links: Dashboard, Tests, Devices, Stations, and Guide. The main content area is titled 'New Test' in a blue header. Below this is a form with the following fields: 'Test name' with the value 'My Upload', 'Description (optional)' which is empty, 'Type of Test' which is a dropdown menu currently showing 'Automated Video Tracking', and 'Duration (s)' with the value '600' and a subtext 'The duration of each trial, in seconds'. At the bottom of the form are two buttons: 'CANCEL' and 'CREATE'.

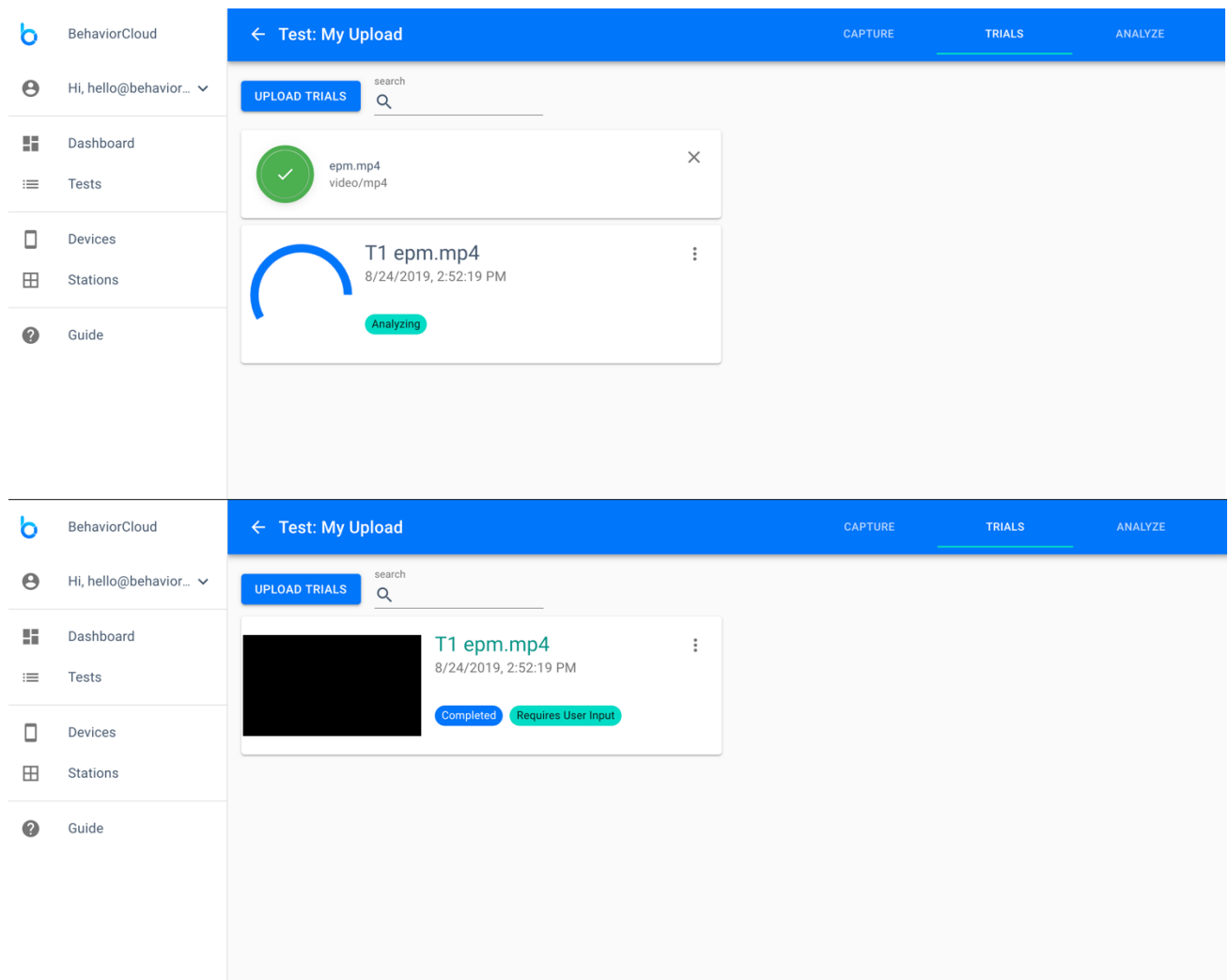
On the next page, click Upload Existing Files and select the files you wish to upload.



Edit the name of your video if desired and click Upload to begin the upload. This may take some time so feel free to log out and come back later. If your videos are very large or high resolution, we recommend transcoding them to a lower resolution or frame rate to accelerate upload times.



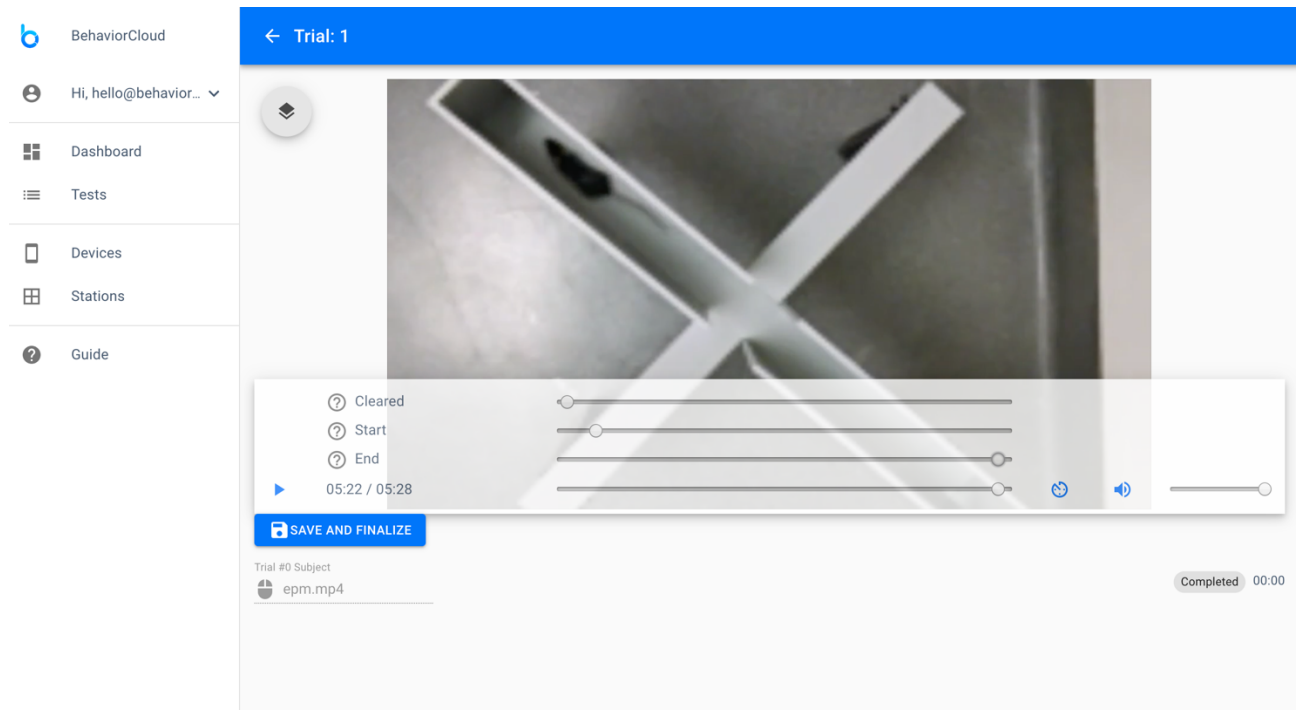
After a file uploads successfully you will see the following screen as the file is automatically converted to a format compatible with BehaviorCloud. Please wait for the file to be converted successfully before proceeding.



The screenshots show the BehaviorCloud interface. The left sidebar contains navigation links: BehaviorCloud, Hi, hello@behavior..., Dashboard, Tests, Devices, Stations, and Guide. The main content area is titled 'Test: My Upload' and has tabs for CAPTURE, TRIALS, and ANALYZE. The TRIALS tab is active. In the top screenshot, a video card for 'epm.mp4' (video/mp4) is shown with a green checkmark and a progress bar, indicating it is 'Analyzing'. In the bottom screenshot, the video card for 'T1 epm.mp4' (8/24/2019, 2:52:19 PM) is shown with a black thumbnail, a 'Completed' status, and a 'Requires User Input' button, indicating it is ready for manual scoring.

## c. Setting Timestamps

When the upload and conversion process is complete you will see a card representing your video and it will indicate that user input is required. Click into the detail view for your video. Here you will need to set three timestamps so the system knows when the video is cleared (i.e., showing a background image), when the trial starts, and when the trial ends. Click Save and Finalize when you are finished.



## 3. Scoring Behavior

### a. Setting Options

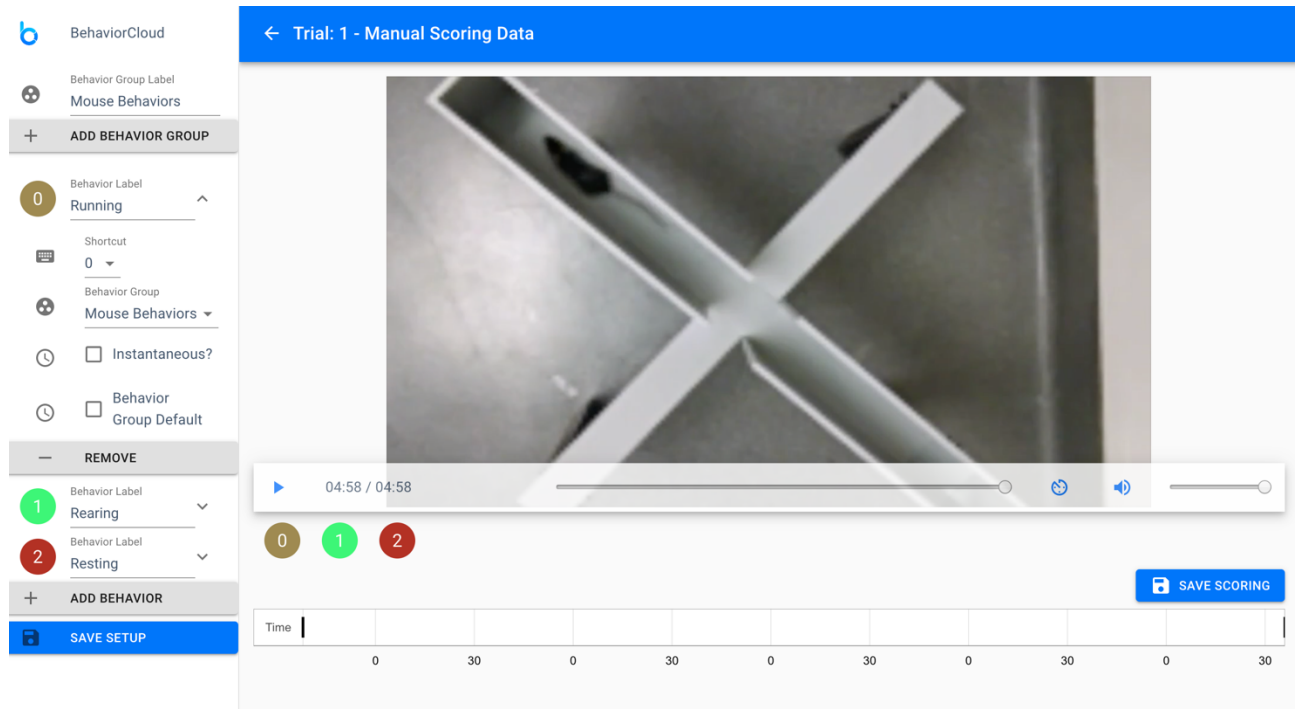
Manual scoring data can be added to any trial from the trial detail view. Click the pencil icon next to Manual Scoring from the overlay icon. In this view, you will see a playback of your video and options on the left to set up the behaviors you wish to score. Use the Add Behavior group to list each behavior you wish to score. Each behavior will get a default keyboard shortcut, which you can change as desired by opening the detail drawer for that behavior. By default, all behaviors are timed but you can select the checkbox to set any behaviors to instantaneous events as needed.

*Timed behaviors have a duration, such as running or resting. Instantaneous behaviors are counted events, such as fecal boli.*

You can also add individual behaviors to groups to indicate mutually exclusive behaviors. This will allow you to toggle between different behaviors while scoring and the system will automatically end one behavior when another begins. By default, each behavior will operate as an on/off switch and you will need to select a given behavior once to turn it on and a second time to turn it off while you are scoring. When you are finished setting up your manual scoring options, click Save to continue. Your scoring options will be made available for all trials in a test once you set them up for the first time.

## b. Coding Behaviors

Play the video and select behaviors to record by clicking the shortcut icons on the screen or by using your keyboard shortcuts assigned to each behavior. Your work will be recorded in the timeline view below the video. Click Save Scoring when finished.



*You can play back your video in real-time or choose to speed it up or down using the toggles on the video controls.*

## 4. Analyzing Data

Once you have scored all of your trials, you can check that everything is complete and correct by visiting the Trials tab of your test. Each trial is shown as a separate card with a thumbnail video preview. Manual Scoring will appear as a tag for those trials that have manual scoring data.

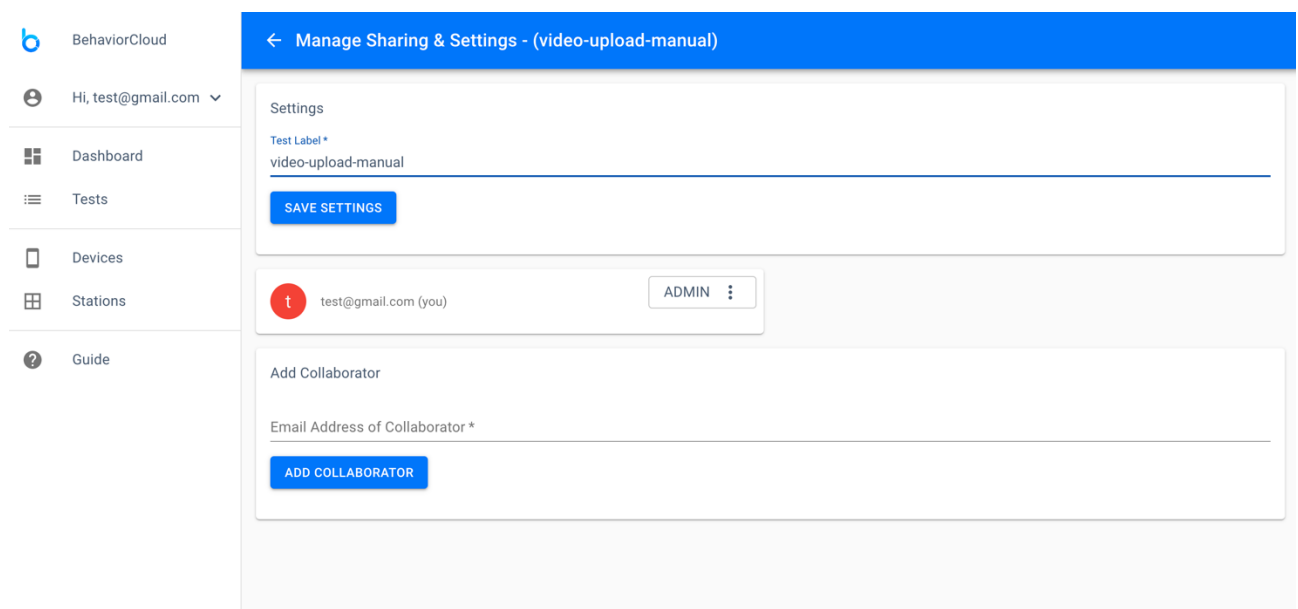
### a. Analysis Plan

Navigate to the Analysis tab and you will see a space for your Analysis Plan at the top of the page. This is where you can choose the relevant analyses for your test. Use the plus icon to add an analysis. It will begin processing as soon as it is added. Use the trash icon to cancel or delete an analysis. The results of your analyses will appear in the drawers below your plan. You can expand those drawers to see which results are ready, which results are still being analyzed, and you can view or download your analyzed data.

## 5. Sharing a Test

### a. Adding Collaborators

You can share your data and invite collaborators to contribute to any phase of the experiment through your BehaviorCloud account. Go to Tests to view all of your experiments. Private experiments are indicated by a lock icon and shared experiments are indicated by a share icon. To add a collaborator, select the three dots menu icon to the right of a test and click Manage Sharing and Settings. You will be able to enter the email address of the person you would like to invite to your test. Your collaborator will receive an email notification prompting them to login and access the shared experiment.



The screenshot shows the 'Manage Sharing & Settings' page for a test labeled 'video-upload-manual'. The left sidebar contains the BehaviorCloud logo, user information 'Hi, test@gmail.com', and navigation links for Dashboard, Tests, Devices, Stations, and Guide. The main content area has a blue header with a back arrow and the title 'Manage Sharing & Settings - (video-upload-manual)'. Below this is a 'Settings' section with a 'Test Label \*' field containing 'video-upload-manual' and a 'SAVE SETTINGS' button. Underneath is a user profile for 'test@gmail.com (you)' with an 'ADMIN' button and a three-dot menu. The bottom section is titled 'Add Collaborator' and features an 'Email Address of Collaborator \*' field with an 'ADD COLLABORATOR' button.

### b. Managing Permissions

The default level of permission is read only. You can manage their level of permission: read only (can view data but cannot edit), read/write (can view, contribute, and edit), or admin (full permission, including to delete an experiment).

## 6. Downloading Data

All of your data are available for download at any time. Manual scoring produces a table that includes behavior durations, counts, latencies, and timestamps. You can access and download these data from the analysis tab of your test.

## Additional Information

Further details can be found in our User Guide at [www.behaviorcloud.com/guide.html](http://www.behaviorcloud.com/guide.html)

For support and inquiries, contact [support@behaviorcloud.com](mailto:support@behaviorcloud.com)