



glue.

VIRTUAL COLLABORATION WITH ANY DEVICE

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# REQUIREMENTS



# HARDWARE

## **Recommended computer hardware**

- Graphics: nvidia GTX 1070 or GTX 1070 Ti
- Processor: Current generation i7 or i5
- Memory: 16GB or more
- Hard drive: SSD

## **Example PC configurations**

- Desktop: Acer Predator G3-710 (SKU (DG.E08EQ.060)
- Laptop: Asus ROG Strix GL502VS 15,6" (SKU GL502VS-GZ227T/R / GL502VS-GZ227T)

## **Internet Connections and OS**

- Reliable Internet connection (all participants): Cable or 4G/LTE preferred.
- OS: Windows 10 (version 1703 or later)
- OS: macOS High Sierra 10.13

# INTERNET CONNECTIONS AND OPERATING SYSTEMS

## Recommended VR and Audio gear:

- **HTC Vive** with **a)** HTC Vive Deluxe Audio strap or **b)** Good quality closed headphones without microphone
- **Oculus Rift** ( gear includes audio devices)
- **Windows Mixed Reality** headset with microphone

## VR Device Instruction Videos

- HTC Vive: <https://vimeo.com/264976652/d91e7b90b0>
- Oculus Rift: <https://vimeo.com/264976758/ddcfc75d85>
- Windows Mixed Reality: <https://vimeo.com/264976703/8db3880574>

# IT POLICY AND FIREWALL CONFIGURATION

The client application communicates using HTTPS with the following servers that must be whitelisted:

app.glue.work

glue.eu.auth0.com

limu.fake.fi

rink.hockeyapp.net

For the real-time session network traffic, the client application requires permissions for both incoming and outgoing **TCP and UDP** traffic.

The outgoing ports used by the client application are assigned by the user's operating system and are not statically assigned.

**NOTE!** If you require precise IP and port information at the server end, please contact support so we can statically allocate server resources for you.

# USER GUIDE - INSTALLING THE SOFTWARE



# SOFTWARE DOWNLOAD

Glue requires personal login info to allow access to the workspace which contains all the accessible 3D environments or *scenes*.

- In your web browser, navigate to <https://app.glue.work/>.
- If this is your first time using the system, use the **Sign Up** -tab to create an account. You will get a confirmation e-mail.
- **Log In** using the Google account or username and password
- Download the latest Glue client for your preferred operating system.



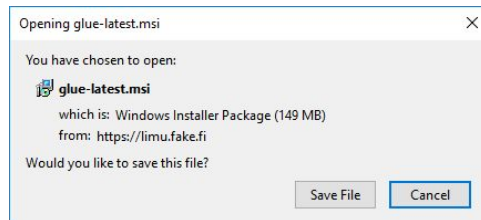


# INSTALL AND LAUNCH - WINDOWS

## To install Glue

→ Double click the **glue-latest.msi** > **Save file**

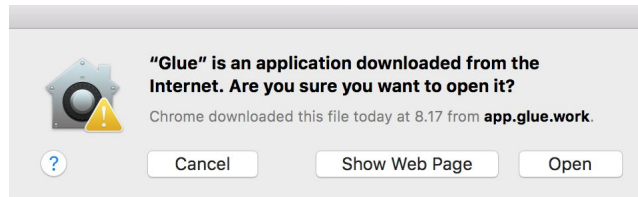
Glue is automatically launched after the installation



# INSTALL AND LAUNCH - MAC

## To install Glue

- Double click **glue-latest.dmg**
- In the installation window use your mouse to drag Glue icon to Applications folder icon
- **Start Glue** from the Applications window
- If you get prompted the following window, select **Open**



# USER GUIDE - USING THE SOFTWARE



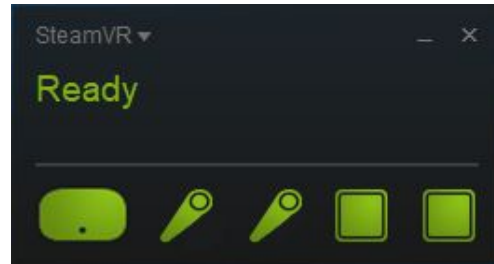
# STEP ONLY FOR VR USE / LAUNCH STEAM VR

For VR use the software requires VR device and SteamVR application is in use before starting, so make sure you have SteamVR installed and set up correctly.

→ **Start SteamVR** application from the desktop icon.

**More info:**

[https://support.steampowered.com/kb\\_article.php?ref=2001-UXCM-4439](https://support.steampowered.com/kb_article.php?ref=2001-UXCM-4439)



**NOTE!** SteamVR needs to be running and the headset indicator needs to be green before starting the Glue application. Otherwise the system will not detect the headset microphone on startup and audio issues will follow.

# APPLICATION LOG IN

Glue requires personal login info to allow access to scenes which Glue administrator has granted.

## To log in:

Use the previously created account info

→ Click **Log In**

This screen is shown only when previous login data is not found. Otherwise the previous login information is used.

Web browser window opens with log in options.

→ **Log In** using the Google account or username and password



# THE LOBBY USER INTERFACE

After successful login, return to the Glue application window from the web browser.

- **Enter your name** in the field above the avatar.
- **Select your Avatar** using the left and right arrows.

All rooms associated with the active workspace are shown on the right. The workspace can be changed from a menu in the top left corner of the lobby screen.

- **Enter the scene** by clicking on the scene name.

It is recommended to pre-download the scene data with **the cloud button**. “R” indicates it is already loaded and pressing the button will refresh the scene if it has changed. **The trashcan button** will clear the local cache.



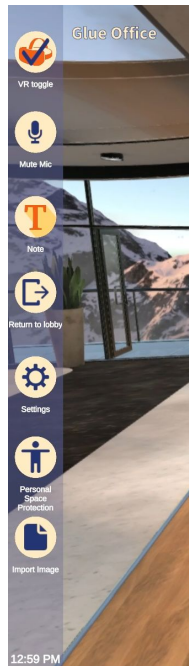
# USING GLUE IN DESKTOP MODE

When entering a glue scene, desktop mode is on by default. In this mode you are able to move around the scene:

- Use **keyboard arrow keys or W-A-S-D keys** to move and mouse to Pan / view around.
- Press **spacebar** to enable vertical movement (Fly Mode)
- Press **Esc key** to access the main menu.
- Exit the main menu and return to navigation mode with the **Esc key**.



# SIDE MENU - EXPLANATIONS



**VR toggle:** Toggles VR mode by switching between desktop mode and VR mode.

**Mute Mic:** Will mute your own microphone.

**Note:** Adds a new text note to the scene.

**Return to lobby:** Returns to the Lobby user interface.

**Settings:** Opens up a separate window for audio, video or other settings.

**Personal Space Protection:** Adjusts a radius around your avatar, within which other avatars are not displayed.

**Import image:** Imports an image file (PNG or JPG) to the scene.



# USING GLUE IN VR MODE

Glue is launched in desktop view by default, but can be switched to VR mode via menu.

## To use in VR

→ From the **Menu** in left select **VR toggle** icon

This activates the view in VR headset.

**NOTE!** If mouse is not visible, press **Esc** (keyboard) to toggle visibility on/off.

**NOTE!** For VR mode the Steam VR application needs to be started and running before launching Glue.

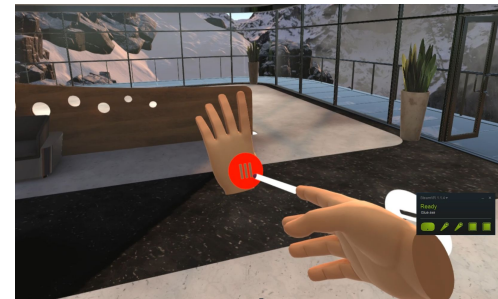


# VR TOOLS - MENU ACCESS

If the user has VR hand controllers in use there is a menu to access selection of tools. These might vary depending of the software version or customization for specific organization.

## Accessing tools menu

- Point at the **menu symbol** so it is highlighted.
  - Squeeze the **trigger** on the controller.
- **With 2 controllers active** there is one menu access button on the back of both hands.
  - **With 1 controller active** the menu button is floating in low center of view.



# VR TOOLS - SELECTING

## Selecting tools

- Use the controller to point a tool that you like to use and squeeze the **trigger** to select the tool.
- Close the Menu by pointing the “X” on the upper right corner of Menu window or back of your avatar hand and squeeze the **trigger**.



# TOOLS - TELEPORT

Teleport allows the user to move around in the scene easily and in greater distances than a typical room scale VR play area allows.

The teleport is also assigned to the **thumbpad** button on the controller and is available without selecting the tool. When the teleport tool is specifically selected from the menu, it is used with the **trigger** similarly to other tools.

## To use the Teleport:

- Press and keep pressed the **thumbpad** (or **trigger**).
- Point to the wanted location and release the button.

**NOTE!**      **Green line:** Teleport to location is possible  
                 **Red line:** Teleport to location is not possible



# TOOLS - GROUP TELEPORT (BETA VERSION)

Group teleport tool allows one user to move all users in the scene.

## To use Teleport Group

→ Follow the instructions for the **Teleport** feature.

Tool will visualize where other users will relocate.

The thumbpad shortcut does **not** apply to the **Teleport Group** feature. This feature must be explicitly selected from the menu and is therefore used with the **trigger**.

**NOTE!** Be aware that with this tool everyone else will teleport as well. Meant to be used by the host and inform other users before teleporting for good use experience.



# TOOLS - CHANGE SCENE IN VR

In VR mode you can change directly to another scene without the need to return to the lobby screen.

The Change Scene tool opens a list of scenes in the workspace. This tool will take everyone from the current scene to the selected scene.

## To use Change Scene

→ Choose the tool and select from the list.

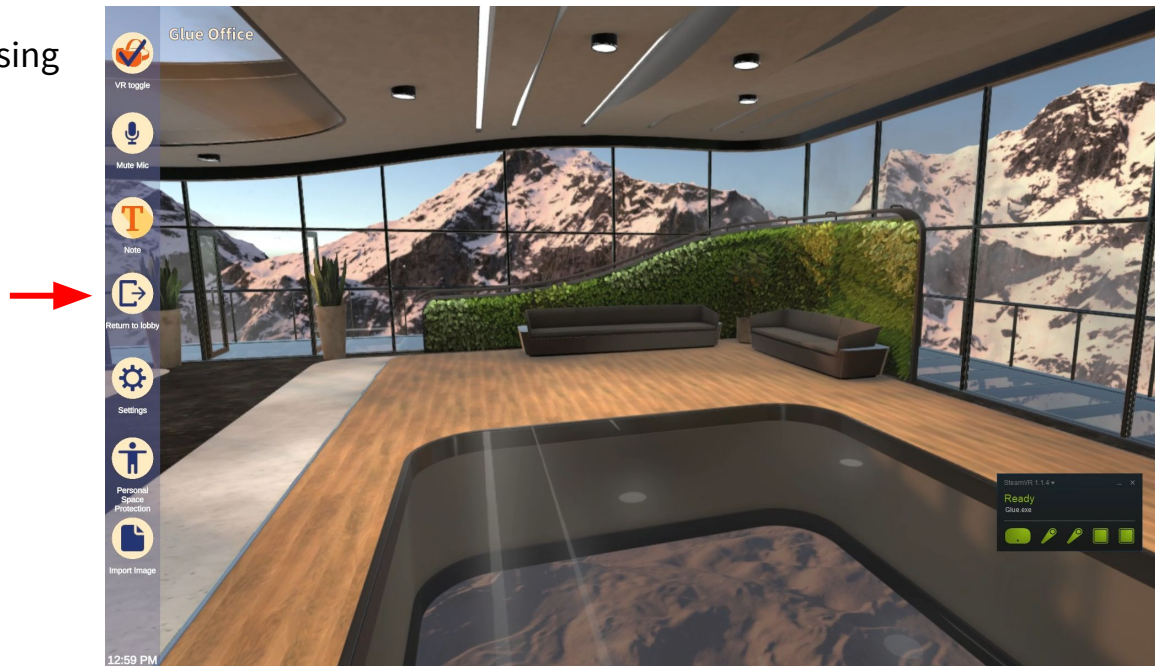
**NOTE!** When you change to another scene all people with you in the same room will also move along with you.





# RETURN TO LOBBY

- Access the **Main Menu** by pressing the **Esc** key.
- Select **Return to lobby**.



# NOTES

Windows only: Exiting the application is done by pressing **ALT + F4** key combination or closing the window from the **X** in the upper right of the screen.

Windows only: To toggle between windowed and full-screen mode press **ALT + Enter**.

The application automatically logs in the previous user when re-opened. This can be prevented by logging out in the “Room selection” view.

Only the administrator is required to create rooms and add access to rooms.



# WORKSPACES - FOR WORKSPACE ADMIN



# WORKSPACES - GENERAL INFO

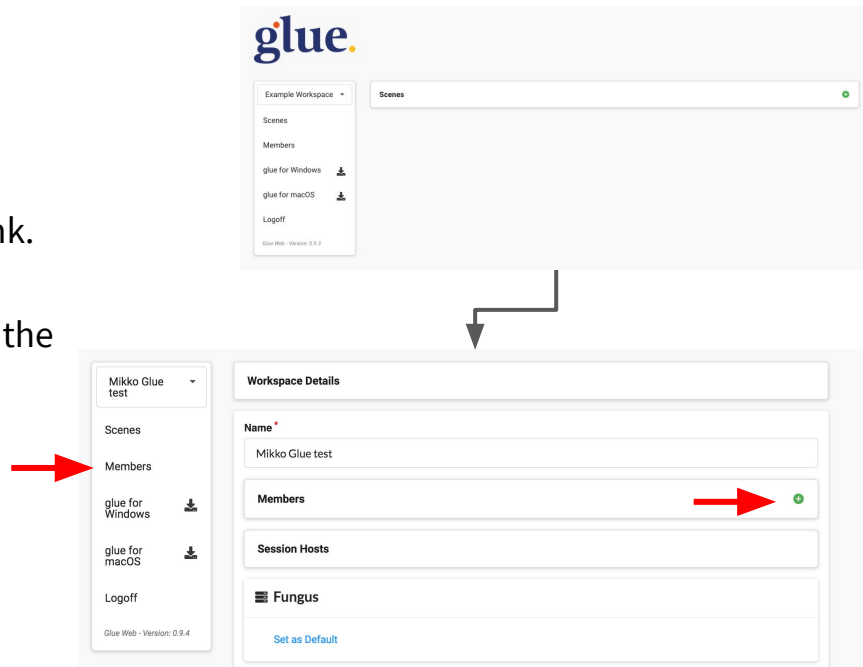
Glue users, scenes and assets are grouped under *Workspaces*. When you start using Glue, you have provided at least one e-mail address for Workspace Admin status.

The workspace administrator can add and remove scenes and members within their workspace.

All members of the workspace have access to all the scenes in their workspace. Users can belong to multiple workspaces, even using the same e-mail address.

# ADDING NEW MEMBERS TO A WORKSPACE


- Use web browser to access the Glue app site:  
<https://app.glue.work/>
- Log in using the username and password
- In the navigation panel, select on the Members link.
- Click on the plus symbol in the Members panel at the bottom of the page.



# ADDING NEW MEMBERS TO A WORKSPACE

- Add the member e-mail address and user type. Workspace Admins can add and remove members and scenes, regular users have read-only access.

**NOTE:** Members need to use the exact email address specified here to create their glue account in order to access the workspace.



Add new member to workspace

**Member email**

Enter email for new workspace member

Select type of member to add:

☒ Regular user (read-only access to workspace data)

☐ Workspace admin (can add or remove workspace members)

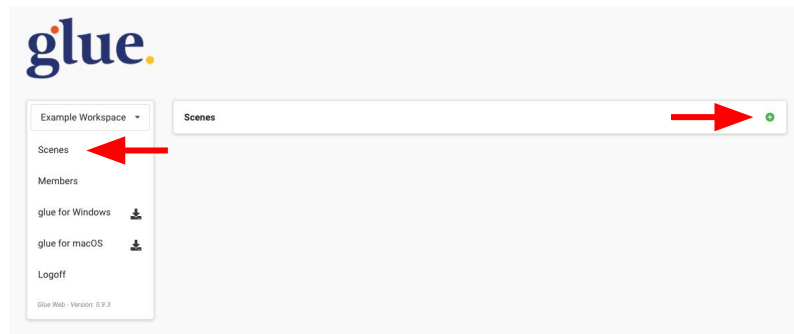
Cancel Add Member

# ADDING EXISTING SCENES TO A WORKSPACE

Collaboration in Glue happens within 3D spaces called *scenes*. Each scene requires a 3D model representing the environment. We provide a built-in set of environments and we can also customize environments private to your workspace. You can instantiate any number of scenes within your workspace.

## Adding a scene to the workspace

- In the left navigation panel, select **Scenes**
- Select the **plus** symbol in the Scenes panel at the top of the page.

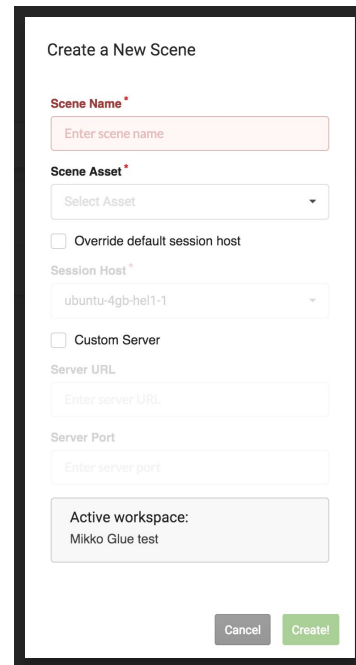


# ADDING EXISTING SCENES TO A WORKSPACE

- Enter the **Scene Name**. This is the name visible in the scene selection.
- From the **Scene Asset** drop-down list, select the environment.
- **Only** check the override button if you have a custom server hosting configuration set up by the Glue system administrators.
- Click the **Create** button.

## For Example

- Scene Name: My sky lounge
- Scene Asset: Lounge



The screenshot shows a web form titled "Create a New Scene". It contains the following fields and options:

- Scene Name \***: A text input field with the placeholder "Enter scene name".
- Scene Asset \***: A dropdown menu with the placeholder "Select Asset".
- ☐ **Override default session host**: A checkbox option.
- Session Host \***: A dropdown menu with the placeholder "ubuntu-4gb-hel1-1".
- ☐ **Custom Server**: A checkbox option.
- Server URL**: A text input field with the placeholder "Enter server URL".
- Server Port**: A text input field with the placeholder "Enter server port".
- Active workspace:** A section with the text "Mikko Glue test".
- Buttons**: "Cancel" and "Create!" buttons at the bottom right.

# SCENE DETAILS

- If you need to modify or remove the scene, go to **Scenes** and click **Edit** for the appropriate scene.
- You can change the scene name by editing the name field and pressing **Save** at the bottom of the page.
- You can **reset** the scene, removing all drawings, notes or imported 3D models, clearing the scene back to the base environment 3D model.
- Selecting **Delete** will remove the scene along with all user-created content within it. It will **not** remove the environment 3D model from the service, just this one scene instance.

**NOTE:** Some visible fields are for troubleshooting and debugging purposes and are therefore read-only.

The image shows a two-part screenshot of the Glue Web interface. On the left, a sidebar menu for 'Mikko Glue test' includes 'Scenes', 'Members', 'glue for Windows', 'glue for macOS', and 'Logoff'. The 'Scenes' section is active, displaying a list with a 'lounge' scene and an 'Edit' button. An arrow points from this 'Edit' button to the right-hand screenshot. The right-hand screenshot is the 'Scene Info' page for the 'lounge' scene. It contains several input fields: 'Scene Name' (lounge), 'Scene Asset Name' (Lounge), 'Orchestrator Name' (ubuntu-4gb-hel1-1), 'Scene IP' (95.216.201.61), 'Asset Name' (lounge), 'Session Server Port' (7842), 'Scene Asset URL' (https://limu.fake.fr/bundles/glue/lounge/c), 'Session services version' (Pending version data...), and 'Server Key' (8734ff01-56ff-4a48-b2ff-6d608d18c218). At the bottom of this page are three buttons: 'save' (green), 'reset scene' (blue), and 'delete' (red).

# QUICK SETUP

glue.



# QUICK SETUP / VR WITH WINDOWS PC

## Hardware and OS

1. Make sure that PC is on and user logged in to Windows or MacOS operating system
2. Make sure that VR headset and controllers are switched on

## Software

1. Start SteamVR application
2. Start Glue application
3. Log in Glue (if the user is already logged in this is skipped)
4. Select Scene to enter
5. Select VR mode from Glue menu

## Begin Use

1. Wear a VR headset and start using the software

# TROUBLESHOOTING



# TROUBLESHOOTING - CAN'T HEAR AUDIO

**Start SteamVR before starting the Glue application**

**Check SteamVR audio settings**

→ Audio and microphone are set to “Do not change device”

**Check Windows sound settings**

→ Playback > HTC Vive set as default

→ Recording > HTC Vive set as default microphone

# TROUBLESHOOTING - SCENE MOVES OR FLICKERS

## **If the surrounding scene disappears, moves or is tilted when using the VR mode**

- Make sure that there are not big reflective surfaces around the VR play area (mirrors, windows, large shiny metal surfaces, etc.)
- Make sure that base stations are not moving and have not moved since play area setup
- Redo VR play area setup according your device instructions
- Make sure the user is staying inside the play area and in view of the base stations

# TROUBLESHOOTING - GENERAL

## General issues

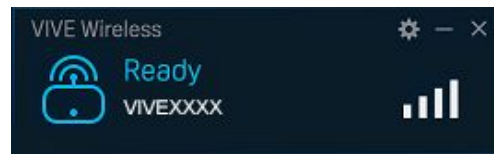
- Switch off computer and all VR devices
- Restart computer and all VR devices
- Re-install / update SteamVR

# VR DEVICE / HTC VIVE WIRELESS

If you use HTC Vive wireless device you need to use VIVE Wireless software to allow the headset to work and connect to SteamVR

→ **Start Vive Wireless** software from the desktop icon before or after starting SteamVR.

**More info:** <https://www.vive.com/eu/setup/wireless/>



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[www.glue.work](http://www.glue.work)