UpStage

Manual

Introduction

Welcome to the user manual for the new [UpStage](#), relaunched in October 2021. This manual was most recently updated in August 2022.

This manual is intended for anyone who wishes to create and present [cyberformances](#) (live online performances) using UpStage. There's also information for audiences, to help you have the best possible experience.

The first section provides a [background](#) to the platform, its history and [community](#). There's some general [technical information](#), and you can learn about the team and how to [get involved](#) in the UpStage community.

Tips for [AUDIENCE](#) are included in the next section; this is also useful for Players (artists, creators) to know what tools and possibilities the audience has in UpStage, and how your audience will experience your cyberformance.

UpStage users are known as players: the PLAYER section explains how to [create an account](#), [manage your profile](#), and [create your own live stage](#).

The [MEDIA MANAGEMENT](#) section describes how to upload and manage media including graphics, animations and audio files which can then be assigned to your stage to use in performances.

The 'live' stage is where performances are created and presented; the PLAYER: ON STAGE stage section gives an overview of how the stage functions, and the LIVE STAGE TOOLS section explains the on-stage tools that allow real-time manipulation of your uploaded media as well as [live drawing](#), [live text](#) and [audio-visual streams](#).

There's a section dedicated to [STREAMING](#), which explains how to optimise your stream and further explore the creative use of live streams.

RECORDING AND STATISTICS explains how to [record performances](#) in UpStage, and the [statistical information](#) that's available during live performances.

The [ADMIN section](#) explains tools that are available to players with admin status, to manage other players and the configuration of the UpStage instance.

Lastly, the APPENDICES include a [Glossary of terms](#) and a [Troubleshooting](#) section.

We hope this manual helps you to use and have fun in UpStage. If there's something missing or unclear, please email feedback@upstage.org.nz.

Quick start: audience

This chapter summarises some common questions from our audience.

How can I join a performance / enter a live stage?

UpStage works in a web browser. All you need is the link to the live stage. You may have received this link in an email when you booked for the show, or found it on a website or social media. You can also go to the Foyer (https://upstage.live/) where there are links to currently live stages.

UpStage performances are live, so you need to know what time the performance will happen, in your local time.

At the time of the performance:

1. Click on the link to the stage. It will open in a browser (see the chapter Technical information for browser recommendations).
2. A loading screen appears; it may include information about the show you're going to see.
3. When the stage is 100% loaded, a message will ask you to "click anywhere to continue".
4. Click on the screen and a pop-up window gives you the option to enter a nickname. If you don't enter a name, your nickname will be "Guest".
5. Click again anywhere on the screen to enter the live stage.

What can I do on the stage?

Today people are used to being able to chat, respond and participate in various ways in live online events. UpStage allows this mainly through the chat window, which gives you many possibilities. When the chat window is visible, the audience can chat and express feelings with emojis.
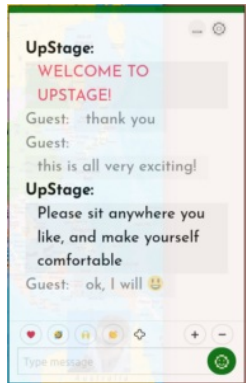
Type in the field at the bottom of the chat window and press enter (on your keyboard) to send your message. It's visible to all audience and players present on the stage. Text input by audience members appears as grey text, while player text is black, in a slightly larger font size. You can increase or decrease the size of the font using the + and – buttons just above the chat input field – this only changes the size for you, not anyone else.

Can I change my nickname?

There's a cog icon at the top right of the chat window. Click on this and a pop-up window opens. In the first tab you can change your nickname.

1. Choose another nickname or simply put an empty space by pressing the space bar once.
2. Confirm by clicking "Save".

Why are the chat and the reaction emojis sometimes there and sometimes not?

Different performances will invite more or less participation, depending on the artistic intentions of the players. The players can hide the chat and the reaction emojis when they don't want audience input, and make them available when they want your response. If the chat window is there, you're welcome to chat.

I can't hear anything – should I?

Check that you have your device's volume up, and if you're using headphones check that they're working. If you still don't hear any sound, ask in the chat if others are hearing sound – maybe it's just a quiet part of the performance.

If others are hearing sound and you're not, and you've checked your volume and headphones, please reload the stage (using the refresh button in your browser).

Quick start: players

Live stage tools

On your stage you have access to these tools from the left-hand menu (the audience doesn't see the tools). Go to the relevant chapters in this manual to learn about each tool.

- Audio
- Backdrops
- Avatars
- Props
- Streams
- Meeting
- Live drawing
- Object drawing
- Text
- Depth
- Curtain
- Scenes
- Settings
- Player Chat

Audio tool
Backdrop tool
Avatar tool
Props tool
Stream tool
Meeting tool
Live drawing tool
Object drawing tool
Text tool
Depth tool
Curtain
Scenes
Stage settings
Player chat

Backstage

In Backstage, players can create stages, upload and manage media items, and edit their profile.

Those with Admin status have access to the Admin area to approve new players and other tasks. Read the relevant chapters in this manual to learn more about what you can do in Backstage.

About the project

UpStage is a browser-based venue for live online performance (also known as cyberformance). Remote performers – players – collaborate in real-time using a variety of digital media, while online audiences can participate from anywhere in the world by clicking on a link, without having to download and install any additional software. UpStage is also used in hybrid online-offline performances and for presentation and discussion events.

UpStage is open source and available to anyone who would like to use it. To find out more, visit upstage.org.nz and go to UpStage.Live to create an account.

Background

UpStage was first developed in 2003 in Aotearoa New Zealand, born out of the fantasies of the globally-dispersed cyberformance troupe Avatar Body Collision and the code-magic skills of artist-programmer Douglas Bagnall. It was launched in January 2004. Since then hundreds of artists and students of all ages from all over the world have created and presented performances in UpStage. Six annual festivals of online performance were held in UpStage from 2007 to 2012. You can find out more at the UpStage website, including video showreels and publications about UpStage and cyberformance.

In 2021, UpStage was 'mobilised' and relaunched in the context of *Mobilise/Demobilise*, a Creative Europe-funded collaboration project between Teater InterAkt (Sweden), Schaumbad Freies Atelierhaus Graz (Austria), the Center for the Cultivation of Technology (Germany) and UpStage. This new version represents a complete re-engineering of the UpStage software to remove dependency on Flash software, and introduces many new features and enhancements. It comes at a time when interest in online events and demand for purpose-built platforms has surged.

UpStage offers an open-source, artist-led, accessible and customizable online venue, paired with a vibrant artistic and developer community and a rich knowledge base.

Team

UpStage was rebuilt and mobilised during 2020-21 by an international team of developers and designers in collaboration with the platform's artist-users.

Development team 2020-2022

Lead developer: Gloria Willisden
Back-end developers: Gloria Willisden, Paul Rohrlach
Front-end developer: Nguyen Hong Phat, Tuyết Giang
Interface designer: Elisa de Castro Guerra
Interface design intern: Riad Salameh
Documentation: Helen Varley Jamieson, Elisa de Castro Guerra, Sandra Sarala, Vicki Smith, Claudia Beezhold and Clara Gomes
Testers: UpStage community

Mobilise/Demobilise partners

The artistic and administrative partners of the _Mobilise/Demoblise_ project have contributed in many ways – from taking care of the finances to providing valuable user testing and feature requests, and ultimately creating the performances for which UpStage is designed.

Teater InterAkt: Sara Larsdotter Hallqvist, Cecilia Nkolina, Manel Ruiz Blas, Parnian Faizi and Jesper Miikman.

Schaumbad – Freies Atelierhaus Graz: Eva Ursprung, Katharina Aschauer, Cym, Alexandra Gschiel, Eva-Maria Gugg, Doris Jauk-Hinz, Anita Hofer, Rebecca Hofer and Keyvan Paydar.

Center for the Cultivation of Technology: Kristina Klein, Susanne Eiswirt and Martin Modlinger.

UpStage community

Many artists from UpStage's global community have contributed to the testing and development of UpStage during this project period and over the years, which has served to support and sustain the project. These artists include Petyr Veenstra, Miljana Peric, Christina Papagiannouli, Suzon Fuks, James Cunningham, Katarina Djordjevic, Clara Gomes, Karla Ptáček, Leena Saarinen and Martin Eisenbarth. Without the generous and imaginative contributions of these and many other individuals, UpStage would not be what it is today.

Thank you!
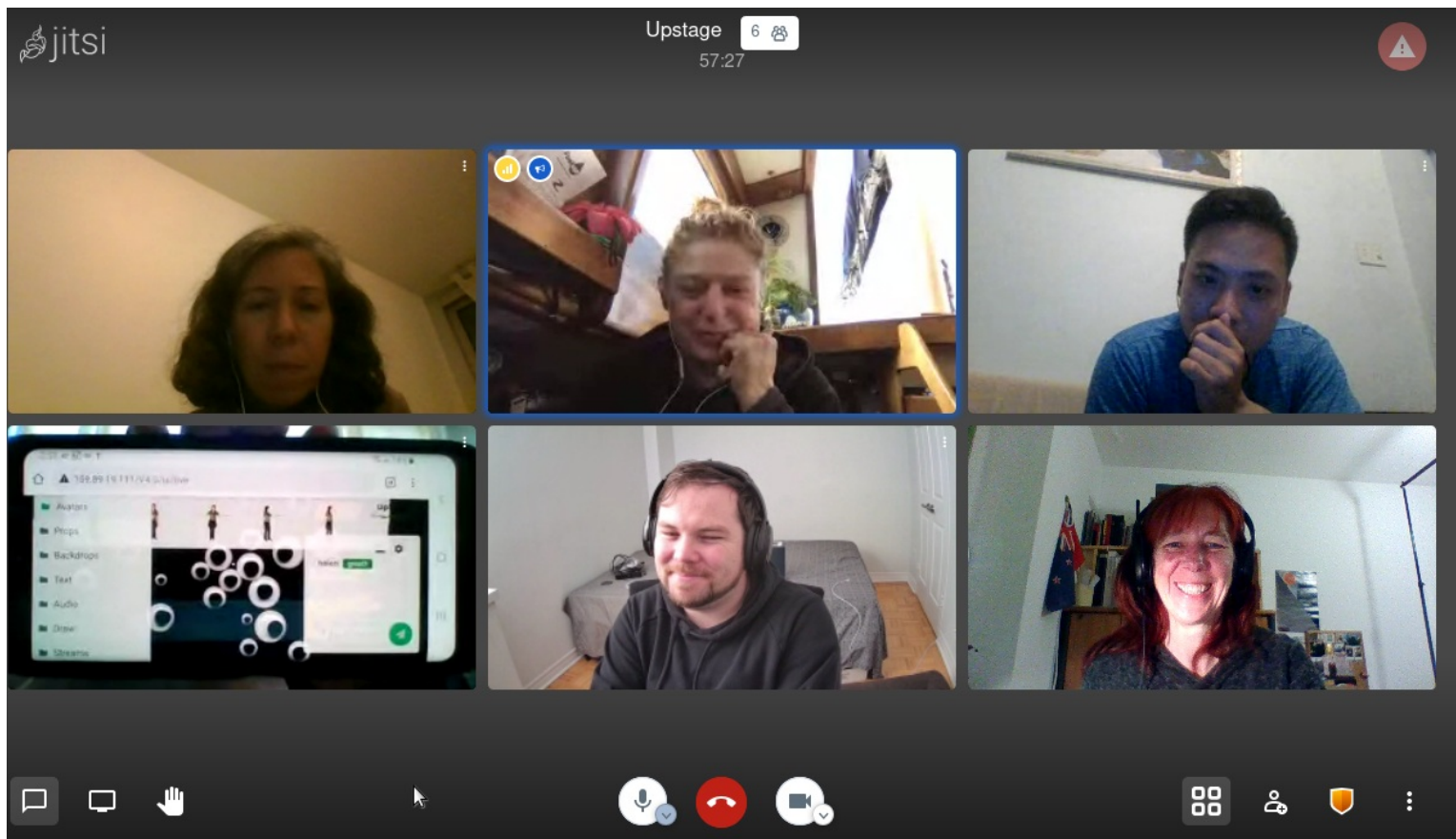
Get involved

UpStage is open source and created by artists, for artists. It's sustained in part through the enthusiasm and energy of a vibrant global community of artists, developers and designers who love to collaborate on this innovative creative tool.

Here's how you can get involved with UpStage:

Artists' community

Add UpStage to your cyberperformance toolset for the creation and presentation of online performances. Next, share your performances with the global UpStage community. You'll meet artists who've been working in the online environment for decades, as well as those who are new to the field and bring diverse artistic expertise. We thrive on artistic exchange, collaboration, experimentation and boldly going where no artist has gone before! Or not many, anyway.

- Email info@upstage.org.nz
- Join the UpStage announcements mailing list
- Create an account at UpStage.Live

Documentation

Do you have skills in writing, translating, proofreading, illustration or video editing? You can contribute to the UpStage manuals (this user manual, developer documentation and installation manual), training videos and other materials – everything needs constant updates and improvement!

If you're looking for something in the documentation and can't find it, why not offer to create it yourself? There are others on the team who will help. Email feedback@upstage.org.nz

Development team

Do you have coding or sysadmin skills? Do you enjoy improving usability? Are you great at hunting down elusive bugs? Join our enthusiastic and motivated development team, who enjoy collaborating with artists to translate their wild fantasies into zeroes and ones.

Find UpStage on GitHub, join the developers' mailing list, or email our lead developer, Paul Rohrlach: paul@upstage.org.nz

Promotion

Can you write articles or edit video? Help to spread the word about UpStage by publishing articles, blog posts and videos, presenting UpStage at conferences or introducing the platform to students. Email info@upstage.org.nz

Educate

If you teach students of any age, introduce them to UpStage as a tool for live online collaboration, improvisation and creation. Invite us to give workshops and presentations, and ask your institution to install an UpStage instance to provide a safe and secure stage for your students' creative work.

Email info@upstage.org.nz to find out more.

Host your own UpStage

If you have your own web server, you can install your own customisable UpStage instance. This gives you complete control of who has access and what can happen on your very own virtual stage.

Download the software and installation documentation from the UpStage GitHub repository, and contact support@upstage.live for help.

Donate

Donations of any amount are always gratefully received and help us to cover our operational costs; thank you! Click here to donate to UpStage. (Why not make it a monthly donation?!)

UpStage

pStage

DEMOBILISE

We collaborate in real-time, using all kinds of digital media, from audio-visual streams to live drawing, and lots more, to tell our own stories, in our own voices.

Audiences just click on a link to join the performance, and interact in real time with each other and the artists. You can chat with us right now, here in the chat window.

Vicki:
Which is where we are right now - in UpStage!

helen:
Alongside the creative process, UpStage has been "mobilised" - re-engineered to function on mobile devices and brought up-to-date with current internet technologies.

Vicki:
helen and I are two of the co-founders of UpStage, which was originally built in Aotearoa / NZ in 2003.

helen:
UpStage is a virtual stage, or blank canvas, where artists and performers can really let their imaginations run wild.

Vicki:
We collaborate in real-time, using all kinds of digital media, from audio-visual streams to live drawing, and lots more, to tell our own stories, in our own voices.

Jon: HoHoo

helen:
Audiences just click on a link to join the performance, and interact in real time with each other and the artists.
You can chat with us right now, here in the chat window.

Type message

Technical information

UpStage is an open source server-side application that players and audiences access via a standard web browser. You don't need to download or install anything in order to create, perform and watch UpStage performances.

The code is written in Python and the main technologies used are Vue, JavaScript, SCSS, HTML and CSS. For more technical information please visit UpStage on GitHub.

Licence

UpStage v1 (2021) is licensed under the GNU General Public License v3.0.

Ownership of artistic work on UpStage remains with the artist(s) unless stated otherwise.

Browsers

UpStage should work in all standard browsers. However, some are better than others – and browsers are constantly evolving. Currently (October 2021) the recommended browsers are **Google Chrome** and **Chromium**.

- Mac users: Chrome is better than Safari (but can have scrolling issues – see the Troubleshooting section). UpStage will not function in Safari 13 due to a bug in Safari. Please upgrade to Safari 14.

- Firefox users: there are several known issues, including a WebSocket configuration issue. UpStage will automatically detect this and provide instructions on how to fix it. Or, if you need more help, please refer to the Troubleshooting chapter at the end of this manual.

Installing UpStage on your own server

If you want to install UpStage on your own server – giving you full control over your own UpStage instance – please visit UpStage on GitHub for installation information and support: https://github.com/upstage-org/upstage

About this manual

This user manual was written during and following the redevelopment of UpStage in 2021-22 and continues to be regularly updated as new features are released. This documentation is under GNU General Public License.

This manual explains the features and operations of UpStage for artists and audiences. If you're looking for something that isn't here, please write to us at feedback@upstage.org.nz. We'll do our best to fill in the gaps. Or why not propose the content yourself? UpStage is constantly evolving and so too must the documentation evolve. New contributors are always welcome!

We're also happy to hear from translators who would like to translate this manual and the UpStage platform interface into any language.

The authors of this manual are Helen Varley Jamieson and Elisa de Castro Guerra, with testing, proofreading and corrections by Sandra Sarala, Claudia Beezhold, Vicki Smith and Clara Gomes.

Audience

The audience is a very important part of a live performance in UpStage. Find out here how the audience can interact and have the best possible experience.

- The role of audience
- Join a live cyberformance
- Chat

The role of audience

Cyberformance is inherently participatory: the audience is usually seated in front of a screen and keyboard, ready to interact. Today people are used to being able to chat, respond and participate in various ways in live online events. UpStage allows this mainly through the chat window, which gives the audience many possibilities. Please go to the chapter Chat for details of the chat window.

Different performances will invite more or less participation, depending on the artistic intentions of the players. They may provide an introduction or instructions to help the audience know what to expect. If you're new to cyberformance, it's a good idea to look for information about the performance before you attend, and familiarize yourself with it as much as possible, as otherwise it can sometimes be confusing or overwhelming.
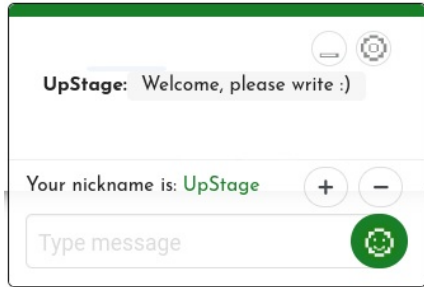
Don't be shy! If the chat window is visible, it's there for you to use. Audience members can introduce themselves and chat with each other while waiting for a show to begin. Sometimes they help each other with technical assistance or information about the show or UpStage. You might be sitting alone at home, but you're certainly never alone during an UpStage performance!

We're researching more possibilities for audience interaction; watch this space!

Join a live cyberformance

On UpStage there are two kinds of users: the artists (known as "players") who create and present performances, and the audience, who watch and may participate in specific ways. Audience members can join from a computer or a mobile device, such as a smartphone or tablet, using a standard browser application.

To join an UpStage performance as an audience member, you need a link to the live stage. This could be a link in an email, on a web page, or in a social media post. Wherever you click the link, you should normally find time and date information; UpStage performances are live events, so you need to arrive at the correct time just as you would for an in-person performance at a theatre.
(Tip for players: it's a good idea to use a time converter such as Time and Date or WorldTimeServer to help your audience find their local time.)

Live and upcoming performances are displayed on the Foyer page of an UpStage instance, for example at https://upstage.live/. If a performance is listed as "upcoming", you won't be able to enter, but you will be able to see information about the performance such as its dates and times.

Enter a live stage

Once you have a link to a live stage, follow these steps to enter:

1. Click on the link to the stage. It will open in a browser tab (see the chapter Technical information for browser recommendations).
2. A loading screen will appear; look out for any information about the show you're going to see.
3. When the stage is 100% loaded, a message will ask you to click anywhere to continue.
4. You have the option to enter a nickname. If you don't enter a name, your nickname will be "Guest".
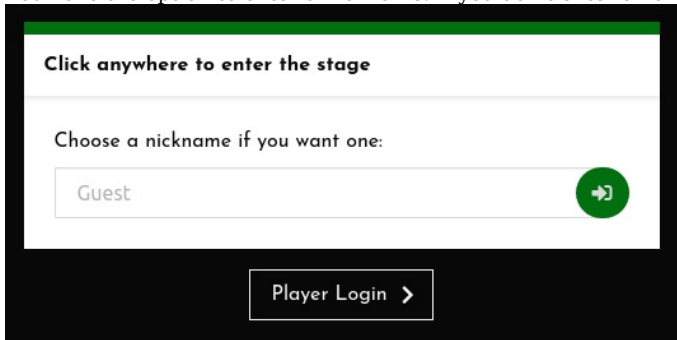

5. Click anywhere on the screen to enter the live stage.

You see the live stage and usually also the chat window. Note that players can hide or expose the chat as appropriate for their performance, so don't be alarmed if it isn't there.

In the top right corner is the "LIVE" indicator and a counter, showing how many players and audience members (connected devices) are currently on this stage. Hover your cursor over the counter to see details of who's present. A person icon indicates a player, while the screen icon indicates an audience member.
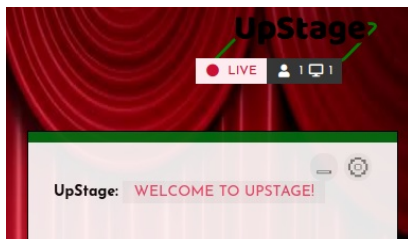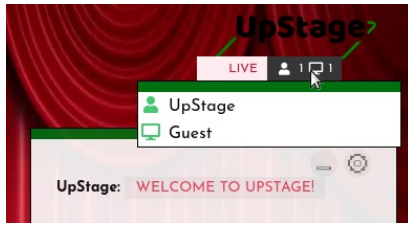
Troubleshooting

Listed below are a couple of common issues faced by the audience when trying to access UpStage. If you experience other issues, please email feedback@upstage.org.nz so we can correct them or explain how to solve them. Please also check the <u>Troubleshooting</u> chapter of this manual for solutions to more technical issues.

The stage doesn't load!

If the stage doesn't load or you're unable to enter, first check that your internet connection is functioning properly. If it is and you still can't enter the live stage, try using a different browser. There's information about recommended browsers in the <u>Technical information</u> chapter.

What's the correct size of the browser window?

Each computer, screen or device has different dimensions and resolutions, and while we do our best to ensure that everyone will have an optimal view of the performance, we can't control how you set your browser.

For the best experience:

- make your browser window full-screen (normally F11 on a computer keyboard, or the 'Control-Command-F' shortcut on a Mac will achieve this)
- don't change the size or zoom of the window once the performance has begun
- to adjust the size of the chat text to something that's comfortable for you to read, use the + and – icons by the chat input field.
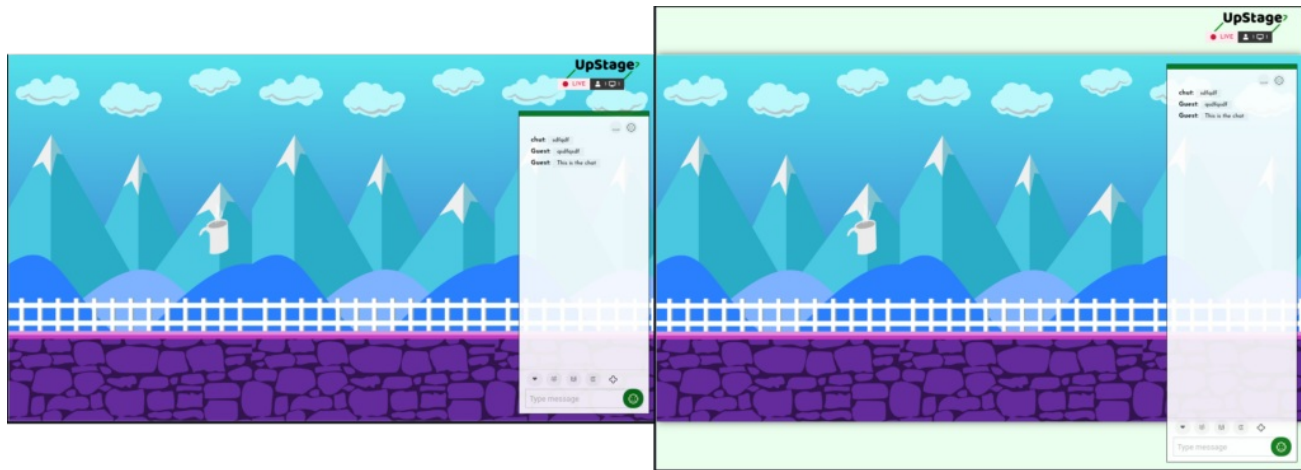
On the left image above, the window is in full-screen mode and well aligned with the dimension of the stage. The image on the right shows that the window is larger than the live one and this can move some parts of the performance. The ideal is to make the edges of the browser window match the stage, which is best achieved in full-screen mode.

Chat
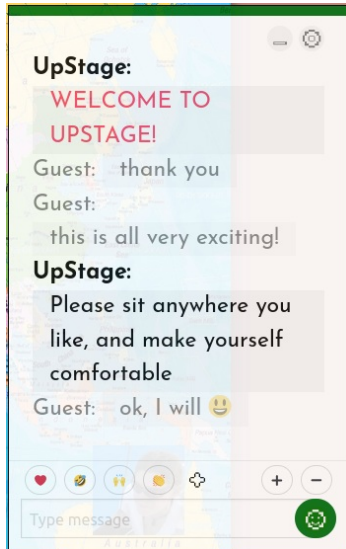
The audience and players can chat with each other during UpStage performances when the chat window is visible. Players can choose to hide or expose the chat window during a performance, and to position it on either the left or the right-hand side of the screen.

You can minimize the chat window locally (just for your view) using the line icon at the top right corner of the chat box.

To pop the chat window back up again, use the double-square icon.

You can increase or decrease the size of the font using the + and – buttons just above the chat input field.

Chatting

When the chat window is available, you can write in the field at the bottom of the chat window and press enter (on your keyboard) to send your message. It will be visible to all audience and players present on the stage.

Text input by audience members appears as gray text, while player text is black and in a slightly larger font size.
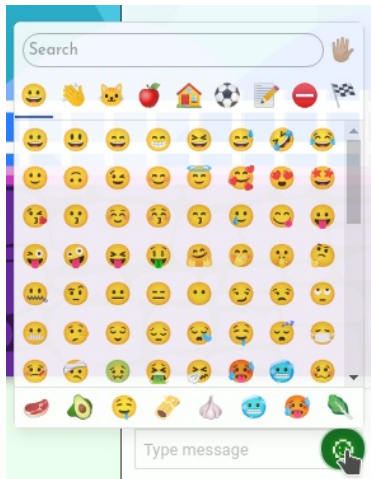

You can include emoticons in your message by clicking on the green emoticon icon located at the bottom-right of the text input field. A pop-up window will open, showing the available emoticons. Click on one to select it, then hit enter to send your message.

Emoji reactions

Above the chat text input field are four emoticons and a 'fat' plus symbol. Click on one of these and it will pop up along the bottom of the stage. The four options are for love, laughter, raised hands and applause.

If you want to express a different reaction, use the 'fat' plus symbol to access more emoji options.
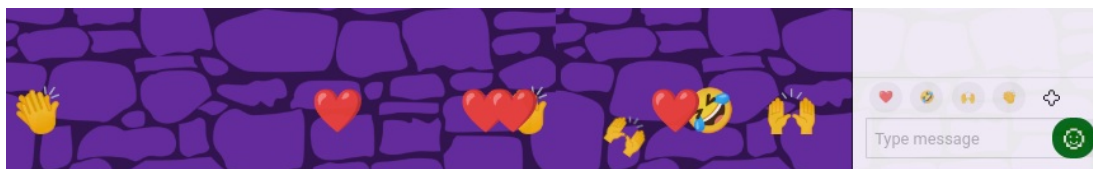

Adjust the opacity and the font size

The opacity of the window's chat can be adjusted with the slider.

The size of the font can be adjusted with the + and – buttons at the right above the text input field. Press on the + to increase the font size, and on the – to decrease it. Remember, this only changes the font size for you, not for anyone else.

The settings are accessed from the cog icon at the top right of the chat window. Click on the cog and a pop-up window opens:
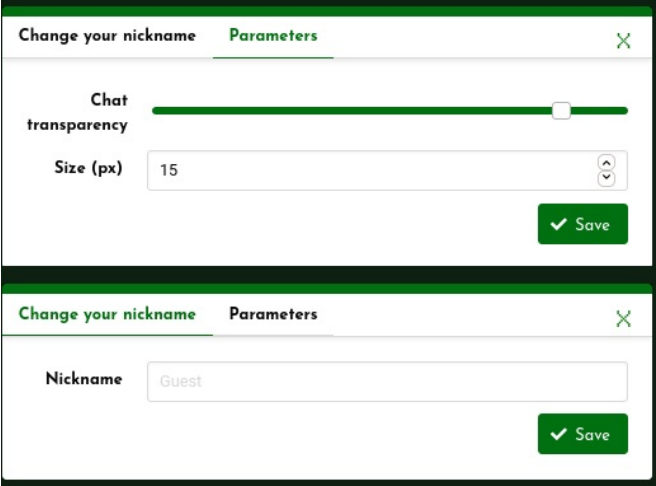
# Change your nickname on the chat window

The settings are accessed from the cog icon at the top right of the chat window. Click on the cog and a pop-up window opens. In the first tab you can change your nickname.

1. Choose another nickname or simply put an empty space by pressing the space bar once.
2. Confirm by clicking on "Save".

Shouting and thinking

"Shouting" and "thinking" are ways to add expression to the chat.

- "Shouting" makes your text appear in red upper case letters in the chat window. This is done by typing ! at the beginning of your text.
- "Thinking" makes your text appear in pale blue letters in the chat window. This is done by typing : at the beginning of your text.
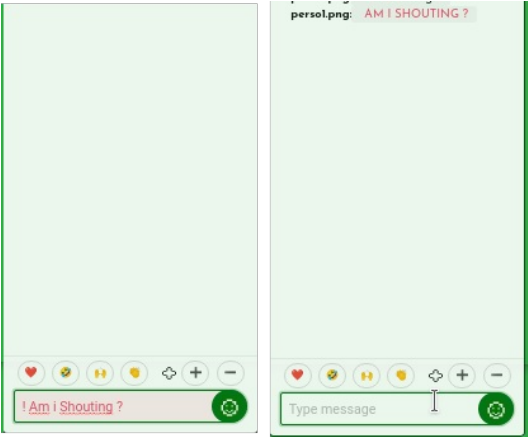
Player

This section explains the role of a player on UpStage, describes actions that can be done in the Backstage and provides other useful information for players.

- Becoming a player
- Manage your profile
- Backstage
- Create your own stage
- Manage your stage
- Customise your stage
- Manage your stage: media
- Manage your stage: chat and replays
- Manage your stage: scenes
- Enter your stage
- How does the audience see your stage?
- Invite audience

Becoming a player

"Players" are those who create and present live performances on UpStage. To be a player, you must first create an account on an UpStage server. This might be the public UpStage, or you may be at a university, school or arts organization that has its own UpStage instance where you can create an account.

You will begin at the Foyer, which is the home page of an UpStage instance. As well as information and links to events, in the top right-hand corner are two buttons: "Login" and "Register".

Note that you only need to have an account if you wish to create and participate in performances as a player. Audience members don't need to log in.

Create an account

When you click on "Register" a pop-up window opens where you can enter your information to create an account. Your registration must be approved by an administrator of this UpStage instance before you're able to have player access to the Backstage and Live Stage parts of the platform.

To create your account:

1. Click on the "Register" button on the Foyer and fill out the form that appears.
2. Username: the user name you choose will be displayed in the chat and statistics, visible to both players and the audience.
3. Password: keep it safe.
4. First name and last name: write your first and last name here
5. Email: enter your email address.
6. Please say briefly who you are and why you would like an UpStage account
7. Terms & conditions: you must agree to the terms and conditions of service in order to use the platform.
8. Click "Register" to complete your registration.

Note: your email address may be used by administrators to contact you about upcoming changes, scheduled maintenance, etc. It's also used in the event that you find yourself locked out of your account. If you're registering on the public UpStage, your information will never be shared with any third party or used for solicitation or advertising purposes.

If you're on a different UpStage instance to the public UpStage, the terms and conditions of service may have been adapted by the host organisation; the administrators of that UpStage instance are responsible for the security of your data.

Log In

Enter username and password to login

👤 Username

🔒 Password 👁

Forgot password?

By logging in, you are agreeing to our Terms & Conditions

Login >

Once your account has been approved by an admin, you can log in to the Backstage area. Click on the "Login" button at the top right of the Foyer.

Enter the nickname you entered when registering and your password, and click on "Login".

You'll arrive at the Stages section of Backstage. Please go to the next chapters for more information about the Backstage features.

Manage your profile

To update any information you entered during registration, such as your email address or password, go to the "Profile" page from the navigation menu at the top of the Backstage.

You'll see your name, username and email address. To modify any information, write directly in the fields, and then click "Update Information".

The green "Status" button indicates whether or not an admin has activated your account. You must have agreed to the terms and conditions of service to use UpStage – you will have been asked to do this in the registration process.

Change your password

UpStage allows you to change your password. In the left-hand menu, click "Change Password".


You'll be asked to enter your old password, and then the new password twice. Confirm by clicking on "Change Password".

Backstage

Backstage is where all the preparation for your cyberformance happens. Here you can create, view and manage your stages, upload and manage media, and edit your profile. If you have admin permissions, you can also manage others' profiles, stages and media.

It can be a good idea to have Backstage open in one browser tab, and your stage open in another tab, so that you can work between both.

When you log in from the Foyer, you'll arrive at the "Stages" page:
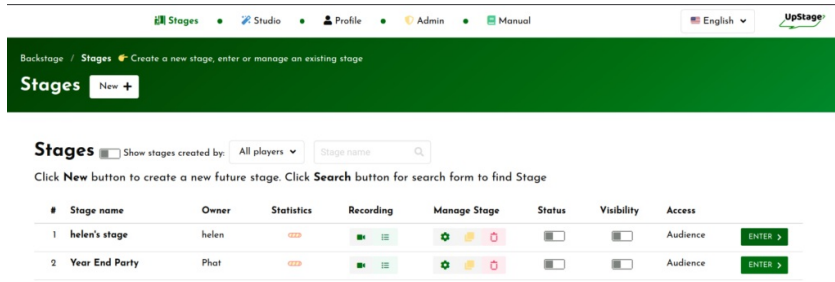
The default view shows your stages – this includes the stages you've created, as well as any other stages where you have player permissions. To see other stages, toggle the green switch (next to the black 'Stages' heading). If you're looking for a particular stage you can enter the stage name in the search field.

The stage list displays the number, name and owner of each stage.

The Statistics column shows how many players and audience members are currently on a stage.

The Recording column contains two icons:

- the camera activates the recording of your stage – see the chapter on replays for information about this feature
- the list icon takes you to the Archive section of that stage, where you can find previous recordings and chat logs

The Manage Stage column contains three icons:

- the green cog icon takes you to the stage management section for that stage – see the chapter Manage your stage for information on this
- if you want to duplicate a stage (handy sometimes during rehearsals), click on the yellow squares icon and give the duplicated stage a new name
- the red trash icon is to delete the stage

In the Access column you can see the access that you have to each stage:

- "Owner" means that you created the stage.
- "Editor" means that another player has allowed you to access and edit a stage that they've created.
- "Player" means that you have access to the on-stage player tools, but you cannot edit the stage.
- "Audience" means that even if you're logged in to UpStage when you enter this stage, you won't have access to the on-stage player tools; you'll see the stage as an audience member.

To enter a stage, click on the green "Enter" button.

Create your own stage

To create your own stage, click on "Stages" in the top menu of the Backstage. You'll see a list of stages; the default setting displays your stages.

Click "New +" in the green banner to create a stage. Give the stage a name that will appear in the stages list and other places, as well as a short name that will be in the stage's URL (for example, http://upstage.live/shortname). You only need to write the short name in the URL box.

You can add a description, which will be visible to the audience while they are loading the stage.

With the Status toggle, you can set your stage to be either "Live" or "Rehearsal". Live means that the public can enter; Rehearsal means that only logged-in players who have player access on this stage, will be able to enter.

The Visibility toggle lets you choose whether or not your stage is shown on the Foyer. If you turn this toggle on, a thumbnail of your stage's cover image will be shown in the grid of stages on the Foyer. You can use this to promote an upcoming performance and for audiences to easily enter the stage when it's live.

Assign players to your stage

Unless you're creating a solo cyberformance, you'll want a team of players – the cast and crew of your cyberformance. You need to give these other players access to your stage, otherwise they'll only be able to enter as audience, without access to the on-stage player tools.

There are two levels of access you can give to other players on your stage:

- "Player access" gives them access to the on-stage tools so that they can be part of the performance
- "Player and edit access" allows them to also edit the stage – to add media and make other changes in the stage management interface.

Click on a player's name to move them to the right and increase their access. Right-click on a player's name to move them to the left and decrease their access. Use the search field if you don't see the username of the player you want to move.

Cover image

You can choose an image to display while your stage is loading. This could be a backdrop from the performance, or you may wish to create a specific image that includes information about the show to help the audience have the best experience.

Click "Choose an image" and select from the available images, or click "New +" to upload a new image from your computer.

Create the stage

Press the "Create Stage" button at the top right of the screen to save and create the stage. Note that you can change any of the information you have entered, at any time. The only fields that must be filled to create the stage are the stage name and URL name.

After creating your stage, you'll arrive at the stage management interface. Please go to the chapter <u>Manage your stage</u> to find out what you can do here.

Manage your stage

The Stage Management section is where you can manage all aspects of a stage that you've created or been given access to edit. To reach this section:

- Navigate to the Stages list: this is where you arrive when you log in from the Foyer, or click on "Stages" in the Backstage top menu.
- Find the stage you want to manage in the list of stages. The default view of your stages will include any stage that you have access to manage.
- When you've found the stage you want, go to the "Manage Stage" column and click on the green cog icon.

Management interface

A banner at the top of the page gives the name of the stage, an "ENTER" button to enter the live stage, and tells you that you're in the stage management interface. Below this, the left-hand menu contains the following options:

- General Information
- Customisation
- Media
- Archive (see the Replays and Chat logs chapters)
- Scenes

General information is explained below, and the other sections are explained in the following chapters.

General information

This is the same as the form to create a new stage. You can edit all of the information that you originally entered, including the stage name, URL and description.

At the upper right there is a row of buttons:

If you make changes to the general information of the stage, you must always remember to click "Save Stage" in order to save those changes.

"Clear Chat" removes all text from the chat window on the live stage. You can also do this from the on-stage tools. This does not remove the chats that are saved in the Archive section of Stage Management, but chats are not automatically archived, so make sure that you either have saved the chat or don't want to keep it before you clear the chat.

"Sweep Stage" tidies up any media, text and drawing that has been left on the stage and sets it back to its default settings. It does not unassign media from the stage – everything will still be available in the toolbars to be used again on the stage. It does not force a reload – anyone on the stage at the time of the sweep will just see everything disappear from the stage. Any scenes that you've saved will still be accessible in the Scenes toolbar.

"Delete Stage" will delete the stage from the server. You'll be prompted to download the archive for your stage (chat and replays) if you want to keep it, as this will also be deleted along with the stage. Note that deleting a stage does not delete from the server any media that has been assigned to the stage.

Players

To give other players access to your stage so that they can collaborate in your performance, move them from "Audience access only" to the "Player access" or "Player and edit access" list.

Click on a player's name to move them to the right and increase their access. Right-click on a player's name to move them to the left and decrease their access. Use the search field if you don't see the username of the player you want to move.

You can move a whole list by clicking on the >> or << buttons instead of an individual player. This is useful if, for example, you've selected the team of players for your performance, have individually given them player access and now want to give all of them edit access as well.

Stage status and visibility

The "Status" and "Visibility" toggles control who can see and access your stage.

With the Status toggle, you can set your stage to either Live or Rehearsal. Live means that the public can enter; Rehearsal means that only logged-in players who have player access on this stage will be able to enter.

The Visibility toggle lets you choose whether or not your stage is shown on the Foyer. If you turn this toggle on, a thumbnail of your stage's cover image will be shown in the grid of stages on the Foyer. You can use this to promote an upcoming performance and for audiences to easily enter the stage when it's live.

Note: It's very important to remember to change the status from Live to Rehearsal when you want your audience to enter!

Cover image

Select an image to display while the stage is loading. This is useful to give the audience information about the performance. You can create and upload a separate image, or use a backdrop that you'll use in the performance. It should be a landscape-oriented graphic.

If you've turned on the Visibility toggle, the cover image is also used as a thumbnail image on the Foyer.

If you want to change a cover image that has already been set, click on the image that's displayed in this section. A pop-up window will open and you can select from the existing images or upload a new one.

Remember to save!

If you've made changes to a stage's general information, you must click the green "Save Stage" button at the top right of the interface. Otherwise, the changes you've made won't be saved.

Customise your stage
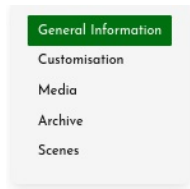
Once you've created your stage, there are several settings that you may want to customise. This is done from the Customisation interface in the Stage Management for your stage. Here you can change the stage ratio, select animations for speech bubbles and the curtain, and choose whether or not to allow auto-detect for streaming.
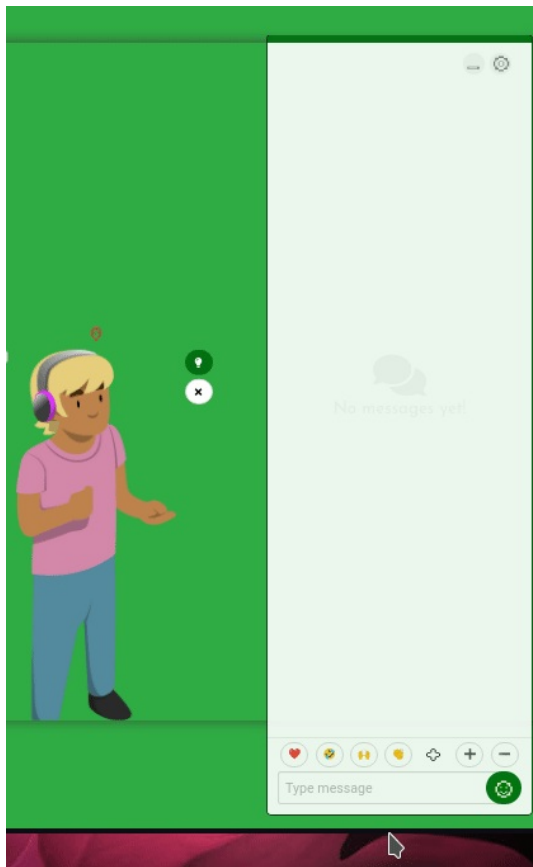
Animations

You can change the animation style for avatar speech bubbles and the curtain on your stage.

Speech bubble animation

Speech bubbles can either fade out or bounce. Make your choice from the drop-down options, then adjust the speed of animation using the slider. You need to click "Save" in order to see the change on your stage.
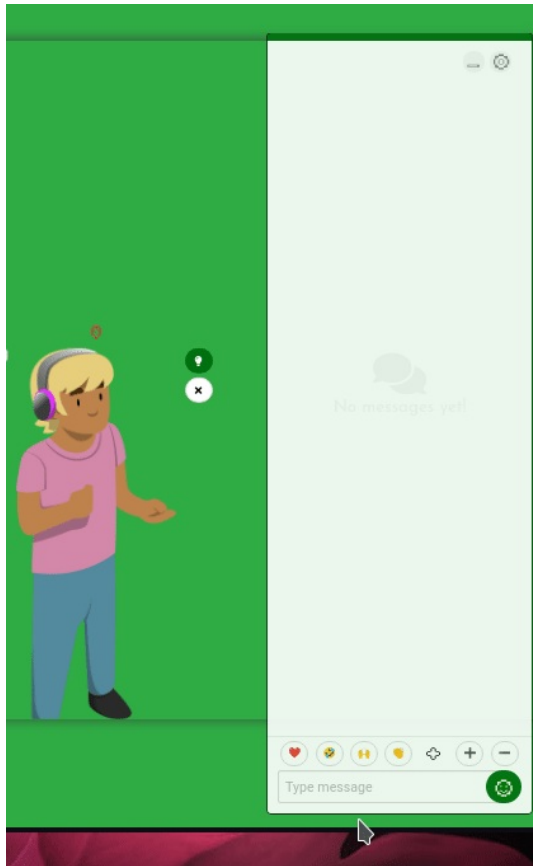
Curtain animation

You can change the animation style for the appearance and disappearance of a curtain that hides your stage from the audience.

Curtains can fade in and out, drop down and lift up, or close from the sides. Make your choice from the drop-down list, and then adjust the slider to set the speed of animation. Remember to click "Save", then visit your stage to see the results.
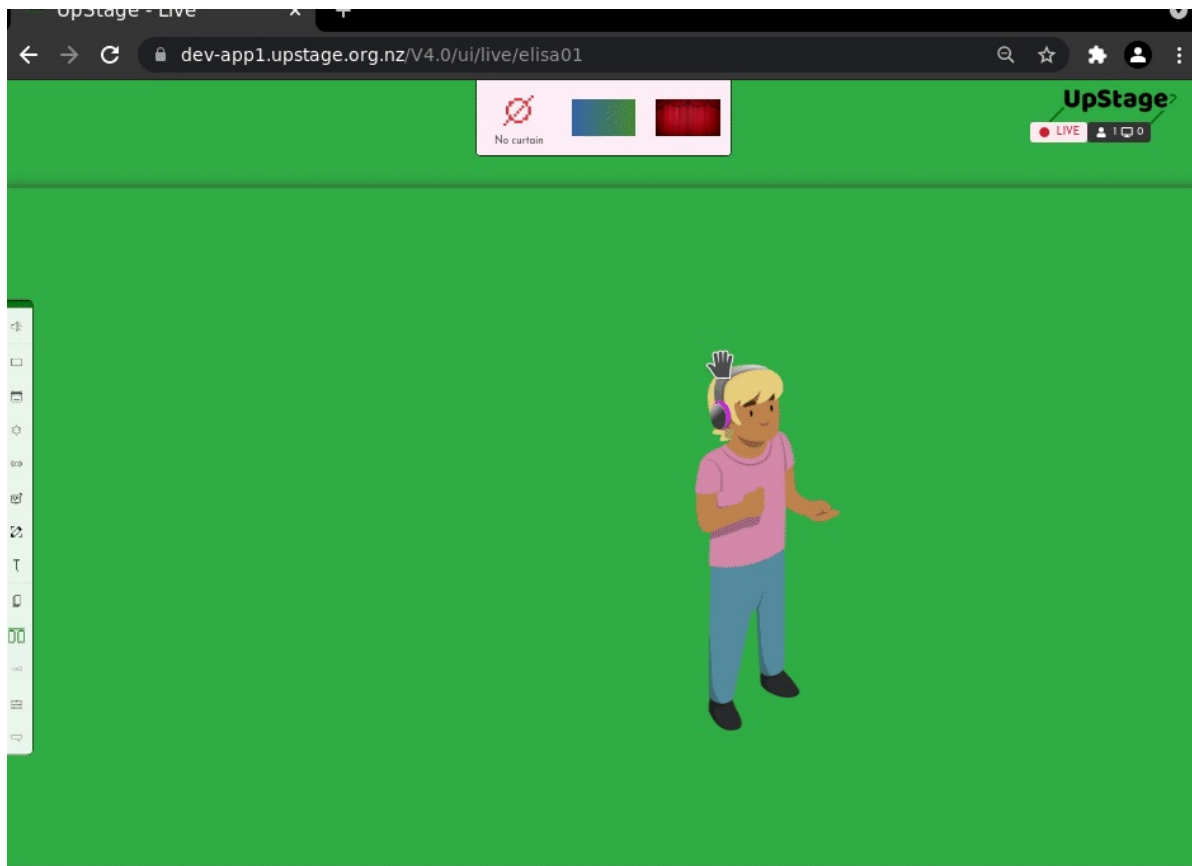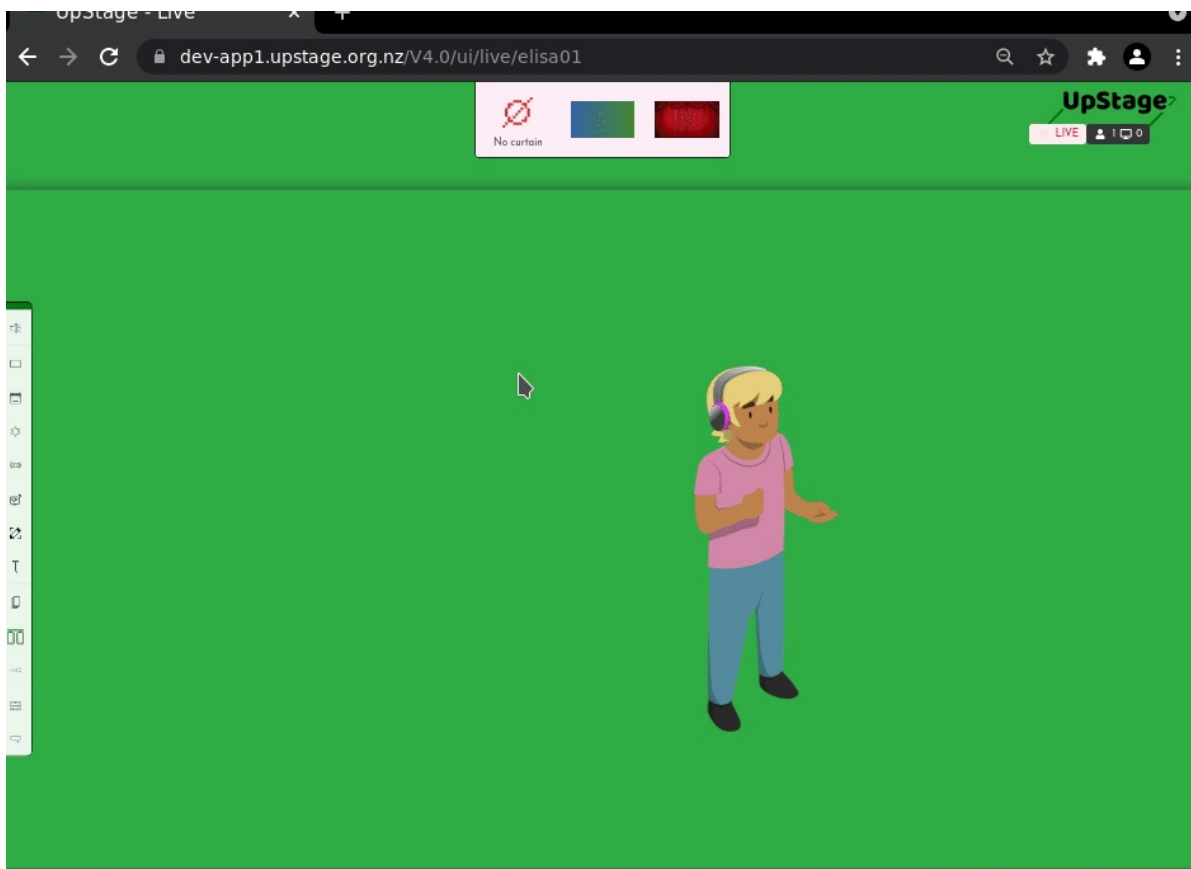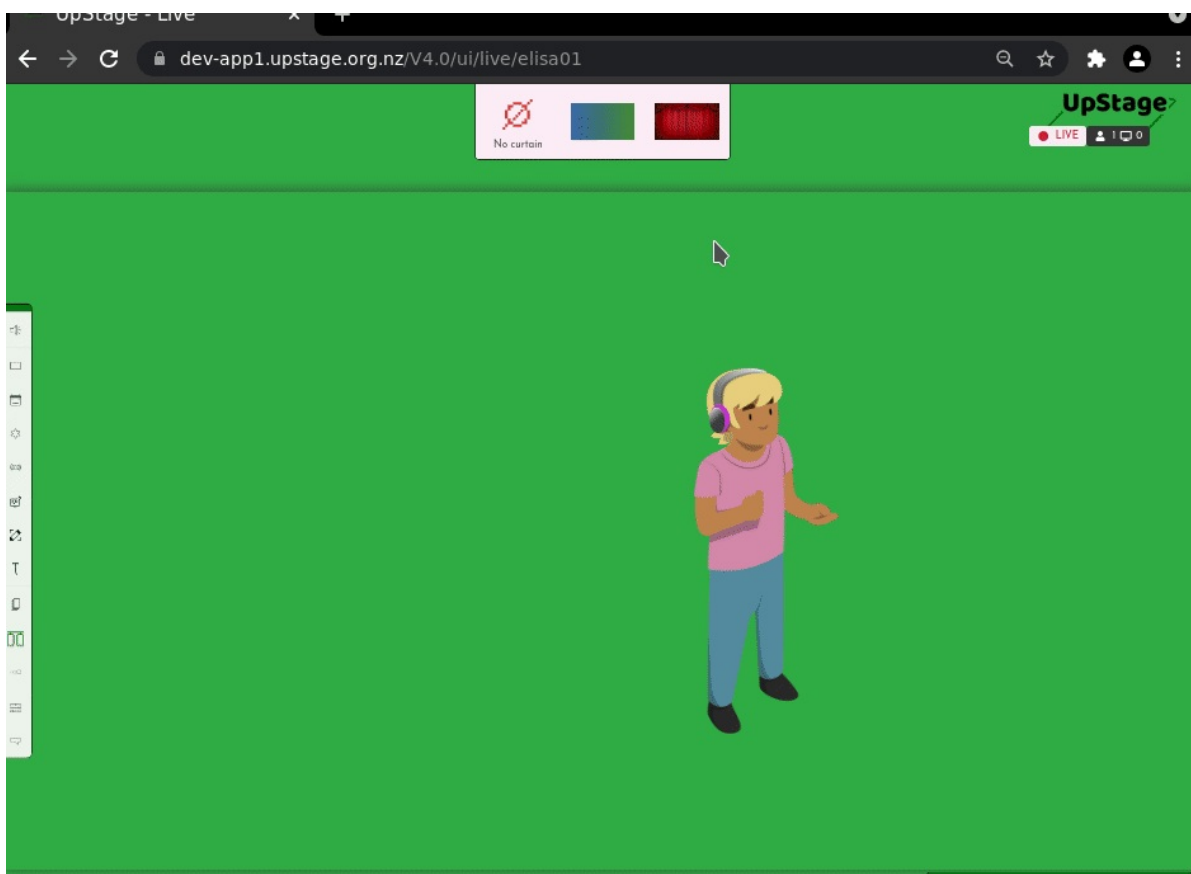
Stage ratio

The ratio of the stage can be set to 4/3, 16/9, or a custom ratio of your choice. The default is 16/9 as this will best suit the screens of most computers and mobile devices. If you prefer 4/3, simply click on that option. Alternatively, you can set your own custom ratio.

Streaming

If you set streaming to "Auto detect for live streams", any stream that's sent to the UpStage server will automatically be detected and displayed in the on-stage Streams toolbar.

This is useful if you want to incorporate spontaneous streams such as those sent by the audience. However, it does mean that if other people are also streaming to the same server at the same time for a different performance, their streams will also show up in the toolbar and may slow down the stage.

Remember to save!

To save any changes you have made in the Customisation settings, click the green "Save" button at the top right. Otherwise changes will be lost when you navigate away.

Manage your stage: media

Once you've created a stage, you can add graphics (backdrops, avatars and props) and audio files that you want to use in your performance. This chapter explains how to assign media items – that have already been uploaded to UpStage – to your stage. For information about creating and uploading media, see the Media Management section.

Assign media to a stage

Graphics and audio files that have been uploaded to UpStage can be assigned to specific stages, making those media items available to be used in performances on that stage or other stages. A media item can be assigned to, and used on, multiple stages at the same time.

To assign media to a stage:

In Backstage, click on "Stages" in the top navigation menu. Find the stage you want to assign media to in the list of stages. You must be the owner of a stage, or have been given edit access to a stage, to be able to assign media to that stage.

Click on the cog icon to enter the Stage Management interface for your stage.

In the left-hand menu of Stage Management, click on Media. You'll see two columns: Available Media and Selected Media.

Available Media by default shows media uploaded by you. Use the drop-down menus to display media uploaded by a different player, or by all players, and use the search box to search for a specific media item. In the left-hand menu, you can select a specific media type, e.g. 'Avatar', 'Curtain', etc., in order to further narrow the display and find the media item you're looking for.
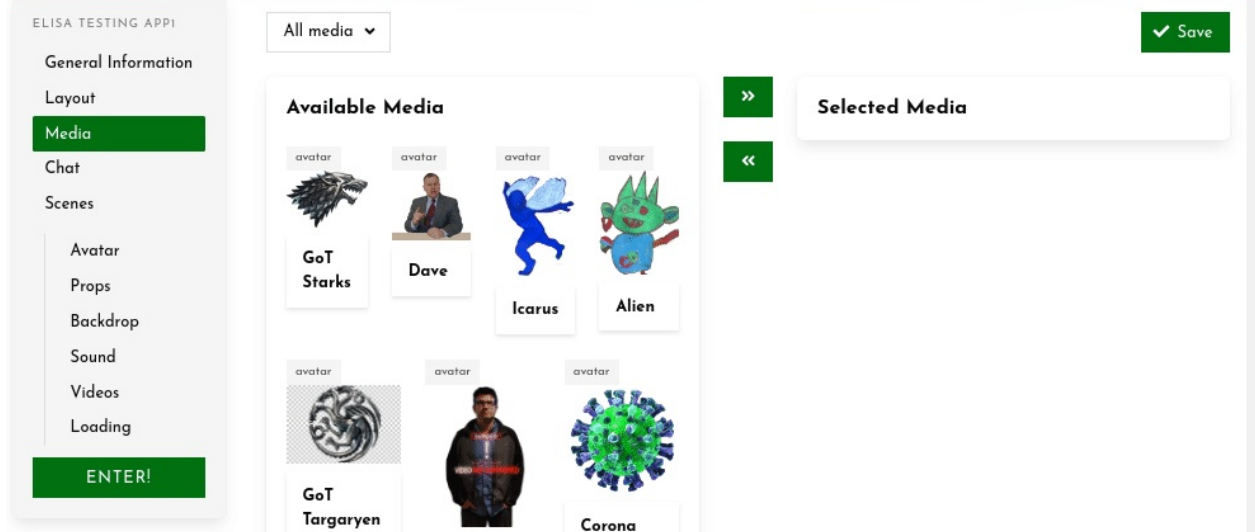

Selected Media shows any media that has already been assigned to the stage. If you've selected a media type and/or player to filter the display by, it will show only the media of that type or uploaded by that player, which has been assigned to the stage.

Move the cursor over the media item you want to assign to this stage; it will be covered with a green overlay and a white + sign. Click on it, and it will move from the Available Media list to the Selected Media list.

Once you've selected all the media you want on your stage, you must click the green "Save" button at the top right, to save the changes you've made. The selected media will now be available for you to use on the live stage.
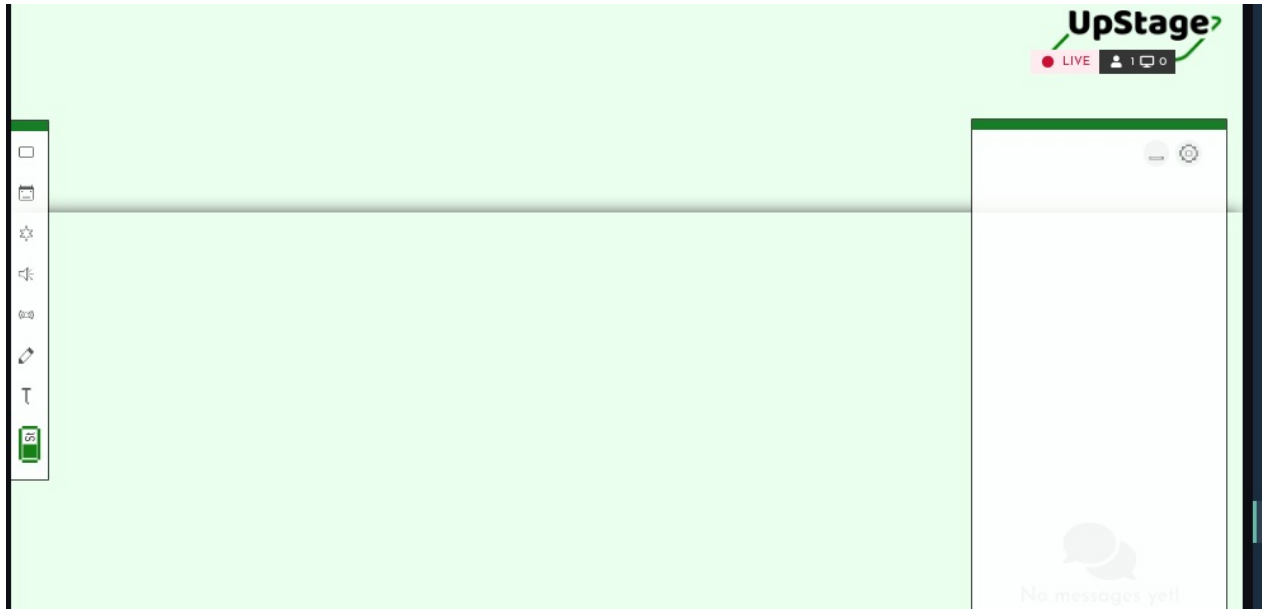
Unassign media from your stage

During the process of creating a performance you'll often end up with more media on your stage than you need. It's a good idea to unassign any unwanted media in order to minimise the stage load time and make your on-stage toolbars less cluttered.

Unassigning media from a stage does not remove it from the server, it only means that it's no longer available to use on that particular stage.

To unassign a media item from a stage:

1. Go to the Stage Management interface for your stage.
2. Select "Media" in the left-hand menu.
3. The right-hand Selected Media list shows all media assigned to this stage. Locate the item(s) you want to remove – it will be covered with a red overlay and a white – sign – and click once. The item will move to the left-hand Available Media column.
4. Click "Save" to save your changes.

Stage Management

ELISA TESTING APP1

General Information

Layout

Media

Chat

Scenes

Avatar

Props

Backdrop

Sound

Videos

Loading

All media ▾

✔ Save

Available Media

avatar

avatar

avatar

GoT
Starks

Dave

Icarus

avatar

avatar

avatar

»

«

Selected Media

avatar

avatar

avatar

GoT
Starks

Dave

Icarus

avatar
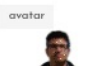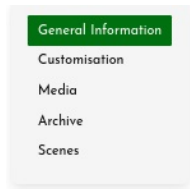
The media item is no longer assigned to your stage but is still present on the UpStage server.

Manage your stage: chat and replays

General Information
Customisation
Media
Archive
Scenes

If you've made replay recordings of your stage, you can find these and the chat logs in the Archive section of the Stage Management interface for your stage.

Here you'll find a list of all the saved replay recordings. You can play a recording, edit its name and description, download the chat or delete unwanted recordings.

For more information on making replay recordings, see the section "Recording and Statistics", and the chapter Replays.

#	Name	Chat	Replay	Messages	Length	Archived On		
1	Auto recorded from 2021-07-22 to 2021-08-15			48	3 weeks, 2 days, 16 hours, 42 minutes, 15 seconds	a month ago		
2	**Test speed** Recorded from 2021-08-15 to 2021-08-15			5	5 seconds	a month ago		
3	**Hey** Recorded from 2021-08-14 to 2021-08-14			2	20 seconds	a month ago		
4	**test for grey carrot** Recorded from 2021-08-11 to 2021-08-11			2	5 seconds	a month ago		
5	**Hey~** Recorded from 2021-08-10 to 2021-08-10			1	0 seconds	a month ago		
6	**Here** Recorded from 2021-08-10 to 2021-08-10			1	0 seconds	a month ago		
7	**Another recording** Recorded from 2021-08-10 to 2021-08-10			2	3 seconds	a month ago		
8	**Very first recording** Recorded on 2021-08-10			0	0 seconds	a month ago		

Play a Replay recording

Click on the camera icon to play a Replay recording. It will open just like a live stage, but in the top right-hand corner the status will show as "Replaying" instead of "Live".

In the bottom left-hand corner is a toolbar. Use this to play, pause and stop the recording. You can set it to play at different speeds, or select a point along the timeline to play from.

Use the 'esc' key on your keyboard, or the line icon at the top right corner of the toolbar, to hide these tools if you want to watch the recording or make a screen recording of it without seeing the replay tools.

No messages yet!

1x

0:00 568:55:12

Type message

Manage your stage: scenes

If you've created scenes on your stage (see the chapter <u>Scenes</u> in the Live Stage Tools section of this manual), you can view the saved scenes in the Stage Management interface for that stage.

Currently this interface only allows you to view the Scenes list and delete individual scenes (which can also be done on the live stage). In the future other features may be added here.

Enter your stage

As a player, you can log in and enter stages that you've created or been given player access to. You'll see the on-stage player tools that aren't visible to the audience; these tools allow you to manipulate digital media in real time on the stage in order to present live performances.

To enter a stage as a player:

1. Log in to UpStage from the Foyer.
2. You arrive at the Stages list.
3. Locate the stage you want to enter and click on the green "ENTER" button at the right.

You can also enter a stage directly from a link on the Foyer page, another webpage or email. When you do this, a pop-up window will appear:

Click on "Player Login" then enter your username and password. Click "Login" and you will enter the stage as a player (as long as you have player access to that stage).

How does the audience see your stage?

When the audience enters your stage for a performance, they'll see and hear the objects and audio that you're manipulating in real time. They won't see the player tools, or the green frames that players use to manipulate objects. If you use a curtain, they'll see only the curtain and not see through it as players can.

It can be useful to see your stage from the perspective of the audience, in order to be sure they're seeing what you want them to see. This can be done in three ways:

- log out and enter the stage as a guest; this can only be done when the status of the stage is "Live", which means that other public with the link could also enter.
- make a Replay recording: this records everything on the stage except for audio-visual streams, from the audience perspective.
- masquerade as audience.

Masquerade as audience

Masquerading as audience allows you to step out of the player view of the stage and into the audience view. This is very useful when a group is rehearsing and one person wants to check the audience view. While you're masquerading as audience, you cannot operate any media on the stage, you can only watch what other players are doing.

Click on the Settings icon in the left-hand toolbar to open the settings overlay. Towards the right-hand end is the button "Audience View". Click on this and the stage will change to audience view – the player tools are no longer visible to you and if you write in the chat your text will appear smaller than the player text and light grey.

To return to player view, click on the masquerade icon in the top right corner, above the chat window and below the player-audience counter.
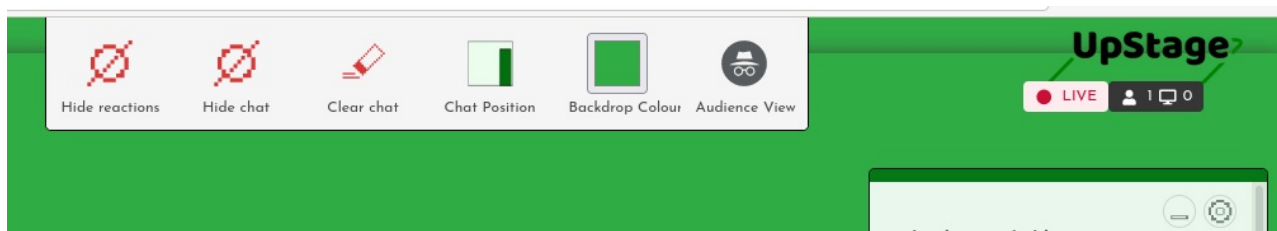
Invite audience

While you're preparing your cyberformance, you can set your stage's status to "Rehearsal" so that only the players can enter the stage. When you're soon going to give a public performance, you may want to turn on the Visibility toggle, so that the public can see the stage on the Foyer page, but still cannot enter.

Before giving a live performance you want the audience to attend, you'll need to change the status to "Live". This means that audience members will be able to enter the stage and participate in the performance when they click on its link.

Change the status of your stage

- In the Stages list, find the stage whose status you want to change.
- Click on the green cog icon to enter its management interface.
- In the General Information section, find the stage "Status" toggle and click it to "Live".
- Remember to click "Save" at the top right of the page to save your changes.

Status   ▢   The public can only enter your stage when its status is Live. With Rehearsal status, only players who have access to the stage can enter.

Visibility   ▢   Select whether this Stage is visible in the Foyer or not.

Share the stage link

When the Visibility toggle is turned on, your stage will be displayed on the Foyer for the public to see. However, audience members don't have to come to the Foyer to enter the stage – all they need is the direct URL for the stage. You can share this URL via email, social media and other websites in order to promote your event and make it easy for the public to enter the stage.

Information for the audience

To help your audience have the best possible experience of your show, it's a good idea to give them some information, such as:

- UpStage functions on laptops, desktop computers and mobile devices using a standard browser. Make the browser full screen for the best view.
- Time conversion: if you're expecting a global audience, be clear about the time – what time zone are you in? Add a time converter link to make it easy for everyone to find their local time.
- Audience interaction: does your show use the Chat? How do you want to interact with the audience? Give them some tips in advance so that they're comfortable and confident about interacting during the live performance.

Media Management

This section explains how to create media for UpStage, and how to upload, modify and manage it.

- The Studio
- Media in UpStage
- Creating graphics for UpStage
- Creating audio
- Upload media
- Modify media
- Assign media to your stage
- Delete media
- Clickable links

The Studio

The Studio is the area of Backstage where you can upload and manage your media.

Navigate to the Studio by clicking on "Studio" in the top menu bar of Backstage.

[Screengrab]

You arrive at the list of all available media on this UpStage instance, with the default display showing the media that you've uploaded.
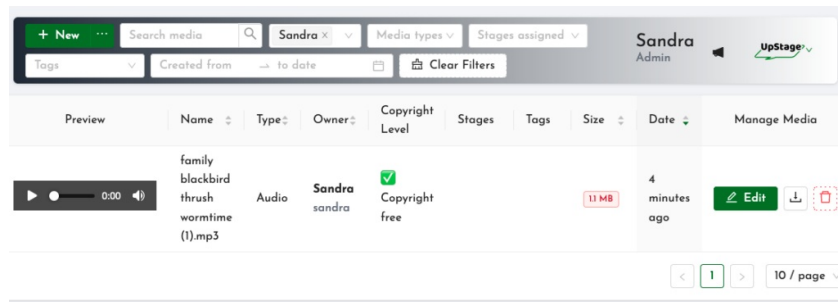
The list shows a preview of each item of media, its name, type, who uploaded it, the copyright license of the media, any stages that the media item has been assigned to, when it was uploaded, and buttons to edit, download or delete the media item.

Filter and search

The ability to filter and search media is greatly enhanced in the Studio. As well as being able to search media by name or keyword, you can also add filters to refine the displayed list of media.

The available filters are:

- Owners: display media uploaded by one or more specific players
- Media types: show media of only one or more types (avatar, prop, backdrop, audio, stream, shape, curtain)
- Stages assigned: allows you to see just the media assigned to a specific stage or stages
- Tags: filter by tags attached to media items
- Date filter: select a time period and view all media uploaded within that period.

Copyright and permission

The Studio provides a system for players to set, request and approve permission for the use of media items by other players. The Copyright Level column shows the status of each media item – whether it's copyright free for anyone to use, if it can be used with acknowledgement, or can only be used with permission.
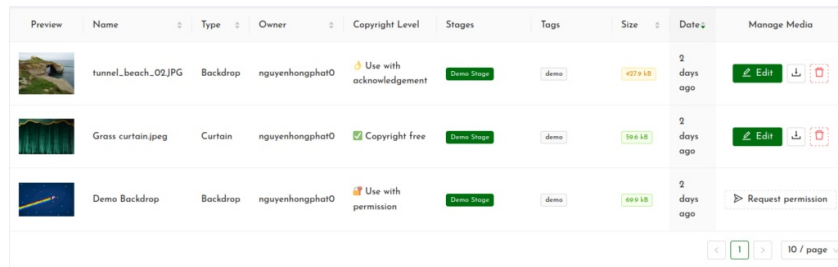
A media item can also be set to "Not shared", which means that other players won't have access to this media item.
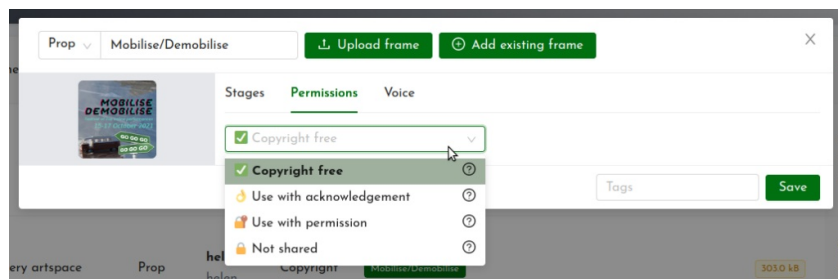
Use with acknowledgement
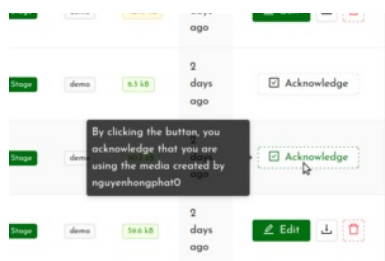
This means that you're free to use this media item, but you must acknowledge the copyright owner. In the Manage column you'll see a button that says "Acknowledge". When you hover over it, a pop-up tells you that by clicking the button, you're acknowledging use of the media by that player. The player will receive a message telling them that you're using the media. They may contact you or check your show to ensure that the media is properly acknowledged.

Use with permission

This means that you can only use this media item if you have permission from the copyright holder (usually the player who uploaded it). Click on "Request permission" in the Manage column for that item, and a pop-up window appears where you can write a message to the player. You should tell them in what context you want to use their media, so that they can decide whether or not to allow it.

The copyright-holding player will receive a notification asking them to approve your request. Note that this notification is only within the UpStage system (at this stage) – they don't receive an email or any other alert that there's a request waiting for them. If they're not regularly active on this instance of UpStage, you may need to contact them through another channel as well, or ask an admin of the UpStage instance to contact them.
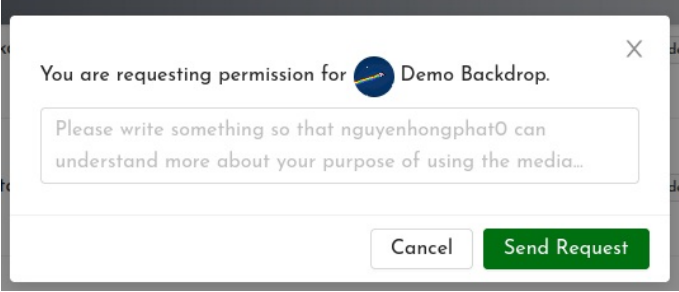
Media in UpStage

"Media" in UpStage means a digital file such as an an image, animation, sound or video that has been uploaded to the UpStage server. These files can then be made available on your live stage as backdrops, avatars, props, audio tracks and streamed videos.

You must first create your media before it can be uploaded to UpStage. You can use existing media that's in the public domain, or that's available under a license which allows you to use it. Usually, you'll want to create your own media that's specifically designed for the show you're creating. The following chapters in this section give some tips on creating audio and graphics for UpStage, and then explains how to upload and manage media files on UpStage.

File formats

Here's a list of file formats that you can upload to UpStage:

Images	Audio	Video
.png .jpg .jpeg .gif .svg	.wav .mpeg .mp3 .aac .aacp .ogg .webm .flac .m4a	mp4 .webm .opgg .3gp .flv

Small is beautiful

UpStage is a venue for live online performance, and audiences can be located anywhere in the world on all kinds of devices and internet connections. In order to ensure the best possible experience for everyone, you should always keep media file sizes as small as possible. Data speed is more important than rich media. If you have a lot of media on a stage and the file sizes are large, it will take longer for the stage to load and real-time performance could be impeded.

For these reasons, there is a default limit of **1MB** for graphic and audio media uploads, and 300MB for video uploads. An UpStage administrator can override this limit for individual users, but this should only be done when there's a good reason.

Ownership

UpStage uses a Creative Commons based system of permissions for all media items uploaded to the server. This allows you to restrict access to your media, or to make it available for general use by other players on the same UpStage server. As an open source project, we believe in open access and sharing; however, as an artistic project we also understand the needs of artists to protect their work.

You should always keep copies of your media on your own computer in case of accidental deletion or a failure of the UpStage server which you uploaded your media to.

Please delete unwanted media from the server – such as duplicate or replaced files, or media for a show that has finished and won't be performed again. UpStage is not a file storage service, and data storage is not free.

Creating graphics for UpStage

Before you can upload media to UpStage for use in your cyberformance, you must either find or create it. If you're finding media items online, they must be in the public domain or have a license allowing you to use them. Usually you'll want to create your own media that's specifically designed for the theme and artistic style of your cyberformance. This chapter provides tips for creating graphics for UpStage.

Graphics (image files) can be backdrops, avatars, props or curtains on the live stage. An image file can also be uploaded as a cover image that displays while your stage is loading.

File formats

Images can be uploaded in the following file formats:

- .png – recommended for avatars and props, to retain transparency in clear-cut images
- .jpg or .jpeg – suitable for backdrops, cover images, curtains and any media item that is square or rectangular (not clear-cut)
- .gif – can be used for still images and gif animations
- .svg

Size and dimensions

As images can be scaled on stage, the precise size of your image is not important. However, you don't want it to pixelate when you increase the size, so you need to estimate the size you want to use it at on stage and make the image approximately that size. Usually something between **300 to 500** pixels should be sufficient to allow scaling of an avatar or prop without losing quality.

You may need to have a few tries before getting it right. If you're making a lot of media for one performance, it can be a good idea to create a template image. Once you've got the size of your template image right, use it as a basis for the rest of the graphics. If you upload multiple files that you later don't need, please remember to delete them from the server to avoid unnecessary clutter.

Backdrops cannot be scaled. A standard size of approximately 800 pixels wide by 450 pixels high will usually fit well and fill the screen when the browser is in full screen view. Remember that your audience will be on a range of devices, with browser windows at different sizes, and they may not be in full screen view; they may see space on either side of the backdrop. You can set the colour of this space to fit with your backdrops.

Tip: In the Stage Management interface for your stage, go to "Customisation" to set the ratio for your stage.

Graphics software

You can use any graphics software to create your graphics so long as it can save or export files to the accepted formats. We recommend open source graphics applications including:

- GIMP – a bitmap editor; https://www.gimp.org/
- Krita – a Photoshop alternative; krita.org/
- Inkscape – a vector editor; inkscape.org/

Animated gifs

Gif animations can be uploaded to UpStage as backdrops, avatars and props. Looping is defined within the gif itself, not in UpStage. The speed of the gif animation cannot be adjusted in UpStage, and you cannot stop it at a specific static frame. If you want to do this, consider creating a multi-frame media item instead of a gif.

When a player moves or resizes a gif media item, the animation will start over again, because the image has to re-render on the stage. If you don't want this to happen, create a multi-frame media item instead.

Multi-frame avatars, backdrops and props

Another form of animation is multi-frame: an animated avatar, backdrop or prop can be created by uploading two or more images and saving them together as a multi-frame avatar, backdrop or prop. This allows you to control the speed of the animation, and to move from one frame to another within the same object.

Creating audio

Before you can upload media to UpStage to use in your cyberformance, you must either find or create it. If you're finding media items online, they must be in the public domain or have a license allowing you to use them. Usually you'll want to create your own media that's specifically designed for the theme and artistic style of your cyberformance. This chapter provides tips for creating audio for UpStage.

Audio files can be music, sound effects, pre-recorded voices, or any other kinds of audio tracks. UpStage's on-stage audio tools allow for simple manipulation including looping, adjusting volume, and playing multiple tracks at once. If you want to do more sophisticated audio mixing, you can use your preferred audio mixing software and send a live audio stream to the stage. See the Streaming section for information about how to do that.

File formats

The following audio file formats can be uploaded to UpStage:

- .ogg – open format, lossless
- .flac – open format, lossless
- .webm – audiovisual media format, royalty free
- .wav
- .mpeg
- .mp3
- .aac
- .aacp
- .m4a

File size

It's important to keep media file sizes as small as possible to avoid slow-loading stages or lag for people on slow connections. We set the default limit of **1MB** for graphic and audio media uploads to encourage you to compress your files as much as possible. An UpStage administrator can override this limit for individual users, but this should only be done when there's a good reason.

As audio files can easily exceed **1MB**, one option is to cut up a large file into several smaller files which are all under 1MB.

Upload media

Digital media files – images, animations, audio and video – can all be uploaded to UpStage and assigned to a live stage for use in your cyberformances.

Please see the previous chapters on Creating graphics for UpStage and Creating audio for tips on creating media. This chapter explains how to upload media that you've created or sourced to use in your UpStage cyberformances.

Upload media

From Backstage, navigate to the Studio. In the banner at the top of the screen you'll see the button "+ New" at top left. Click on this and a file upload window opens. Drag the media item you want to upload from your computer onto the window.

The media edit interface opens; here you can (these things are explained in detail below):

- select the media type from the drop-down list (avatar, prop, backdrop, etc.)
- give the media item a name
- upload additional frames if you want to make a multi-frame media item
- assign it to one or more stages
- set permissions
- for avatars, you can select and save a voice
- for avatars and props, you can add a link
- and click "Save" to create your media item.

[New screengrab]

When you click "Save", the edit interface closes and you are in the main interface of the Studio. You should see your new media item at the top of the list.

Media types

You must give your media item a type, so that when you assign it to a stage it will appear in the appropriate toolbar. Select the type that will allow you to use the media item in the way you want to use it on stage.

The media types are:

Avatar	An avatar can be held by one player at a time; it can be given a voice, and speak with Text2Speech; and props can be attached to it.
Prop	A prop is a graphic object that can be operated by any player, and can be attached to an avatar.
Backdrop	A backdrop is an image that appears behind all other visual media on the stage, filling the background area completely.
Audio	Music, sound effects or other sounds that can be played on the stage.
Curtain	A full-screen image that covers the stage, hiding it from the audience just like a theatre curtain.

Note: a media item can only be one type. If you want the same item to have more than one function – for example, a backdrop that's also a curtain – you must upload the original file twice, as two separate media items.

Media name

The field next to media type allows you to give your media item a name. If you don't enter anything here, UpStage will automatically use the filename.

It's a good idea to give your media items short, meaningful names that will allow you to easily recognise the media item in the on-stage toolbars and in the Studio's media list.

Frames

Adding frames allows you to create a multi-frame avatar, prop or backdrop. You can upload additional frames from your computer, or you can add frames that have already been uploaded to UpStage.

Uploading a new frame works the same way as uploading a new media item. To add an existing frame, follow these steps:

1. Click on "Add an existing frame" in the media item's edit interface.
2. Find the frame you want to add in the media list.
3. At the right-hand side of the list, click on "Append frames".
4. The new frame appears as a thumbnail at the end of the list of thumbnails in the media item's edit interface; if you have more than four frames, you will need to scroll down to see it.
5. Drag the thumbnails if you want to reorder them.
6. When you've finished adding frames, remember to click "Save" in the bottom right-hand corner of the edit interface.

[New screengrab]

Assign to stages

You must assign your media item to a stage in order to be able to use it there in a performance. A media item can be assigned to many stages at the same time.

In the media item's edit interface:

1. If the list of available stages is not showing, click on the Stages tab.
2. Find the stage or stages that you want to assign this media item to, and click the checkbox next to the stage name.
3. Click on the green arrow between the two stages list.
4. The selected stage(s) will appear in the right-hand list of assigned stages.
5. Click "Save".

[New screengrab]

Set permissions

Click on the Permissions tab (next to Stages) and select one of the following options from the drop-down list:

- Copyright free: the media item can be used and edited by other players in any way without need for permission.
- Use with acknowledgement: the media item can be used and edited by other players as long as the owner is acknowledged.
- Use with permission: other players must ask you for permission if they want to use this media item.
- Not shared: the media item can only be edited by the owner, and only operated by players who have access to a stage that the owner has assigned the media item to.

Here you can also set the owner of a media item to another player – for example, if you have uploaded something for someone else, you may then wish to transfer ownership to that player.

The notes field lets you save any copyright or acknowledgement details, or other information that may be useful to keep with the media item.

[New screengrab]

Avatar voices

If you've chosen Avatar as the type of media item, you'll see the Voice tab in the media item's "Edit" interface. Here you can set the avatar's Text2Speech voice by selecting a voice and variant, and adjusting the sliders for pitch, rate and volume.

Test the voice by entering the text you want to hear spoken in the test field and clicking the green circle at the right-hand end of the text input field. You'll hear the text spoken in the voice you've set, and can make further adjustments until you're satisfied.

[New screengrab]

Clicking "Save" once you've modified the voice will mean that this voice will be used for this avatar on all the stages that it's assigned to. See the chapter on Avatar speech and voices in the Live Stage Tools section for how to adjust the voice on the live stage.

Link

If you want a prop or avatar to be a clickable link on stage, enter the URL here. During the cyberformance, the audience can click on it to open the URL in their browser.

Note that players will need to right-click on the prop or avatar and select "Open link" in order to visit the link. This is because clicking on the prop or avatar when you're a player selects it for you to operate.

[New screengrab]

Save your changes

Click on the green "Save" button in the lower right-hand corner to upload your media item and save any other changes that you've made. You can go to the Manage Media "Edit" window at any time to edit the media item.

Modify media

To modify a media item that has been uploaded to UpStage, nagivate to the Studio and locate the item you want to modify. Then at the far right in the column Manage Media, click on the "Edit" button.

[New screengrab]

This brings you to the media item's edit interface.

[New screengrab]

Here you can do the following:

- change the media type using the drop-down list (avatar, prop, backdrop, etc.)
- change the media item's name
- add additional frames to a multi-frame media item
- assign it to stages, or remove it from stages
- change the permissions
- change and save an avatar's voice
- change and save a link for a prop or avatar.

For step by step instructions for each of these actions, please see the previous chapter, Upload media.

What modifying media does and doesn't do

When you modify a media item in the Studio, these changes will take affect on all stages where that media item has been assigned. For example:

- If you alter an avatar's voice, this will be the voice for this avatar on all stages (although it can be temporarily modified on a specific stage).
- If you give a prop or avatar a clickable link, this link will be active on all stages that the prop or avatar is assigned to.
- If you add or remove frames from a multi-frame media item, this will alter the frames on all stages that it's assigned to.

If you unassign a media item from a stage, this doesn't delete the media item from the UpStage server. It will no longer be available to use on the live stage that you've unassigned it from, but it will still be available on any other stages it has been assigned to, and in the Studio.

Save your changes

You must always remember to click the green "Save" button in the lower right-hand corner of a media item's edit interface if you want to save the changes you've made.

Assign media to your stage

Once you've created a stage, or been given edit access to a stage created by another player, you can assign media to that stage so that you can use it there in live cyberformances.

There are three ways to assign media to a stage:

- during upload
- from the Studio interface
- from the Stage Management interface.

See the chapter Upload media for information about how to assign media to a stage during the upload process.

Assign media that has already been uploaded

Once a media item has been uploaded to UpStage, you can assign it to your stage from either the Studio or Stage Management.

Note that you can set permissions on your media items to control whether or not other players can assign your media items to their stages.

From the Studio

Navigate to the Studio from Backstage by clicking the Studio button in the top menu bar.

1. In the Studio you will see the media list, showing as the default view media that you have uploaded.
2. Locate the media item you want by entering the media name in the search box, or use the filters in the top navigation bar; you can filter the media list according to the player who has uploaded a media item, the media type, stage assigned to, tags and a date range.
3. Once you've located the media item you want, click on the green "Edit" button on the right-hand side. The media item's edit interface opens in an overlay.
   Note: if you don't see an Edit button, this is because the player who uploaded the media has set its permissions to either "use with permission" (in which case, you must request permission) or "not shared" (in which case you cannot assign it to a stage).
4. In the list of available stages, locate and click on the stage or stages that you want to assign the media item to. Its checkbox will change to green with a tick.
5. Click on the green arrow between the list of available stages and the right-hand column of assigned stages. The stage(s) will move to the right-hand column.
6. Click "Save" in the lower right-hand corner of the media item's edit interface.
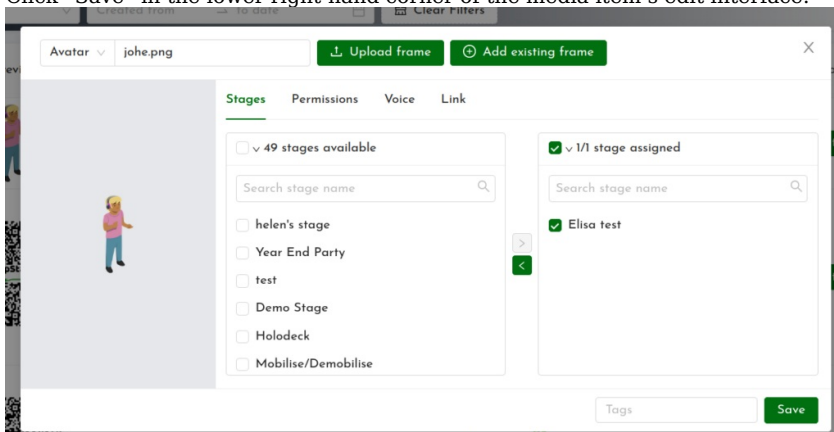
From Stage Management

1. In Backstage, click on "Stages" in the top menu bar. You'll see the stages list.
2. Locate the stage to which you want to assign media to; use the search box if you don't see the stage you want.
3. Click on the green cog icon in the "Manage Stage" column. The Stage Management interface opens.
4. Click on "Media" in the left-hand navigation.
5. Select the type of media and / or the player who uploaded it to filter the list, or use the search box to find the media item you want.
6. Hover the cursor over a media item; it will be highlighted in green, with a white plus (+) icon.
7. Click on it and it will move to the right-hand list, which shows the media that is assigned to this stage.
8. Click "Save" in the upper right corner.
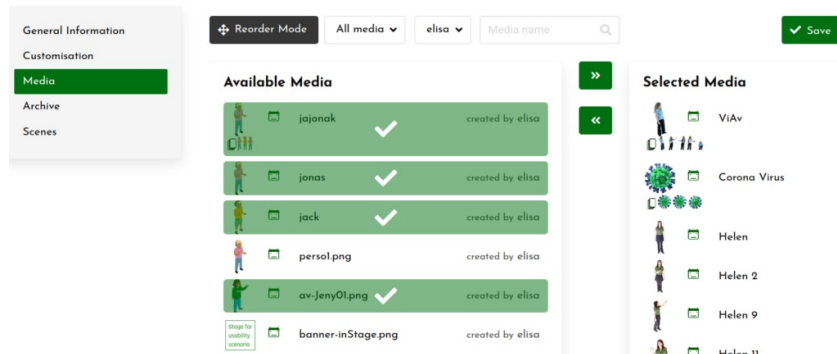
Remove media from a stage

It's good practice to remove any media from your live stage that you don't need for a performance. The stage will load faster, and you'll find it easier to locate the media you want in the on-stage toolbars.

To unassign, or remove, media from a stage:

- in the Studio, open the media item's edit interface; click on the stage you want to unassign the media item from to select it, then click on the green arrow between the columns to move it back to the available stages column. Then click "Save".
- in the Stage Management interface, click on the media icon in the "Selected Media" column, which will move it back to the "Available Media" column. Then click "Save".

Unassigning media from a stage does not delete it from the server, only from that stage. The media item will still be on other stages that it has been assigned to, and available in the Studio media list to be reassigned at any time.

Delete media

Deleting a media item removes it completely from the UpStage server. It's important to do this with media that you no longer want to avoid the server becoming unnecessarily cluttered. This practice also makes it easier to find the media you do want!

Note that deleting media from the server is different to unassigning it from a stage. You can unassign media from the Stage Management interface or the Media Management window for that media item. Then it will no longer be available on that stage, but it's still on the UpStage server and can be assigned to other stages.

To delete a media item from the UpStage server:

1. In Backstage, click on "Studio" in the top navigation menu and locate the item you want to delete in the media list.
2. At the right in the "Manage Media" column, click on the red trash icon.
3. You'll be prompted to say 'yes' or 'no' to deleting the item. If you say yes, it will be removed from the server and no longer available on any stages or anywhere in the system. You will need to re-upload the file if you've deleted it by mistake.
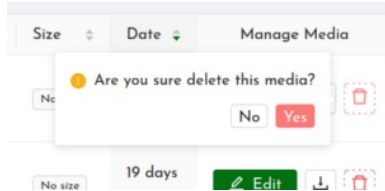
Clickable links on stage

Avatars and props can be made into clickable links – to take your audience to another stage, to a webpage with information about the cyberformance, or any other online location.

1. In the Studio find the prop or avatar that you want to make into a clickable link.
2. Click on the green "Edit" button to open its edit interface.
3. In the edit interface, click on the "Link" tab.
4. Enter the URL for the link.
5. Choose if the link will be opened in a new tab or not.
6. Choose if you want the link to have a hover effect – the image will increase in size on the stage when someone rolls their cursor over it.
7. Click "Save".

[New screengrab]

Note that the link will always be available on the avatar or prop. If you only want the audience to click on it at a specific time, you should create a specific media item for the link, and only place that on the stage when you want to make the link available.

Other than the optional hover effect, there's no visible indicator that an avatar or prop is clickable. You may need to inform the audience that they can click on this link. For example the prop or avatar could have text saying "Click me" on it, or you could invite them verbally through the chat, live text or audio, to click on the object.

Oops! That page can't be found.

It looks like nothing was found at this location. Maybe try a search?

Search for: Search … Search

Enter a live stage

If you've created or been given player access to a stage, you can enter the stage as a player and have access to the on-stage tools for operating media in the live cyberformance.
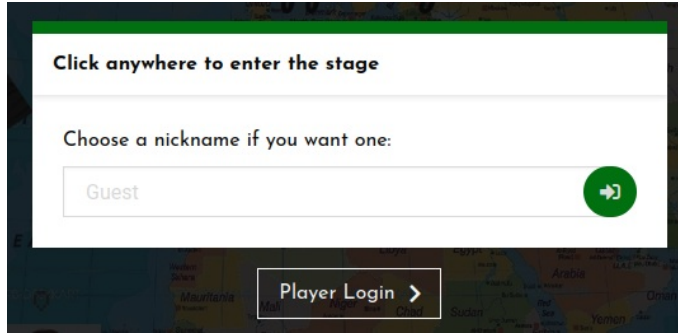
You can enter the stage in two ways:

- from a direct link to the stage
- from the Backstage.

Direct stage link

If you click on a link to the stage on the UpStage Foyer or anywhere else (such as in an email, ticketing system or other webpage), once the stage has loaded you'll have the option to enter an audience nickname or log in as a player.
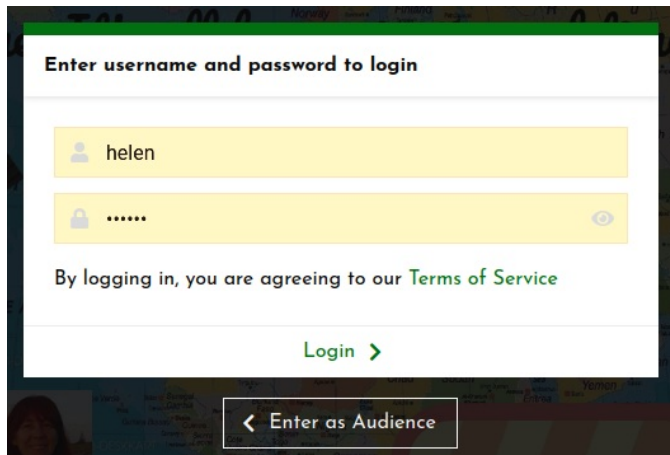
Click on "Player Login" and enter your username and password, then click "Login" to enter the stage as a player.

You have the option here to return to the previous screen and enter as an audience member if you don't want to log in.

From Backstage

If you're logged in to UpStage but not on a live stage, you'll be in the Backstage. From here you can enter a stage in a number of ways.

From the Stages list

1. Click on "Stages" in the top menu bar to see the stages list.
2. Locate the stage you want to enter; you can filter by player or use the search box to find the stage.
3. Click the green "Enter" button at the right-hand end of the stage's line in the list.

From the Stage Management interface

If you've been editing the stage's settings, you can enter the stage directly from the Stage Management interface. In the upper left, next to the name of the stage you're managing is a white "Enter" button. This will bring you directly into the stage.

From Media Management

The media list includes a column called "Stage", showing which stage or stages a media item has been assigned to. Clicking on the name of a stage in this column will take you directly into that stage.

Quick overview of tools

When you're logged in and have player access to a stage (either you created it, or the stage owner gave you access), you'll see tools on the live stage that aren't visible to the audience. These tools allow you to manipulate the media assigned to the stage, in real time, to present your cyberformance to the audience.

From the toolbar on the left side of the stage, you can find the media that's assigned to this stage (backdrops, avatars, props, audio and streams) as well as tools for real-time features (drawing, text and streams), stage management tools (settings, curtain and scenes) and the player chat.

This chapter briefly describes each tool; please see the section Live Stage Tools for more detailed explanation of each tool and how to use it.

Toolbar

The left-hand toolbar contains the following tools:

- Audio: sound files
- Backdrops: images that fill the background area of the stage
- Avatars: images and animations that can be moved around the stage and can speak with Text2Speech voices
- Props: images and animations that can be moved around the stage and attached to avatars
- Streams: pre-recorded video and live audio-visual streams that are either pre-assigned to the stage or sent spontaneously if the stage is set to auto-detect streams.
- Meeting: embed a Jitsi meeting in the stage, or add your individual Jitsi stream.
- Live drawing: draw in real time directly on the stage
- Object drawing: drawings that can be saved as either avatars or props
- Text: write in real time directly on the stage
- Depth: manage the depth positions of media on the stage, and remove single media items from the stage
- Curtain: closes a curtain over the stage that players can see through; the chat and emojis can be made available on top of the curtain for the audience
- Scenes: save an arrangement of media to select later with a single click, or click blank scene to remove all media from the stage
- Settings: hide or expose the chat window and reactions, clear text from the chat window, change the background colour of the stage, and masquerade as audience to see how they're receiving your stage
- Player Chat: chat privately with your cast and crew without the audience seeing it.

Click on a tool in the left-hand menu and its overlay appears at the top of the screen. The overlay displays available media or tools to create in real-time.

To hide the overlay, click again on the tool in the left-hand menu, or on a different tool to see its overlay.

All of the tools are explained in detail in the [Live Stage Tools](#) section.

Who is here?
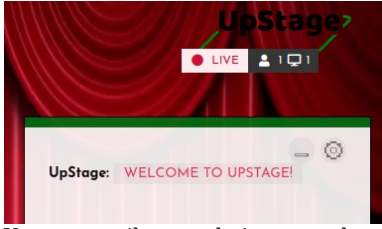
You can easily see who's currently on a live stage using the Player-Audience Counter located at the top right corner of the stage.

The person icon indicates players (logged in), and the computer screen icon indicates audience – the number of connected devices that aren't logged in as players. Note that often there can be more than one person watching a performance from a single device, and sometimes performances are screened to gathered audiences in a proximal space. In these situations, the audience counter only shows the number of connected devices, not the actual number of people who may be watching.
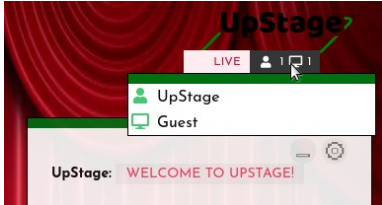
When you hover the cursor over the counter, a drop-down list appears, showing the names of all players and audience members who have chosen to enter a nickname.

Audience members who haven't entered a nickname will appear as Guest. If there's more than one Guest, they'll show as Guest1, Guest2 and so on.

The drop-down list will disappear when you move your cursor away.

Note that you can also see the Player-Audience Counter in the Backstage list of stages, in the Statistics column, and on the Foyer page in the top right-hand corner of stage images, when the stage is live.

Chat with the audience

The live chat window allows players and audience to chat freely together.

By default the chat window sits at the right-hand side of the stage. Players can move the chat position to the right and hide or expose the chat from the Settings tool.

At the bottom of the chat window there's a text input field. Just above it are icons for reaction emoticons that will appear along the bottom of the stage when clicked. The reaction emoticons are available to both audience and players, and when clicked on by anyone, they are seen by everyone. They can also be hidden or exposed from the Settings tool.

Chat as a player
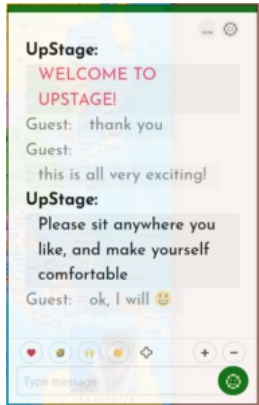
When a player types in the input field, their text will appear in the chat window preceded by their player username.

If the player is holding an avatar, the text will appear in the chat window preceded by the name of the avatar. It will also appear on stage as a speech bubble and be spoken in the avatar's Text2Speech voice. See the chapter on Avatar speech and voices for more information.

Use the round green button at the right of the text input field to add emoticons to your chat text.

Customise the chat window

Settings to locally customise the chat window are available to both players and audience:

- Minimise the chat window by clicking the – icon at the top of the window.
- Increase or decrease the font size with the + and – icons above the text input field.

The cog icon at the top right of the chat window opens the Chat Settings window. Here you can change the nickname that appears in the chat window with your text.

In the Parameters tab of the Chat Settings, you can set the font size and adjust the opacity of the chat window. Note: this only affects your view of the chat window.
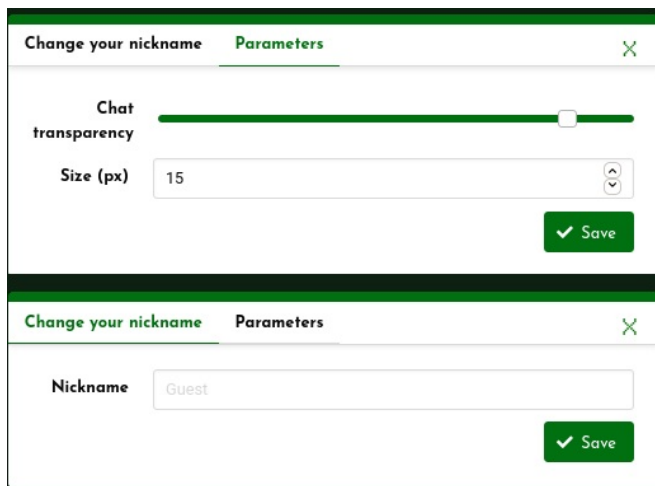
Player chat

As a logged-in player, you can use the Player Chat tool to communicate privately with the other players who are presenting the cyberformance with you.

The last icon in the left-hand toolbar opens the player chat. By default it sits at the bottom left-hand corner of the stage. If this is inconvenient during your performance, you can move it to another position.

Click on the star icon in the top right-hand corner of the player chat window. A green frame and handles appears around this chat box. You can now drag and drop it to put it elsewhere on the stage, and use the handles to resize it.

When you have unread messages in the player chat, a small red number will show beside its icon in the toolbar.

You can tag another player in the player chat using @ and their player name. This will cause their player chat window to open, if they don't already have it open.

You can also click on a player's name in the drop-down of the Player/Audience Counter, to tag and message them in the player chat.

Clear player chat

To clear the player chat, go to the Management interface of the stage and click the yellow "Sweep Stage" button.

Note: this will also clear the audience chat, and remove any media currently visible on the stage. The media will not be unassigned from the stage.

Live Stage Tools

This section gives detailed explanations of the on-stage player tools.
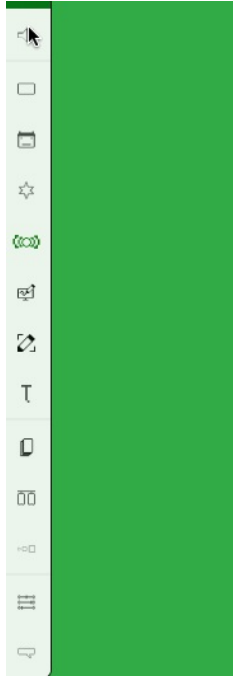
- [Audio tool](#)
- [Backdrop tool](#)
- [Avatar tool](#)
- [Avatar speech and voices](#)
- [Avatar animation](#)
- [Props tool](#)
- [Stream tool](#)
- [Meeting tool](#)
- [Live drawing tool](#)
- [Object drawing tool](#)
- [Text tool](#)
- [Depth tool](#)
- [Curtain](#)
- [Scenes](#)
- [Stage settings](#)

[New screengrab]

Audio tool

The Audio tool allows you to play audio files that you've uploaded to UpStage and assigned to your stage. Audio tracks can be played, paused, stopped and looped, and the volume can be adjusted.

More complex soundscapes can be achieved by using separate sound mixing software and sending a live audio stream to UpStage. See the section on Streaming for more information about how to do this.
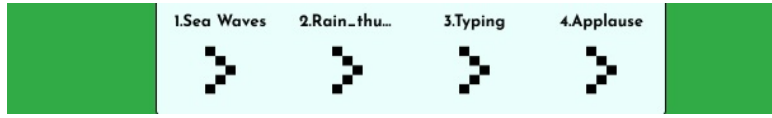
Play an audio track

Click on the Audio tool icon in the left-hand tool bar. The Audio overlay appears at the top of the stage, showing the tracks that have been assigned to this stage. Hover over the audio track to see the tools for each track. Volume, loop and where the track starts can be adjusted before playing the track. Click on the play arrow for the track and it will be played and heard by all players and audience members currently on the stage.

The play icon changes to a pause button, the red stop button appears and the slider below the icon shows both the length of the track and progress through it.

Loop an audio track

By default the loop icon is grey, the track will play through once. To loop, click on the loop toggle icon so it becomes green. The track will loop continuously until you stop it.

Adjust the volume

The vertical slider at the left of the track's tools is the volume slider. Move it up to increase the volume and down to decrease the volume.

Backdrop tool

Backdrops are images or animations that can be displayed behind the rest of the media on the stage, providing a visual background, or scenery, for your cyberformance. The image will fill the background area of the stage.

Note that audience members may have different sized browser windows, so they may have space at the sides of the backdrop. You can change the background colour of the stage in the Settings tool, to match it to your backdrops.

Place a backdrop

Click on the Backdrop tool in the left-hand toolbar, and its overlay appears at the top of the stage. Thumbnails of all the backdrops assigned to this stage are displayed. Click on a thumbnail to make it appear on the stage. Note that you may have to scroll horizontally along the toolbar if you have many backdrops.

An icon appears on the lower right of the thumbnail if the backdrop has multiple frames.

Change backdrop opacity

To change a backdrop's opacity, right-click on the backdrop's thumbnail in the overlay at the top of the stage. The opacity slider appears. Slide it to the left to fade the backdrop out. Slide it to the right to fade it back in again.

You can change the opacity of another backdrop and switch between them using the "set as backdrop" button.
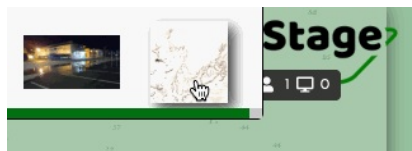
Remove a backdrop

Click on the Backdrop tool, and the overlay appears at the top of the stage. Click on another backdrop thumbnail and it will replace the backdrop previously shown. Click on the "Clear" icon to remove the backdrop from the stage; when there is no backdrop, the background colour of the stage shows. You can change this colour in the Settings.

Animated backdrops

Backdrops can be animated gifs, which will animate continuously as a loop, or multi-frame backdrops. With multi-frame backdrops you can select one frame at a time to display, or set it to animate – either one cycle through the frames or as a continuous loop.

Right-click on the backdrop's thumbnail to access the tools and click play to start the animation. You do not have the ability to control the animation speed until you have pressed the play arrow. The animation should start at the slowest speed and on the first frame.

Behind the backdrop

If you remove the backdrop from the stage, you'll be left with the background. The background will also be visible when you reduce the opacity of a backdrop, or if a browser window is not in full screen view and is wider than the width of the backdrop.

You can change the background colour in the Settings tool.

1. In the tool option, click "Background Colour".
2. The colour picker appears at the top of the stage; select the colour you want.
3. The new colour is applied in real time.

Avatar tool

An avatar is an image that can appear on the stage as a character – a kind of digital puppet. It can be moved, rotated, scaled in size, and faded in and out. Avatars can speak with a computerised voice and in speech bubbles as well as in the chat window.

Unlike virtual worlds, games and other platforms where each player has their own avatar, in UpStage all of the avatars assigned to a stage are available to all of the players on that stage; and one avatar can be placed on the stage multiple times.

Place an avatar on the stage
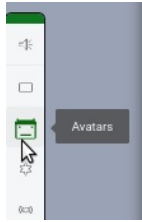
From the left-hand menu, select the Avatar tool. An overlay will appear at the top of the stage showing thumbnails of the avatars that are assigned to this stage.

If many avatars have been assigned to this stage, you may need to use the scroll bar to access those further to the right. A white rectangle icon in the lower right corner of an avatar's thumbnail indicates that it's a multi-frame avatar.

Drag the avatar you want to operate onto the stage. It first appears in black and white, and the live action (light bulb) icon at the top right of the avatar is white. This means that only you can see the avatar.

Click on the light bulb: it becomes green and your avatar becomes coloured. This means everyone can now see it. You can adjust the size, position, opacity and frame of the avatar before making it visible to the audience.

Holding an avatar

To "hold" an avatar means that you are controlling that avatar, and no other player can operate it until you release it. You must be holding an avatar in order to operate it.

When you place an avatar on the stage by dragging it from the Avatar tool overlay, you will be holding it by default. To hold an avatar that's already on the stage, double-click on it.

A red pointer icon above the avatar indicates that you're holding it. A gray pointer icon is shown over avatars held by other players. The audience does not see the red and gray icons.

A player can only hold one avatar at a time, and an avatar can only be held by one player at a time. You cannot hold an avatar that's held by another player.

To release an avatar, either remove it from the stage or right-click on it and select "Release" from the menu that appears. This will leave the avatar on the stage and other players will be able to hold and operate it.
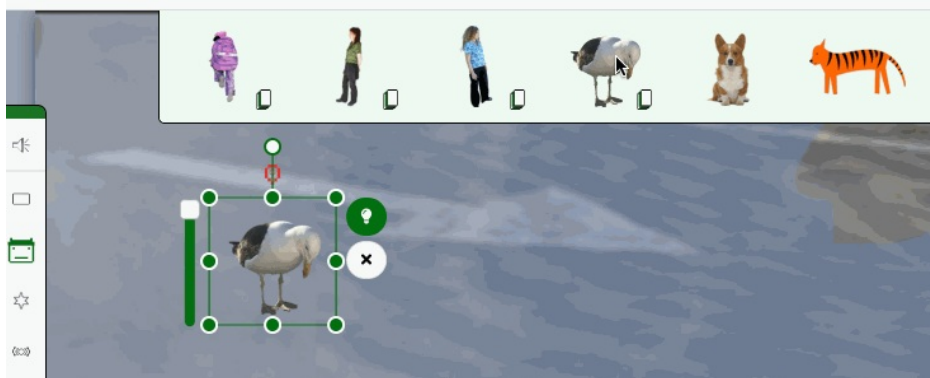
Live action light bulb

The light bulb icon allows you to make changes to your avatar without the audience noticing. This allows you to do multiple things simultaneously, such as fade out an avatar at the same time as it moves to another position and gets smaller, so that it appears to be receding into the distance.

Click on the light bulb to turn it off; your avatar becomes black and white but only for you. The audience sees the avatar as it was before you clicked the light bulb off.

Make the adjustments that you want, to the point that you want the avatar to finish at (for example, small and transparent).

Click the light bulb so that it's green again. The audience will now see the avatar change to the new position and settings, for example moving away, getting smaller and fading out simultaneously.

Note: turning off the light bulb does NOT make your avatar invisible; it means that the audience don't see what changes you're making until you turn the light bulb on again. The avatar is only invisible when the light bulb is off at the moment when you first drag it onto the stage.

Avatar operations

When you click on the avatar that you're holding, a green frame appears around the avatar. The frame is used for scaling, rotating and moving the avatar.

At the left is a slider. This is used to change the avatar's opacity (green) and can be changed to adjust move speed (pink) and animation speed (yellow).

At the upper right of the avatar's frame are two buttons: the light bulb (explained above) and an X to remove the avatar from the stage.

Move an avatar

To move the avatar that you're holding to another area of the stage, click and drag it to the new location. A shadow of the avatar will show you where it will end up. When you release the click, the avatar glides to the new position.

To adjust the speed at which your avatar moves, right-click on it and select "Move speed" in the "Slider" options. The slider at the left of the avatar will become pink, and you can adjust this slider to make the avatar move faster or slower. This is further explained and illustrated below in the 'Adjust move speed' section.
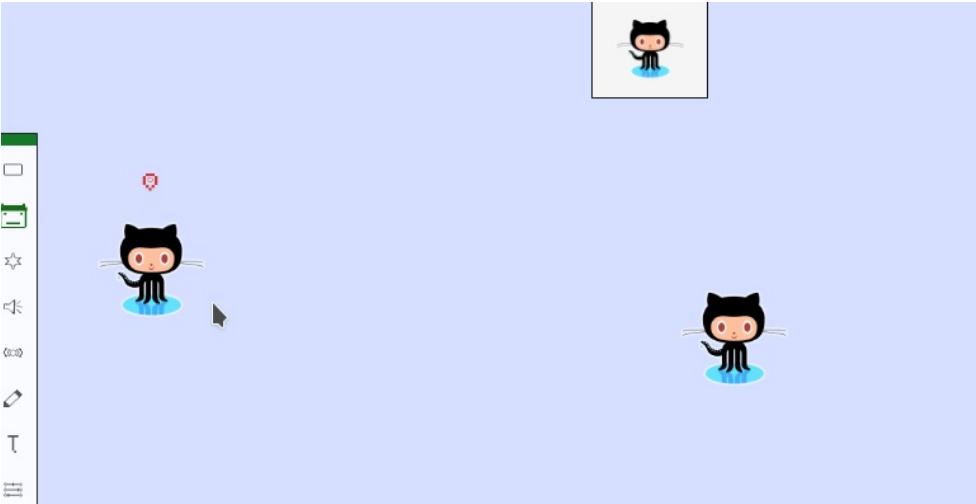
Scale an avatar

When you click on the avatar you're holding, a green box with handles appears around the avatar. Drag the handles to resize the avatar; the original proportions will be maintained.
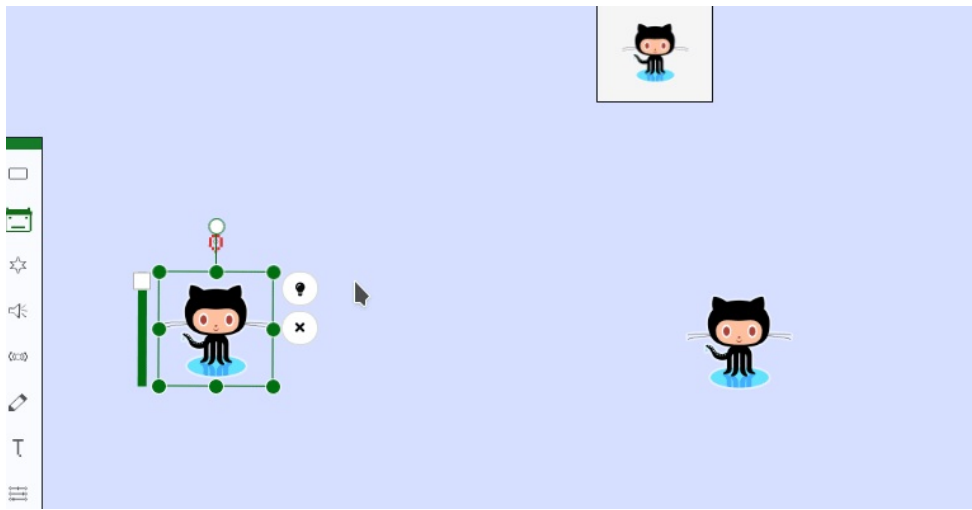
Rotate avatar

Click on the avatar you're holding to see the green frame; at the top is a handle with a small white circle. Click and hold this handle, and drag it to rotate the avatar.
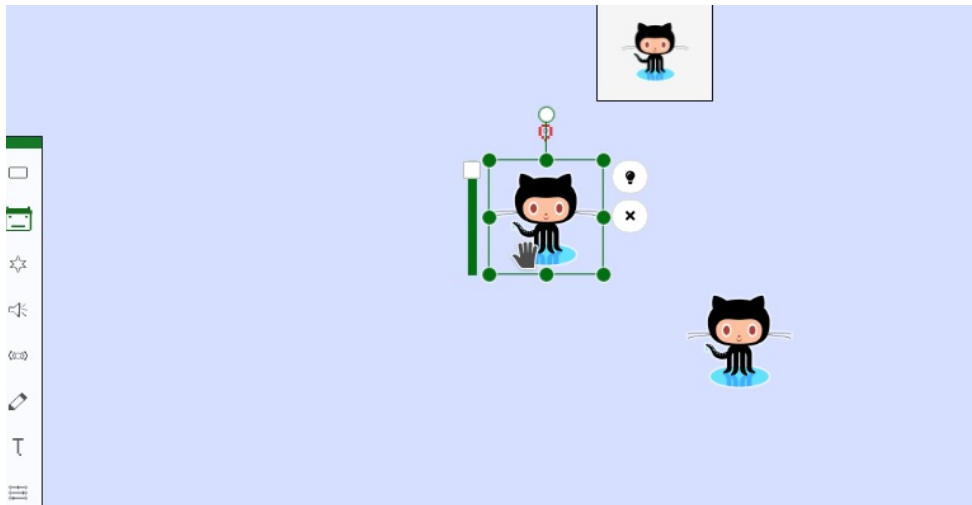
Change opacity

Click on the avatar you're holding to see the green frame. The green slider on the left allows you to decrease or increase the opacity.

When you first drag an avatar onto the stage, its default setting is set at full opacity. If you want the audience to see the avatar fade in, lower the opacity before turning on the light bulb. Then turn on the light bulb and raise the opacity.
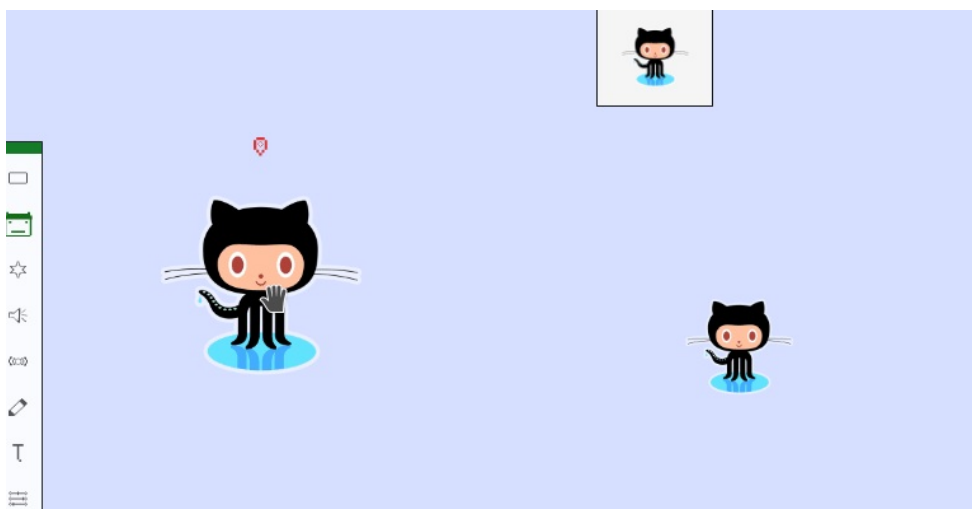
The right-click menu

Right-click on the avatar for an additional menu. Read on to discover what these tools allow you to do.
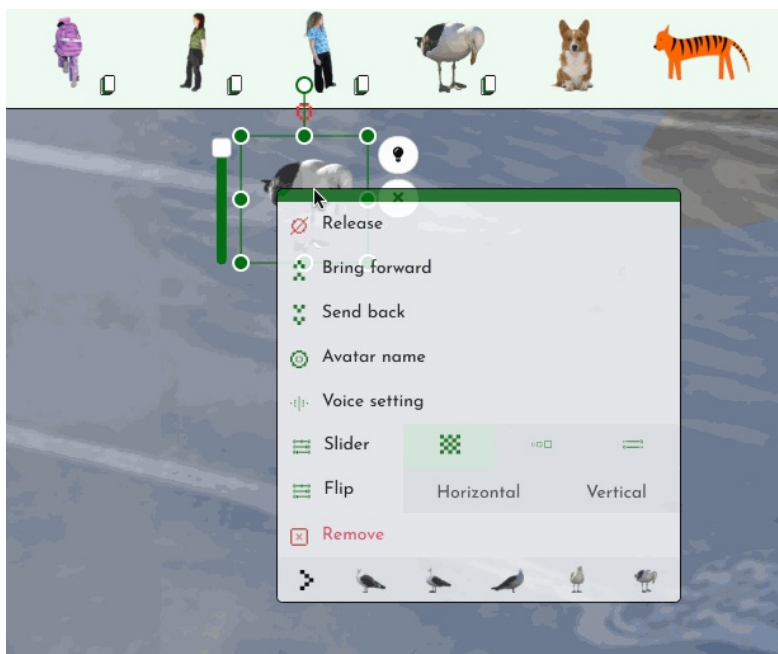
Release

Release allows you to stop holding an avatar and leave it on stage. This is useful if you're sharing the operation of an avatar with another player.

If you're holding an avatar and drag another avatar onto the stage, this will automatically release the first one and you'll be holding the second avatar.
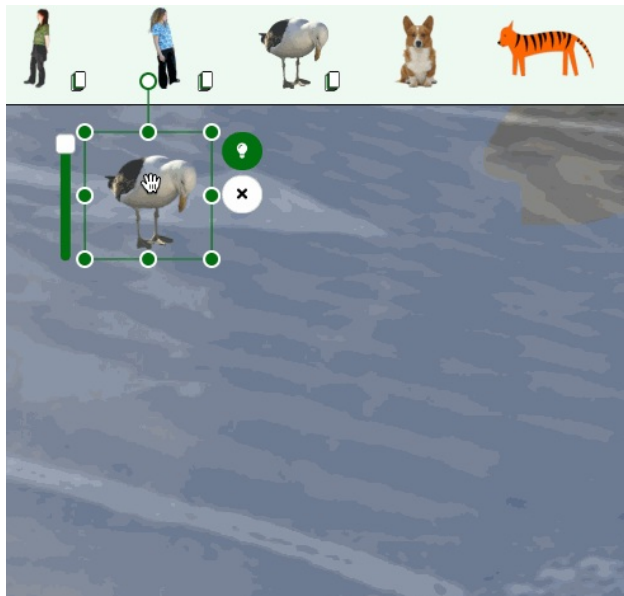
Bring forward and send back

When an avatar is placed on the stage, it will appear 'in front' of other media that's already there. To move your avatar behind other media, right-click on your avatar to access the context menu and select "Move back". If it's behind other media, you can select "Bring forward".

The Depth tool is another way to change the order of media on the stage. See the chapter Depth tool for information about this.

Animation

If your avatar has multiple frames you can select frames to change individually using the right click menu. You can also play an animation of all

the frames, also using right click. Find out more about animation in the [Avatar and prop animation](#) chapter.

Adjust move speed

Right-click on the avatar. Choose the option slider "Move speed". The colour of the slider becomes pink – it now alters the speed of the avatar's movement across the stage. Lower the slider to move slower. Raise the slider to speed up.
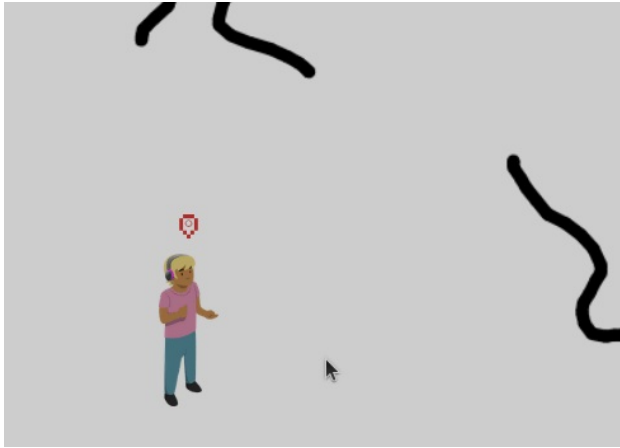
Change avatar name

When you're holding an avatar and type text into the chat input field, the avatar name will appear in the chat window alongside the text. To change this name, right-click on the avatar and in the context menu select "Avatar name". A pop-up window appears where you can enter a new name. Press "Save" to confirm.

Note: changing the name on the stage will only temporarily change it. If you want to change the name permanently, do this in the Backstage media management interface. See the chapter [Modify media](#) in the Media Management section.
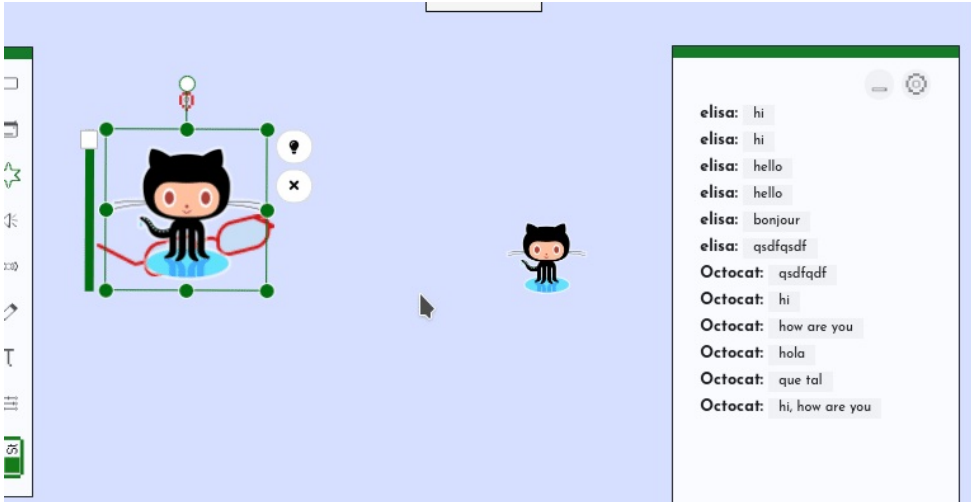
Remove an avatar from the stage

You can remove the avatar you're holding from the stage in three ways:

- In the right-click context menu, select "Delete";
- Hit the X button on the right side of the avatar's frame
- Hit the delete key on your keyboard.

Removing the avatar from the stage does not unassign it from the stage; it's still available in the Avatar toolbar, just not visible on the stage any more. You can place it back on the stage at any time. See the [Media Management section](#) for information on how to unassign media from a stage, as well as how to delete media from the server.
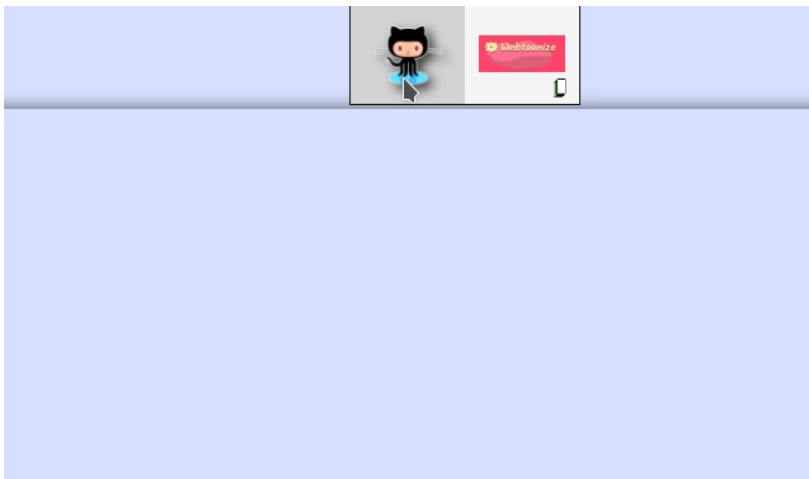
Avatar speech and voices

When you're holding an avatar (see the Avatar tool chapter for how to hold an avatar), you can make it speak by typing in the chat window input field. The text will appear in the chat window and as a speech bubble above the avatar. If you've given your avatar a voice, the text will also be spoken aloud in a computerised voice.
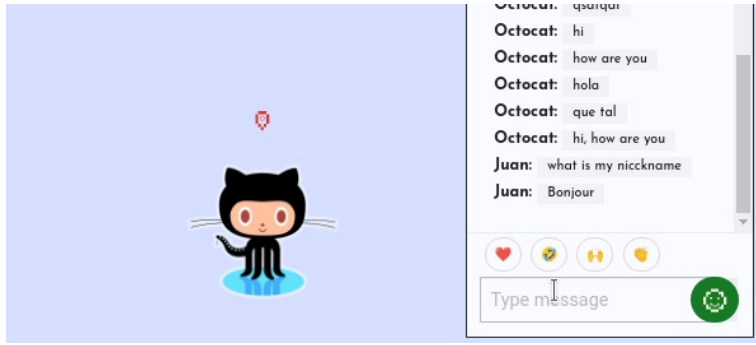
Customise your avatar's voice

You can customise your avatar's voice from the Media edit interface, or directly on the stage. If you do it on the stage, the change will not remain after reloading the stage. To permanently set the voice, you must do it in the Media edit interface (see the Modify media chapter).

On stage, right-click on the avatar you're holding and in the context menu select "Voice setting". Here you can adjust the pitch, rate and volume of the voice, as well as its accent and variant. You can test the voice before saving it.
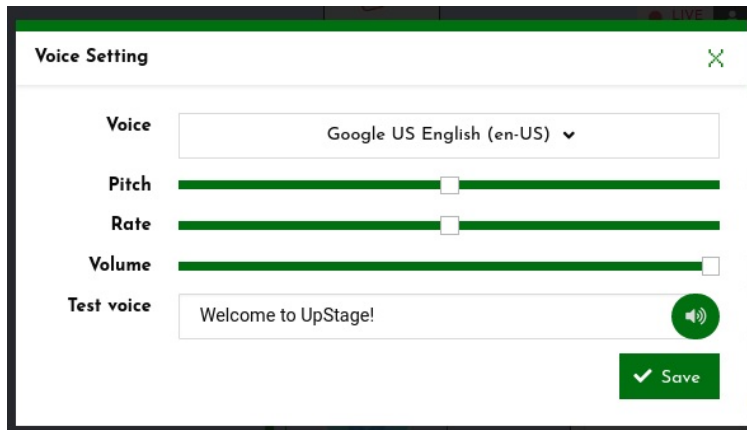
For the voice to pronounce the dialogue correctly and audibly, it's essential to select the voice from the correct dictionary. For example, if you use a voice from the French dictionary when your avatar will be speaking English, it will pronounce the English words as if they were French words.

Parameters:

- Pitch: set at minimum, the voice is deep and at maximum the voice is high.
- Rate: the speed of speech; set to the left speech is slower and on the right faster.
- Volume: move to the left for quieter speech, to the right for louder.
- Test voice: write in the language of the voice and click the green button to hear how these voice settings sound.
- Click "Save" when you're satisfied with the voice.

Shouting and thinking
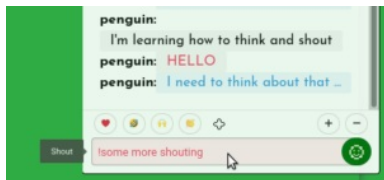
As well as the regular speech bubble for avatar text, your avatar can 'shout' and 'think'. This adds colour to your avatar's text, changes speech bubbles shape and makes the computerized voice louder with shouting or silent with thinking.

How to shout

'Shouting' is done by typing ! at the beginning of your text in the chat input field. This creates a jagged speech bubble shape and your text appears in red upper case letters in the chat box. The volume of your avatar's voice is slightly increased as well.

How to think

'Thinking' is done by typing : at the beginning of your text. This creates a cloud-shaped speech bubble, with smaller italicized text in it, and in the chat box your text will be blue. The avatar voice does not speak thoughts aloud.

Simulate audience chat

Sometimes, you might want to interact as an audience member in the chat. You can do this by typing – before your text. The text will be gray in the chat window.

Your player name will still appear. To truly hide as an audience member, you need to give yourself another nickname. If you don't leave a space after the –, the first word after the – will appear as a nickname. For example, if you want to use the nickname Bob, type –Bob and then your message.
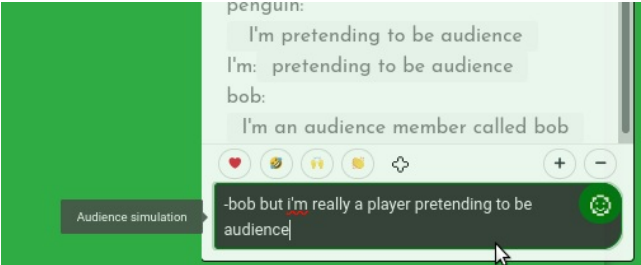
Avatar and prop animation

Avatars and props can be animated in two ways:

- creating and uploading an animated gif
- creating a multi-frame avatar or prop.

GIF animation

Gif animations can be uploaded as props, avatars, backdrops and cover images. The animation is controlled within the gif's settings, so it cannot be adjusted in UpStage.

If the gif has been set to loop, then it will automatically loop on stage. If it hasn't been set to loop, the animation will play once and stop. To play the animation again, click on the prop or avatar.

See the chapter on Creating graphics for UpStage for more information about creating gif animations.

Multi-frame animation

A multi-frame animation is created by uploading a series of still images and saving them together as a multi-frame media item (this is explained in the Upload media chapter of this manual). This allows you to display one frame at a time or cycle through the frames as an animation.

The layers icon at the bottom right of an avatar or prop in the tool overlay shows which are multi-frame:

Drag a multi-frame avatar or prop onto the stage and right-click to open the context menu. The frames are shown as small thumbnails at the bottom of the context menu. Click on a frame to display it, or hit the "play" button to run the animation.
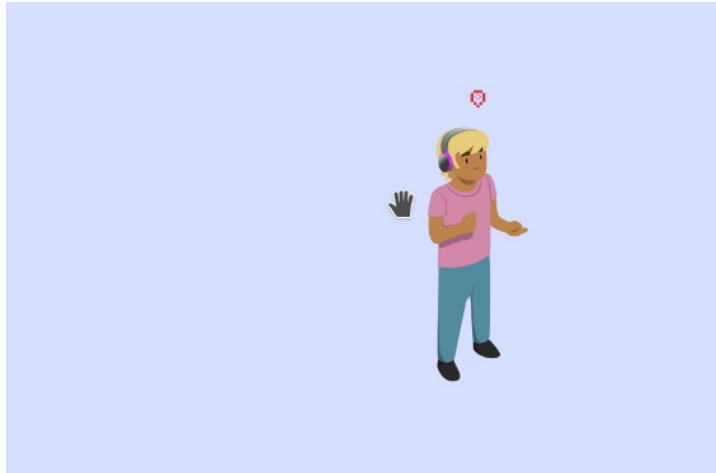
Change animation speed

To change the speed of the animation, open the right-click menu and choose the "Animation" slider option. The slider becomes yellow. Move the handle up to make the frames animate faster, or down to slow the animation down.
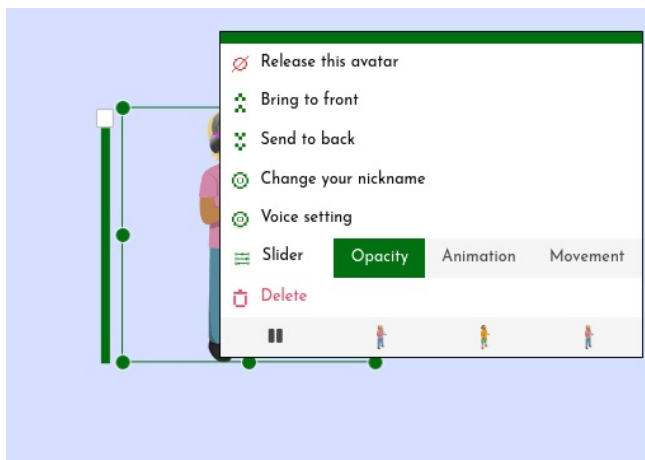
Stop animation

Right-click to display the context menu and tap the pause icon. This stops the animation.
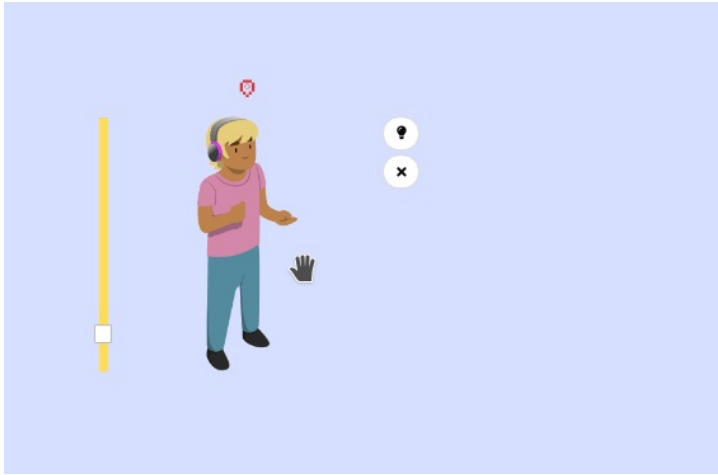
Props tool

Props are images that can be placed on the stage and moved, resized, rotated and so on. They are different to avatars in the following ways:

- a prop is not held by a player; when a prop is placed on the stage it can be operated by any player
- props do not have voices and cannot 'speak' in the chat or with speech bubbles
- props can be attached to an avatar so that they are moved and resized with the avatar.

Place a prop on the stage

Click on the Props tool in the left-hand menu. The Props overlay appears at the top of the stage, showing all the props that have been assigned to this stage. Drag the prop you want onto the stage.

The prop will initially appear black and white, and only visible to you. You can adjust the size, position, opacity and other properties before clicking on the light bulb icon at the upper right of the prop to make it visible to everyone on the stage. The light bulb will become green and the prop will become coloured.

Basic prop operations

Props are operated in very much the same way as avatars, without the ability to speak and with the ability to be operated by any player.

Move

Click on a prop on the stage and a green frame appears around it. Drag and drop to move the prop to another position on the stage.

Right-click on the prop to access its context menu. Here you can change the left-hand slider to "Move speed" (the slider becomes pink) to adjust the speed with which the prop will move.

Scale

Click on the prop to see the green frame. Drag the handles to resize the prop; the original proportions will be maintained.

Rotate

Click on the prop to see the green frame. At the top is a handle with a small white circle. Click and hold this handle, then drag it to rotate the prop.

Flip

Right-click on the prop to access the context menu. The "Flip" options are "Horizontal" or "Vertical". Click Horizontal to make the prop flip horizontally. Click Vertical to make the prop turn upside-down.

Change opacity

Click on the prop to see the green frame. The green slider on the left allows you to decrease or increase the opacity. (If the slider is pink or yellow, open the right-click menu and select the "Opacity" option for the slider.)

When you first drag a prop onto the stage, its default setting is full opacity. If you want the audience to see the prop fade in, lower the opacity before turning on the light bulb. Then turn on the light bulb and raise the opacity.

Bring forward or send to back

When a prop is placed on the stage, it will appear 'in front' of other media that's already there. To move a prop behind other media, right-click on it to access the context menu and select "Send back". If it is behind other media, you can select "Bring forward".

The Depth tool is another way to change the order of media on the stage. See the chapter Depth tool for information about this.

Play an animated prop

Animated props are created either as multi-frame props – a series of still images combined into one prop – or uploaded as animated gifs. A multi-frame prop will be identifiable in the prop overlay by the small white rectangle icon. A prop that has been uploaded as an animated gif will be identifiable in the prop overlay because the thumbnail icon will be in motion.

To play a multi-frame prop, right-click on it to access the context menu. Click on the play icon at the bottom of the menu. You can adjust the speed of the animation by changing the slider to "Animation speed". The slider at the left side of the prop's frame will turn yellow, and you can adjust it up or down to make the prop animate faster or slower.

Animated gifs will animate as soon as they are placed on the stage. If the gif has been saved to loop, it will loop continuously. If it doesn't loop, you can play the animation again by clicking on the prop.

Change animation speed

To change the speed of a multi-frame animation, right-click on the prop to access the context menu and change the slider to "Animation speed". The slider will now be yellow. Adjust it up or down to speed up or slow down the frame rate.

The speed of gif animations cannot be changed in UpStage – this is set in the graphics application where the gif was created.

Remove a prop from the stage

There are three ways to remove a prop from the stage. You must first select it with a single click so that the green frame is visible, then either:

- click the X at upper right (beneath the light bulb icon)
- right-click to access the context menu and select "Remove"
- use the delete key on your keyboard.

The prop will disappear from the stage. It's still accessible in the props overlay if you want to put it on the stage again.

Stream tool

This chapter explains how to operate a pre-recorded video or live RTMP stream on the stage. See the section on Streaming for information about how to set up and send an RTMP stream to UpStage. Note that this is different to using the Jitsi meeting tool or individual Jitsi streams – see the Meeting tool chapter for information on streaming using Jitsi.

Show your stream on stage

Click on the Stream tool in the left-hand tool bar. This opens an overlay at the top of the screen showing icons for any RTMP streams and pre-recorded videos that have been assigned to this stage, as well as a "Refresh" button. Note that streams that are not currently live will show as their QR code, and you cannot place them on the stage unless they are live. When the stream is live, you'll see a thumbnail of that stream.

Drag the thumbnail of your stream or video onto the stage. You may see a buffering icon before the image appears.

[New screengrab]

The stream has the same 'light bulb' icon as props and avatars; until you activate this (it's green when activated) your stream isn't visible to anyone else. It will show as black and white to you, so that you can adjust parameters such as its size, position and opacity before turning on the light bulb to make it visible to everyone.

Once you've turned the light bulb on, turning it off doesn't make the stream invisible to others. It allows you to make changes to the stream (such as size, position and opacity) that won't be visible to everyone else until you turn the light bulb on again. They will still see your stream while you're making the changes.

Adjust size, position and opacity

The green frame around your stream allows you to adjust the size, position and opacity of your stream – the same as you can do with props and avatars. If you don't see the frame, click on the stream and the frame will appear around it.

- Drag and drop to move the stream to another place on the stage.
- Use the corner and side handles to scale the stream to be larger or smaller.
- Click and hold the white circle at center top, then drag it to rotate the stream.
- Move the slider on the left-hand side down to reduce opacity (fade out) and up to increase opacity (fade in).
- Right-click on the stream to access the context menu with more options, including horizontal and vertical flip and shape.
- for pre-recorded videos, the right-click menu includes pause, play and loop options.

Mute

The speaker icon at the lower right of the stream is a *local* mute button. Clicking on this will mute the audio of this stream only for you. Use this to mute other people's streams if you don't want to hear them, for example if you start to get feedback from someone else's stream.

To mute or control the level of your audio stream for everyone else, you must adjust it in the streaming software (e.g. Larix or OBS). Note that audience members don't see the local mute button.

Stream shape

Video streams are rectangular. If you'd like your stream to appear as a circle or oval, right-click on the stream. A context menu appears with the circular frame option at the top of the list. Click on the circle to give your stream a circular frame.

A rectangular stream will become an oval. To make your stream round you will need to choose square dimensions in your streaming application's resolution settings. See the chapter Sending an RTMP stream for more information.

Remove a stream from the stage

Right-click on the stream to see the green frame, then click on the cross. The stream will disappear from the stage. It's still available in the stream toolbar if you want to put it back onto the stage.
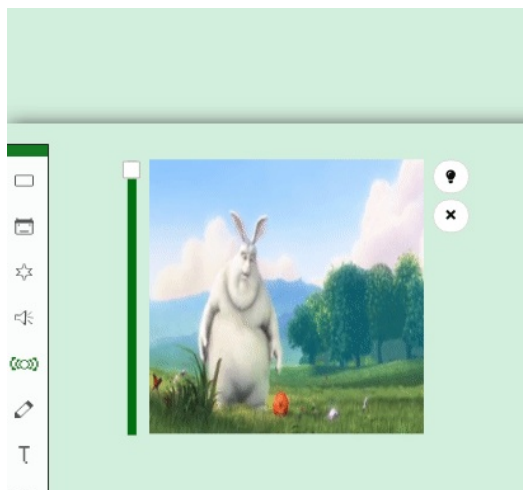
Meeting tool

The Meeting tool allows you to embed a Jitsi meeting directly in the live stage. This is done using Jitsi Videobridge, and allows audio-visual conferencing with no or extremely minuscule latency. Thanks Jitsi!

As well as the meeting feature, which invites everyone present on the stage (audience as well as players) to share their mic and webcam, you can now also use the "individual Jitsi" streaming feature to show only your own stream. The meeting feature is very useful for presentations and training sessions, while the individual Jitsi feature provides an easy and almost lag-free alternative to RTMP streams.

This chapter first explains the meeting feature, and then the individual feature.

Create a meeting

Click on the "Meeting" icon in the left-hand menu, and a tool overlay appears at the top of the screen showing a plus sign and "New Room." You'll also be asked to share or allow your computer's webcam and microphone.

Click on "New Room" and a pop-up window opens asking you to name the room.

[New screengrab]

Give the room a name. This can be anything, but it's best not to use something like 'test' or 'meeting' as this could result in strangers entering the room through a regular Jitsi link, without also being in UpStage.

Click "Create Room" and you'll see its icon in the overlay. Drag the icon onto the stage. You'll be asked again to share your webcam and mic.

As with other UpStage media, the meeting isn't visible to others until you turn on the light bulb icon at the top right of the object. You can move the meeting, resize or rotate it and adjust the transparency before you click the light bulb icon to reveal it to everyone. At this point everyone – players and audience – on the stage will be invited to join the meeting by sharing their mic and webcam.
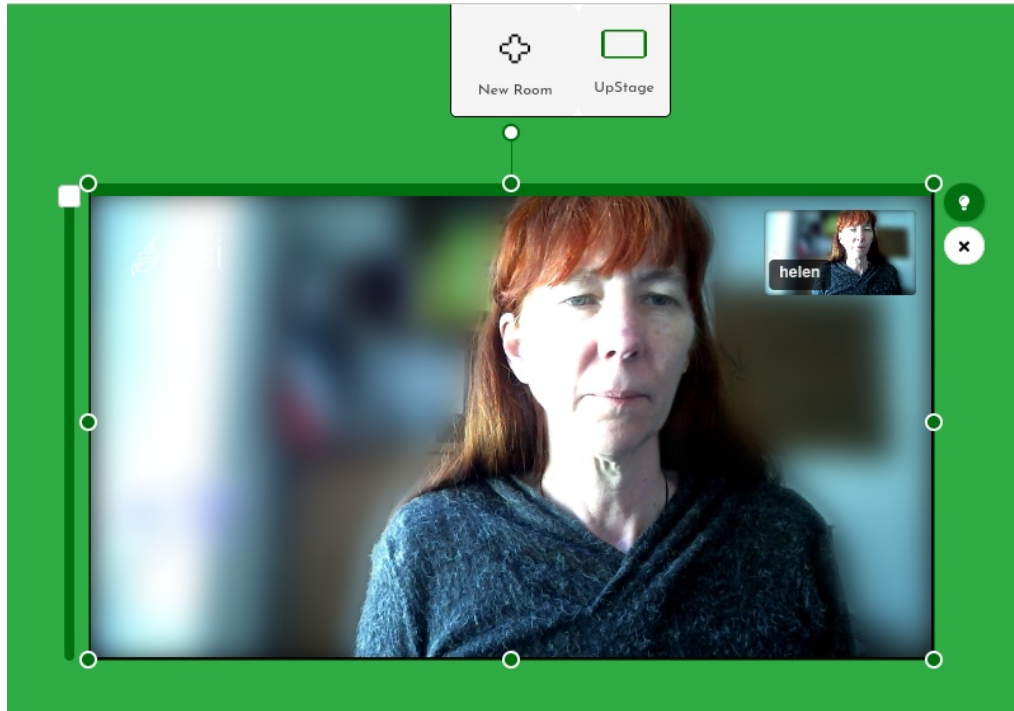
Jitsi tools

When you roll your cursor over any part of the meeting window, the Jitsi tools will appear along the bottom as well as information in the centre top. These tools are visible only to the individual who has moved their cursor over the window, not to everyone on the stage, but anyone can do this, whether they're a logged in player or an audience member.
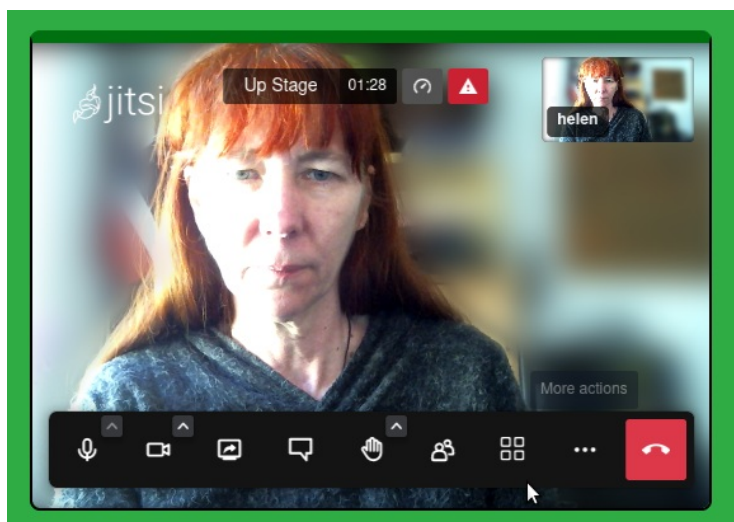
The Jitsi tools allow each individual (players and audience) to mute or unmute their microphone, show or mute their webcam, alter the view (grid or speaker), share their screen, write in the Jitsi chat, raise their hand and other Jitsi functionalities.

There's also the red hang-up button, to leave the meeting. If someone does this, they'll still be in UpStage, but the Jitsi window will change to show something from Jitsi.org – it could be information about how to embed a meeting, or an ad or something else from Jitsi's website. The person who left will need to reload the stage in order to re-enter the meeting.

For these reasons, meetings should be used with care, and participants need to know how to use (or not use!) the Jitsi tools. If you're planning to use a meeting in a performance, you may want to think about ways to hide these tools, for example putting a prop in front of the meeting so that the tools are covered. (If you need to access the Jitsi tools when the window is behind a prop, you can do this with the [Depth](#) tool).

If you only need to use Meeting for audio, you can hide it behind the chat window, or make it small and/or transparent. This prevents or make it more difficult for others to find the Jitsi tools.
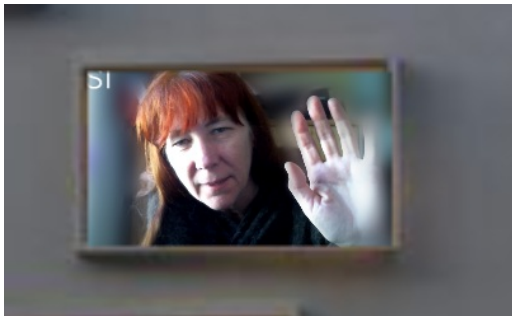
Individual Jitsi stream

The "individual Jitsi" stream provides a quick and easy alternative to sending an RTMP stream. However, using an additional application (such as OBS or Larix Broadcaster) to send an RTMP stream allows a great deal more control over the quality, dimensions, special effects and other parameters. You should consider what you want to achieve artistically with your stream in order to decide which form to use.

Place an individual Jitsi stream on the stage

Click on the Meeting tool icon in the left-hand toolbar and the overlay opens. You'll be asked to share or allow your computer's webcam and microphone. Once you've done this, you'll see a thumbnail of your webcam in the overlay.

[New screengrab]

Drag the thumbnail onto the stage. You may see a buffering icon before your stream appears. As with other media, your stream is only visible to you until you activate the light bulb icon. Use the stream frame and the right-click menu to position your stream as you want, then click on the light bulb icon to reveal it to everyone else.

If you need to mute your individual Jitsi stream, you may be able to do this by right-clicking on the stream's thumbnail in the overlay. However, it will vary depending on the browser you are using and some may be easier to mute than others.

An important difference between individual Jitsi streams and RTMP streams is that only you can put your individual Jitsi stream onto the stage. No other players see your thumbnail in their Meeting tool overlay. Once your individual Jitsi stream is on the stage with the light bulb activated, another player can operate it and remove it. RTMP streams show up as thumbnails in the Stream tool overlay for all players, and this can be useful if you are not at your computer when your stream needs to appear on the stage

Live drawing tool

The "Live drawing" tool allows players to draw in real time directly on the stage. The audience will see the drawing appearing as you draw it.
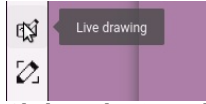
Click on the "Live drawing" tool icon in the left-hand menu and an overlay toolbar appears at the top of the screen.

The live drawing overlay appears at the top of the screen:
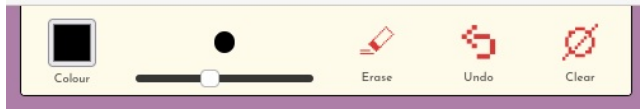
Use the tools to select the colour and size (thickness) of the line you want to draw, then draw on the stage with your cursor.

"Erase" turns your cursor into an eraser, so that you can erase any parts of your drawing.

"Undo" will remove the immediate last piece of the drawing. If you've only drawn one unbroken line, it will remove all of it. If your drawing is made from several lines with pauses or gaps, it will undo the last one.

"Clear" will remove the all of the drawing on the stage, including live drawings made by other players.
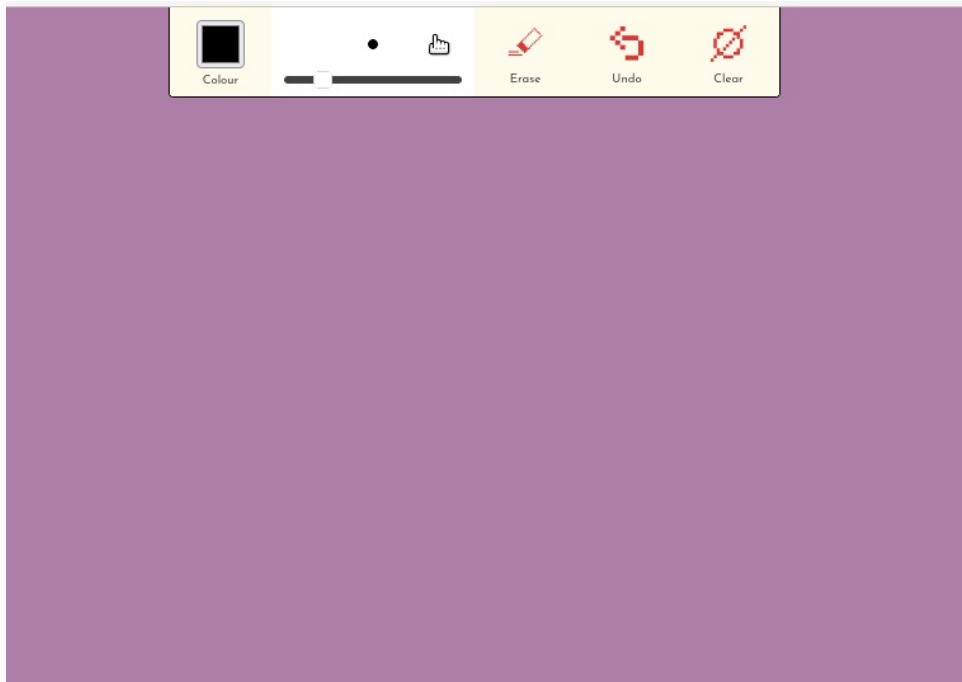
Object drawing tool

The "Object drawing" tool allows you to create a drawing directly on the stage and save it as an object – either an avatar or a prop – that can then be placed on the stage and manipulated in the same way as other objects.
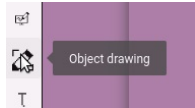
Click on the "Object drawing" icon in the left-hand menu and its toolbar overlay appears at the top of the screen.

The overlay shows a "New" icon, and if any drawings have previously been saved, they'll show as thumbnails that can be dragged onto the stage and operated as avatars or props.

If no drawing has been saved, or if you want to create a new drawing, then click on the "New +" button.

A new overlay appears:
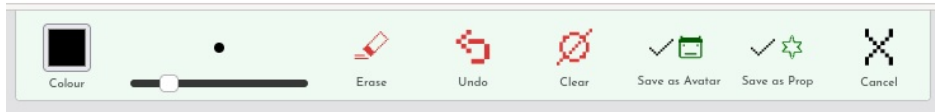
Select the colour and line size (thickness) that you want and create your drawing on the stage. Use "Erase" to remove parts of the drawing, "Undo" to delete the immediate last part, or "Clear" to remove the entire drawing.

When you're satisfied with the drawing, click either "Save as avatar" or "Save as prop". Your drawing will have slightly different properties depending on how you choose to save it (see the chapters on Avatars and Props for more information).

When you save the drawing, or drag a saved drawing from the overlay onto the stage, it will appear on the stage but is not yet visible to the audience. Until you activate the light bulb icon, the drawing is only visible to you. You can adjust its size, position and opacity before revealing it to the audience.

You can now operate it on the stage as you would another prop or avatar.
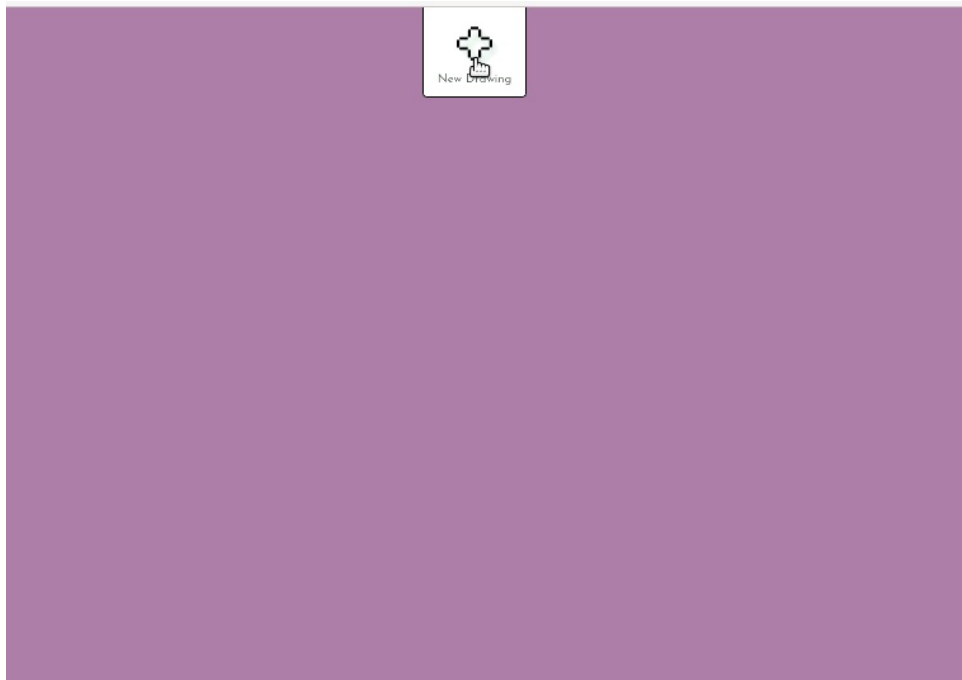
Text tool

Letters, words and sentences can be written onto the stage in real time using the Text tool. Once you've created a text object and placed it on the stage, you can edit the letters and change the text object's position, but be aware that you cannot adjust the font or its size or color.

Create text
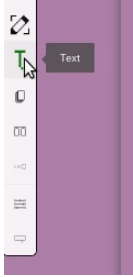
Click on the Text tool in the left-hand menu. The text overlay will appear at the top of the stage, showing the "New +" icon. Click on this, and a white overlay appears, along with the text options. Here you can choose the font, size, colour, and the style (bold, italic, underline) of your text.

Replace the default text "Write or paste your text here", by highlighting it then writing your own text. You can type, or paste text that you have copied from elsewhere. Make any adjustments to the font, size, colour and style that you want, then click "Save".
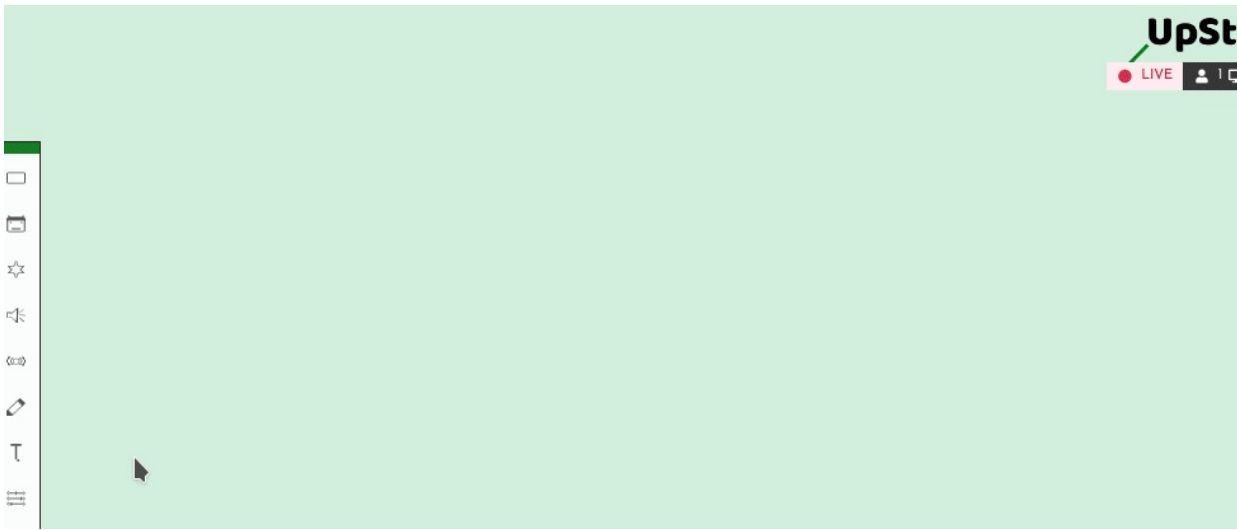
Your text object is now visible in the Text overlay and on the stage. The light bulb is off, so it's not yet visible to other players and audiences on the stage.

Place text on the stage
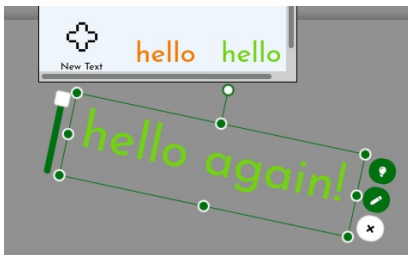
Your text is placed on the stage immediately after saving. To place a duplicate text, or one that has been saved earlier, drag it from the Text overlay onto the stage.

Position the text where you want it on the stage and make any adjustments that you want to the opacity and rotation. The click the light bulb icon to make it visible to everyone.

Edit or Move mode

Text objects have two modes: "Edit "or "Move". This is changed using the pencil icon below the light bulb icon, at the upper right of the text object's green frame.

Click on the icon and it becomes green; now you're in Edit mode and can edit the text to change, add or remove letters.

Click on the pencil icon again to make it white and you're back in Move mode. Now you can drag and drop the text to a new position on the stage.
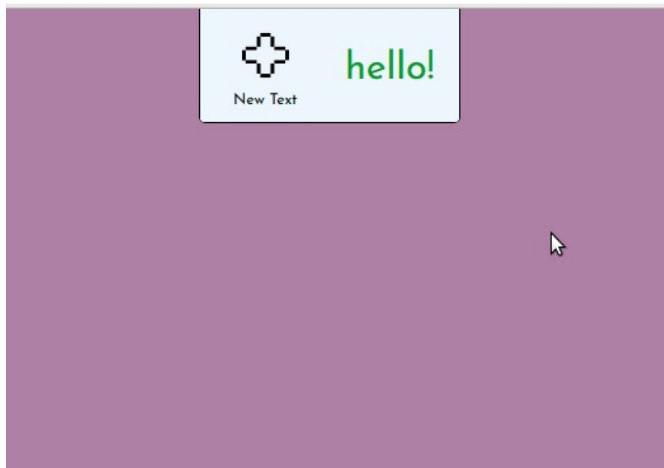
Rotate

Your text can be rotated by grabbing the white circle above the centre of the text and turning it to the left or right.

Change opacity

Click on the text to display the green frame. Move the green slider on the left up or down to adjust the opacity of the text.

Bring forward or Send back

Right-click on the text to show the context menu. Choose "Bring forward" or "Send back" to move the text in front of or behind other objects on the stage.

Change speed of movement

If you want the text to move more quickly or slowly across the stage, right-click on it to access the context menu and in the "Slider" options select "Move speed". The slider on the left of the frame will become pink. Move the slider handle down to make the move speed slower, or up to make it faster.

Flip

Text can be flipped horizontally or vertically. Right-click on the text to access the context menu and in the "Flip" options select "Horizontal" or "Vertical". Select again to bring the text back to the original position.

Remove or Delete

When you no longer want the text on the stage, use the X icon at the right of the frame to remove it from the stage. There is also a "Remove" option in the context menu. The text will disappear from the stage, but it still exists in the Text tool overlay. You can drag it onto the stage again if you want the same text to appear again.
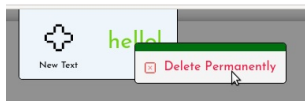
To delete the text object completely so that it is no longer available in the Text tool overlay, you can either right-click on its icon in the overlay and select "Delete Permanently" or right-click on the text object on the stage and select the "Delete Permanently" option from the context menu. This text will then disappear from the Text overlay and from the stage if it is on stage.

Note: if you reload the stage, any text that you've saved in the Text overlay will be deleted. If a text object has been placed on the stage, it will still be there.

Depth tool
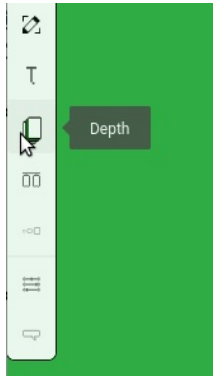
The Depth tool allows you to access media items that are hidden behind other media items on the stage. It also allows you to remove items from the stage.

Open the Depth tool by clicking on the icon in the left-hand tool bar. An overlay appears at the top of the stage with thumbnails of all of the graphic media items currently on the stage (avatars, props and streams).

Operate a hidden media item

Hover your cursor over the avatar, prop or stream that you want to operate. A green frame appears around that item on the stage, and it floats in front of the media items that it is behind, but only you are seeing it in front. You can then adjust the size, move it, access the right-click context menu and perform other operations using the green frame.

Note that if it's an avatar, you must also be holding it (the red icon will show above it) in order to access the right-click menu, light bulb and delete button.

Re-order Depth positions

The order of media items can be rearranged by dragging and dropping the thumbnails in the Depth tool overlay. The icon at the left-hand end of the bar is at the back, and the icon at the right-hand end of the bar is at the front, or on top. Drag an item from left to right to bring it forward, or from right to left to move it behind other media items on the stage.

Remove avatars and props from the stage

The Depth tool provides another way to remove avatars and props from the stage: drag a thumbnail away from the bar, and you'll be asked if you want to remove this media item from the stage.

This can also be done with an avatar that's held by someone else, which is useful if another player's internet connection has dropped and they've left a 'ghost avatar' on the stage – an avatar that's held by a player who's no longer on the stage.

But take care, as it is possible to accidentally remove an avatar that's held by another player. There's a prompt that will ask you if you really want to do this.
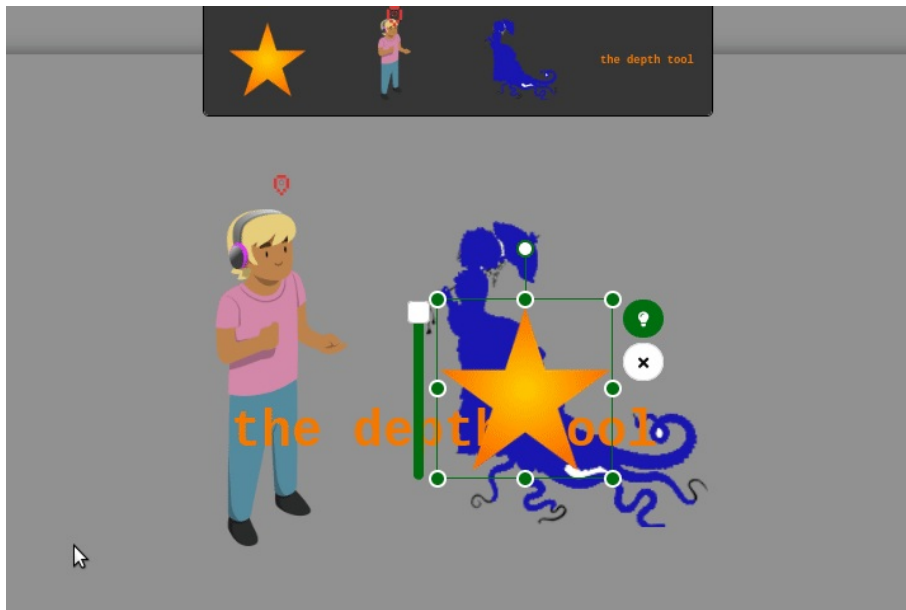
Curtain tool

The Curtain tool allows players to close a curtain across the stage and hide scene changes from the audience. You can either use the default curtain or upload your own images.

Click on the Curtain icon in the left-hand toolbar. The curtain overlay appears at the top of the stage, showing all curtains available on this stage. Click on a curtain to close it on the stage in the way that has been previously set in the management interface for this stage.

Logged-in players can see through the curtain to prepare a scene behind it. The audience only sees the curtain, and the chat window (unless you have hidden the chat). They can chat together while you're changing the scene.

To change how the curtain animates, go to Backstage and navigate to the Customisation section of the Manage interface for the stage. Here you can choose whether the curtain drops from the top, comes in from the sides, or fades in and out. You can also set the speed at which the curtain moves. These settings will apply to all curtains on a stage.
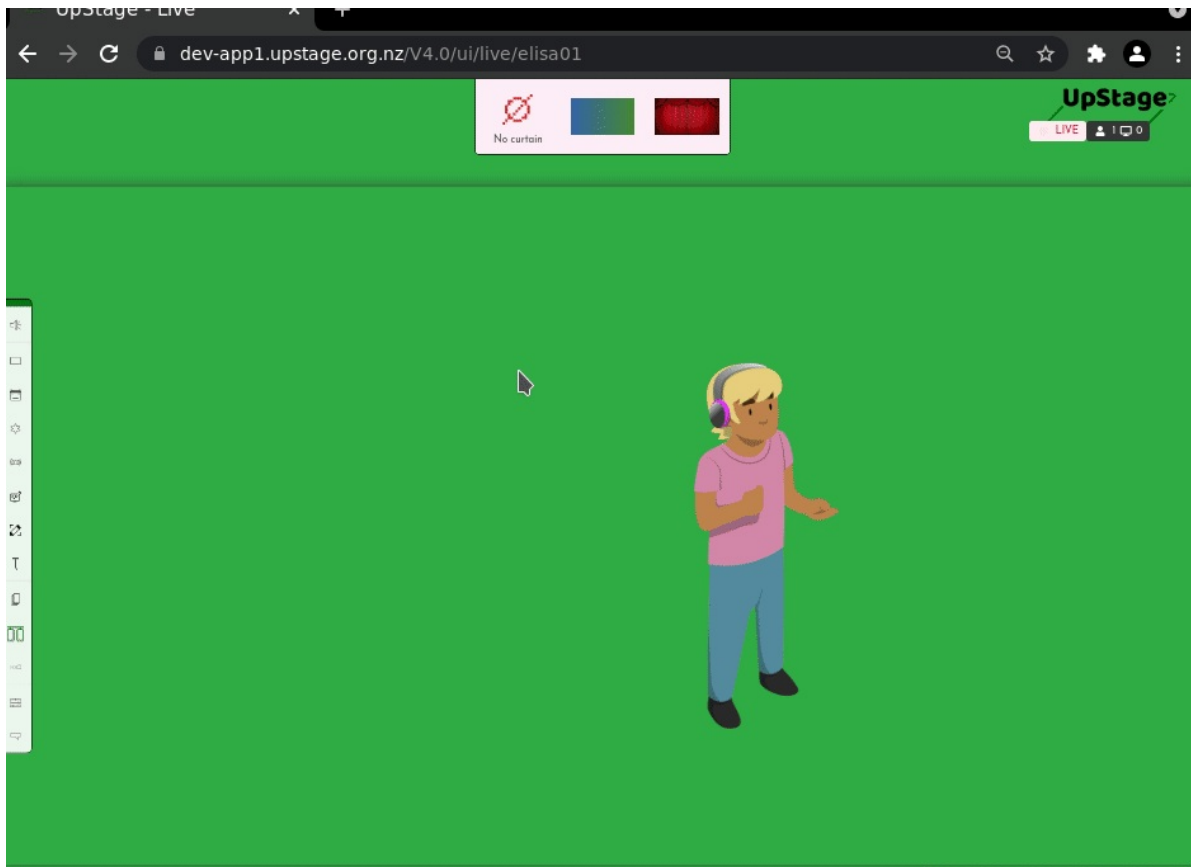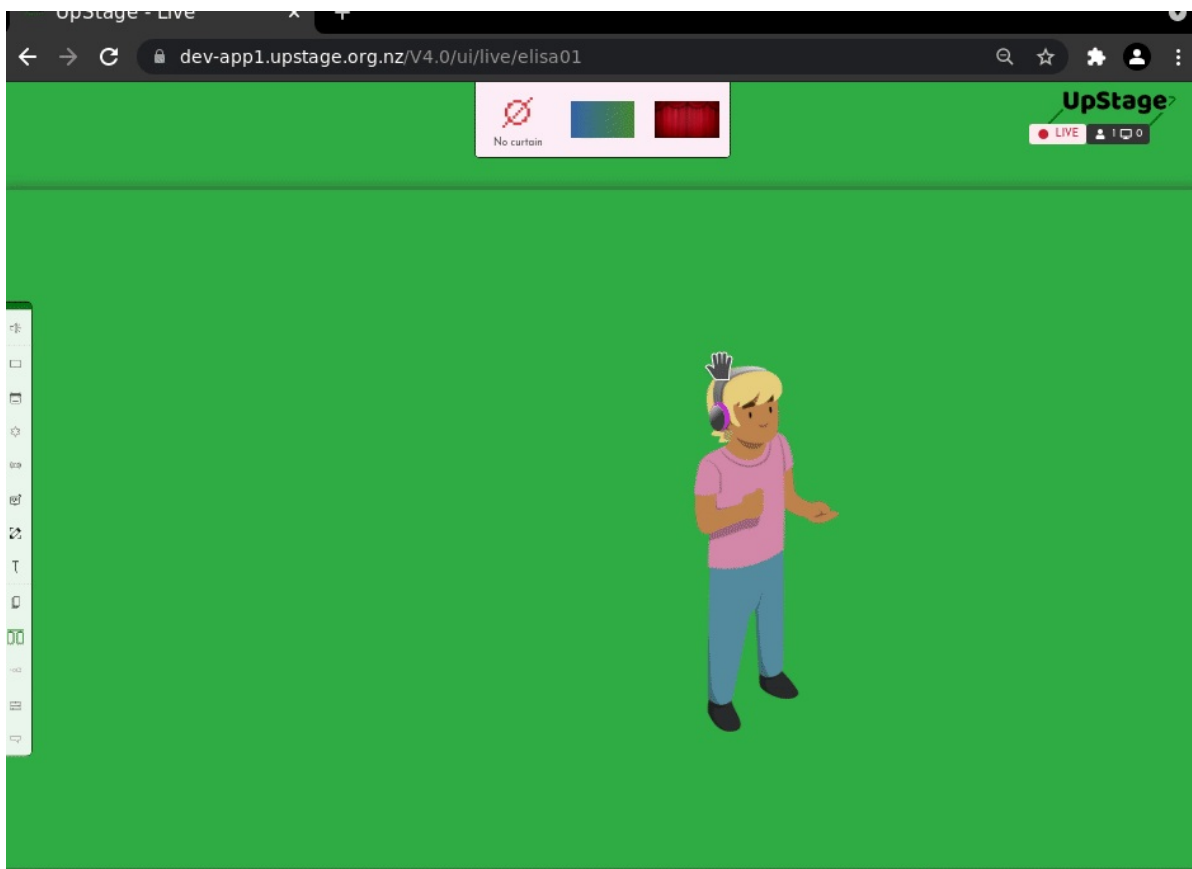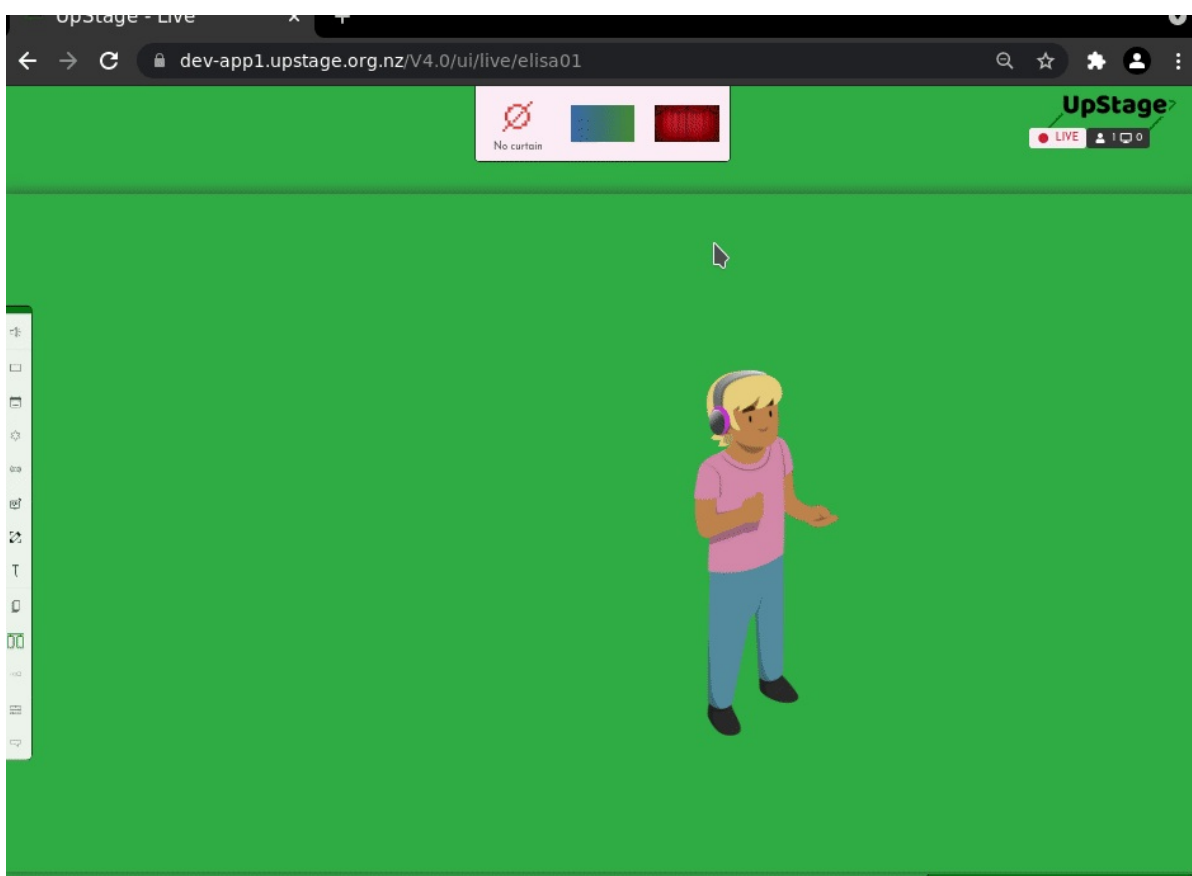
Scenes

The Scenes tool allows you to prepare and save an arrangement of visual media that will appear together with a single click when you select that scene.
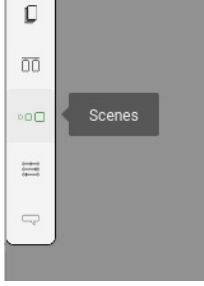
Select the Scenes icon in the left-hand toolbar. The scenes overlay is displayed at the top of the stage. Any previously saved scenes will appear as thumbnails, along with the "Blank Scene" and "Save Scene" buttons.

Click on Blank Scene to remove all media from the stage. This can be useful to clear the stage in any situation, not only when you want to create a new scene.

Create a new scene

To create a scene, arrange your media as you want it on the stage. You can reduce the opacity of avatars and props if you want to fade them in after you have started the scene.

Note that audio files are not included in a scene, only visual media.

Once you're happy with the arrangement, click "Save Scene" in the Scenes overlay. You'll be asked to give the scene a unique name. This will help you to identify which scene you want if you have two or more similar scenes. The saved scene will appear as a thumbnail in the scene overlay.
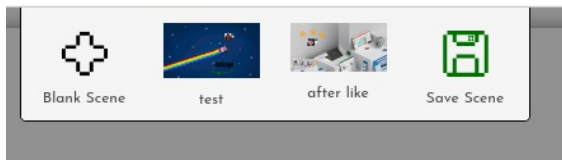
Display a saved scene

When you want to change to a scene you've previously saved, click on the thumbnail of that scene in the Scenes overlay. The stage will change to display the media you have saved as that scene.

Remove a saved scene

If you've saved a scene that you no longer need, you can delete it from the Scenes overlay by right-clicking on its thumbnail and selecting "Delete Scene". This will delete the scene from the Scene tool overlay. It will not unassign the media from the stage, or remove it from the stage if it's on stage when you delete the scene.
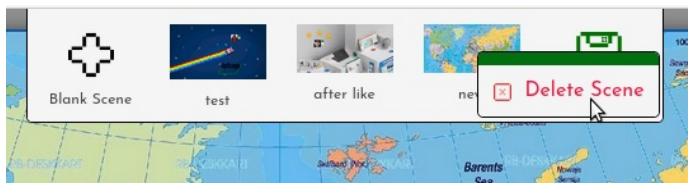
Stage settings
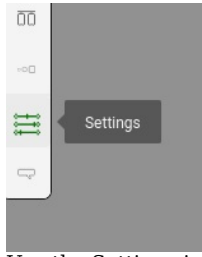
Use the Settings icon in the left-hand toolbar to access a number of stage settings that you can control in real time during a performance.

Click on the Settings icon and its overlay will appear at the top of the stage.

The settings overlay gives the following options:
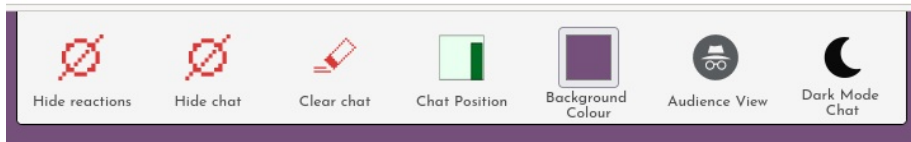
Hide reactions

This allows you to hide or show the reaction emojis that the audience can make appear along the bottom of the stage. This is useful if you don't want your performance to be visually disturbed, or if someone is over-using the emojis in a way that is disruptive.

When you click to hide the reaction emojis, the red icon will change to a green one and the text changes to "Show reactions", indicating that now when you click it, the reaction emojis will be displayed again. Look at the chat window, just above the input field, to see the emojis appear and disappear when you click the button.

Hide chat

This removes the chat window completely from the stage. It is useful if you want a full screen image with the focus solely on your performance. The audience are no longer able to chat and comment.

Players can still chat privately via Player Chat, and avatars are still able to speak. To make your avatar speak when the chat window is not showing, click on the red icon above the avatar you're holding. An input field appears. Type here and hit enter. Your avatar will speak the text. If the chat window is displayed again, the avatar's text will also be visible there.

When you click to hide the chat window, the red icon will change to a green one and the text to "Show chat". Now when you click the icon, the chat window will reappear.

Clear chat

This removes all of the chat from the chat window. You may want to do this at the start of a performance, to remove pre-show chat.

Chat position

The chat window can be placed on either the right-hand side of the stage (the default position) or the left-hand side of the stage. Change this by clicking on the "Chat Position" icon.

The icon will change to show which side of the stage the chat is on. You may need to know this if you are hiding and showing the chat during a performance.

Change background colour

You can change the colour of the stage background using this colour picker. The background is visible when no backdrop is displayed, if a backdrop has reduced opacity, when a browser is not in full screen, or when the browser window size is wider than the stage. Audience members may see the background around the edges of a backdrop at any time, so it's important to remember to set the background colour to something appropriate for your performance.

The background colour can be changed during a performance, and the change will be visible immediately for everyone.

Masquerade as audience

It's useful to be able to see how things will look for the audience on your stage. This can be done easily without leaving the stage by using the "Audience View" button in the settings overlay.

Click on the Audience View button and you will see the stage as the audience sees it. To return to player view, click on the masquerade icon that has appeared in the top right hand corner of the stage, just below the Player/Audience counter.

Note that when you're masquerading as audience, your text in the chat window will also appear as audience – light grey – with your nickname.
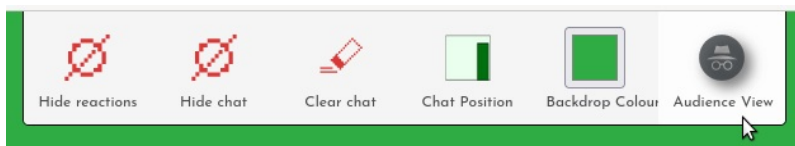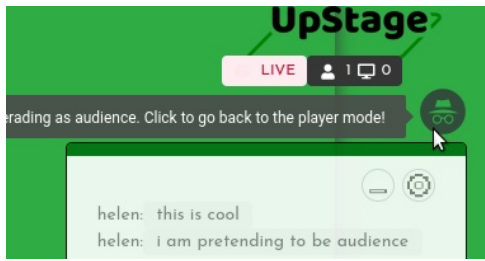
Light and dark mode for chat

You can change the chat from its default white window with dark text, to a dark window with light coloured text using the last icon on the settings overlay. This change is local – the audience will still see the chat window in its default light mode.

Dark mode is useful in situations such as when you are streaming and want a darkened environment for your stream; the light chat window can be disturbingly bright.

An alternative to dark mode is to adjust the transparency of the chat window, which can be done from the settings icon at the top right corner of the chat window – click "Settings" then click "Parameters" and adjust the "Chat transparency" slider to suit. However, this can result in the text being difficult to read.

Streaming

This section explains how audio-visual streams work in UpStage and gives step by step instructions for setting up a stream and manipulating it on stage, as well as tips for optimising your stream to minimise lag (delay).
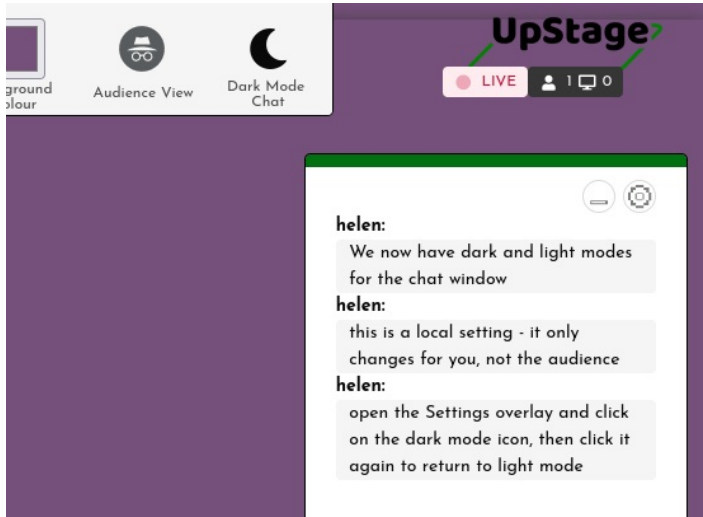
- Introduction to streaming
- Sending a stream
- Assign a stream to a stage
- Allow auto-detected streams
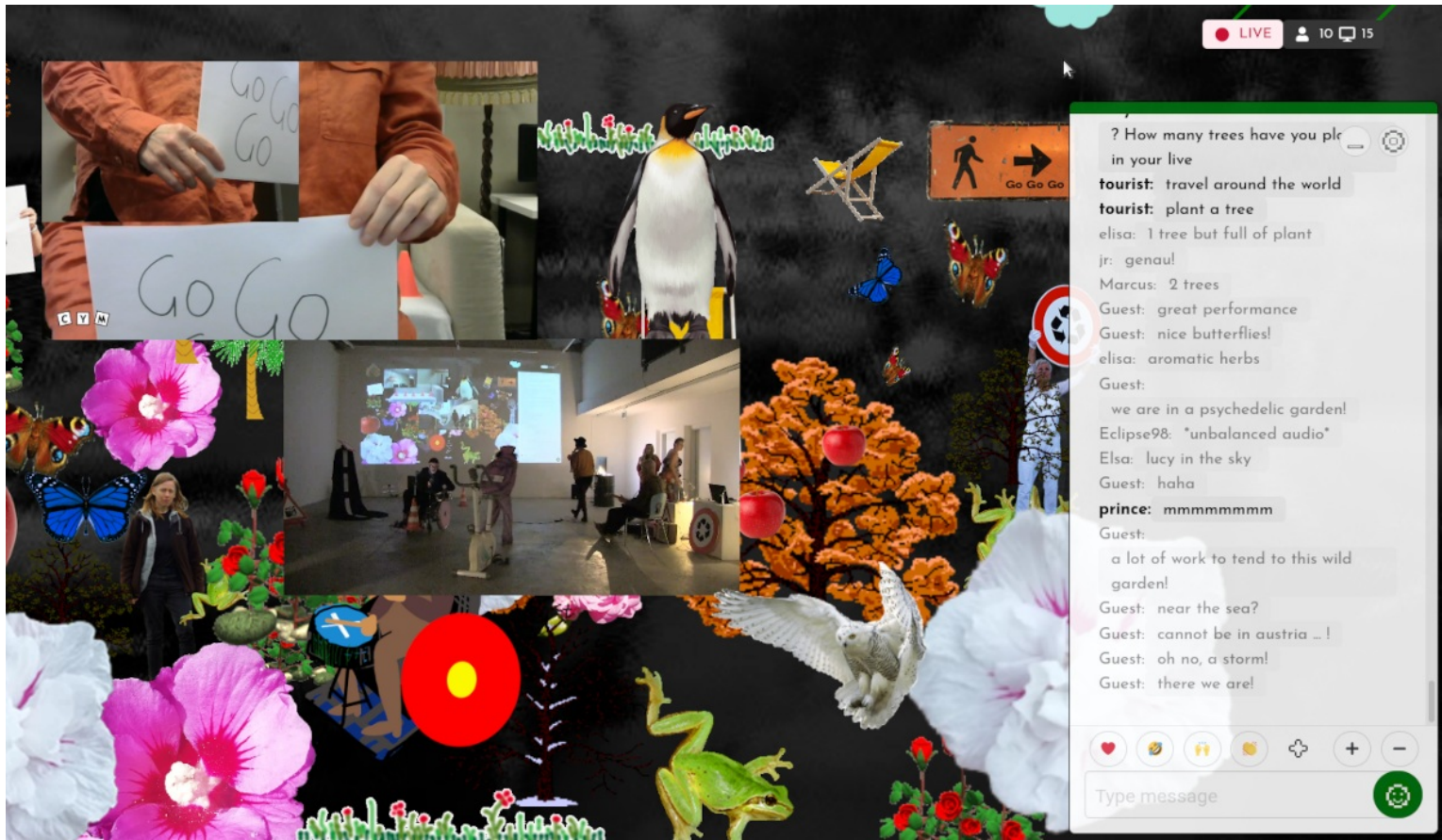
Introduction to streaming

Your performance can include live audio-visual streams, which can be sent to UpStage in either of two different ways:

- as an RTMP stream, which involves using a separate streaming application OR
- as a Jitsi meeting or individual stream, which is handled by your browser

A stream can be video (image) only, audio only, or both. You can also stream a video file, your desktop, or mix audio in your favourite DJing application and send the audio stream to UpStage as a soundtrack.

The following chapters explain how to set up and send an RTMP stream from your phone or computer to UpStage, and how to operate the stream on your stage. For information on a Jitsi meeting and individual Jitsi streams, see the Meeting tool chapter.

The applications that we recommend for RTMP streams are Open Broadcaster Software (OBS; for computers) and Larix Broadcaster (for mobile devices). Other applications can also be used, but we've provided screenshots and step-by-step instructions for these two applications as we've found them to be good.

Download:

- OBS Project
- Larix Broadcaster

But first, some important points to understand about streaming in UpStage…

RTMP versus Jitsi

RTMP streams require an additional software application and take more time to set up than Jitsi meetings or individual streams, which function directly through your browser. However, there are important points to consider when deciding which streaming method is best for your performance:

- Jitsi meetings invite everyone present on the stage – players and audience – to share their webcam and mic. This is great for discussions and workshops, or audience feedback at the end of a performance, but it may not be what you want for the performance itself.
- Individual Jitsi streams appear in the toolbar of the individual player only, as opposed to RTMP streams which are accessible to all players. This means that any player can place another player's RTMP stream onto the stage, but only you can place your individual Jitsi stream. In some situations it may be useful for another player to be able to place your stream on the stage.
- OBS allows a great deal of customisation of an RTMP stream, and Larix also allows quite a lot – for example, altering the video dimensions so that you can make your stream round rather than oval, or adding text or images to your stream. How much you can customise an individual Jitsi stream will depend on what browser you're using and what that browswer allows. Usually this is not much.

Streaming versus audio-visual conferencing

It's helpful to understand the difference between audio-visual conferencing platforms (such as Jit.si, BigBlueButton, Zoom, Skype, etc.) and a real-time interactive multimedia platform such as UpStage.

Platforms that are purpose-built for audio-visual conferencing use specific (and often proprietary) technologies and protocols and have dedicated high capacity servers. The primary feature of these platforms is streaming. On the other hand, UpStage has a great many other features besides streaming, and requires HTML-compliant streaming functionality as everything is delivered to the browser. As an open source project we're using the best open source streaming server technologies that we've found.

Streams in UpStage normally have around 2-3 seconds of lag (delay) and this will vary according to each individual's internet connection and their device's CPU. We choose to see this as a feature of the environment rather than as a problem, and we look for creative and interesting ways to work with delay.

Keeping it light

To minimize lag and ensure the best possible experience, even for those on slower internet connections, you should keep your stream as light as possible. Minimising file size is a good habit with all UpStage media – we're working online and in real time, so speed is more important than high definition for your audience's best experience.

You'll need to experiment with settings including the size, resolution and bit rate of your stream to find the best compromise between speed and quality – and the best settings will depend on variables such as how big you need your stream to be on the stage and what level of quality is aesthetically appropriate for your performance. See the chapter Sending an RTMP stream for optimisation tips.

Theoretically there's no limit to how many streams can be active on a stage at one time. However, the more streams there are, the more data is being processed by the server and by the audience's devices; so the more streams you have at one time, the greater the chance of lag and other performance issues.

Audio feedback

Audio feedback can be created by re-transmitting audio from UpStage back into UpStage via your stream. The easiest way to avoid this is to use headphones, so that your microphone cannot pick up any of the sound from UpStage, however this may not always be possible – for example when there's more than one person at the stream location, and they both or all need to hear the audio from UpStage.

It's advisable to keep the audio input in your streaming application muted all the time, except when you're sure you want to send audio. You can also mute the browser, so that no audio is heard from UpStage, when you're sending your audio stream.

If you need to send an audio stream from a location where the UpStage audio is being played over a sound system, it's best to use a good quality directional mic and have it as far away from the speakers as possible. When all else fails and the feedback builds, mute your audio stream and wait for it to quieten.

Frozen streams

Sometimes a stream may freeze, or stop, for an individual player or audience member. This is usually caused by either a blip in their internet connection, or because their device cannot process all the data. Usually it can be solved by that person reloading the stage. If others are receiving the stream normally then the issue is a local one, not a problem with UpStage.

Replay recordings

UpStage's [Replay recording feature](#) does not record streams. It's a log of all the actions on the stage, not a screen recording; so the data of a stream will not be saved as part of the replay. You'll need to make a screen capture recording in order to have a full recording of a performance that includes streams.

Sending an RTMP stream

To send an RTMP stream to UpStage, you need to use a streaming application on your computer or mobile phone. There are many applications you can use; the only requirement is that it can send a stream in the RTMP format (RTMP = real time messaging protocol). If you're looking for information about streaming using Jitsi, please see the Meeting tool chapter.

This manual provides instructions for the desktop application OBS and the mobile app Larix Broadcaster:

- OBS: https://obsproject.com/
- Larix Broadcaster: https://softvelum.com/larix/

Once you've installed the streaming application of your choice, you need to:

1. create a Stream media item in UpStage, then
2. configure your streaming application, and
3. optimise your stream settings.

Then you're ready to get your stream on stage!

Create a stream media item

Creating a stream media item on UpStage generates a unique key to enter into your streaming app, and allows you to assign your stream to the stage or stages where you want to use it.

[New screengrab]

1. From Backstage, go to the Studio and hover over the three dots to the right of the "+ New" button (do not click the button).
2. A dropdown menu appears with the option "RTMP Stream" – select this.
3. In the edit interface that appears, give the stream a name. You can also enter a unique key, which can be the same as the stream name, or leave this blank and the key will be automatically generated.
4. Assign the stream to the stage or stages where you want to use it.
5. Click "Save", and the edit interface closes. You should see your new stream at the top of the media list, with a QR code as its preview.
6. If you're using Larix Broadcaster on a mobile device, you can scan this code to directly import the settings.
7. If you're using OBS, click on the QR code and a pop-up window opens with the configuration instructions, along with screenshots of the OBS settings. Click the red buttons to copy the URL and key, and paste them into your OBS settings.

[New screengrab]

Configure your streaming application

Larix Broadcaster

If you haven't already got the settings, you can scan the QR code from any of these places: the media list in Studio; the stream's edit interface; and the Streaming toolbar overlay on a stage that you've assigned the stream to. Scan this code with a QR reader app, then click to import your unique key and the UpStage streaming URL into the Larix settings. Depending on the QR reader app you're using, you may need to click "Visit URL", "Browse website", "Click to access" or something similar.

Then open Larix Broadcaser and click on the cog icon to access the settings:

1. In "Connections", you'll see a new stream with the UpStage streaming URL and your unique key.
2. Tap the key to activate it.
3. Go back to the UpStage Settings menu and make any changes that you want, such as selecting "Audio only" in the audio settings if you only want to send audio. In the video settings you can select landscape or portrait orientation. Other adjustments to optimise your stream are explained below.
4. Go out of the Settings menu and start your stream by tapping the red circle on the Larix camera interface. Next to this circle is a mute button to mute and unmute the audio stream.

OBS

Access the OBS configuration instructions by clicking on the stream's QR code in UpStage's Studio media list, or in the Streaming toolbar overlay on the live stage. A window opens with step-by-step instructions and screenshots for configuring OBS.

Click on the red icon at the end of the streaming URL and key to copy and paste this information to OBS.

The Output, Audio and Video settings can be configured to optimise your stream. Some suggestions are below, and there are many online tutorials and discussions about optimal settings for streaming from OBS.

Optimise your stream settings

Before you start sending an RTMP stream to UpStage, make sure that you're not sending more data than necessary and have adjusted the settings to make the stream as good as possible for everyone in your audience. If you send a large high resolution stream, some people may have problems receiving it.

There are no universal optimal settings, as what's best will depend on technical variables such as your audience's bandwidth and devices, as well as artistic choices. You'll need to experiment and try out different adjustments to find what is right for your technical conditions and for the specific performance.

When you're testing different settings, make sure you always have others on the stage who can give feedback about how they're experiencing the stream.

Resolution

Resolution is the dimensions (height and width) of your video in pixels. To change the resolution go to "Video" in the settings menu of OBS or Larix.

The appropriate resolution will depend on how big you want your video to be on the stage – if you want it to fill most of the stage then you'll need a higher resolution than if your stream is quite small. If you've chosen a lower resolution and then increase the size of the stream on the stage, it

may become pixelated.

Tip: start with a resolution of 640×480, or 800×600 and see how this looks on the stage. If it looks great, try a lower resolution as it may give better speed. If it looks pixelated and you don't want that, you'll need to increase it.

The resolution also determines the shape – for example, 600×600 will give you a square stream, while 800×600 will be a rectangle. In UpStage you can use a frame to make your stream round (right-click on the stream on stage to access this option). If your stream is square then this frame will make it round, whereas a rectangular stream will become oval.

Bit rate

The bit rate is the size of the file per second of data, in kilobits or megabits per second. Lowering this will reduce the file size, and also the quality of your stream. The default bit rate in applications such as OBS and Larix is 2500. This can usually be reduced without significant loss in quality.

Tip: reduce the bit rate to 1000 Kbps and test the stream on stage. If the quality is dropping below what's acceptable for your performance, increase it to 1500 or 2000 and test again.

If you think it's likely that many in your audience may be on unstable connections or with older devices, you can choose to use a lower bit rate and accept a loss of quality in exchange for more of your audience being able to receive the stream.

Frame rate

The default frame rate 30 fps (frames per second). Reducing the frame rate will decrease the size of your stream, however the stream may also become choppy or there may be other noticeable loss of quality such as loss of lip-sync.

Encoder

In OBS, you may have the option to change the encoder (this depends on the version of OBS that you have). Using the software encoder H.264 may improve the speed of your stream as this uses less of your computer's CPU.

Other settings

Both Larix Broadcaster and OBS have many other settings that you can play around with, and there are many online articles offering advice about how to optimise these and other applications for streaming. This manual is only a starting point.

Assign an RTMP stream to a stage

Before you can see and hear your RTMP stream on a live stage, you need to assign the Stream media item to your stage.

There are two ways that you can assign your stream to a stage:

- via Studio, or
- via Stage Management.

Assign via the Studio

In the Studio, you can assign an RTMP stream to a stage during or after creating it. If you've already created it, find your stream in the Media list and click on the green pencil icon in the Manage Media column at the right of the list to open the stream's edit interface.

Then:

1. You'll see a list of available stages in the left-hand column. Click on the name of the stage you want to assign your stream to.
2. Click on the green arrow between the two columns, and the selected stage(s) will move to the right-hand column.
3. Click "Save" to save the changes you've made.

To remove your stream from a stage, click on the stage name in the right-hand column and it will move back to the left.

]New screengrab]

Assign via Stage Management

From the Stages list in Backstage:

1. Locate the stage you want your stream to appear on.
2. Click the green cog icon to enter the management interface for that stage.
3. In the left-hand menu, select Media.
4. From the drop-down menu of media types, select Stream. The Available Media list will change to display only streams.
5. In the Available Media column, click on the stream you want to assign to this stage. It will move to the right-hand column of Selected Media.
6. If you want to put all available streams onto this stage, use the green ">>" button.
7. To remove a stream from this stage, click on the stream name in the right-hand column.
8. Click "Save" to save the changes you have made.
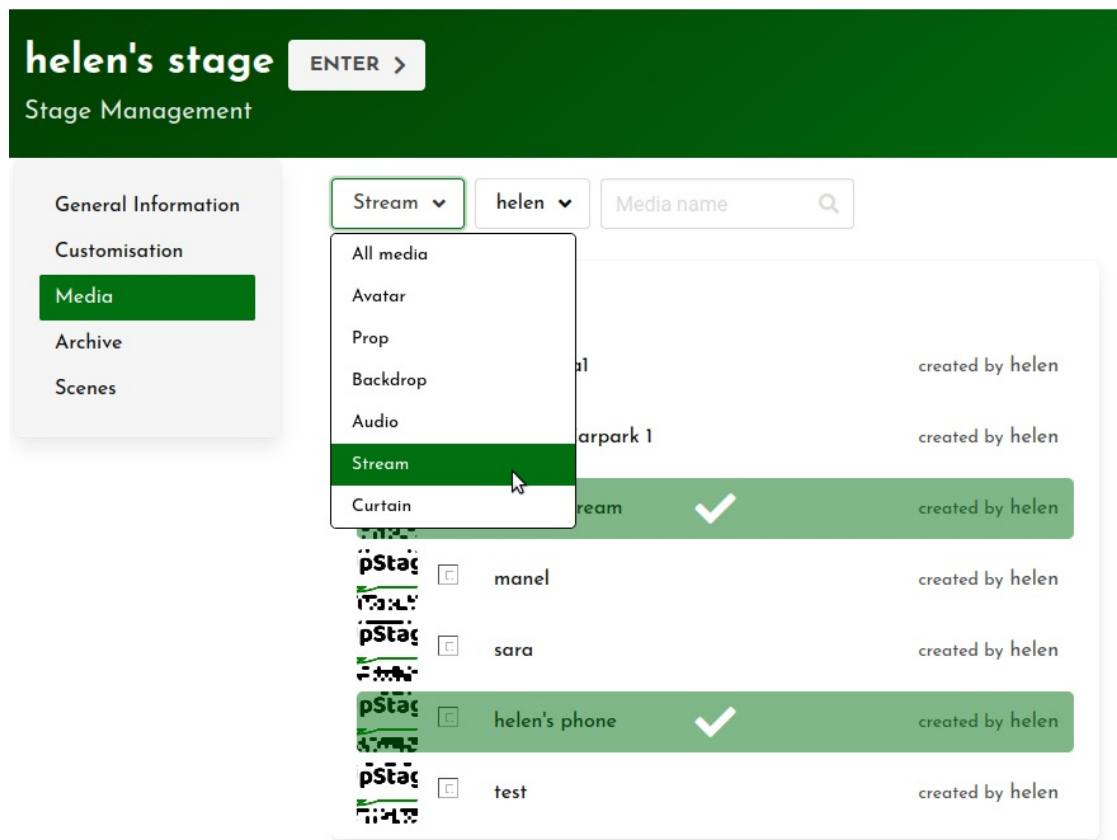
Operate your stream on the live stage

Once your stream has been assigned to a stage, you can now operate it on that stage. Go to the Stream tool chapter in the Live Stage Tools section of this manual for more information on operating your stream on the live stage.

Allow auto-detected streams

The previous chapters have described how to create a Stream media item that must be assigned to a stage in order to use it there. As well as this, it's possible to set a stage to auto-detect live streams. This feature allows any stream that is sent to this UpStage server to be displayed in the on-stage Streams toolbar, and operated by players on the stage.

This is useful if you want to incorporate spontaneous streams such as those sent by the audience. However, if other players are also streaming to the same server at the same time for a different performance, their streams will show up in the toolbar as well and could slow down the stage.

If you want to use this feature, go to Customisation in the Stage Management interface for your stage, and click on the "Auto-detect" toggle for streaming. When it's green, auto-detect is on.

You can then give the stream server URL to someone you want to be able to send a stream to your stage – for example a volunteer from the audience or a guest who you want to spontaneously invite. They can put this URL and any stream key into their streaming application (such as Larix or OBS) and once they've begun sending their stream to the server, it will be available on your stage – and on all stages on the same server.

Recording and Statistics

This chapter explains the statistics and recording features of UpStage.

- Statistics
- Chat logs
- Replays
- Screen recordings
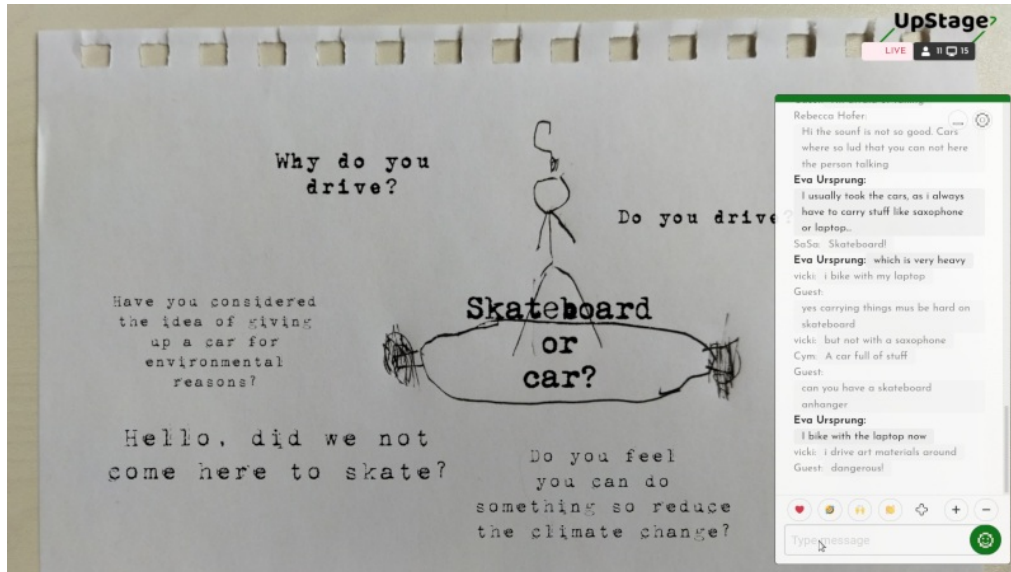
Statistics

What data is collected?

UpStage servers collect network metadata as part of normal traffic processing. This is only used for debugging and usage statistics purposes. It's compressed and deleted over time, and only anonymised statistics are kept long-term.

UpStage identifies your browser in order to determine if the Firefox configuration information needs to be displayed. This information is not stored or connected to any other data.

If you register a player account on an UpStage instance, you'll be required to enter your email address. This is stored in the database and is only accessible to Admins of that UpStage instance. Passwords are encrypted using modern encryption algorithms.

Player / audience counter

The player/audience counter shows how many players and audience are connected to a stage at the current moment. The counter is always visible in the top right corner of a stage. The number of logged in players on the stage is shown next to a person icon, and the number of connected devices in audience view is shown next to a screen icon.

Note that in many situations there can be more than one audience member at a device. For example, two or three people may be watching together around a computer, or the stage may be projected in a physical location for a large proximal audience. The counter simply shows the number of connected devices.

Hover your mouse over the counter and a drop-down will display the nicknames of players and audience on the stage.

If you're a logged-in player, you can click on another player's name in this list to send them a message via Player chat.

The player/audience statistics are also shown in Backstage, on the Stages list. This can be useful if you're working on multiple stages and want to see where your collaborators are, or if you're making changes to a stage that might disturb others on the stage.

When a stage is live, the player/audience counter also shows on that stage's image on the Foyer.

Chat logs

The content of player and audience chats remains in the chat window until it's cleared, either using the on-stage clear chat tool (see the <u>Stage settings</u> chapter) or from the Stage Management interface for a stage, using the Clear Chat button.

Saving the chat

To save the chat contents as a text file you can:

- manually select and copy the text directly from a chat window, and paste it into a text document;
- use the <u>Replay</u> recording feature; or
- use the archive or download tools in the Archive section.

The tools in the Archive section of a stage's Management interface are the buttons "Download All Chat", "Clear Chat" and "Archive Performance", on the right-hand side below the green banner.
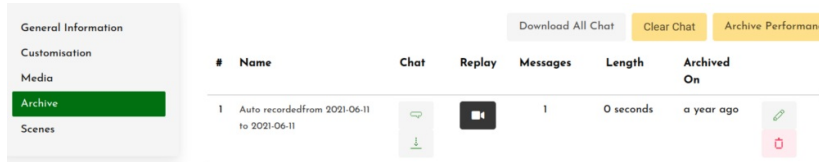
Archive Performance will save all chat and other actions since the stage was last swept or a Replay recording made. Archiving will also sweep the stage, clearing the chat and any media that has been left on the stage. The Archive will then appear in the list along with other archives or Replays.

Download All Chat will create a text file with all the chat that has been entered into both the player and audience chat windows.

If you've made a <u>Replay recording</u> of your stage, it will have created a log file of all the chat text entered during the period of recording. There may be chat text that has not been cleared from the chat window, but was entered before the recording was started and therefore is not included in this chat log.

Viewing saved chat logs

If you've made a Replay or clicked on the Archive Performance button, you will see it in the list of recordings in the Archive.

In the Chat column for that archive or recording, click on the speech bubble icon to display the recorded chat. Click the Download icon to download the chat as a text file.

More actions

In the Archive you can also:

- clear chat currently in the stage's chat window using the "Clear Chat" button
- delete unwanted recordings and archives using the red Trash icon
- edit the name and description of a recording or archive using the green pencil icon.

Replays

Replays are recordings of all the messages sent between the browser and the server, which can be replayed to recreate the on-stage actions of a performance from the audience point of view.

This is not a screen recording, therefore audio-visual streams aren't captured and won't appear in the replay. If your performance includes audio-visual streams and you want to make a recording of it, you will need to use third party software to make a screen recording.

NOTE – **starting a recording will clear the stage**; any media that has been placed on the stage will be taken off. The media will still be available in the stage tools, and any scenes that you have saved will still work.

Make a recording

Before starting to make a recording, it's a good idea to have Backstage and your live stage open in two separate browser tabs. This means you can easily start and stop the recording without having to leave and re-enter your stage.
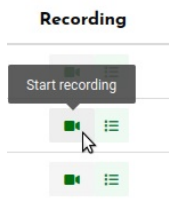

In Backstage, go to the Stages list and click the camera icon in the Recording column for your stage.

A pop-up window will ask you to enter a name for the recording, and warn you that the stage will be cleared before the recording begins.
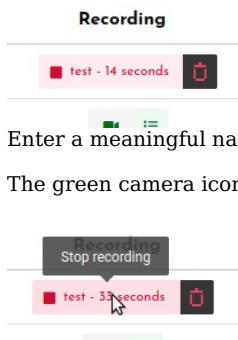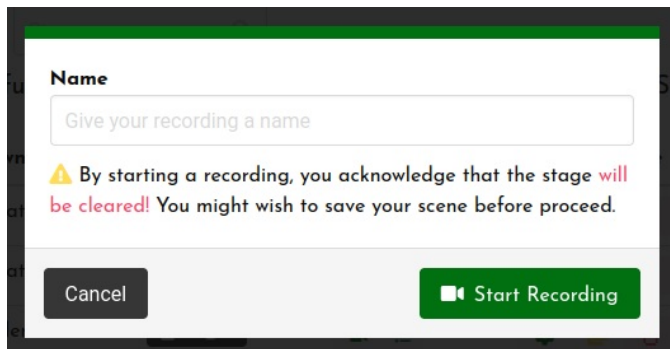
Enter a meaningful name for the recording and click the green "Start Recording" button.

The green camera icon will be replaced with red text showing the name of the recording and the length of time it has been recording for.
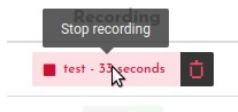
When you want to stop the recording, hover over this red text. You will see a tool-tip message saying "Stop recording". Click on the red text and the recording will stop.

If you don't want to keep the recording, you can click on the trash can icon at any time to delete the recording.

When you've just stopped a recording, the camera icon will become a "Play" icon, so that you can immediately watch the recording if you want to.

Find and view a recording Replay

Go to Stage Management of the stage for which you want to view a Replay. In the left hand menu, select Archive. You'll see a list of available recordings, ordered by date. You can also reach this section by clicking on the list icon next to the camera icon in the Stages list.

To view a replay, click on the camera icon. It will open as if it is the stage, and then you'll need to click on the cover image just the same as if it was a live stage.
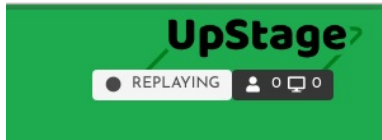
On the replay stage, the status in the top right-hand corner shows "REPLAYING" in grey, instead of the red "LIVE" when you're on a live stage. There are no player tools available, and you cannot interact in the chat.

In the bottom left-hand corner are the controls for the replay. You can select the speed at which you want to view the replay, and play, pause or stop it. You'll also find a slider that shows how far through the replay you are. Move this slider to jump to a specific point in the replay.

The counter at the left end of the slider shows at what time in the recording you are at, and the counter at the right end shows how long the recording is.

If you want to watch the replay without seeing this toolbar, click on the icon in its top right corner or use the Esc key on your keyboard. This key will bring the toolbar back if you've removed it.
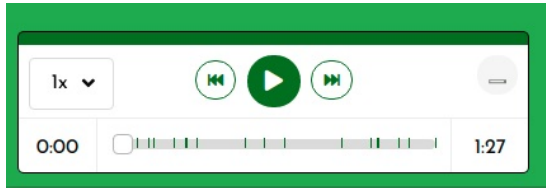
Screen recordings

You may want to make a screen recording of a performance as well as, or instead of a [Replay recording](#) if you're using audio-visual streams – which aren't captured in the Replays – or as an additional form of documentation.

Screen recordings of UpStage performances can be made using any software that's capable of recording your desktop, such as OBS, QuickTime or many other applications specifically for screen recording. You'll need to consult the relevant documentation of the software you choose to use for instructions on how to screen record.

Tips for screen recording:

- make sure that you're in audience view (not logged in) and that your browser window is full screen (F11);
- check that your screen recording software is capturing the computer audio, and not any external audio;
- you may want to make the font size in the chat window slightly larger, so that it's easier to read in the recording;
- close all other applications on the computer and if possible use an Ethernet cable rather than WiFi, to minimise lag and network interruptions.

Permissions

Unless you're part of the player crew or have been specifically asked to make a screen recording of a performance, you should not do so without the permission of the artists. Make sure that any distribution of a recording is done with the necessary permissions and appropriate crediting.

The audience is relatively anonymous in a recording, however it's good practice to inform them that the performance is being recorded. You could do this via the chat, the cover image, or in other information about the performance.
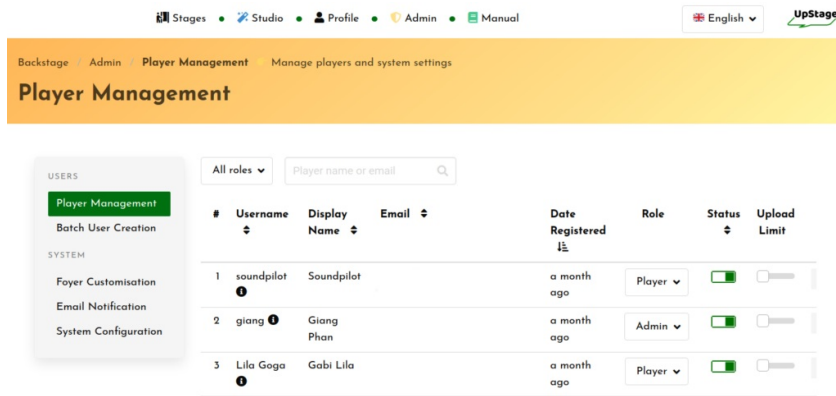
Admin

If you have an Admin role on an UpStage instance, you will have access to additional tools:

- UpStage administration
- Foyer customisation

UpStage administration

Players with Admin status can access the Admin section of Backstage. This is where new player registrations can be approved, existing player accounts managed and the Foyer customised. In the future there may be more features added here.

Player management

Admins can see a list of all players who have accounts on this UpStage instance, including their email address and the date they registered their account. From this list, admins can:

- activate or deactivate individual accounts
- change the role of a player (see below)
- increase a player's upload limit (the default is 1MB)
- edit a player account, to update their email address
- reset a player's password
- delete a player account.

Roles

UpStage accounts have one of four roles: Guest, Player, Admin, and Super Admin. Each has a different level of permissions.

Guest

Guest accounts are for use by people who do not have their own player log-in and may not want to have one, for example in workshops or demonstration situations. Logging in with a guest account allows you to access and operate the on-stage player tools of the stage or stages that the guest account has been given access to. Guest accounts don't provide access to Backstage.

Player

Players can log in to UpStage, create stages, upload media, and perform on stages that they've created or been given access to. Players can update their email address and change their password in their profile.

Admin

Admins are players with additional permissions. They can customise the Foyer and access the Admin section of UpStage, where they can approve new player registrations and undertake other player management, for example, increasing a player's upload limit or changing a player's role.

They have full powers in Backstage, which means they can view, edit or delete all stages and media, not only their own. They don't automatically have player access to stages which they haven't been given player access to.

Super Admin

This role is usually held by the person who has installed and configured a specific instance of UpStage. As well as all of the permissions of other roles, they can make other players into Admins and do back-end configuration of the instance. This person may be a systems administrator rather than an artist-player.

Batch User Creation

This feature of the Admin section allows admins to quickly create multiple new users without needing an email address for each user. This is

useful for temporary log-ins, for example, in a teaching or workshop situation where participants may not intend to keep using UpStage in the future.
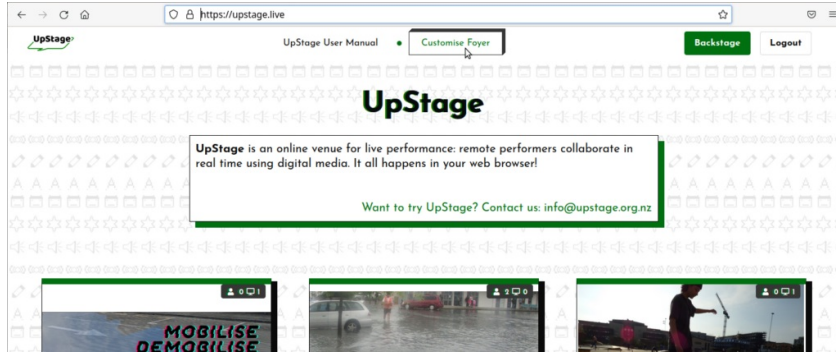
Foyer customisation

The Foyer is the home page of an UpStage instance – for example, https://upstage.live/. This is where players can log in, and new players can register. Audiences can enter live shows or see what's coming up.

The Foyer also includes information about the UpStage instance. If you have your own UpStage instance, you can customise this information. You need to have an Admin role to customise the Foyer.

Foyer customisation interface

There are two ways to access the Foyer's customisation interface:

- From the "LIVE" page of UpStage's Foyer, click the Customise Foyer button in the top navigation bar.
- From Backstage, click Admin in the top navigation bar, then in the left-hand menu click Foyer Customisation

Customisation options

Currently, you can customise three areas of the Foyer:

- Title
- Description
- Menu

Click the green Edit button at the right of the area you wish to customise. Make your changes and click "Save".
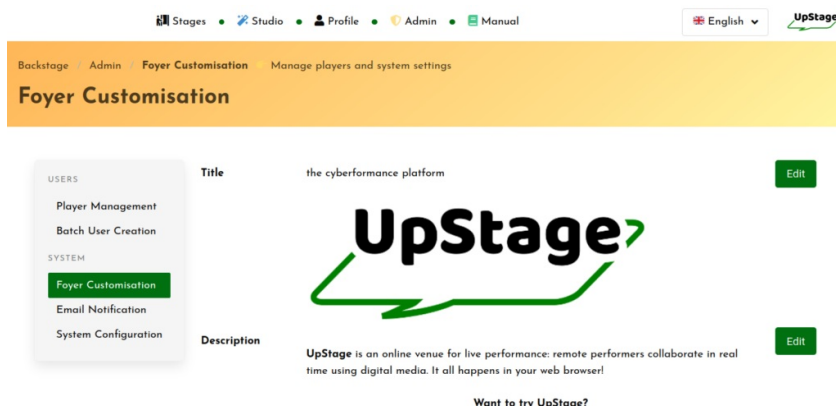
Description formatting

You can use standard HTML code to format fonts, text size and so on in the description area. Hyperlinks and images can also be inserted.

Menu links

Menu items can be added to the top navigation bar. By default this has a link to the UpStage user manual and a link to the Foyer Customisation interface.

Links can be added in the following format:

Clickable Text (URL for link)

Re-order the links by changing the order of the list in the customisation interface: the first link will be at the left, and the last at the right.

Appendices

- [Glossary](#)
- [Troubleshooting](#)

Glossary

Common terms explained. If you're looking for a term that isn't here, write to feedback@upstage.org.nz.

Admin	A player who has been given the role of Admin: they then have access to the Admin section of Backstage, where they can approve new players and manage player accounts. Admins can customise the Foyer and edit other players' stages and media in Backstage.
Audience	Public attending a performance, who don't need to log in to enter the live stage. The audience can chat in the text chat window and use emoticons to express reactions.
Avatar	A graphic character that's held by a player and manipulated on the stage. Avatars can have Text2Speech voices: text entered into the chat input field by the player holding the avatar appears in the audience chat window and in graphical speech bubbles on the stage. If the avatar has been given a voice the text will be spoken aloud by the computer.
Backdrop	A static or animated image that fills the background area of a stage, behind all other visual media.
Background	When a stage is completely empty, with no backdrop showing, it displays the background colour. The default colour is green, and this can be changed in Stage Settings. The background may be visible to the audience if they don't have their browser in full screen mode.
Backstage	The 'behind the scenes' area of UpStage, where players create and prepare their stages, upload and manage media, and other tasks.
Chat	Real time text chat for players and audience. Players can choose to hide or expose the audience chat, and have a separate player chat for private communication during performances.
Cyberformance	Live theatrical / artistic performance that's situated on the internet; https://en.wikipedia.org/wiki/Cyberformance
Foyer	The home page of an UpStage instance, for example http://upstage.live. This is where the audience can enter live stages, players can log in, and new players can register an account. The Foyer has links to the UpStage community website (www.upstage.org.nz) and to this manual. If you have your own instance of UpStage, you can customise the Foyer.
Guest	The guest player role is used for workshops and demonstrations to give someone player access to the on-stage player tools, without having access to Backstage or having to register an account. A guest is also an audience member who hasn't given themselves a nickname.
Live action icon (light bulb)	This icon appears at the top right-hand corner of all moveable images (avatars, props, streams, drawings and text objects) when they're placed on the stage. The default setting is off (white), and until it's turned on (green) only the player who has put this media item on stage can see it. This allows that player to adjust parameters such as size, position, opacity, etc. before making it visible. If you turn it off again, it doesn't make the media item invisible – it means that changes you make to the media item will not be visible to anyone else until you turn the light bulb back on.
Live stream	An audio-visual feed sent in real time from a computer or mobile phone, via the internet.
Media	Digital files such as images, animations or sounds that have been uploaded to the UpStage server. Allowable media formats include: Images: .png, .jpg, .jpeg, .gif, .svg, Audio: .wav, .mpeg, .mp3, .aac, .aacp, .ogg, .webm, .flac.
Multi-frame	A graphical media item (avatar, backdrop or prop) that consists of more than one frame and can be animated on stage to display the sequence of images; one of its specific frames can also be shown as a still image.
Owner	A player who has created a stage, or uploaded a media item, is referred to as the Owner of that stage or media item.
Player	Someone who logs in to UpStage to create and present cyberformances.
Prop	A graphic media item that can be placed on a stage and manipulated by players. Props can be attached to avatars.
Replay recording	A recording of the messages sent between the browser and the server, which can be replayed to recreate an UpStage performance. Replays are not screen recordings and do not capture live data such as audio-visual streams, but create very light-weight documentation for performances that don't use streams.
RTMP	Stands for 'real time messaging protocol', used to stream audio and video over the internet. To send a stream to UpStage you must have software that's capable of sending an RTMP stream.
Scene	A saved arrangement of media on a stage; selecting a scene changes the stage to display all the media saved in that scene, in the positions the media items have been saved in.
Stage	The virtual space created in a browser window, where audiences attend performances and players operate digital media to create, rehearse and present performances.
Text2Speech	Speech synthesis that allows avatars to speak text aloud in computerised voices.

Troubleshooting

This chapter provides solutions to known issues. If you have an issue that's not listed here, please let us know: feedback@upstage.org.nz.

Known issues:

- [Safari 13](#)
- [Stage "offline"](#)
- [iPads and Tablets](#)
- [Scrolling on on-stage toolbars (Google Chrome on Mac)](#)
- [Drawing tablet issues](#)

Safari 13

UpStage will not function in the Safari 13 browser due to a bug in Safari. Please upgrade to Safari 14, or use Google Chrome.

Stage "offline"

If the status indicator in the top right corner of the live stage is grey and says "Offline" (instead of being red and "Live"), your network may be behind a firewall that's blocking the ports required by UpStage. Please ensure that all standard ports are open. If you're not able to configure the firewall yourself you'll need to contact your network administrator.

iPads and tablets

UpStage works on all mobile devices such as smartphones and tablets, using a standard browser. We recommend using the latest version of Google Chrome, Mozilla Firefox or Safari for the best experience on a mobile device.
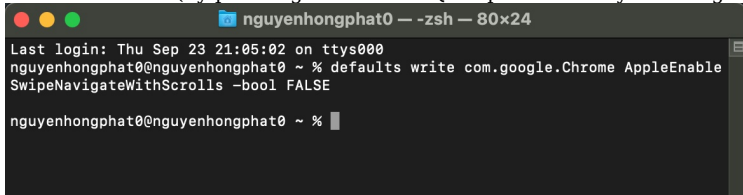
If you have issues on a mobile device, for example not receiving streams consistently, it's most likely a hardware limitation on your device.

Scrolling on toolbar overlays (Google Chrome on Mac)

If you're using UpStage in the Chrome browser on a Mac, you may encounter an issue with horizontal scrolling on the on-stage tool overlays (the bar at the top of the stage with media items and other tools). Scrolling to the left may result in going back to the previous page. This is a feature of Chrome and can be manually turned off.

To turn it off:

1. Open a terminal and paste:
   `defaults write com.google.Chrome AppleEnableSwipeNavigateWithScrolls -bool FALSE`
2. Then hit enter.
3. Restart Chrome (by pressing Command+Q to quit it entirely – closing only the browser window will not work).

Drawing tablet issues

Drawing tablets can be used with the on-stage drawing tool. If you experience an issue with the pen only drawing dots, not lines, you may need to go to the properties of the tablet and add your browser to the application, then un-check the option "use windows ink."

https://support.wacom.com/hc/en-us/articles/1500006273281-Why-is-Google-Chrome-not-accepting-clicks-or-is-lagging-