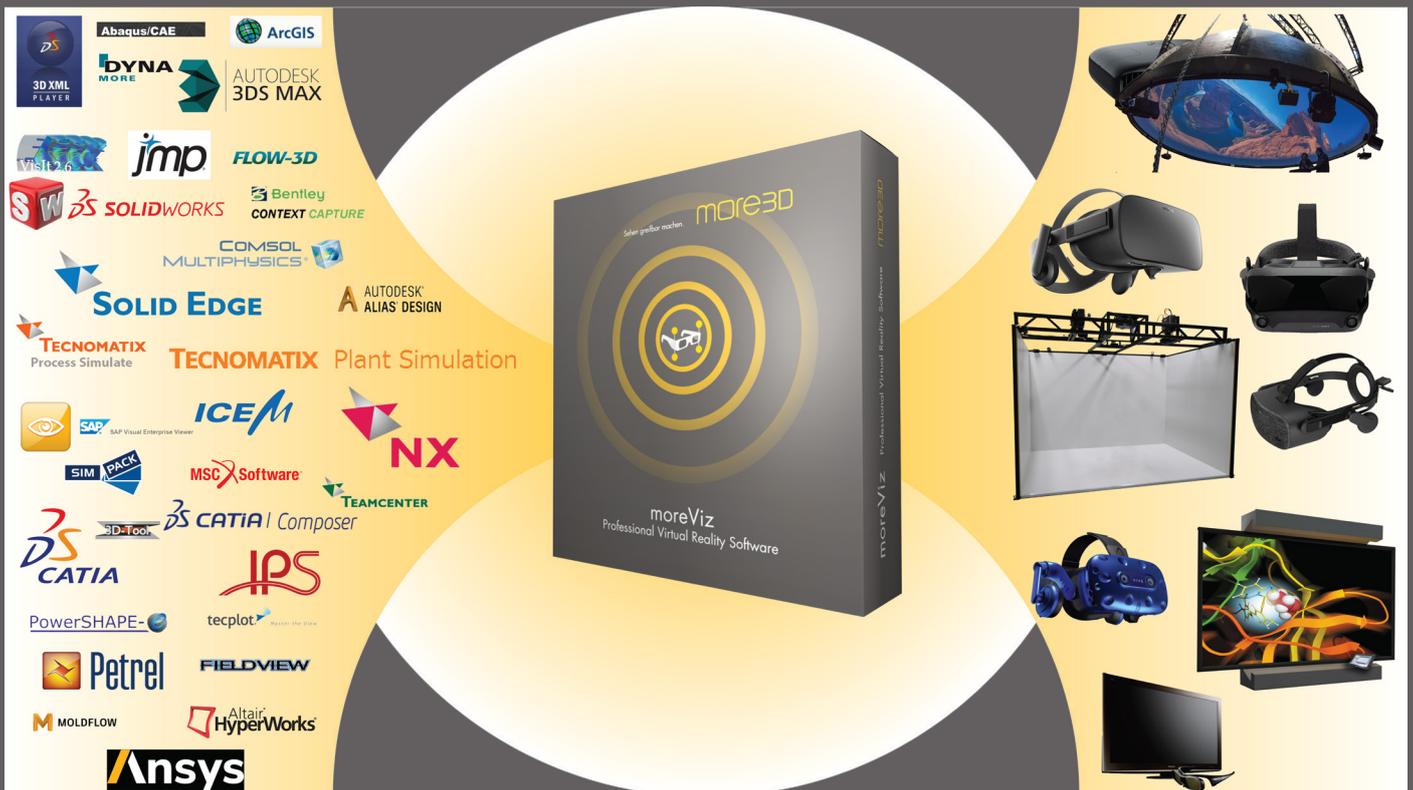


more3D

Create tangible visions.

moreViz Guide



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moreViz Guide table of content



Table of content / Preface	2	moreViz HostApp Configuration:	
moreViz Hardware / Software requirements	3	NX	38
moreViz Quadro Configuration / Multi GPU	4	Solid Edge	39
moreViz Software Workflow	5	Plant Simulation	40
		Process Simulate	41
moreViz Software Component Overview	6	JT2Go	42
		Teamcenter Visualization	43
moreViz for HMD		SAP Visual Enterprise	44
moreViz HMD Hands On Guide	7	Catia / Delmia	45
moreViz HMD Vive (Pro) and Index	9	Catia Composer (Player)	46
moreViz HMD Windows Mixed Reality / Oculus	10	Solid Works	47
moreViz HMD SteamVR fine tuning	11	PTC Creo	48
Operate Host App from within HMD VR	12	Alias Design	49
		ICEM Surf	50
moreViz for CAVE / Powerwall / DOME		IPS Cable Simulation	51
moreViz Powerwall / CAVE / DOME Hands On	13	Ansys Mechanical	52
moreViz Powerwall: Installation & First Start	13	Ansys Enight	53
moreViz Powerwall: Client Instances	14	Ansys Workbench	54
moreViz Powerwall: Tracking	15	LS PrePost	55
moreViz Powerwall: Daily Operation	18	Coin3D/CVExperimentsLab	56
		TecPlot	57
moreViz for 2D Desktop / Laptop		SimPack	58
moreViz mono Desktop Client configuration	19	Moldflow Communicator	59
		Fledermaus	60
moreViz Details		Qimera	61
moreViz Launcher Detail Overview	20	Petrel	62
moreViz Client Instance Details	21	Voxler	63
moreViz Connection and Custom Launcher	24	Acute3D Viewer	64
moreViz Misc Configuration	25	Meshlab	65
moreViz Hotkey Settings	26	Metashape	66
more3D Application Enabler	27	ArcGis Desktop/ ArcScene	67
moreViz in-VR menu	28	Sketchup	68
moreViz VR Control Tool	29	visTABLE	69
moreViz Capture Node	30	3DS Max	70
moreViz Composition Guide	31	3D Tool	71
Composition Alignment Guide	33	RoboDK	72
		BimCollab Zoom	73
		Autodesk Navisworks	74
		FAQ / Troubleshooting	75

moreViz Software: Hardware / Software Requirements



The moreViz software has the same hardware requirements like the original application that's to be bridged into VR, plus a bit of overhead for Stereo3D, higher resolutions and tracking. moreViz works by copying the graphic commands of the actual application (e.g. Plant Simulation, Catia, NX,...) and replaying the captured data in the moreViz client. So, the actual moreViz software's requirements are best described by: The same requirements as the host applications have.

To output 3D Stereo to a projector, it is recommended to have a Nvidia Quadro card. Quadro cards do feature advanced features for sychronisation and Stereo 3D that are not directly essential, yet they do help in setup and ease of operation.

Our recommendations are as follows (02/21):

For HMD (Vive / Rift):

Quad Core CPU with 3.5Ghz or better
16GB Ram in Dual Channel or better
M.2 SSD or better
Geforce RTX 2070 or Quadro RTX4000

For Powerwall:

Hexa Core CPU with 3.5Ghz or better
16GB Ram in Quad Channel or better
M.2 SSD or better
Geforce RTX 3070 or Quadro RTX5000

For CAVE / DOME:

12-Core 3,5 Ghz or better
64GB Ram or better
M.2 SSD or better
Geforce RTX 3080 or Quadro RTX6000

moreViz has the following software requirements:

- * Windows 10
- * Up to date Graphics driver
- * .NET Framework 4.6 or newer installed
- * .NET Core 3.1 or newer installed
- * Admin access rights for configuration
- * For HMD or VRPN for SteamVR: SteamVR
- * For Oculus: Oculus Home and SteamVR
- * For Windows Mixed Reality HMDs: Windows Mixed Reality & Windows Mixed Reality for SteamVR

With over 15 years of experience, more3D provides superior stereoscopic and virtual reality software and solutions to clients in industry, trade and media. We create solutions for 3D VR CAVE, 3D projection, 3D monitors, 3D TVs, 3D HMDs. Inspire your customers and colleagues with 3D VR visualisation and its sustainable benefits.

Here's the official requirements by HTC for HTC Vive and HTC Vive Pro:

Component	Recommended system requirements	Minimum system requirements
Processor	Intel® Core™ i5-4590/AMD FX™ 8350 equivalent or better	Intel Core i5-4590/AMD FX 8350 equivalent or better
GPU	NVIDIA® GeForce® GTX 1060, AMD Radeon™ RX 480 equivalent or better	NVIDIA GeForce GTX 970, AMD Radeon R9 290 equivalent or better
Memory	4 GB RAM or more	4 GB RAM or more
Video output	DisplayPort 1.2 or newer	DisplayPort 1.2 or newer
USB port	1x USB 3.0 or newer	1x USB 3.0 or newer
Operating system	Windows® 8.1 or later, Windows 10	Windows 8.1 or later, Windows 10

Here's the official requirements by Oculus for Oculus Rift:

Component	Recommended Specs	Minimum Specs
Graphics Card	NVIDIA GTX 1060 / AMD Radeon RX 480 or greater	NVIDIA GTX 1050 Ti / AMD Radeon RX 470 or greater
Alternative Graphics Card	NVIDIA GTX 970 / AMD Radeon R9 290 or greater	NVIDIA GTX 960 4GB / AMD Radeon R9 290 or greater
CPU	Intel i5-4590 / AMD Ryzen 5 1500X or greater	Intel i3-6100 / AMD Ryzen 3 1200, FX4350 or greater
Memory	8GB+ RAM	8GB+ RAM
Video Output	Compatible HDMI 1.3 video output	Compatible HDMI 1.3 video output
USB Ports	3x USB 3.0 ports, plus 1x USB 2.0 port	1x USB 3.0 port, plus 2x USB 2.0 ports
OS	Windows 10 or newer	Windows 10 or newer

Please do not hesitate to contact us for technical assistance: support@more3d.com

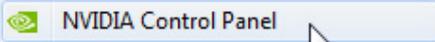
Nvidia Quadro Configuration Guide / Multi GPU Guide



Nvidia Quadro Configuration Guide:

This page shows the configuration for Nvidia Quadro Cards. Misconfiguration might cause tracking failure and distorted/frozen video.

1. Launch the Nvidia Control Panel. To do so, right click the windows desktop, select "Nvidia Control Panel"

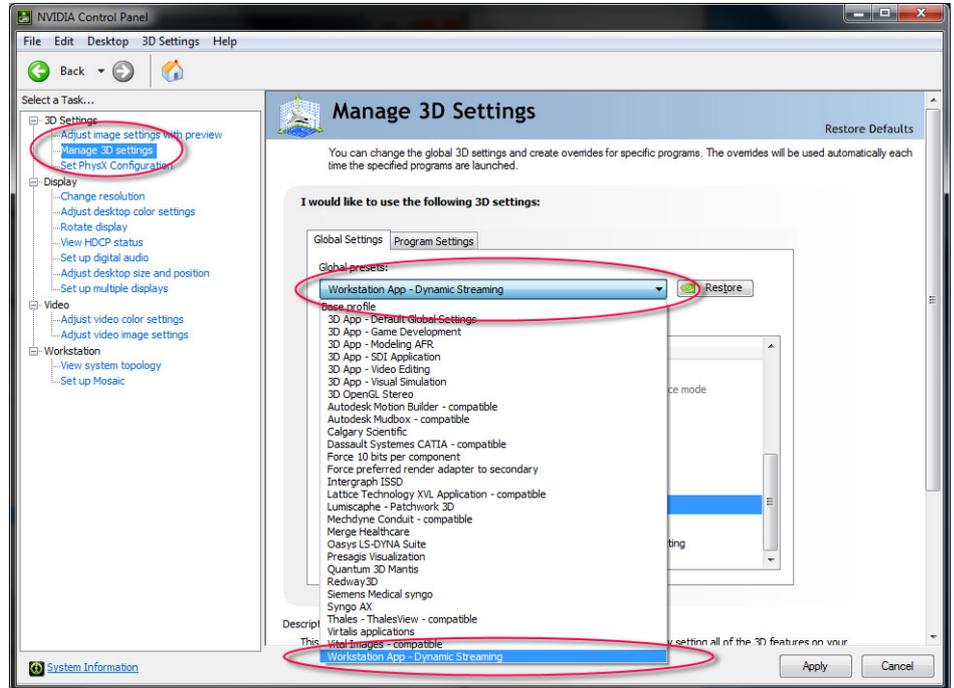


2. In the left hand list, select "Manage 3D Settings"

3. Set the "Global Preset" dropdown to "Workstation App - Dynamic Streaming"

4. Click "Apply" and restart your computer.

5. For Quad Buffer output modes in CAVE or Powerwall, make sure to set "Stereo Enable" to "Enable" and "Stereo Output Mode" matching to your 3D Output Device.



Dual GPU Laptops / Computer Guide:

For Low-Power GPU equipped systems (usually Laptops) we recommend to disable the low power GPU.

Transfer of captured OpenGL data between a e.g. low power Intel GPU and a high power Nvidia GPU can cause the moreViz client to show a black screen.

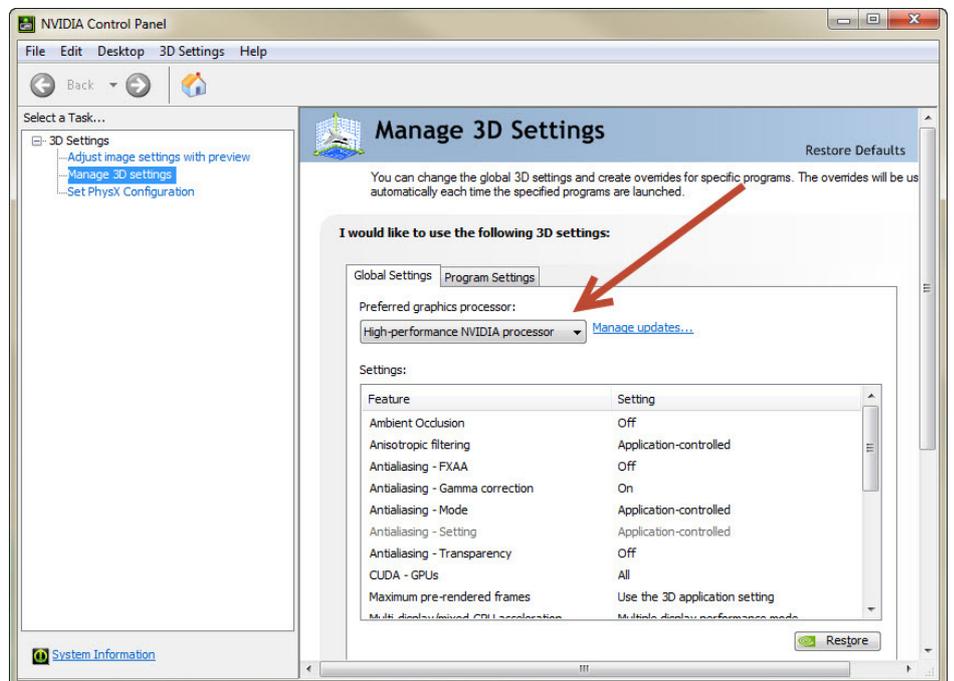
1. Launch the Nvidia Control Panel. To do so, right click the windows desktop, select "Nvidia Control Panel"

2. In the left hand list, select "Manage 3D Settings"

3. Set the point "2. Select the preferred graphics processor to "High-Performance NVIDIA Processor"

Another method is to disable the low Power GPU on BIOS / UEFI level. Yet this option is not always available. For details about your computer, please consult your hardware partner or the computer manual.

The last recommendable method is to disable the low power graphics card in the windows device manager.



moreViz Guide: Software Workflow

The components of the moreViz software are best understood when described in a hands-on workflow:

moreViz bridges your app into VR. To do so, it is necessary to inject a function file into the target application's working directory. The more3D Application Enabler injects a function file into the target application's working directory. (See more3D Application Enabler)

Once the function file is injected into the target application's working directory, the application will load this function file when started. The function file then copies any OpenGL based 3D data from the application and sends it to the moreViz client in realtime.

The configuration of how that data is sent to the moreViz client is done in the moreViz Launcher.

The moreViz Client then renders the OpenGL data. For Head Mounted Displays (HMDs) like HTC Vive, Valve Index and Oculus Rift, this is already the complete workflow, as SteamVR takes care of the tracking. (See moreViz Launcher -> Settings -> Client)

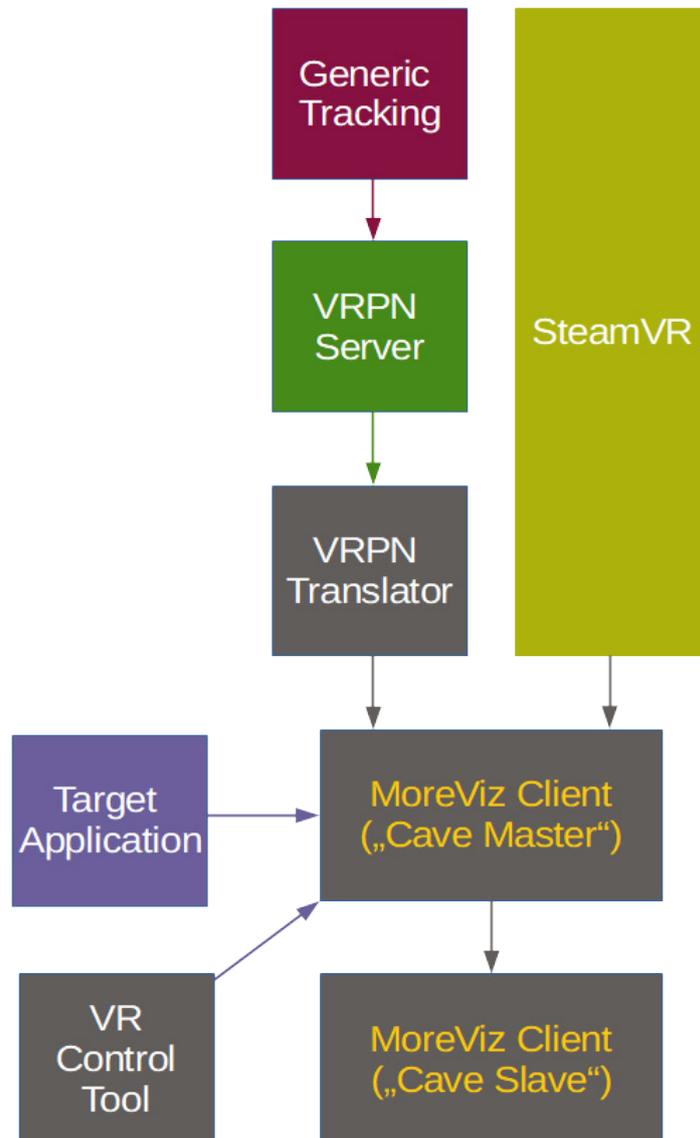
For Powerwalls, CAVEs and DOMEs (non-SteamVR devices) tracking needs to be added. This is done by running the tracking system's generic software (e.g. DTrack, Motive, etc) or a by running a dedicated VRPN server.

The VRPN server converts the generic tracking data into a standardized VRPN data format which then can be read by the VRPN translator. (See Tracking)

The VRPN translator calibrates the CAVE's origin, configures input devices and passes tracking data accordingly to the moreViz Clients. (See Tracking)

The VR Control Tool allows to manipulate the in-VR menu that usually accessed from within VR through the moreViz client also from a desktop application.

The moreViz VR Capture node allows to record OpenGL data and VRPN tracking data.



The moreViz Software component workflow overview

moreViz Guide: Launcher and Software Component Overview

moreViz Launcher:

Holds the licensing and a convenient launch pad for all required moreViz software components. Also configures e.g. the moreViz client's output modes (HMD or Powerwall/ Cave). Requires the more3D service to be executed on the local PC and all cluster pcs.

moreViz Client:

Presents the 3D graphics and gives the VR immersion experience. Must be started before the target OpenGL application is started.

VRPN Server:

Converts the tracking target position, rotation, etc. of many tracking system vendors into standardized VRPN data. Not required for most HMD setups.

VRPN Translator:

Configures tracking and translates VRPN data into moreViz tracking data. Not required for most HMD setups. For a good immersion effect in Powerwall/CAVE setups a perfect calibration is key.

VR Control Tool:

Allows to interact with the moreViz client's VR functions from the computer's desktop.

VR Capture Node:

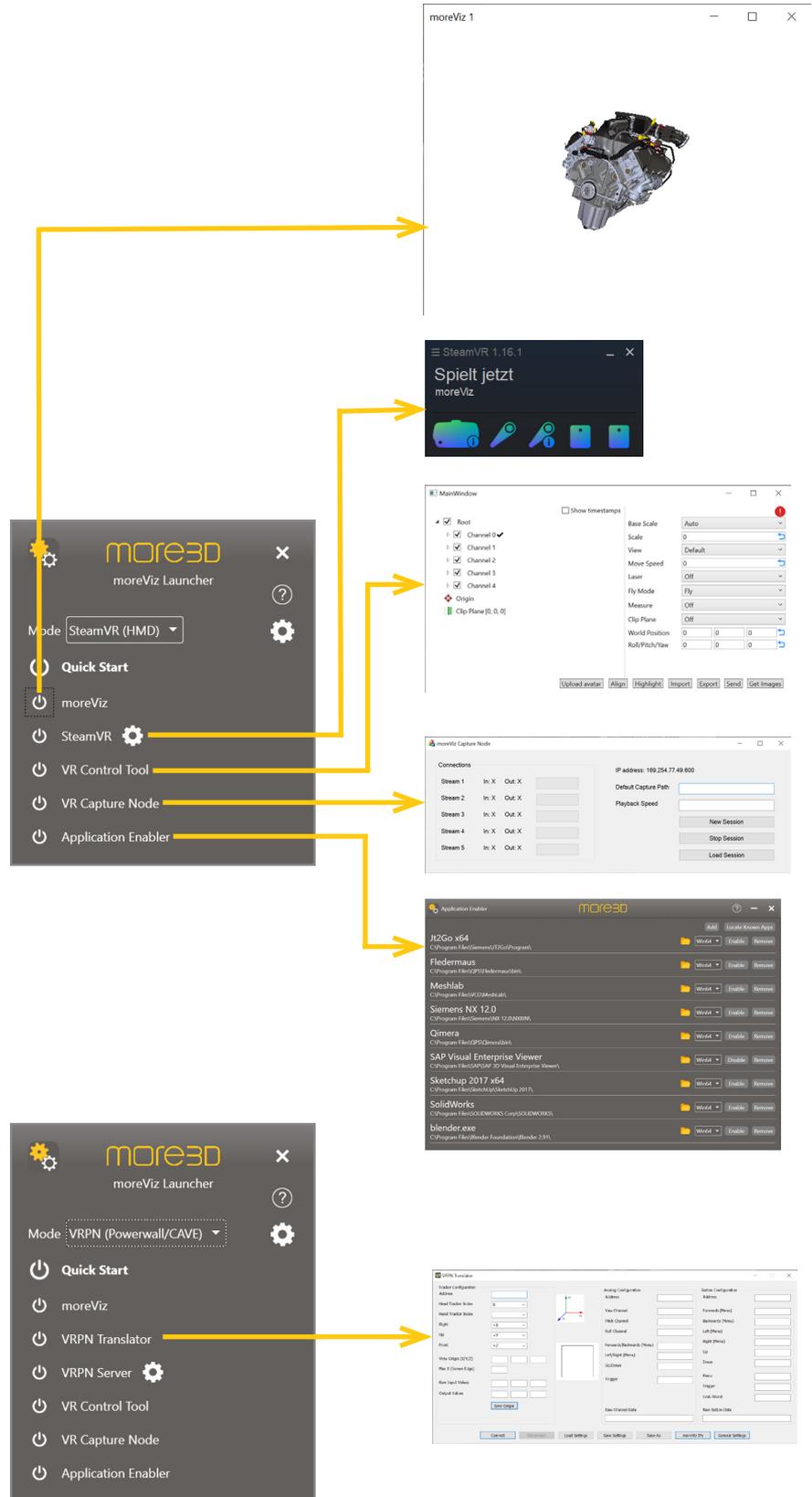
Allows to record and playback OpenGL and VRPN data. SteamVR data supported soon.

more3D Application Enabler:

Injects the moreViz function files into the target app's directory. Configuration for at least one target app required for moreViz to function.

more3D Service:

Receives commands from the moreViz Launcher. Especially useful for cluster and network configurations. Operates in the background without user interaction. Must be installed on all computers of the cluster, also on the host for e.g. single-pc HMD setups.



moreViz Guide: HMD Hands on and First Start

The following pages will describe shortly and briefly what to do to achieve quick results with the moreViz software. For in depth details about the functions, please refer to the detailed sections.

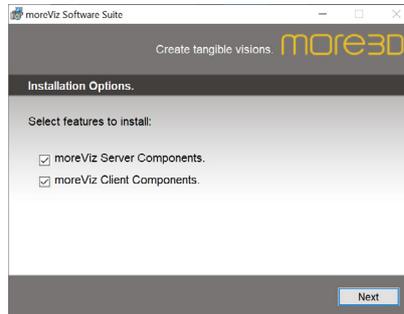
Download and install the moreViz software from the link provided to you by the more3D representative in your area. For the installation, simply follow the instructions on screen. For cluster setups, it is required to install the software on all network computers. After installing the software to all slave computers of the cluster all configuration is done from the master computer.

Starting the moreViz Launcher triggers a three step wizard (except for updating existing installations). The wizard first asks for the presence of an Nvidia Quadro card and DualGPUs on the system. If your computer is equipped with Nvidia Quadro or multi GPUs, click yes and follow the instructions from the PDF.

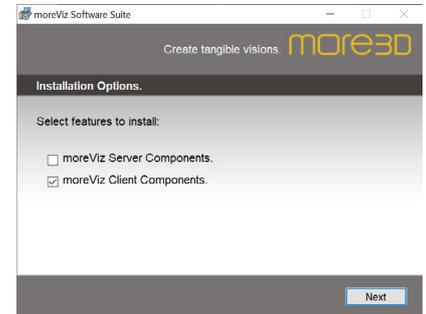
The second step will present the choice between VRPN Mode for Powerwall, Cave and Dome systems and alternatively the SteamVR (HMD) mode for VR glasses. Choose SteamVR (HMD) mode.

The final step loads the more3D Application Enabler. The enabler requires admin rights to write into protected folders, such as "program files (x86)". Click the "Locate known apps" button to add certified applications from their standard installation directories to the list. If the target host-apps are installed into non standard directories, click "Add" to add them manually to the list. Click "Enable" in each app's row to enable the moreViz VR bridging for that application. Refer to the detailed application configuration guide for more details on your specific app. Close the more3D Application enabler.

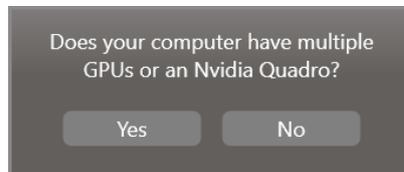
Next the main GUI of the moreViz Launcher is shown.



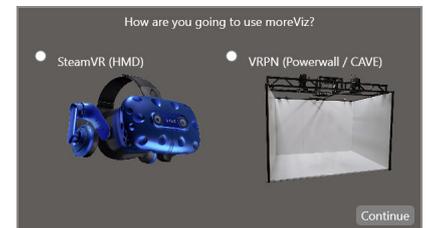
Master Computer Setup



Slave Cluster Computer Setup



Wizard Screen One: GPU Config



Wizard Screen Two: Mode Selection



Wizard Screen Three: Application Enabler



Launcher Main Screen

moreViz Guide: HMD Hands on and First Start

In the main GUI of the moreViz Launcher, click on moreViz to start the moreViz visualization client, this will show the moreViz client in its default waiting for data state, a grey window.

Then launch SteamVR. If the SteamVR software installation has been made in a non standard directory, please click the gears symbol next to the SteamVR launch item and adapt the installation path.

Next, start any app previously enabled in the more3D application enabler. Load a 3D model of choice. The data from the host app will automatically be bridged in realtime into the moreViz client.

For an in depth look at the VR functions and the controls layout scheme of your HMD's VR controller, please refer to the individual guide of your HMD.

In case there are any issues with the visualization in the moreViz client, make sure to have followed these guides:

- * Enable perspective mode, as per individual app guide: For stretched and "glued to the center of HMD" visualization
- * Dual GPU & Quadro guide: For frozen or black image in client

The moreViz Launcher's settings allow for the following advanced usage scenarios:

Getting a more sharp image in the HMD, see "Client Instaces -> Pixel Density"

Bridging to more than one local client, e.g. to multiple LAN-connected moreViz clients, see "Client Instances"

Faster Bridging on the localhost, using a shared memory interface for connection, see "Connection". Especially useful for HIL/SIL scenarios and bridging animation/simulation to VR.

Bridging up to five apps simultaneously into VR, see "Misc Settings -> Composition"

Adding daily used programs to the launcher's main interface, see "Custom Launchers"



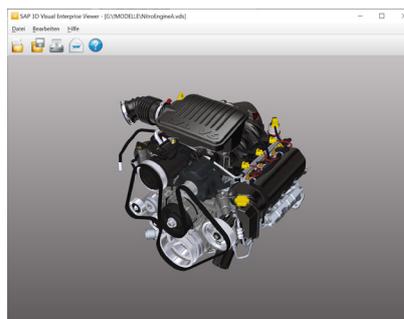
Launcher Main Screen



The moreViz Client waiting for OpenGL data



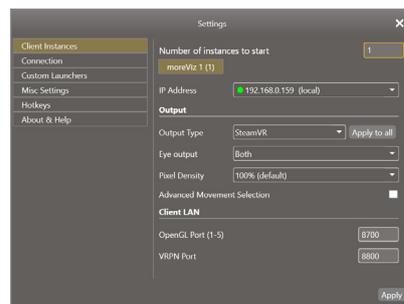
SteamVR Status Window



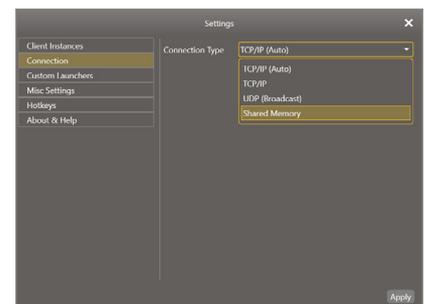
Any supported Host App



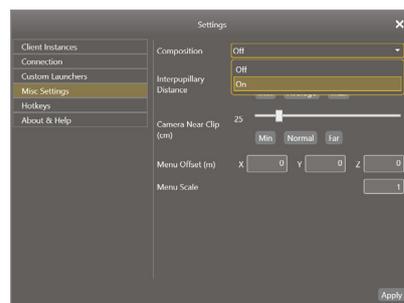
Instant VR Bridge to the moreViz Client



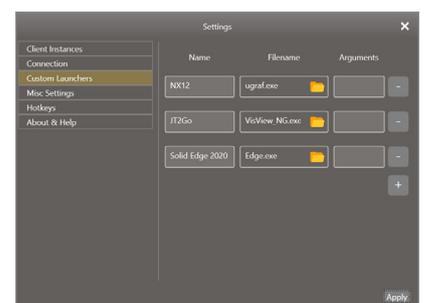
Pixel Density and Client Instance Target IP



Connection Type Settings



Misc Settings with Composition Mode



Custom Launchers added for the main GUI

moreViz Guide: HMD Controls Vive (Pro) and Index

To use an HTC Vive (Pro), Cosmos or Valve Index HMD with moreViz, the SteamVR software must be installed.

The navigation within the VR data with moreViz is intuitive: simply point with the VR controller to the desired direction and pull the trigger to start moving forward.

It can be helpful to activate the Laser option from within the VR menu: A red line will appear, indicating the controller's pointing direction very clearly.

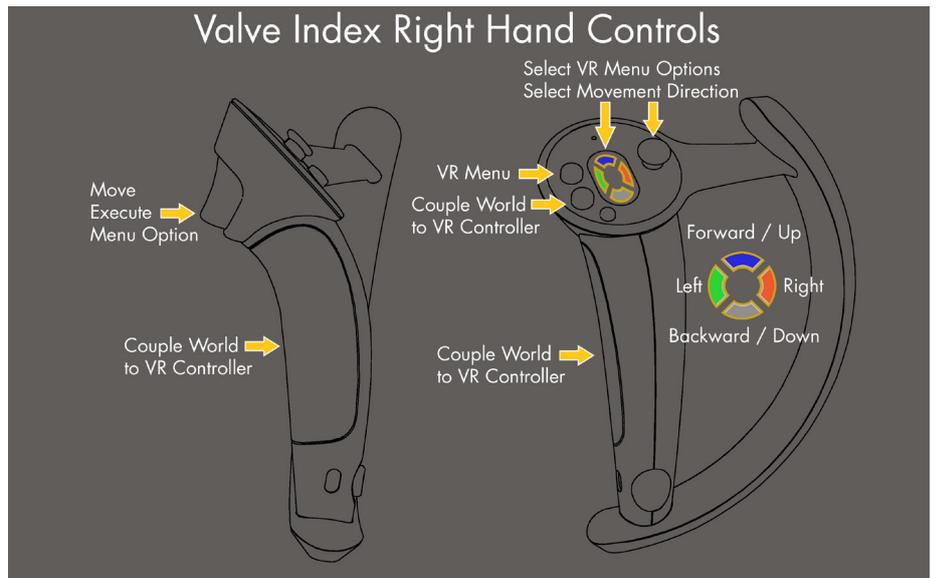
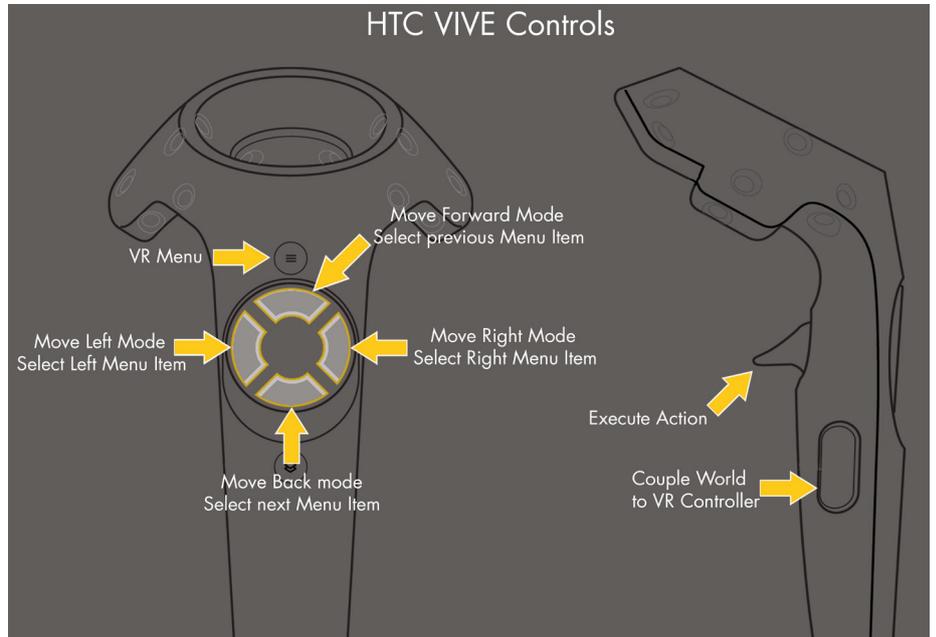
By default selecting parallel movement is disabled, to unlock it make the according advanced movement setting in the client instance settings of the moreViz launcher. This allows perpendicular movement to the controller's pointing direction, selectable with the controller's touchpad.

Coupling the world to the VR controller with the index'es grip or the vive controller's side button allow to freely rotate the VR scene along the Z-axis, as well as panning in the scene along all axis.

To open the in-VR menu simply push the menu button as indicated in the right hand side layout sketches. The in-VR menu floats right above the controller's position in VR when opened. Simply look at your VR controller to see the menu. The in-VR menu holds a variety of options for in-VR operation. To close the menu, simply click the menu button on the VR controller again.

Operating the VR menu is done with the touchpads, to select the next (below) menu item, touch the touchpad at six o'clock. The prior (above option) is selected at the 12 o'clock position. Choosing the left / right option is done at 9 and 3 o'clock. The activate a menu item simply pull the trigger.

moreViz only requires one VR controller. Both VR controllers are rendered inside the virtual reality on their real-world positions. You can identify the active controller very easily: the one showing the yellow arrow on the touchpad is enabled for moreViz.



moreViz Guide: Windows Mixed Reality & Oculus

To run a Windows Mixed Reality HMD with moreViz the following software components must be installed:

- * Windows Mixed Reality
- * SteamVR
- * Windows Mixed Reality for SteamVR

To run a Oculus HMD with moreViz the following software components must be installed:

- * Oculus Home
- * SteamVR

The navigation within the VR data with moreViz is intuitive: simply point with the VR controller to the desired direction and pull the trigger to start moving forward.

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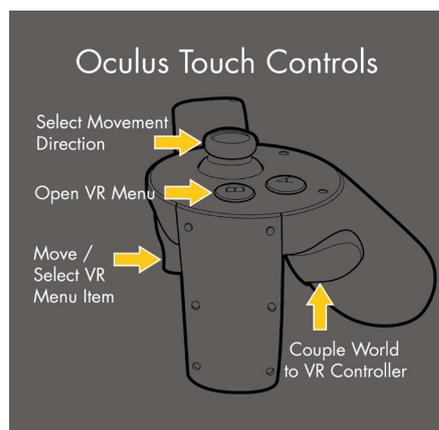
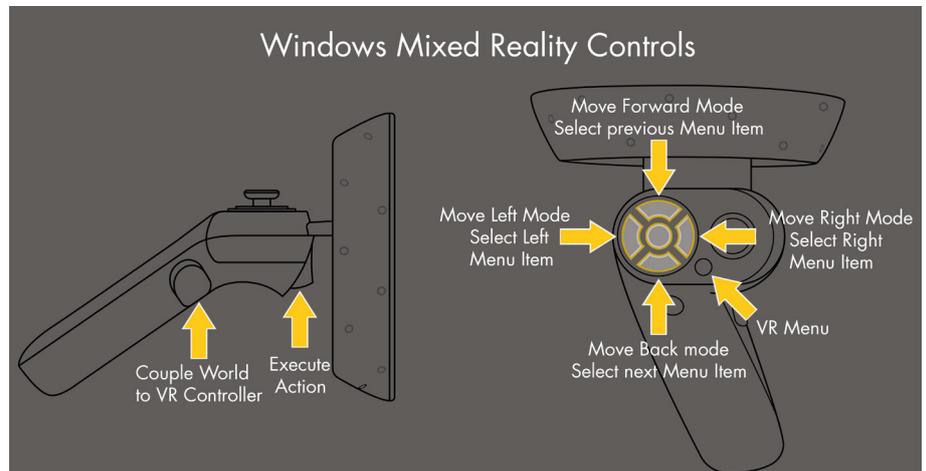
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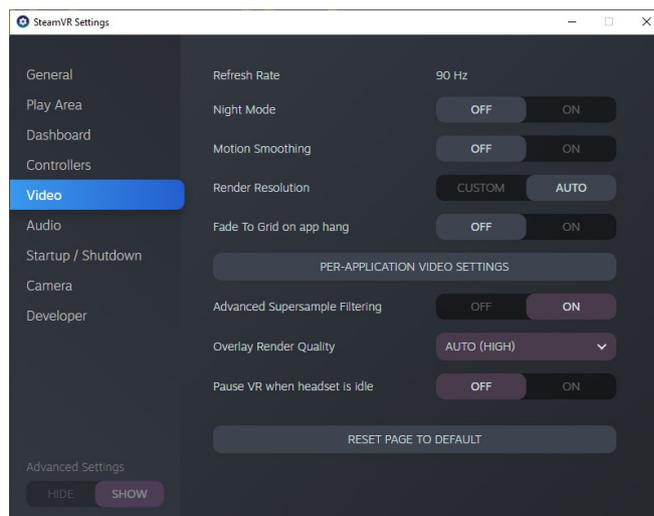
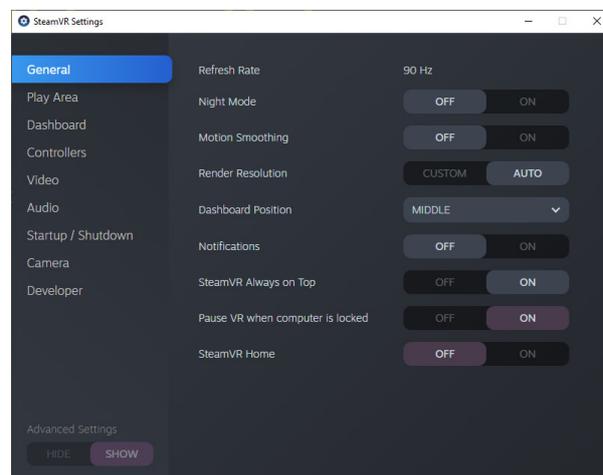
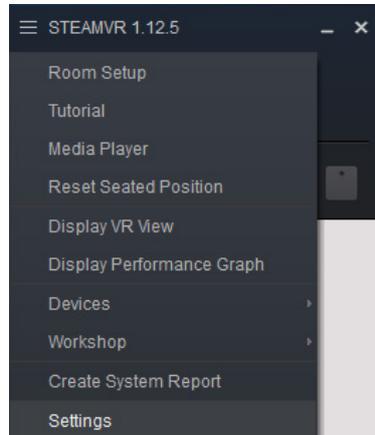
moreViz Guide: SteamVR fine tuning

To optimize the general system performance we recommend to perform the following tasks in the SteamVR configuration:

1. Click the menu button and select settings
2. In the General section, disable "Use SteamVR Home". SteamVR Home is quite nice, but unnecessarily uses your system resources.
3. In the General section, disable the "Motion Smoothing" function. Motion smoothing works great for games, but not for CAD and technical designs. When activated and becoming active in VR straight lines might appear bended and twisted.
4. In the Video section, disable the "Fade to Grid on app hang" function.
5. The camera section: Don't enable the camera, unless you really want to use it. When activated, it will consume system resources and USB bandwidth, potentially loosing FPS / increasing frame times.

Remark: Framerate is desired to be above 50, better 90 frames per second. To increase the framerate, try the following:

- * Switch to simple shading mode in your CAD
- * Reduce the Pixel Density
- * Create Reference sets for your 3D models
- * Upgrade your hardware



moreViz HMD: Operate Host App from within HMD VR

To start animations and or simulations or to change e.g. to wireframe rendering mode it is necessary to perform a few clicks in the host application.

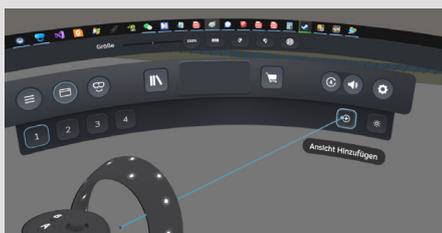
With SteamVR's features "Desktops", introduced in SteamVR v 1.19.6, this is easy to do.

The feature is easily activated from within the VR environment, with the VR controller.

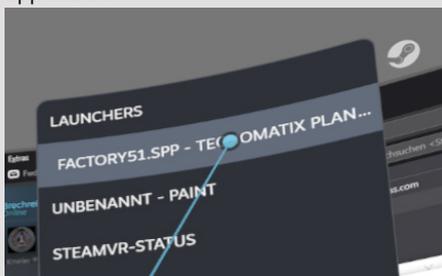
1. Press the SteamVR dashboard button on your VR controller. Click with your VR controller the "Desktops" icon on the left side of the status bar.



2. Click on "Add view" on the right side of the dashboard's bar.



3. Select the host app from the list of available applications.

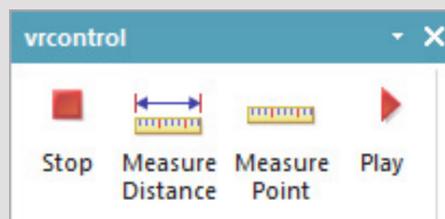


4. Now the selected app is ready for operation with the VR controller. Simply point at the application's window to move the mouse cursor. Pull the main trigger to execute a left click. Additionally useful options are: Scaling from 75% to 150% to increase / decrease the visible size of the app's window. The application's window can be attached to the left or the right VR controller. Push the dashboard button on your VR controller again to return back to moreViz.

5. To bring a window to a persistent position inside of the VR environment, click the world button in the SteamVR Desktops bar. This allows to place the selected window anywhere and keep it visible even when the dashboard is closed.



For many apps it is useful to create a undocked control window or a model cockpit.



moreViz Guide: Powerwall / CAVE / DOME Hands on and First Start

The following pages will describe shortly and briefly what to do to achieve quick results with the moreViz software. For in depth details about the functions, please refer to the detailed sections.

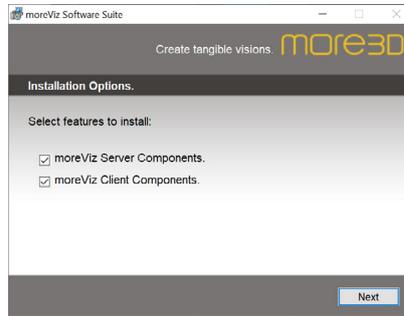
Download and install the moreViz software from the link provided to you by the more3D representative in your area. For the installation, simply follow the instructions on screen. For cluster setups, it is required to install the software on all network computers. After installing the software to all slave computers of the cluster all configuration is done from the master computer.

Starting the moreViz Launcher triggers a three step wizard (except for updating existing installations). The wizard first asks for the presence of an Nvidia Quadro card and DualGPUs on the system. If your computer is equipped with Nvidia Quadro or multi GPUs, click yes and follow the instructions from the PDF. Follow the configuration also for all computers on the visualization cluster.

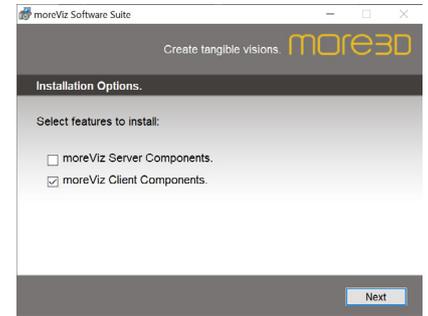
The second step will present the choice between VRPN Mode for Powerwall, Cave and Dome systems and alternatively the SteamVR (HMD) mode for VR glasses. Choose VRPN (Cave / Powerwall) mode.

The final step loads the more3D Application Enabler. The enabler requires admin rights to write into protected folders, such as "program files (x86)". Click the "Locate known apps" button to add certified applications from their standard installation directories to the list. If the target host-apps are installed into non standard directories, click "Add" to add them manually to the list. Click "Enable" in each app's row to enable the moreViz VR bridging for that application. Refer to the detailed application configuration guide for more details on your specific app. Close the more3D Application enabler.

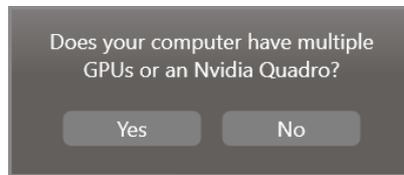
Next the main GUI of the moreViz Launcher is shown.



Master Computer Setup



Slave Cluster Computer Setup



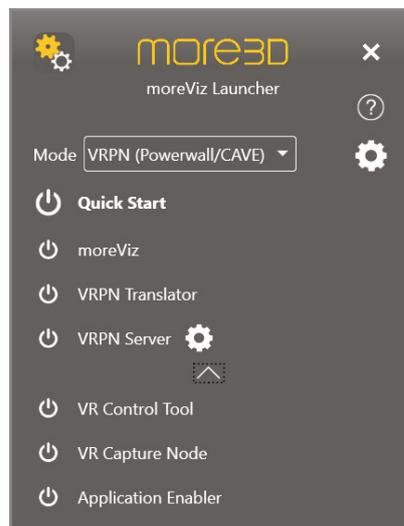
Wizard Screen One: GPU Config



Wizard Screen Two: Mode Selection



Wizard Screen Three: Application Enabler



Launcher Main Screen

moreViz Guide: Powerwall / CAVE / DOME Hands on and First Start

To configure for multiple clients, open the Launcher's settings by clicking on the gears symbol on the top right of the Launcher.

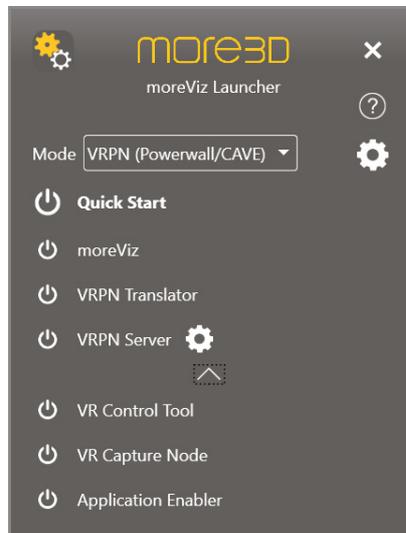
In the settings Client Instaces menu, enter how many clients the should run and press enter. The launcher creates as many client instances in the top selector as entered. Right click a client to rename the instance, left click to perform configuration per client. Usually one client per wall matches for Quad Buffer and SideBySide output types. For seperate left eye only / right eye only setups, two clients per wall are required.

Assign each client the IP address of the target computer. For a target computer to be listed in the IP Address dropdown the moreViz service must be executed. The service automatically launches with windows or after software installation.

Configure the Output Type for the client matching your 3D hardware setup. Set the Antialiasing value if required, for 1080p and lower, 2x+ is recommended. For 2160p and higher it is optional. Yet, depending on your screen size, it can be a visual improvement.

Each cluster requires exactly one Master node to be present on the cluster. The master node syncs all clients on the specified CAVE port. There is no special requirement for choosing the master node.

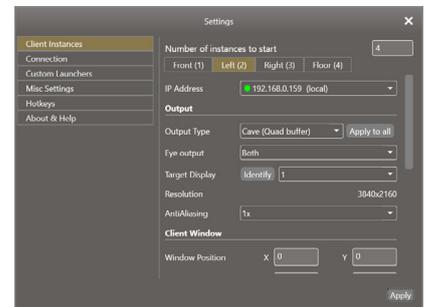
Each client requires its screen position to be configured, to generate the matching contents for e.g. a floor projection. To perform this configuration, firstly choose the target client from the client instance list, then click the "Open" button next to the screen position menu item. The screen position configuration dialouge will be shown in a new window. Rotate over X and Y axis to match the projection's physical location. The advanced setup details are found in the detailed guide.



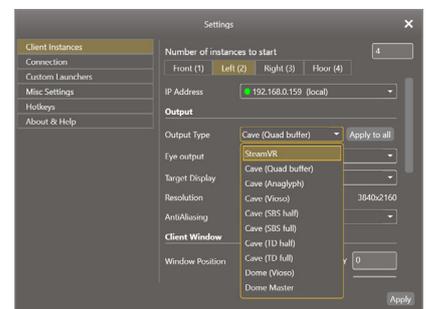
Launcher Main Screen



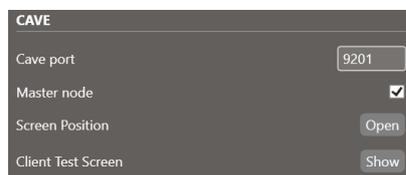
Selecting a target IP for a client instance



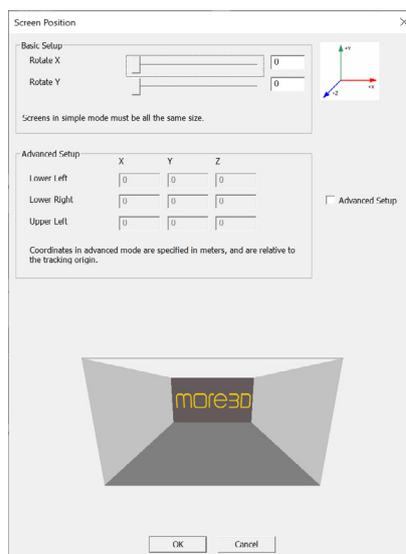
The Client Instances with four named Instances, the instance "Left (2)" receiving configuration



The Output device selection



Screen Position and Master Node Setting



Screen Position configuration screen

moreViz Guide: Powerwall / CAVE / DOME Hands on and First Start

Next the tracking is to be configured, firstly the tracking data source should be identified. If your tracking software has an built-in VRPN server (E.g. Optitrack Motive), activate it and have the data be sent to the computer running the VRPN Translator (usually the same computer as Launcher). ART DTrack users need to configure an output channel to the IP of the computer running the moreViz Launcher and VRPN Server.

To configure for the correct VRPN Server, click the gears icon right next to the VRPN Server launcher item on the launcher's main window. Select any of the preconfigured VRPN Servers or custom to add the VRPN server matching your configuration. Have both your tracking software and the VRPN software running for the following steps.

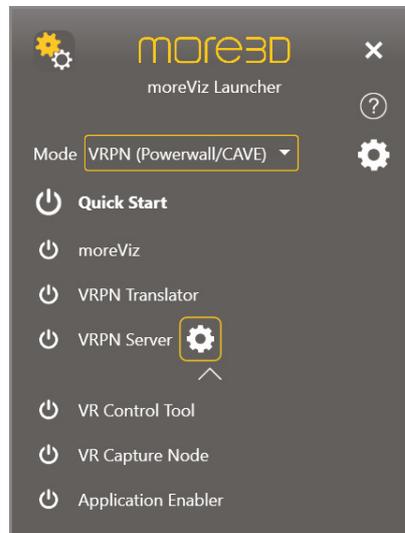
Next launch the VRPN Translator.

Enter your tracking systems' adress in the tracker address field. E.g. Dtrack@localhost for ART DTrack, Target-name@localhost for Optitrack Motive, or openvr@localhost for openVR / SteamVR. Address input in VRPN translator is case sensitive. openvr@localhost is not the same as OpenVR@localhost. Click connect. Custom VRPN Server ports are indicated by entering e.g. :1234 behind the Address. Adding multiple addresses is possible, seperated by ; , e.g. openvr1@localhost; openvr2@127.0.0.1:5400 are recognized configurations.

After entering the tracker adress click connect. Move the headtarget to the tracked area, so the tracking system recognized the target. Open the drop down menu "Head Tracker Index" in the VRPN Translator tracking section. Select an index and move the target in the tracking area. Raw Input values should appear and roll. If the raw input stays empty or does not change its values on moving the target try a different index.

Check if axis alignment is correct.

Moving forwards should move the red triangle forwards in the CAVE representation. moreViz assumes axis direction as follows: X is for left/right, Y is for up/down and Z is for forward/backwards. You can invert and reassign axis directions easily by selecting the matching drop down. If the red triangle does not appear at all but raw values roll, click "save origin".



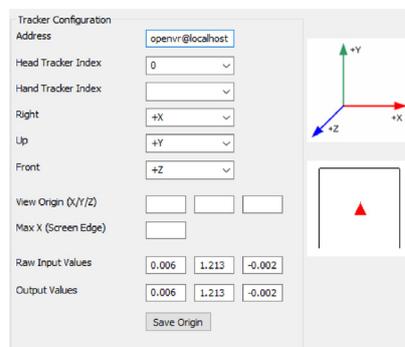
VRPN Server settings highlighted



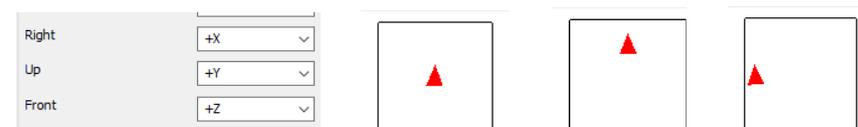
The available preconfigured VRPN Servers



Custom VRPN Servers can be added



The VRPN Translator's Tracker configuration



Checking and adapting to axis alignment manually with the CAVE representation in VRPN

moreViz Guide: Powerwall / CAVE / DOME Hands on and First Start

Next the moreViz origin is calibrated. Firstly, lets understand what the moreViz origin is. To identify it, the main factor is the front screen's image size. The middle point of the front screen, half width and half height, should be identified. Projecting a rectangularly line from the front screen's middle point, a half-screen-width-long distance is measured. This is the position of the moreViz Origin.

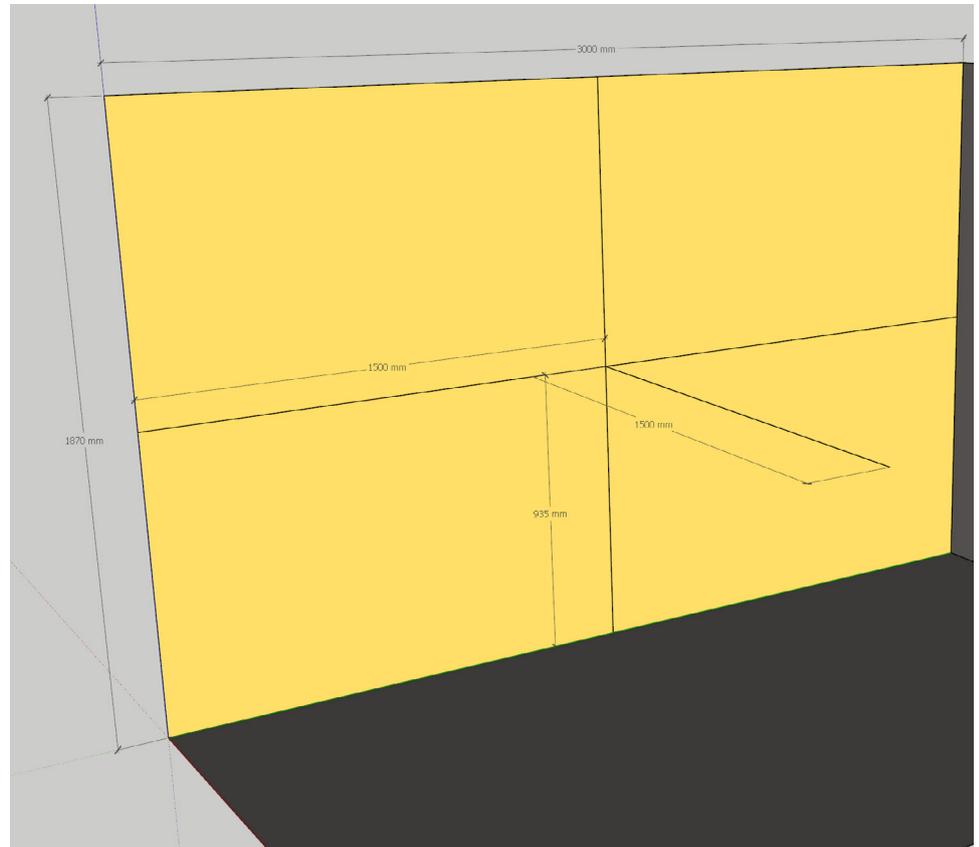
The example on the right assumes a front screen image width of 3000mm and a height of 1870mm. The resulting center point is 1500mm away from the screen, at a height of 935mm.

To calibrate this point as moreViz Origin, the tracked head target is placed to the position, then the "Save Origin" button is pressed.

For re-calibrations the Max X (see next step) value must be emptied before pressing "Save Origin".

Enter Max X. It is half the front screen's image width in meters. This scales the relative coordinates of the calibration to real-world coordinates.-

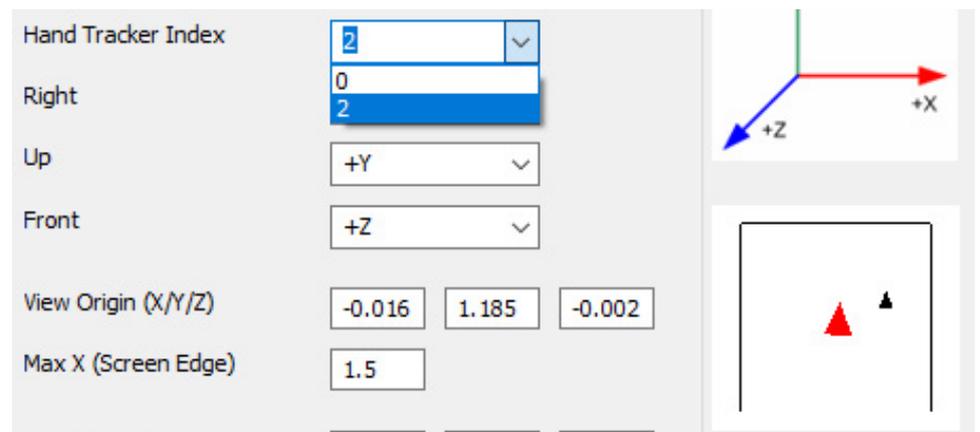
Bring your controller / flystick to the tracked area. Open the drop down at "Hand Tracker Index" and choose another index, usually index number 1,2 or 3. Once the correct index is found a smaller, black triangle appears in the CAVE representation.



A 3000x1870mm CAVE Front/Powerwall with the moreViz Origin 1500mm away from screen center

Max X (Screen Edge)

Setting Max X to 1.5 matches the shown example



The VRPN Translator with both Head Target (Red Marker) and Hand Target (Black Marker) detected

moreViz Guide: Powerwall / CAVE / DOME Hands on and First Start

Enter your controller's VRPN Server address. Disconnect and connect the VRPN Translator to apply the newly added address. Pushing the Analog Axis on your controller will make a data channel in raw channel data roll. The read data is shown in brackets [0.00]. The number in front of the brackets 0 ... 5 indicates this currently pressed axis index. Enter the axis matching your controller or use one of moreViz'es premade configuration files. The Yaw channel rotates the view along Y axis. The Pitch channel rotates along X axis. The Roll channel rotates along Z axis. The Fowards/Backwards (Menu) channel triggers forward and backwards movement as well switching between menu items in moreViz'es VR menu. The Left/Right (Menu) channel triggers parallel left and right movement as well switching between menu items in moreViz'es VR menu. The Up/Down channel triggers parallel up and down movement. The Trigger trigger foward movement into the pointing direction of the tracked controller. Further, it is the "Enter" key for the VR menu, it activates the individual VR menu options.

Enter your controller's VRPN Server address. Disconnect and connect the VRPN Translator to apply the newly added address. Pushing a Button on your controller will show the button index and state in the Raw Button DATA. Enter a configuration matching your controller or use one of moreViz'es premade configuration files. The Fowards /Backwards (Menu) Buttons trigger foward / backward movement and select the above / below menu option. The Left / Right (Menu) button triggers parallel Movement to the left / right or selects the left / right menu option. The Up / Down buttons trigger parallel up / down movement. The Menu button shows or hides the VR Menu. The Trigger button triggers foward movement into the pointing direction of the tracked controller. The Grab World Button attached the selected scene to the controller's position and orientation.

Lastly, make sure to save the configuration.

Analog Configuration

Address

Yaw Channel

Pitch Channel

Roll Channel

Forwards/Backwards (Menu)

Left/Right (Menu)

Up/Down

Trigger

Raw Channel Data

The Analog Configuration of the moreViz VRPN Translator

Button Configuration

Address

Forwards (Menu)

Backwards (Menu)

Left (Menu)

Right (Menu)

Up

Down

Menu

Trigger

Grab World

Raw Button Data

The Button Configuration of the moreViz VRPN Translator

moreViz Guide: Powerwall / CAVE / DOME Hands on and First Start

Now it is time for the first actual startup.
First start the moreViz Client(s).
Next, make sure VRPN Server and Tracking Software are started and tracking is started.
Then launch the VRPN Translator and make sure it is in connected state.
Then start any host app that was previously enabled in the more3D application enabler.
Load a 3D model and see how it being bridged live into VR.

The daily workflow is a lot easier than the actual configuration task. For a startup, all there is to do is:

- Launch the moreViz launcher
- Launch the moreViz Clients
- Launch Tracking Software
- Launch VRPN Server
- Launch VRPN Translator
- Launch Host app

The Tracking software can also be added to the launcher, see the launcher's configuration "custom launchers" submenu. Any app of choice can be added with custom start parameters.

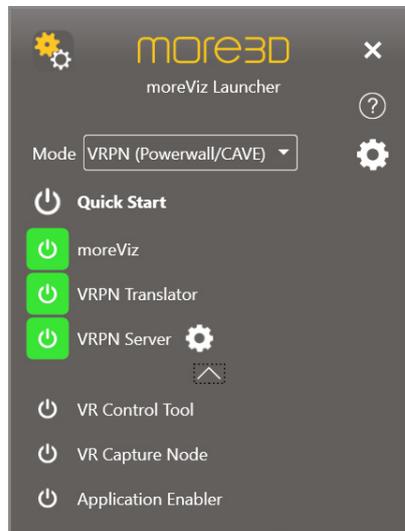
Quick hints on navigation in VR:

Bringing up the moreViz in-VR menu and enabling the Laser function is very helpful for beginners. For making a selection in the in-VR menu the "Trigger" (configured in VRPN Translator) is used. When the menu is closed the trigger is start a forward movement in the pointing direction of the hand target. The laser indicated with a red line where the hand target is pointing.

In case there's issues with the visualization in the moreViz client, make sure to have followed these guides:

- * Enable perspective mode, as per individual app guide: For stretched and "glued to the center of HMD" visualization
- * Dual GPU & Quadro guide: For frozen or black image in client

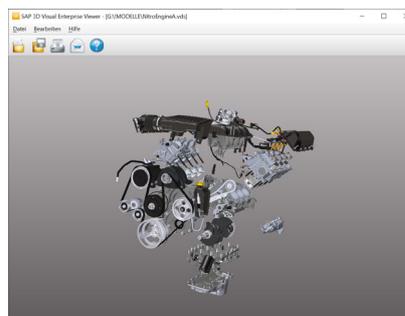
The moreViz Launcher's settings allow for the following advanced usage scenarios:
Getting a more sharp image in the clients, see "Client Instaces -> Anti Aliasing"
Bridging up to five apps simultaneously into VR, see "Misc Settings -> Composition"



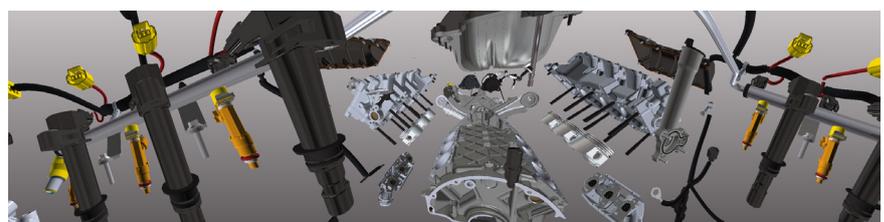
Launcher with started core components



Clients waiting for data. Configured as left, middle and right wall of a CAVE



Host app started and loaded 3D Model



Clients start the 3D Visualization

moreViz Client: Mono Desktop Client



moreViz features a 2D desktop client that allows for simple monoscopic use on any type of display. The 2D client is useful for participating in collaboration sessions when no VR equipment is available. Also, to playback collaboration sessions or previous recordings with the moreViz capture node. The mono client allows for simple interaction and movement with keyboard buttons:

- W - Move forward
- S - Move backward
- A - Sidestep left
- D - Sidestep right
- Q - Barrel roll left
- E - Barrel roll right

- Arrow up - Camera rotation up
- Arrow down - Camera rotation down
- Arrow left - Camera rotation left
- Arrow right - Camera rotation right

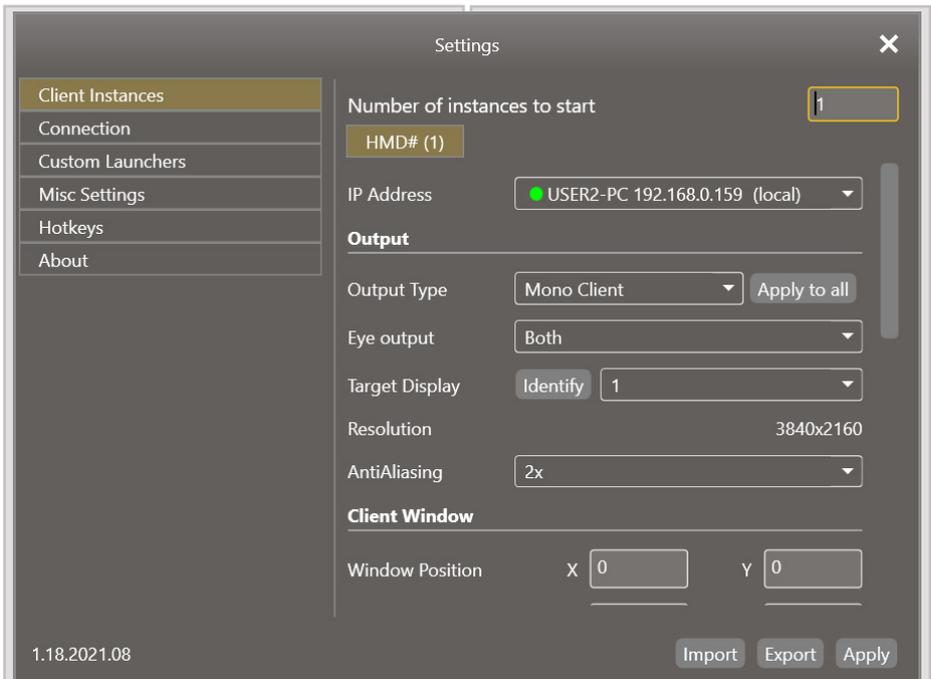
- Ctrl - Parallel movement down
- Space - Parallel movement up

- M - open / close VR menu
- Enter - Activate VR menu items

To use the mono client, simply configure in the launcher's client instance settings accordingly.

Limitations are existing for all VR functions requiring a tracked controller, e.g. Measurement, VR Camera, etc.

With over 15 years of experience, more3D provides superior stereoscopic and virtual reality software and solutions to clients in industry, trade and media. We create solutions for 3D VR CAVE, 3D projection, 3D monitors, 3D TVs, 3D HMDs. Inspire your customers and colleagues with 3D VR visualisation and its sustainable benefits.



moreViz Launcher Guide: Launcher Overview

The moreViz Launcher is the central software operation interface for the full VR experience. To display the Launcher's interface, simply double click the tray icon right next to the computer's system time.

Convenient Launchpad

The front page of the moreViz launcher is intended to provide quick application startup procedures for everyday workflows. The Mode Selection dropdown allows to switch between VRPN (Cave/Powerwall) Mode and SteamVR (HMD) mode.

All moreViz software components for VR are stored are listed on the front page:

Quick Start: Starts all components at once

moreViz: Starts the moreViz client(s) for rendering the 3D data and the VR experience

SteamVR: Starts the SteamVR software, for connecting HMDs to moreViz

VRPN Translator: Starts the VRPN Translator for transmitting VRPN tracking data to the moreViz client(s)

VRPN Server: Starts the VRPN Server for normalizing generic tracking data into VRPN tracking data

VR Control tool: launcher the VR Control Tool for full control over the VR session from desktop

VR Capture Node: Starts the VR Capture Node for capture and playback of VR session data
Further, Custom applications can be added in the launchers "Custom Launchers" settings.

Settings

To open the main settings of moreViz, click the gears symbol in the launcher's main window. A new window will appear, holding most of the crucial configuration for the moreViz VR Bridge. The next pages of the manual show the configuration details.



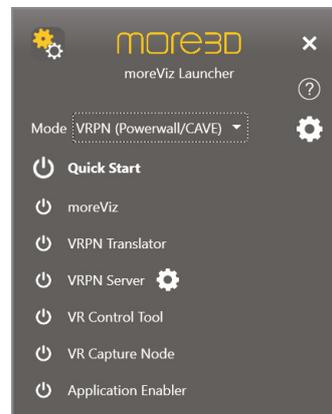
moreViz Launcher
The moreViz Launcher's desktop icon



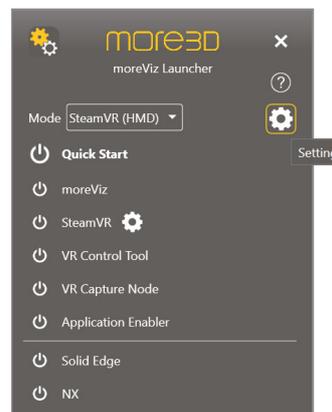
The moreViz Launcher's tray icon



The Launcher's main window in SteamVR Mode for HMDs



The Launcher's main window in VRPN Mode for Powerwall and CAVE



The Settings Gears Symbol and custom launchers added

moreViz Launcher Guide: Client Instance Settings

Client Instances: The client Instances of the Launcher define the Settings per client of the cluster (including a client running on the local computer for simple HMD setups).

Number of instances to start: Defines how many client instances the launcher should launch when the “moreViz” power button on the launcher’s main window is clicked.

moreViz 1(1) \ Clients: Selects for which client to configure. Right click the client name to rename. Will automatically display the number of clients selected at “Number of instances to start”.

IP Address: Opens a dropdown displaying the IPs of found moreViz Services. Select the matching IP for each client. All settings will be made to the client(s) behind the selected IP. Multiple clients can be run a single IP / PC for VRPN setups, yet HMDs are limited to one instance per computer (and this IP).

Output Type:

Configures the output type for the client. SteamVR: For most HMDs like HTC Vive, Oculus Rift, Windows Mixed Reality and Valve Index.

Cave (Quad Buffer): For projection setups, requires an Nvidia Quadro or AMD FirePro graphics card. Final output format is defined by the graphics driver.

Cave (Anaglyph): Red Cyan colored output. Useful mostly for testing scenarios and ultra low cost 3D Stereo.

Cave (Vioso): Output in combination with Vioso Warp n Blend. Calibration files by Vioso need to be copied to each client folder. Best used in combination with Eye Output Left/Right only.

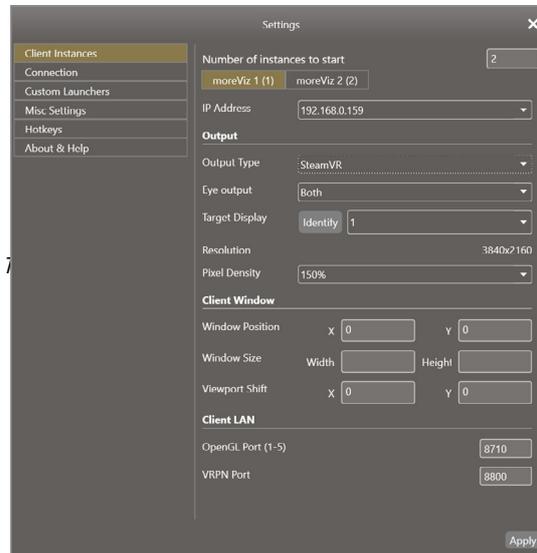
Cave (SBS Half): 50% horizontally squeezed output. Compatible for most consumer grade 3D projectors and TVs.

Cave (SBS full): Full sized left and right channel output horizontally aligned. Best used with Nvidia Mosaic/Surround.

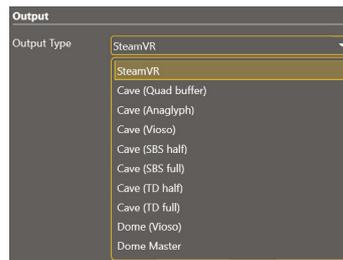
Cave (TD Half): 50% vertically squeezed output. Compatible for most consumer grade 3D projectors and TVs, especially recommendable for line-polarized displays.

Dome (Vioso): Output for Dome projection in combination with Vioso Warp n Blend Calibration. Calibration files must be copied to client folder.

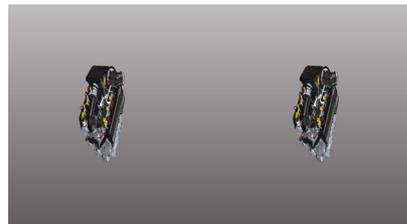
Dome Master: Output for Domes.



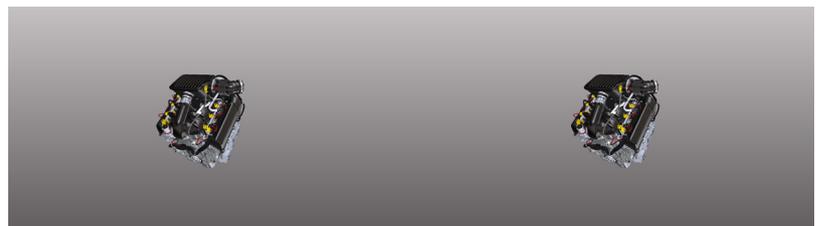
The settings window starting screen configured to operate two moreViz clients



The available output devices for the client output type configuration



The moreViz client visualizing in Cave (SBS Half) Mode



The moreViz client visualizing in Cave (SBS Full) Mode

moreViz Launcher Guide: Client Instance Settings

Eye Output: Chooses whether to output both left and right eye views or left or right eye only. Very useful for passive projection setups and dual head setups.

Target Display: Chooses on which display to open the client by default. Use the identify button to display the display index on all connected displays/projectors.

Resolution: Displays the detected resolution of the target display.

Pixel Density: This option is only available for the SteamVR output type. Increasing the default value of 100% improves the visual quality in the HMD while increasing the load for the graphics card.

AntiAliasing: This option is only available for non-SteamVR output types. Performs a super sampling of the image, increasing image quality while also increasing the load for the graphics card.

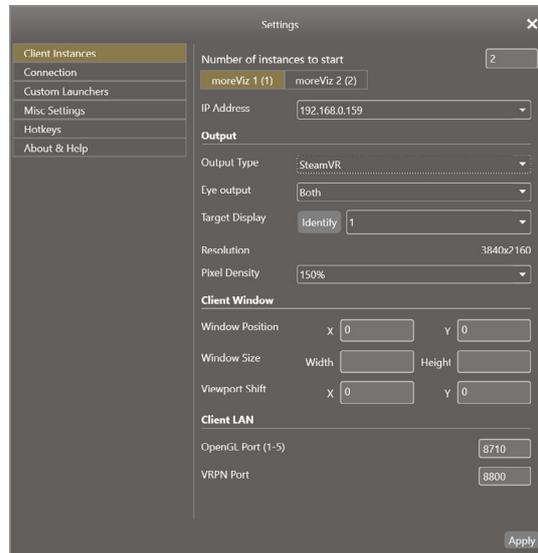
Window Position: Defines the origin point of the client's borderless fullscreen window. 0, 0 references the top left corner of the display/projector, increasing X moves the image to the right, increasing Y moves the image down.

Viewport Size: Defines the size with width and length for the borderless fullscreen window of the client.

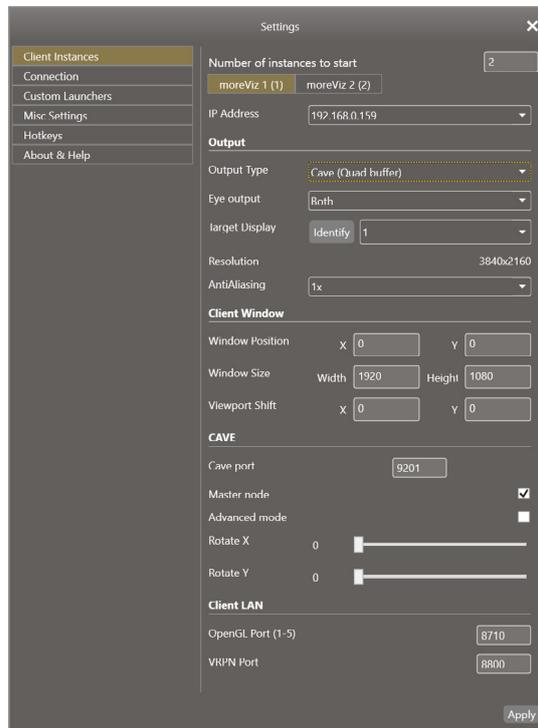
Viewport Shift: Shifts the contents of the moreViz client within its fullscreen window.

Cave Port: Defines the port on which Cave and cluster data is being forwarded between the master node and all slave nodes. (non SteamVR only)

Master Node: Defines a client as master node. The master node handles sync in collaboration setups and forwards/syncs data for slave nodes. (non SteamVR only)



The settings window starting screen configured to operate two moreViz clients, with the current client in SteamVR output mode



The settings window starting screen configured to operate two moreViz clients, with the current client in Cave (Quad Buffer) output mode

moreViz Launcher Guide: Client Instance Settings

Advanced Mode: Enables the advanced wall setup mode for this client. Allows to define the client's physical projection surface by entering three points. (non SteamVR only)

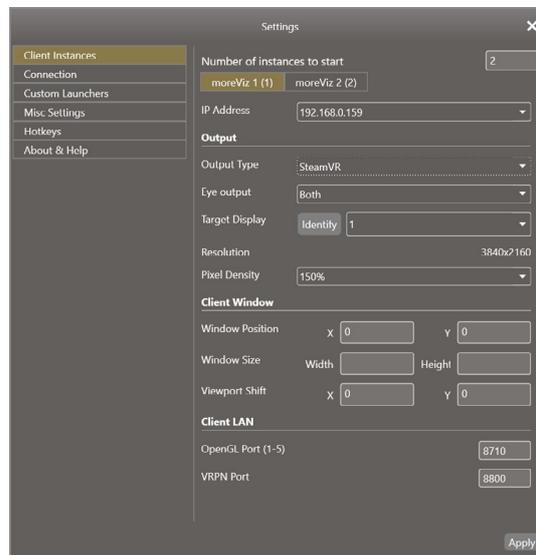
Rotate X: For simple projection surface alignment. Rotate the client over X.

Rotate Y: For simple projection surface alignment. Rotate the client over Y.

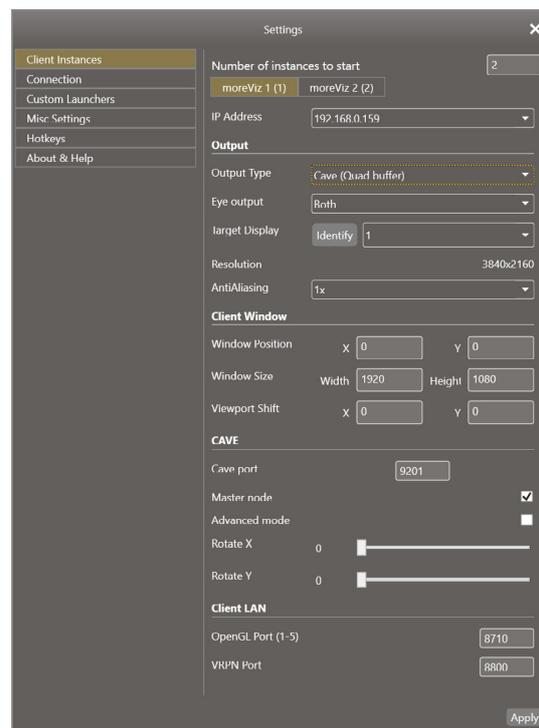
For an indepth explanation, see the moreViz client guide.

OpenGL Port: Defines on which port the client will listen for OpenGL data. Only to be configured if not using the TCP/IP(Auto) Connection type.

VRPN Port: Defines on which port the client will listen for VRPN data. Only to be configured when using the TCP/IP connection type (not TCP/IP (Auto)). Port configuration and IP configuration must match the settings in Connection Tab and VRPN Translator.



The settings window starting screen configured to operate two moreViz clients, with the current client in SteamVR output mode



The settings window starting screen configured to operate two moreViz clients, with the current client in Cave (Quad Buffer) output mode

moreViz Launcher Guide: Connection and Custom Launcher Settings

Connection Settings

The connection type is to be set on the moreViz Server Control property tab. It is accessed by right clicking the tray icon and selecting "Properties". The connection type defines how the graphic data from your host app is transported to the moreViz client.

The available options are:

TCP/IP (Auto): Using TCP/IP connections on the LAN with automatic IP and Port configuration.

TCP/IP: Using TCP/IP connections on the LAN with manual IP and Port configuration.

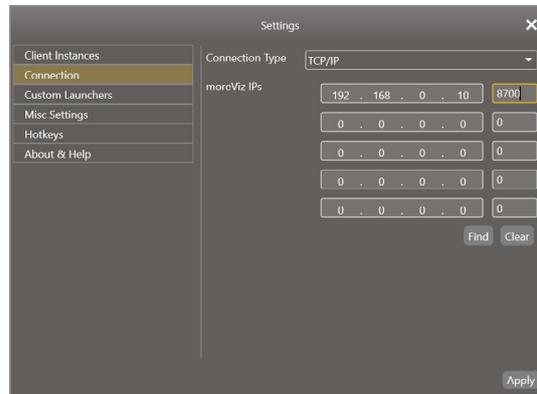
UDP (Broadcast): Data is transmitted in the LAN's broadcast address.

Shared Memory: Does not access the network, but uses system RAM to transport the data. The fastest way of bringing data into the client, recommended for HMDs and local-only single-client setups.

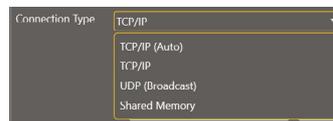
Custom Launcher Settings

To speed up workflows it is handy to have all daily use VR related apps added into the launcher environment. Adding any application to the launcher's main window is easy: Clicking on the folder symbol opens a file dialog. Any executable file can be chosen. Names entered in the name field are the names displayed on the launcher's main window. All arguments will be added to the executable files startup procedure.

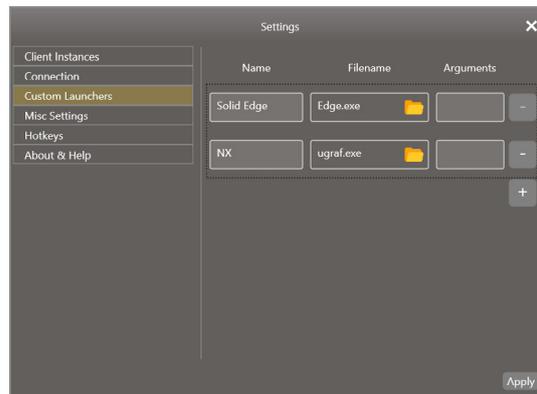
The minus symbols remove a row completely, the plus symbol adds another line to the interface, allowing to add more applications to the launcher.



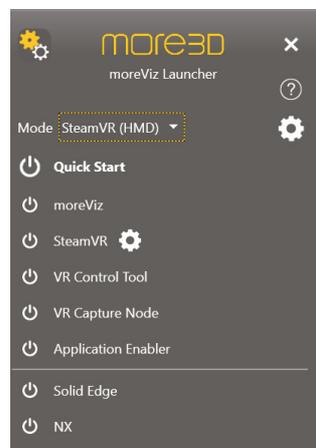
The Connection settings of the moreViz Launcher settings



The available Connection types



The Connection settings of the moreViz Launcher settings



The Launcher's main window with two custom launchers added

moreViz Launcher Guide: Misc Settings

Misc Settings

The Misc settings hold a variety of settings.

Composition:

When Composition is set to on, moreViz will allow multiple apps to be bridged into VR simultaneously. This allows to e.g. visually fuse datasets from Dassault Systems Catia with Siemens NX and SAP Visual Enterprise without ever having to convert a single file. A current maximum of up to five apps is support. Some apps do use multiple connections of the total five composition channels. Using the VR Control Tool is especially handy in multi-source VR sessions: the VR Control tool always keeps order. Read more in the Composition part of the manual.

Interpupillary distance:

Defines the distance between the user's pupils. Affects the 3D effect. A lower value (63mm) is better for multiple users with different interpupillary distances. The lower value will decrease the depth effect for users with larger IPD. The best effect is achieved when setting the IPD value very exact.

Camera near clip:

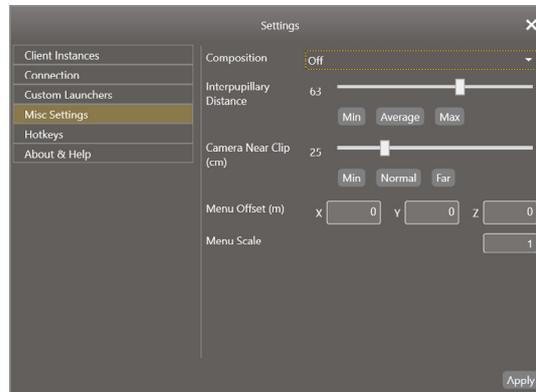
Defines at which distance to the user's eyes object should be clipped / faded out. Objects closer than 25cm to the user's eyes can lead to crosseying.

Menu offset:

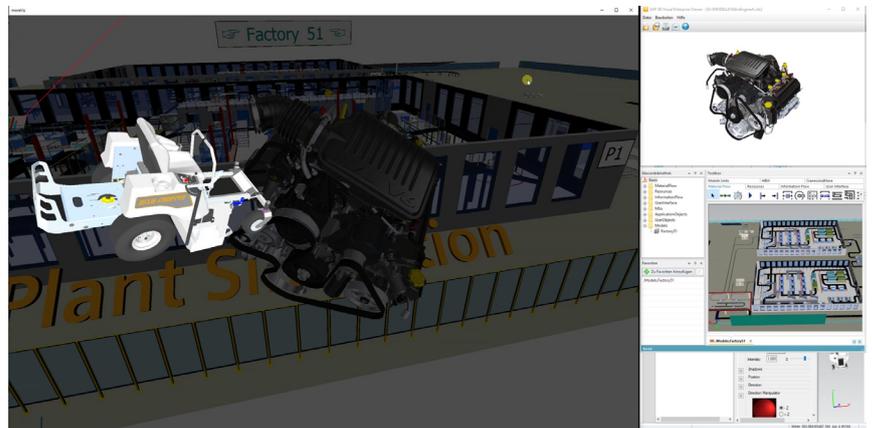
Moves the moreViz in-VR menu relative to it's original position (floating right above the VR hand target / VR controller). X moves to the left/right, Y up/down and Z forward/backward.

Menu scale:

Scales the size of the VR menu. 1.0 is the default value. A bigger value means a bigger in-VR menu.



The Misc Settings of the moreViz Launcher configuration



A Composition Session with the JT2Go mounted channel active.

moreViz Launcher Guide: Hotkey Settings

Hotkey Settings

moreViz's in-App panel requires hotkeys to be configured for interaction. The in-app panel becomes part of the host-apps engine and is very helpful for selecting the correct window for VR bridging (for e.g. 3DS Max, which uses multiple 3D viewports).

The in app panel

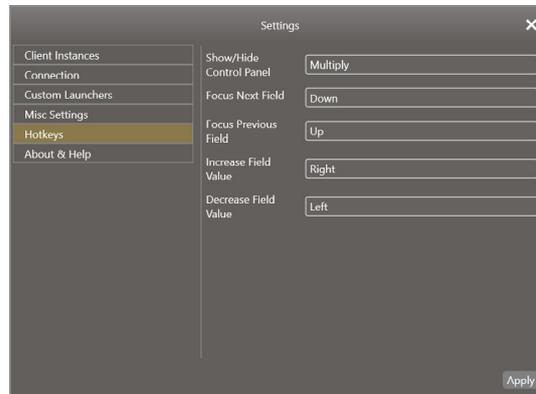
The in-app control panel is especially useful for host apps with multiple 3D viewports. The moreViz software bridges the 3D data of one viewport into VR. The viewport is selected by adjusting the "Sel. Window No." value to match the "Curr. Sel Window No.". The in-app Panel is shown in every 3D viewport, giving clear index numbers for each 3D viewport of the host app. To operate the in app panel, by default, the arrow keys are used. It is necessary to have the 3D viewport update its rendering while using the hotkeys, e.g. the arrow keys. To force the host app to update the viewport, playing an animation is good, alternatively the 3D geometry can be rotated with the mouse while pressing e.g. NUM* to show / hide the in app panel.

Here's a video tutorial on youtube:

<https://youtu.be/wH5ZMeZfHW4>

About & Help

Displays basic system information, support contact information and



The Misc Settings of the moreViz Launcher configuration



The in-app control panel

more3D Application Enabler

The more3D Application Enabler enables the moreViz functions for host applications. Applications need to be added the more3D Application enabler and the Enabled button must be clicked to enable the moreViz VR bridging functions.

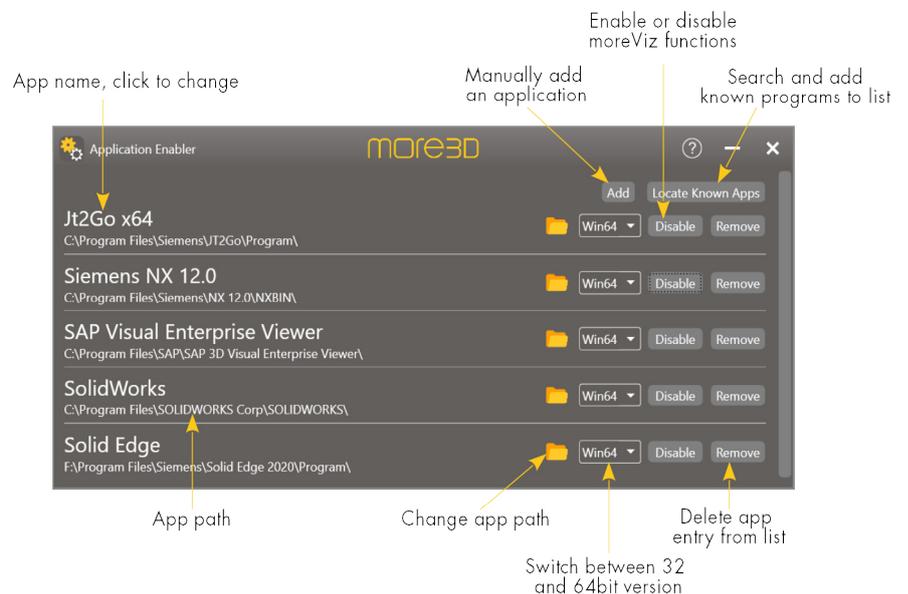
To add any application, click the "Add" button. Select the target application's main executable file. This is sufficient for most applications, yet some apps require additional configuration. It is recommended to read about the individual per app configuration in the Application Guide part of the manual.

Clicking the "Locate Known Apps" will check for all known applications in their default installation paths. All found applications will automatically be added to the list. Applications installed in non-default installation paths need to be added manually.

The "Folder" button in each application's row opens an additional folder selection dialogue. This is only required for a few apps which have non-standard working directories. It is recommended to read about the individual per-app configuration in the corresponding part of the manual.

The "Application Version" dropdown allows to choose between a 32-bit and a 64-bit version of the host application. This is usually auto-detected and should only be changed when absolutely sure.

The enabler will automatically check and update the moreViz opengl32.dll function file on start. After an update of the moreViz software, it is recommended to start and close the enabler once to make sure that all function files in the corresponding application folder have been updated.



moreViz Guide: in-VR menu / VR Control Tool

The In-VR menu manipulates different settings relevant to the VR scene. All in-VR options are also available through the VR Control Tool. To select options use the controller's joystick, to activate an option, pull the trigger.

Scene: Only available when composition mode is activated. Select the current scene channel. Channel X selects all channels.

Reset Position: Teleports to starting location

Reset Scale: Sets Scale to 1.0

Reset Speed: Sets Speed to 1.0

Base: Set application's/model's base length unit, required for correct 1:1 representation. If not available for an app, then that app has fixed units and is already set correctly for 1:1. **Scale:** Sets a free multiplier for geometry size, values smaller than 1 shrink the world, values bigger than 1.0 increases the geometry size. **Scaling small objects** (e.g. a circuit board) bigger allows to go closer and inspect details. **Scaling a whole factory** down to fitting in the palm of a hand creates a good sense of overview. The current value is shown in the last row of the in-VR menu when Speed is highlighted.

View: Switch between 1:1 mirroring and independent position / rotation in VR and app (shows only for supported applications)

Speed: Sets a free multiplier for movement speed. The current value is shown in the last row of the in-VR menu when Speed is highlighted.

Laser: Toggles the laser on/off.

Dist: Enables to measure two or three points

Clip: Allows to clip away geometry on a plane

Cam: Activates the VR camera, create snapshots with the trigger or press menu to go back.

Markers:

Add: Places a marker at the Laser/Geometry intersection, or at controller position (disabled laser)

Del: Deletes last placed marker

Go: Teleports to the next marker

Save: Save markers (one set per host app)

Load: Load markers (one set per host app)

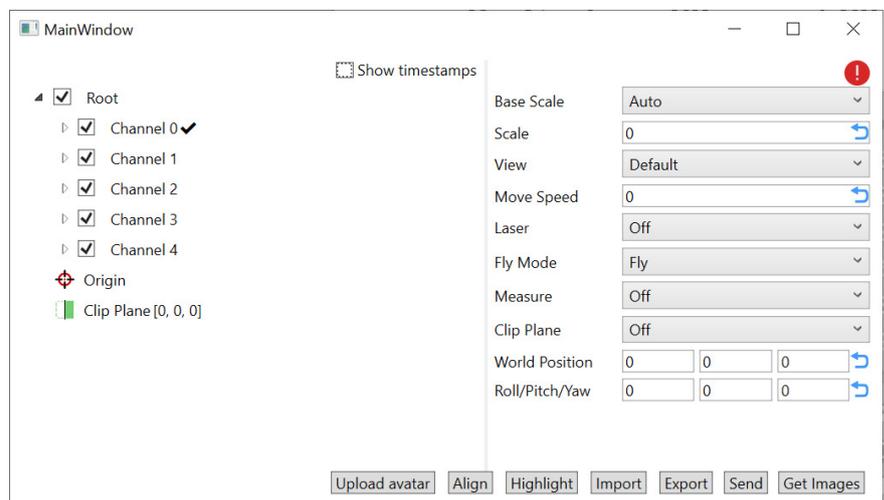
A: Align over three markers (Composition)

H: Highlight markers, for huge geometries.

moreMenu: Composer

Scene:	x 0 1 2 3 4
Reset:	Position Scale Speed
Base:	MM CM M KM IN FT
Scale:	Smaller Larger
Speed:	Slower Faster
Laser:	Off On
Mode:	Fly Walk
Dist:	2-Points
Clip:	Disable Enable
Cam:	On
Markers:	Add Del Go Save Load A H

moreViz'es inVR Menu



moreViz'es inVR Menu can be controlled from the VR Control Tool

moreViz VR Control Tool Guide

The VR Control Tool is targeted to allow in-VR content to be manipulated from an additional 2D desktop screen. The tool controls all in-VR menu options. It moves and rotates the active 3D data in the moreViz client. Further it give information over the currently active host application's executable name.

The right part of the window gives the full control over the options of the in-VR menu. The available options in detail are:

Base Scale: Allows to set the base scale for the loaded 3D data. This should match the host app's / dataset's in-use units.

Scale: Set the scaling of the scene / reset.

View: Switch between Default and App view. Not all apps support default view.

Speed: Sets the movement speed / reset.

Laser: Toggle the red line coming from the joystick on or off.

Fly Mode: When set to fly, Y-axis (Up / Down) movement is allowed. When set to Walk Y-axis movement is not allowed.

Measure: Enable or Disable the measurement function

Clip Plane: When enabled a striped plane is shown in front the hand target. Move this plane into the host app's 3D data to clip the data out.

World Position: Change the position / reset.

Roll Pitch Yaw: Enter a custom rotation for the loaded 3D data.

The left part of the screen gives control over the loaded data in the composition channels. The root node will apply settings all datasets. Individual channels can be opened with the drop down. Created flags and snapshots can be viewed and manipulated from within the individual subnode. Right clicking a node displays a context menu with different options:

Rename: Give a custom name to the object or channel

Remove: Delete from the composition scene

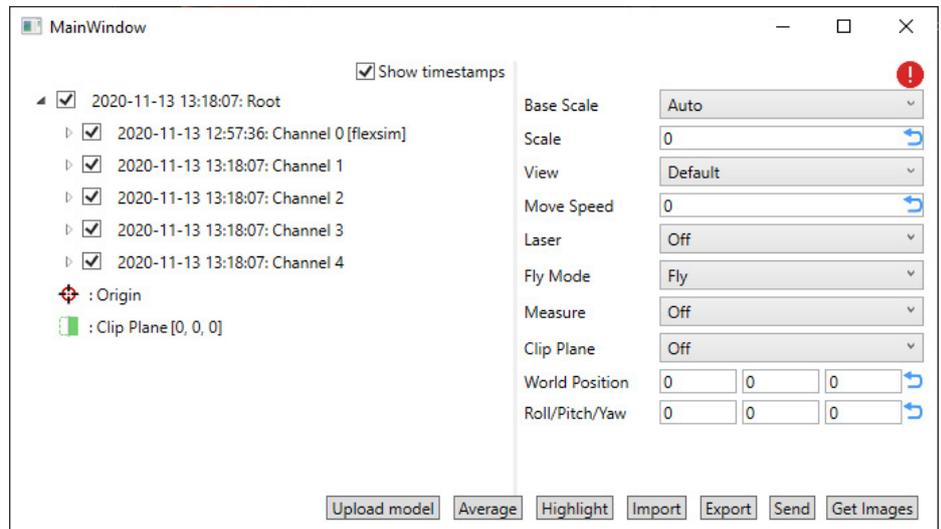
Group: Create a group of objects

Jump To: Move the Vr-scene in client to the selected object

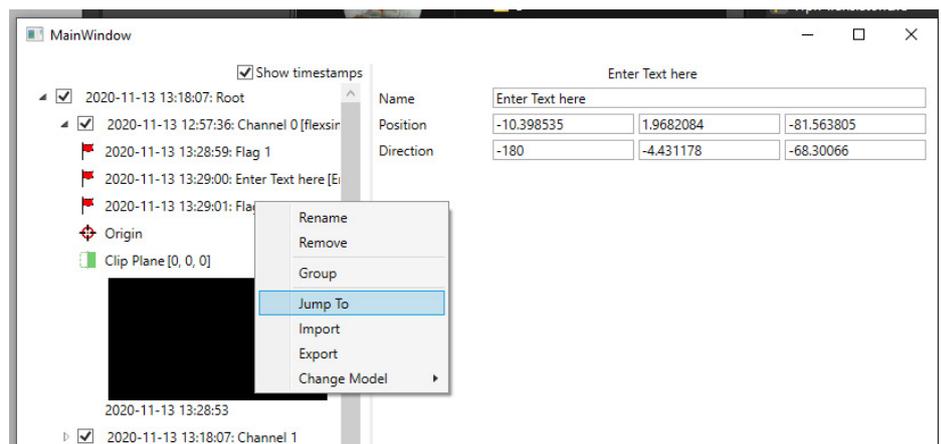
Import: Load JSON File of Objects / Scene

Export: Save JSON File of Objects / Scene

Change Model: Load a custom Model for a marker. Marker geometry is to be provided in C:\Users\user\Documents\moreViz\resources\markers\1 n in OBJ file format.



The moreViz Control Tool main view



The moreViz Control Tool with opened channel 0, running FlexSim and showing the context menu

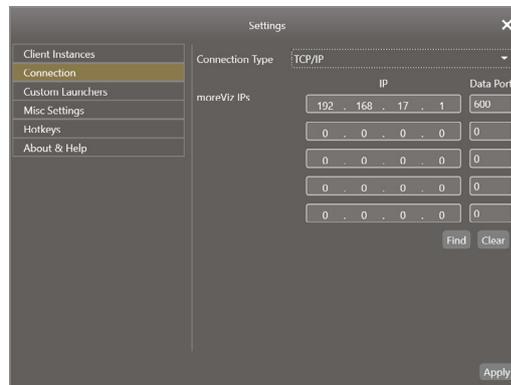
moreViz Capture Node

The moreViz capture node captures a host application's OpenGL data and VRPN Tracking data. The application is still in development, yet already very powerful. SteamVR tracking data is not yet supported, it will be ready soon. Technically the Capture node functions like a moreViz client, it receives the tracking and OpenGL data - so if the moreViz Launcher must either run in TCP/IP(Auto) or TCP/IP with matching IP/Port configuration, the port for the capture node is 600.

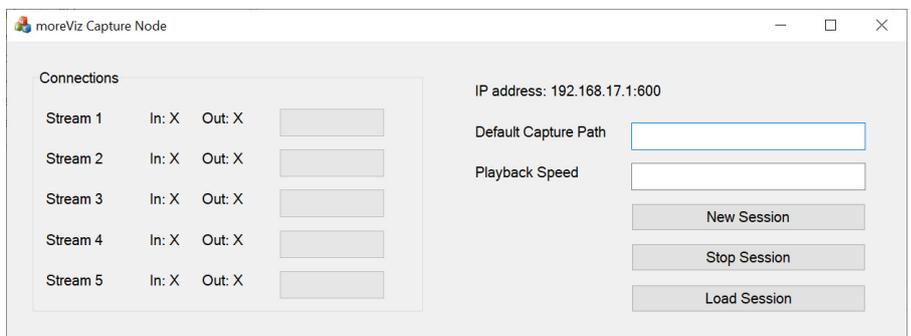
With the combination of recorded OpenGL data and recorded tracking data a replay of a VR session can be easily and quickly done. This is especially useful to bring the insight generated in a VR cave back to a desktop computer, by simply replaying the 3D data with the ability to stop at anytime. Of course the data can also be played back on any HMD, CAVE or Powerwall.

To record a VR session, click "New Session" before starting any host application. This will generate a new folder in C:\temp\ with the current timestamp. Next, launch the (VRPN) tracking solution, the moreViz Client(s) and any host app. As soon as OpenGL data is being sent to the moreViz Client the capture node will receive a copy and start recording to harddisk. The capture node can record up to five streams simultaneously, it is fully compatible to composition mode.

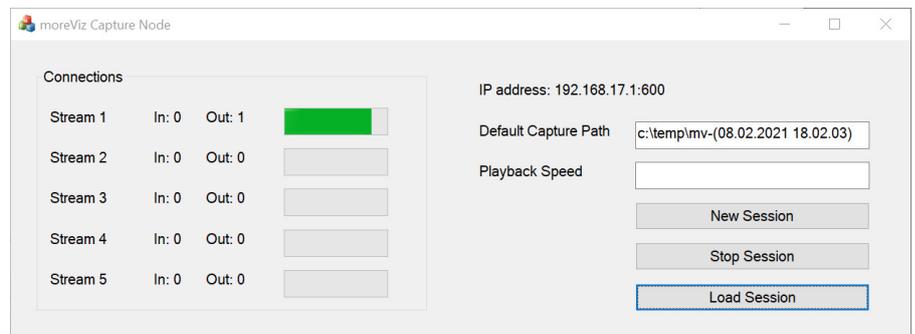
Once the VR session is finished, simply close the app or click "Stop Session". To replay the session start the moreViz Client(s). Do not launch the (VRPN) tracking solution. Click on "Load Session" and select the previously created folder. The capture node will send the recorded tracking data and OpenGL data to the moreViz clients. The session replay can be stopped at any time by clicking the "Stop Session" button. Once a session is stopped, any tracking solution may be started, the scene is live and can be continued from thereon. To playback faster or slower enter any number in the playback speed. Values lower than 1, e.g. 0.5, reduce the playback speed, while numbers bigger than 1 increase the speed. If the value is left empty, the capture node will render at max speed (depending on computer's hardware)



The moreViz Launcher's Connection config for Capture.



The moreViz Capture node main view



The moreViz Capture node main view while playing back one channel.

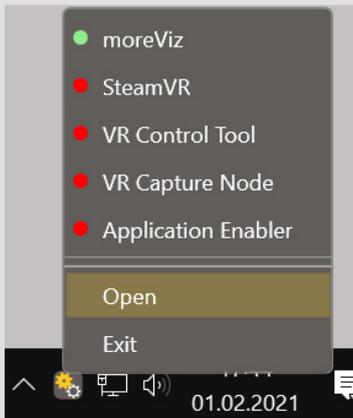
moreViz Compositor Setup and Operation Guide

The new moreViz Compositor mode allow to bridge multiple host apps directly into one moreViz client.

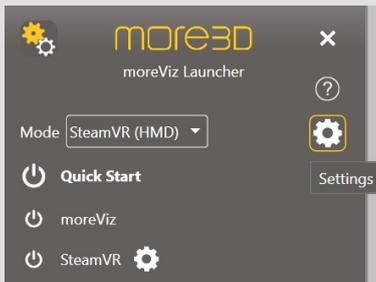
This guide explains the necessary one-time configuration and daily use routine.

One-Time Setup configuration steps:

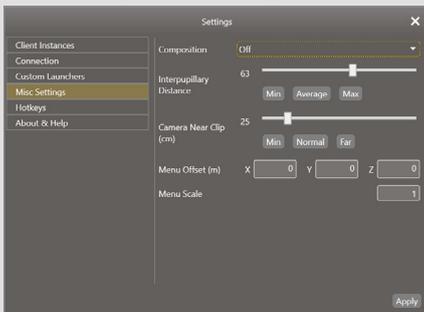
1) Start the moreViz Launcher and open it by clicking the tray icon next to the windows system time.



2) Open the Settings by clicking on the gears icon and select "Misc Settings".



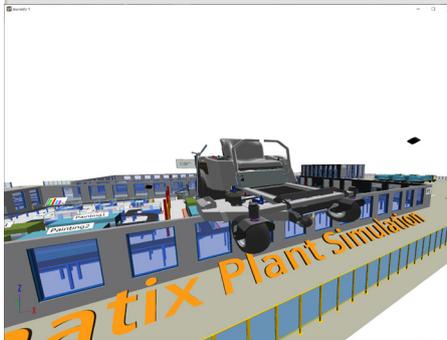
3) Set the dropdown for Composition to On.



4) Click apply and close the settings. It might be necessary to restart clients and host apps.

The next passage shows how to start a composited scene with moreViz.

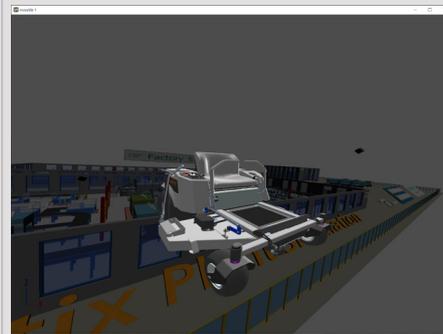
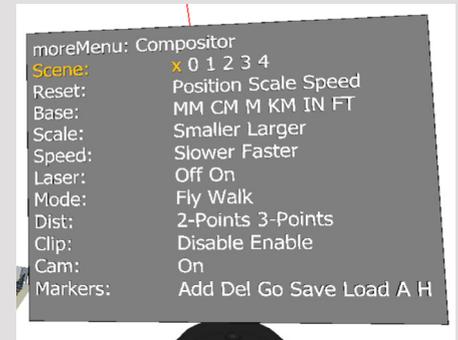
- 1) Make sure moreViz Launcher is running
- 2) Start moreViz client(s)
- 3) Start your tracking solution
- 4) Start your first host app, load any 3D file
- 5) Wait until the client shows the 3D file
- 6) Start your second host app, load any 3D file
- 7) Wait until the client shows the 3D file
- 8) Repeat up to five times in total.
- 9) Run the Compositor Scene Control



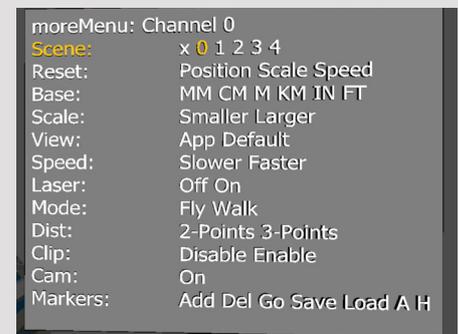
moreViz running a scene composition of JT2Go and Plant Simulation. Selected all scenes.

All moreViz functions are maintained in composition mode. Setting base units, scaling, measurement etc are all available per scene and globally.

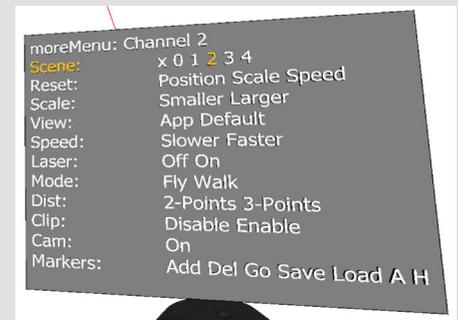
Once all scenes are loaded, use moreViz's VR menu to switch between active scenes of 3D files. Note: Many apps use multiple connections to transfer their data into moreViz. That means that some apps will use more than one scene channel. If the selected scene indicator jumps back to its initial state after selecting, try the next channel.

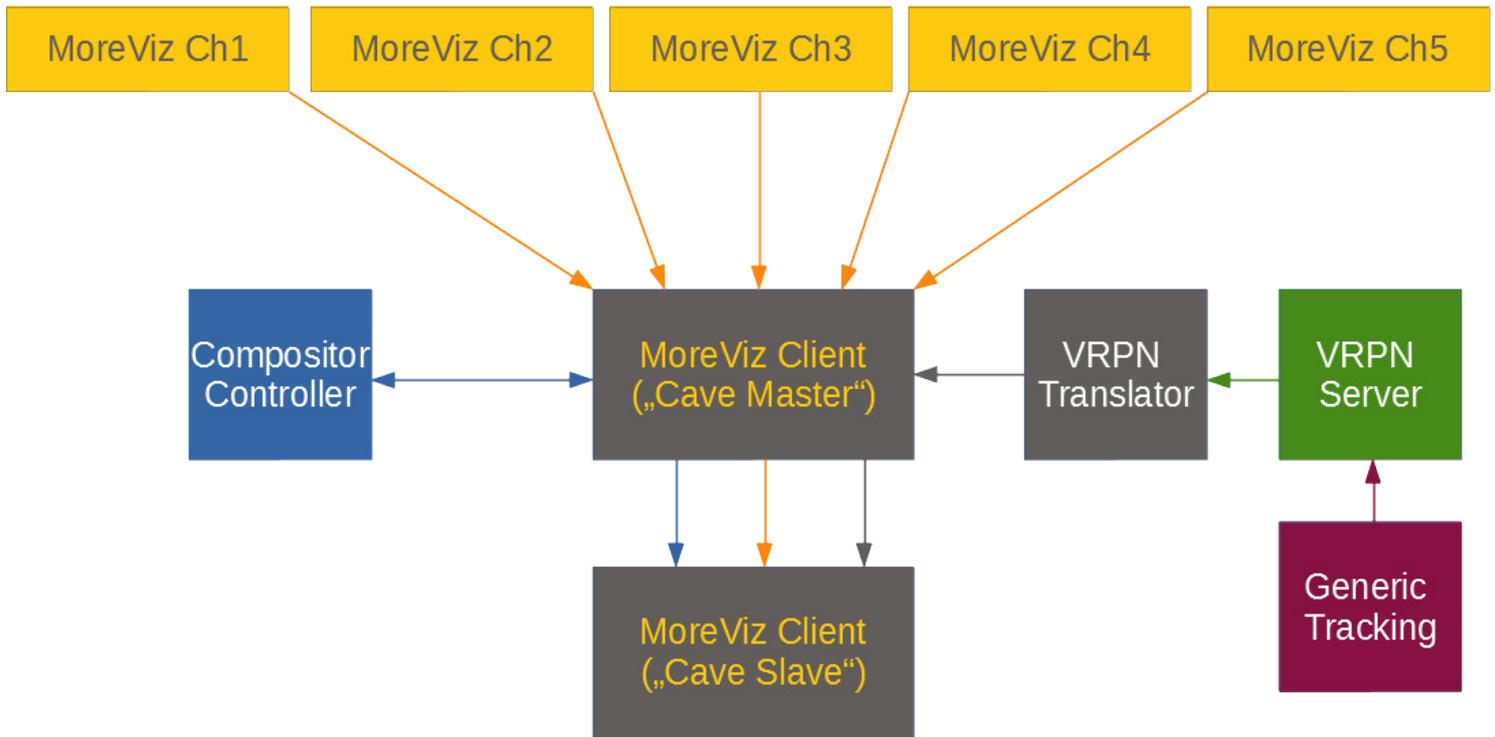


Selected JT2Go as active channel, in channel 0. All other channel's data are greyed out.



Selected Plant Simulation on composition scene channel 2. Inactive scene tinted grey.





-  OpenGL
-  Raw Tracking
-  VRPN Tracking
-  MoreViz Tracking
-  Scene Control

Port list

VRPN:	8800
VRPN (broadcast):	8694
Menu server:	9199
Ping server:	9200
Cave broadcast:	9201-9206

moreViz Composition Alignment Guide

What is the automatic alignment?

moreViz'es Composition mode allows to grab data from multiple applications simultaneously. For some use cases it is necessary to perfectly align datasets to each other. This where the moreViz alignment function helps. By placing three markers in each composition layer an alignment polygon is formed in the cartesian space of moreViz. Geometry is aligned to the polygon when using inVR-Menu -> Flags -> A.

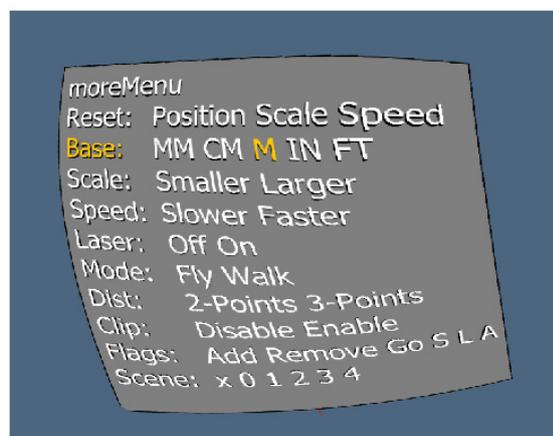
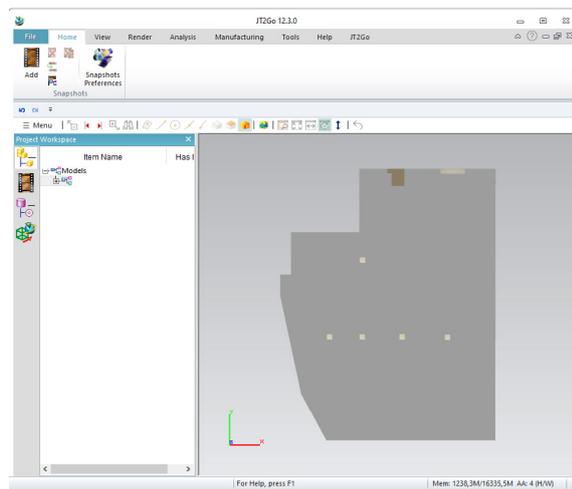
Requirements

Composition Mode must be set to "On" in moreViz Launcher Misc Settings.

1. Load your first app and load any 3D Model

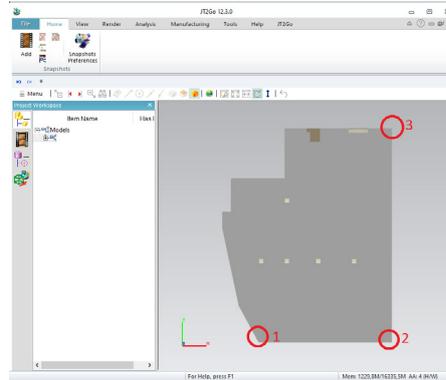
2. Open moreViz'es in-Vr menu and select scene channel 0.

3. Apply the correct base unit for scene channel 0.

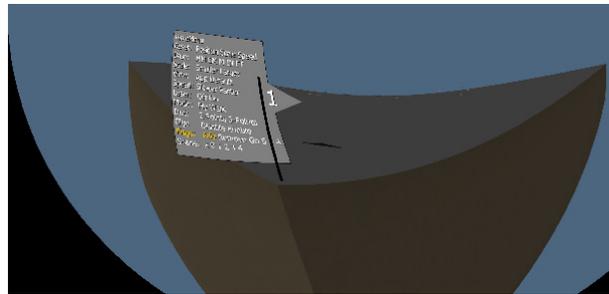


moreViz Composition Alignment Guide

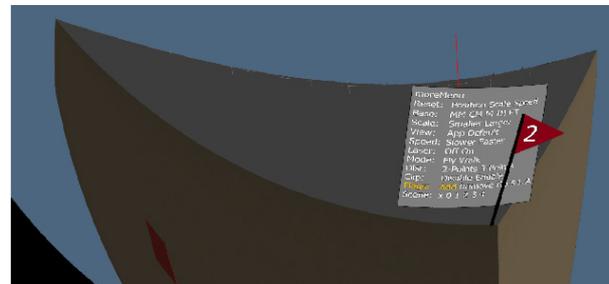
4. Choose three spots to place your alignment flags.



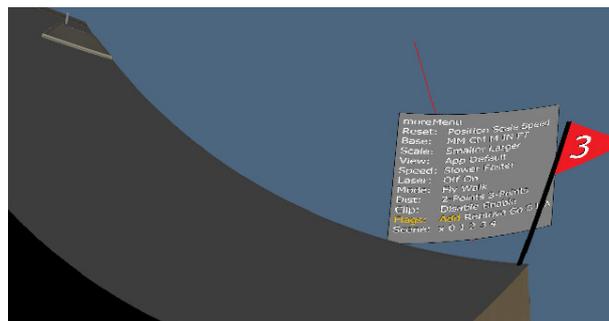
5a. Place Flag 1



5b. Place Flag 2

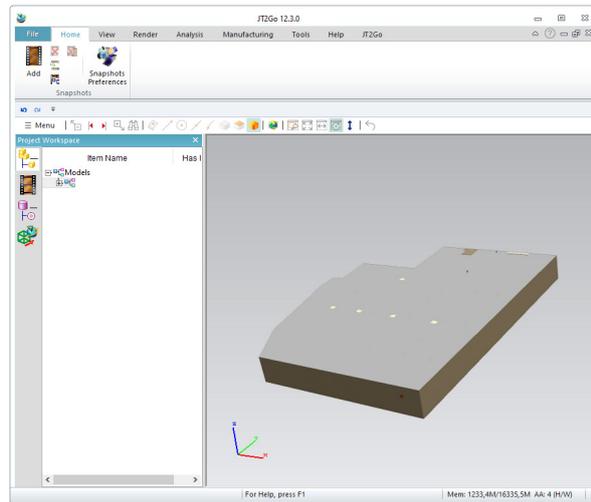


5c. Place Flag 3



moreViz Composition Alignment Guide

6. Load your *second* app and load any 3D Model



7. Open moreViz's in-Vr menu and select the next available scene channel, e.g. 1 or 2.

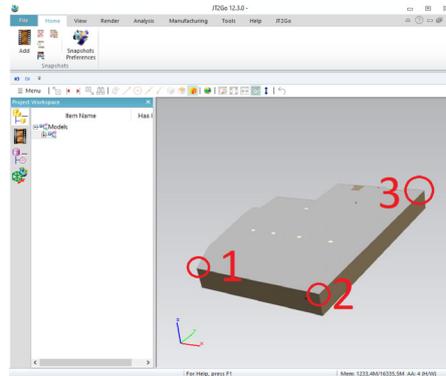


8. Apply the correct base unit for this scene channel.

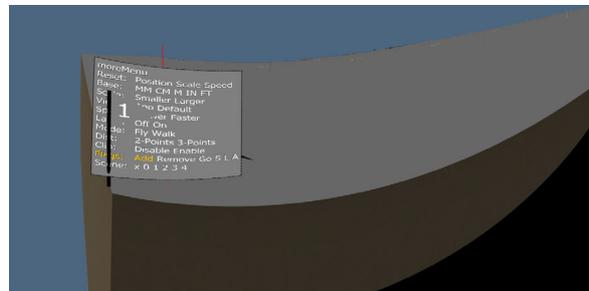


moreViz Composition Alignment Guide

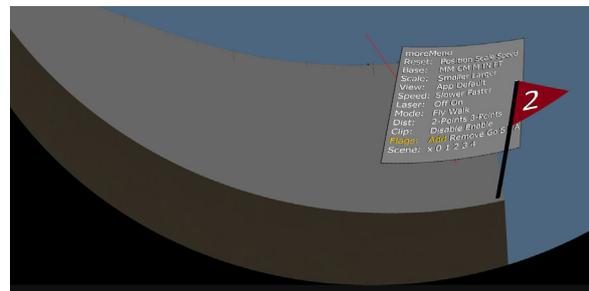
9. Choose three spots to place your alignment flags.



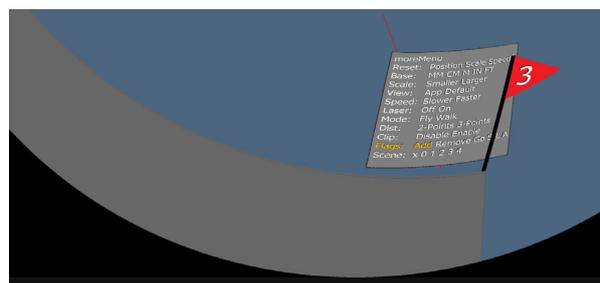
10a. Place Marker 1



10b. Place Marker 2



10c. Place Marker 3

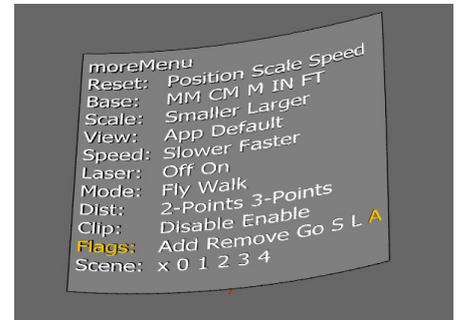
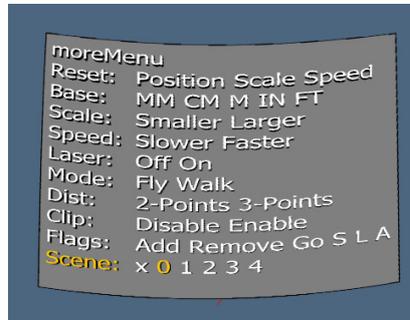


moreViz Composition Alignment Guide

11. Execute the align function for the current channel. Select the "A" in the Markers menu row and execute the command.



12. Select the other hooking channels and repeat the Marker: "A" command.



13. Select the compositor scene channel to move all now aligned geometry / 3D model simultaneously.



moreViz Setup Guide: NX

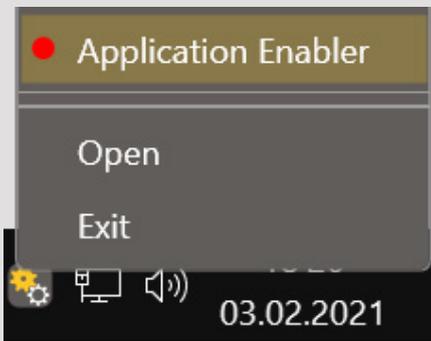


This quick guide shows the necessary configuration steps to bridge NX into VR.

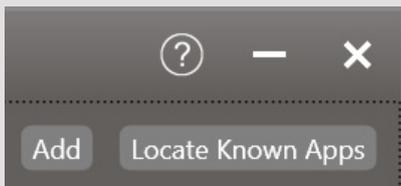
1. Start the moreViz Launcher



2. Notice the moreViz-Tray icon (next to system time) and right-click it, select "moreViz Application Enabler".

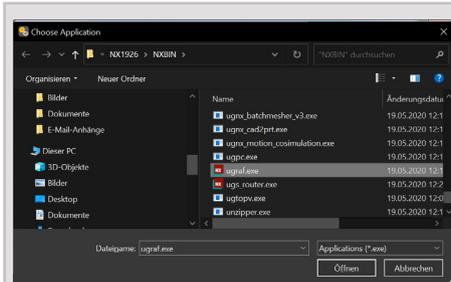


3. Click "Locate known Apps". The more3D application enabler will search the standard program files folders for known NX installations and add them to the list.



4. If your NX is installed to a non standard directory, please click "Add", locate the "ugraf.exe" file. It is usually located in "X:\Program Files\Siemens\NX 10.0\UGII", "X:\Program Files\Siemens\NX 11.0\NXBIN", "X:\Program Files\Siemens\NX 12.0\NXBIN", "X:\Program Files\Siemens\NX1926\NXBIN", "X:\Program Files\Siemens\NX1942\NXBIN" etc.

With over 15 years of experience, more3D provides superior stereoscopic and virtual reality software and solutions to clients in industry, trade and media. We create solutions for 3D VR CAVE, 3D projection, 3D monitors, 3D TVs, 3D HMDs. Inspire your customers and colleagues with 3D VR visualisation and its sustainable benefits.



5. Click the Enable button right next to the newly created entry.

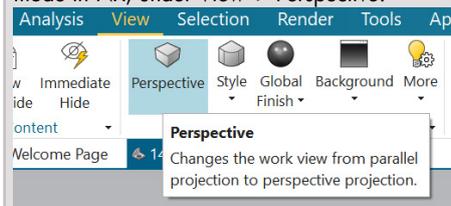


6. Close the Application Enabler.

7. The moreViz VR bridging function is now available for the NX installation.

8. Start the moreViz Client(s) and then start NX.

9. Make sure to enable the perspective view mode in NX, under View -> Perspective.



In case there's issues with the visualization in the moreViz client, make sure to have followed these guides:

- * Enable perspective mode, as per individual app guide: For stretched and "glued to the center of HMD" error type
- * Dual GPU & Quadro guide: For frozen or black image in client

Do not hesitate to contact us for technical assistance at support@more3d.com.

Many tutorial videos are available on more3D's youtube channel: [more3DStereo](https://www.youtube.com/more3DStereo).

moreViz Setup Guide: Solid Edge

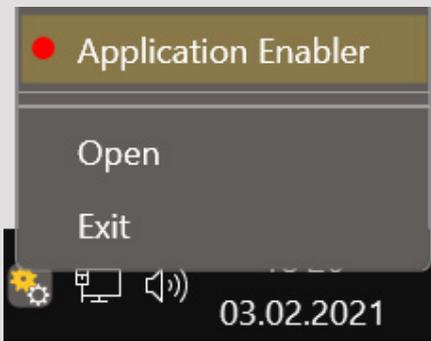


This quick guide shows the necessary configuration steps to bridge Solid Edge into VR.

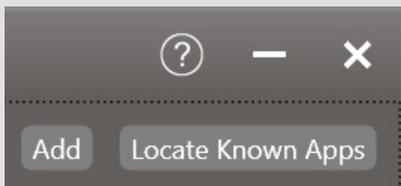
1. Start the moreViz Launcher



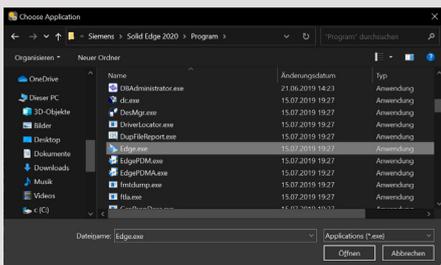
2. Notice the moreViz-Tray icon (next to system time) and right-click it, select "moreViz Application Enabler".



3. Click "Locate known Apps". The more3D application enabler will search the standard program files folders for known Solid Edge installations and add them to the list.



4. If your Solid Edge is installed to a non standard directory, please click "Add", locate the "Edge.exe" file. It is usually located in "X:\Program Files\Siemens\Solid Edge 2020\Program"



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5. Click the Enable button right next to the newly created entry.

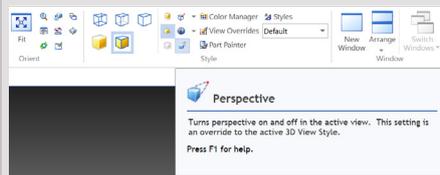


6. Close the Application Enabler.

7. The moreViz VR bridging function is now available for the Solid Edge installation.

8. Start the moreViz Client(s) and then start Solid Edge.

9. Make sure to enable the perspective view mode in Solid Edge, under View -> Perspective.



In case there are any issues with the visualization in the moreViz client, make sure to have followed these guides:

- * Enable perspective mode, as per individual app guide: For stretched and "glued to the center of HMD" error type
- * Dual GPU & Quadro guide: For frozen or black image in client
- * Fit the 3D into the host app's viewport: in case geometry is missing in the moreViz client

Do not hesitate to contact us for technical assistance at support@more3d.com.

Many tutorial videos are available on more3D's youtube channel: [more3DStereo](https://www.youtube.com/more3DStereo).

moreViz Setup Guide: Plant Simulation

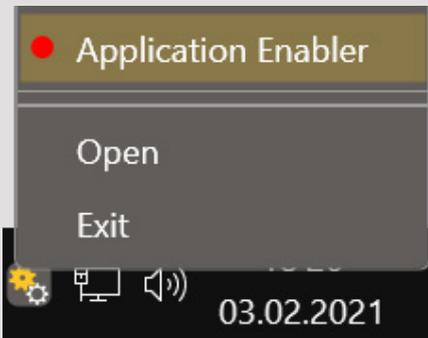


This quick guide shows the necessary configuration steps to bridge Plant Simulation into VR.

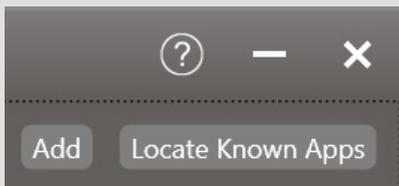
1. Start the moreViz Launcher



2. Notice the moreViz-Tray icon (next to system time) and right-click it, select "moreViz Application Enabler".

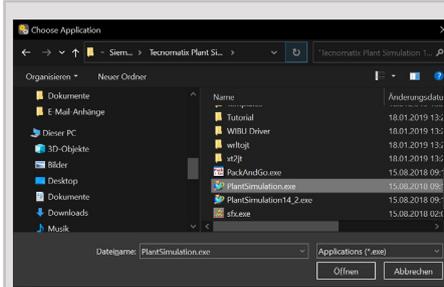


3. Click "Locate known Apps". The more3D application enabler will search the standard program files folders for known Plant Simulation installations and add them to the list.



4. If Plant Simulation is installed to a non standard directory, please click "Add", locate the "PlantSimulation.exe" file. It is usually located in
 "X:\Program Files\Siemens\Tecnomatix Plant Simulation 14.2",
 "Program Files\Siemens\Tecnomatix Plant Simulation 15",
 "Program Files\Siemens\Tecnomatix Plant Simulation 15.1"
 "X:\Program Files\Siemens\Tecnomatix Plant Simulation 15.2"
 "X:\Program Files\Siemens\Tecnomatix Plant Simulation 16"

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5. Click the Enable button right next to the newly created entry.

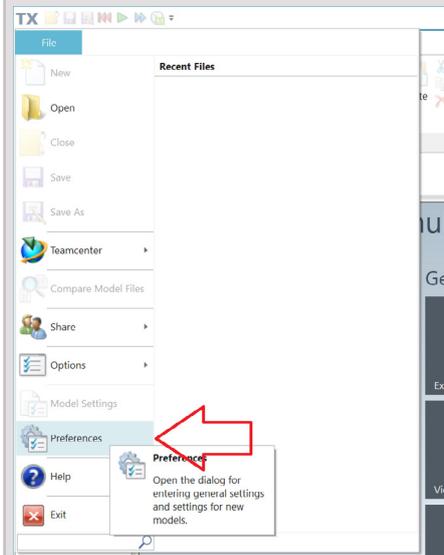


6. Close the Application Enabler.

7. The moreViz VR bridging function is now available for the Plant Simulation installation.

8. Start moreViz according to your setup and then start Plant Simulation.

9. To finetune the VR experience with Plant Simulation open the Plant Sim Preference:

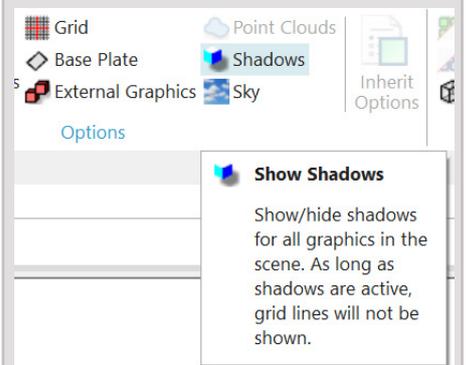


10. Open the 3D Tab.

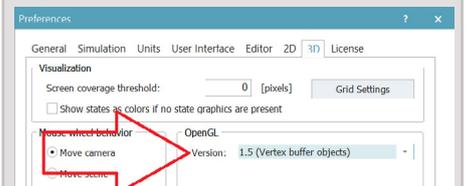
11. Set the "Screen coverage Threshold" to 0. This will force Plant Simulation to render all models at full resolution and ignore any Level of Detail setting, upgrading the visual experience in VR at the expense of GPU/CPU utilization



12. Do not enable shadows in the Plant Simulation model, shadows are not yet supported as of moreViz 1.16.



13. In case shadows are needed, open the Plant Simulation Preferences, go to the 3D tab and set "OpenGL Version" to "1.5".



14. In case there are any issues with the visualization in the moreViz client, make sure to have followed these guides:

- * Dual GPU & Quadro guide: For frozen or black image in client
- * Fit the 3D into the host app's viewport: in case geometry is missing in the moreViz client

moreViz Setup Guide: Process Simulate

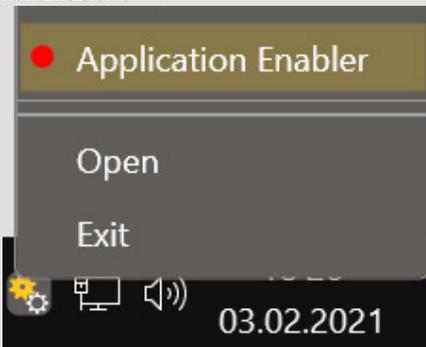


This quick guide shows the necessary configuration steps to bridge Process Simulate into VR.

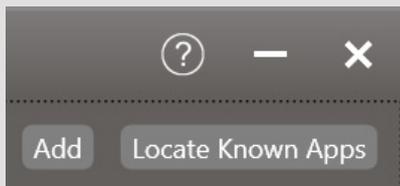
1. Start the moreViz Launcher



2. Notice the moreViz-Tray icon (next to system time) and right-click it, select "moreViz Application Enabler".

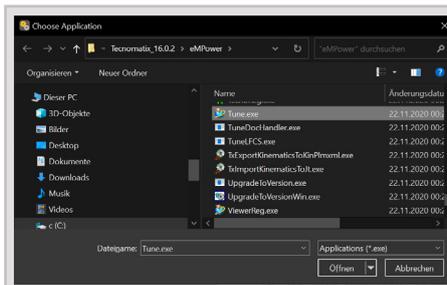


3. Click "Locate known Apps". The more3D application enabler will search the standard program files folders for known Process Simulate installations and add them to the list.

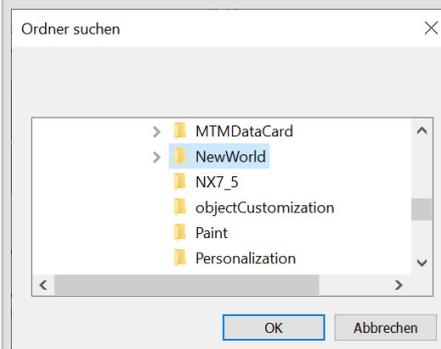


4. If your Process Simulate is installed to a non standard directory, please click "Add", locate the "Tune.exe" file. It is usually located in "X:\Program Files\Tecnomatix_14\emPower", "X:\Program Files\Tecnomatix_15\emPower", "X:\Program Files\Tecnomatix_15.0.2\emPower", "X:\Program Files\Tecnomatix_16\emPower", "X:\Program Files\Tecnomatix_16.0.1\emPower" etc.

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5. Click the Folder button for the newly created entry and navigate to the NewWorld subdirectory, then click OK.

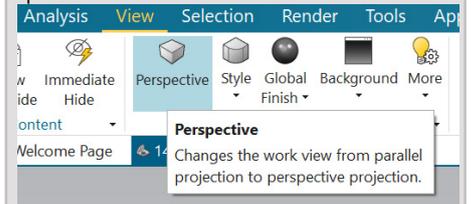


6. Click the Enable button and close the Application Enabler.

7. The moreViz VR bridging function is now available for the Process Simulate installation.

8. Start moreViz client(s) then start Process Simulate.

9. Make sure to enable the perspective view mode in Process Simulate, under View -> Perspective.



10. In case there are any issues with the visualization in the moreViz client, make sure to have followed these guides:

- * Enable perspective mode, as per individual app guide: For stretched and "glued to the center of HMD" error type
- * Dual GPU & Quadro guide: For frozen or black image in client
- * Fit the 3D into the host app's viewport: in case geometry is missing in the moreViz client

11. Do not hesitate to contact us for technical assistance at support@more3d.com.

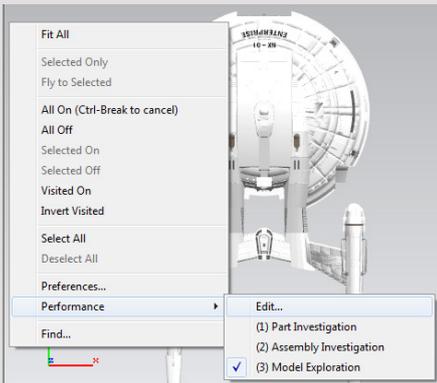
moreViz Setup Guide: JT2Go



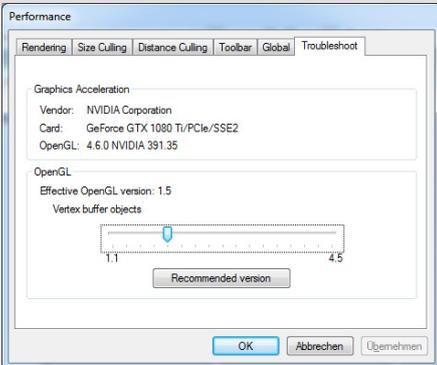
This quick guide shows the necessary configuration steps to bridge JT2Go into VR.

Please proceed as follows:

1. Launch JT2Go and load a model.
2. Right-click into the viewport and select "Performance" -> "Edit"



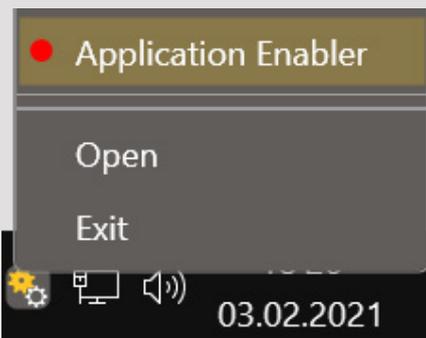
3. Switch to the "Troubleshoot" Tab and set the "Effective OpenGL Version" to "1.5".



4. Exit Jt2Go.
5. Start the moreViz Launcher

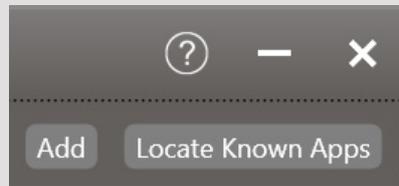


6. Notice the moreViz-Tray icon and right-click it, select "moreViz Application Enabler".

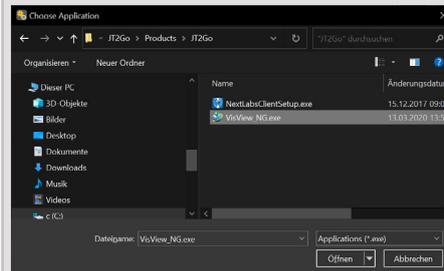


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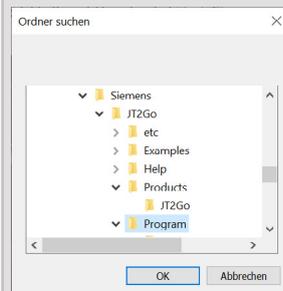
7. Click "Locate known Apps". The more3D application enabler will search the standard program files folders for known JT2Go installations and add them to the list.



8. If JT2Go is installed to a non standard directory, click "Add", then locate the "VisView_NG.exe" file. It is usually located in "X:\Program Files\Siemens\JT2Go\Products\JT2Go".



9. After adding your non-standard-directory version of JT2Go, please click the "Browse" button in the VisView_NG.exe's row. Navigate to the "Program" subdirectory and click OK. It is usually located either here: "X:\Program Files\Siemens\JT2Go\Program".

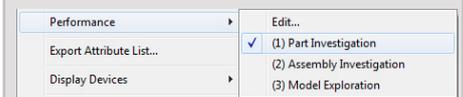


10. Click the Enable button right next to the newly created entry.



11. JT2Go is now properly configured for use with moreViz.

12. When operating JT2Go in VR, we recommend to set the "Performance" of JT2Go to "Part Investigation" for best visual impression.



13. In case there are any issues with the visualization in the moreViz client, make sure to have followed these guides:

- * Enable perspective mode, as per individual app guide: For stretched and "glued to the center of HMD" error type
- * Dual GPU & Quadro guide: For frozen or black image in client
- * Fit the 3D into the host app's viewport: in case geometry is missing in the moreViz client

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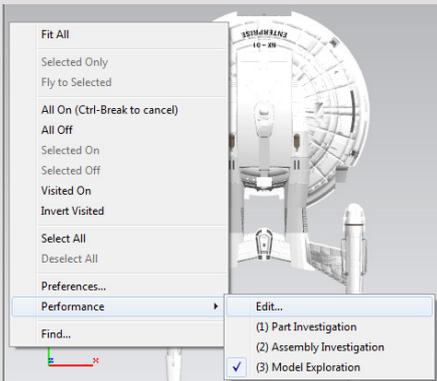
moreViz Setup Guide: Teamcenter Visualization / TcVis / Connect



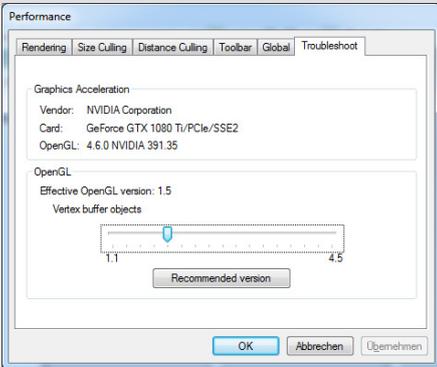
This quick guide shows the necessary configuration steps to bridge TcVis into VR.

Please proceed as follows:

1. Launch TcVis and load a model.
2. Right-click into the viewport and select "Performance" -> "Edit"



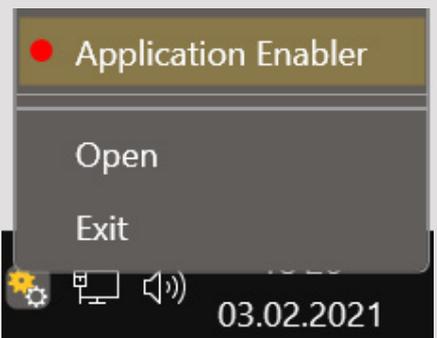
3. Switch to the "Troubleshoot" Tab and set the "Effective OpenGL Version" to "1.5".



4. Exit TcVis.
5. Start the moreViz Launcher

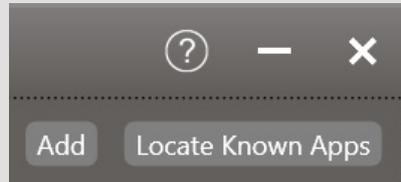


6. Notice the moreViz-Tray icon and right-click it, select "moreViz Application Enabler".

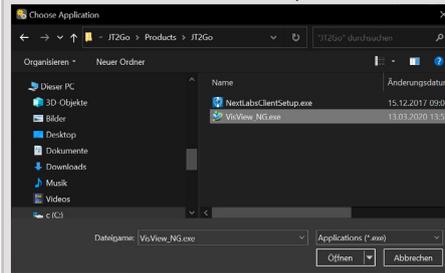


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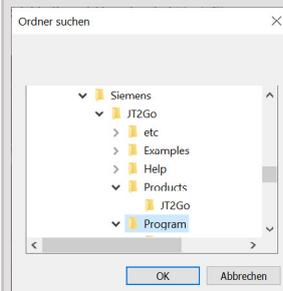
7. Click "Locate known Apps". The more3D application enabler will search the standard program files folders for known TcVis installations and add them to the list.



8. If TcVis is installed to a non standard directory, click "Add", then locate the "VisView_NG.exe" file. It is usually located in "X:\Program Files\Siemens\Teamcenter11.3\Visualization\Products\Mockup".



9. After adding your non-standard-directory version of TcVis, please click the "Browse" button in the VisView_NG.exe's row. Navigate to the "Program" subdirectory and click OK. It is usually located either here: "X:\Program Files\Siemens\Teamcenter11.3\Visualization\Program".

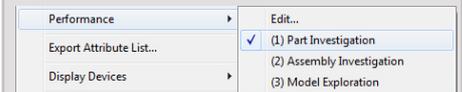


10. Click the Enable button right next to the newly created entry.



11. TcVis is now properly configured for use with moreViz.

12. When operating TcVis in VR, we recommend to set the "Performance" of TcVis to "Part Investigation" for best visual impression.



13. In case there are any issues with the visualization in the moreViz client, make sure to have followed these guides:

- * Enable perspective mode, as per individual app guide: For stretched and "glued to the center of HMD" error type
- * Dual GPU & Quadro guide: For frozen or black image in client
- * Fit the 3D into the host app's viewport: in case geometry is missing in the moreViz client

Do not hesitate to contact us for technical assistance at support@more3d.com.

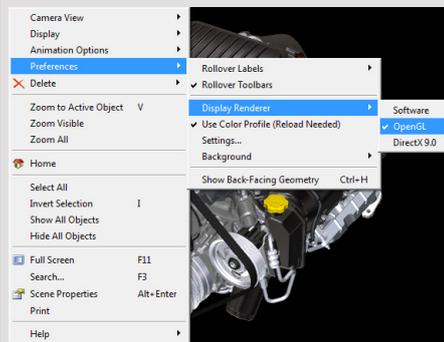
moreViz Setup Guide: SAP Visual Enterprise Viewer / Author



This quick guide shows the necessary configuration steps to bridge SAP Visual Enterprise to VR.

Please proceed as follows:

1. Launch SAP Visual Enterprise Viewer/Author and load a model.
2. Right click into the viewport, select "Preferences -> Display Renderer -> OpenGL"

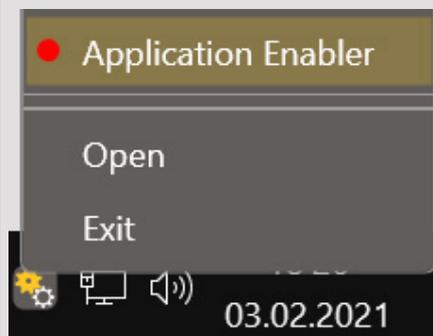


3. Exit SAP Visual Enterprise Viewer / Author.

4. Start the moreViz Launcher

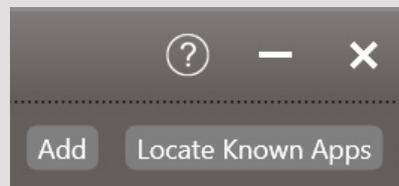


5. Notice the moreViz-Tray icon (next to system time) and right-click it, select "moreViz Application Enabler".

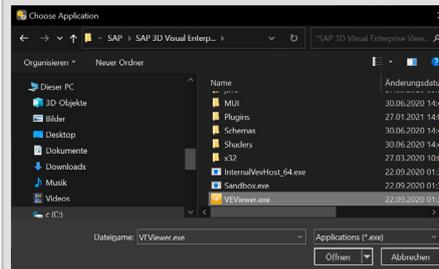


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6. Click "Locate known Apps". moreViz will search the standard program files folders for known SAP Visual Enterprise installation locations and add them to the list.



7. If your SAP Visual Enterprise is installed to a non standard directory, please click "Add Application", locate your "VEViewer.exe" or "VEAuthor.exe" file.



8. Click the Enable button right next to the newly created entry.



9. Close the more3D Application Enabler.

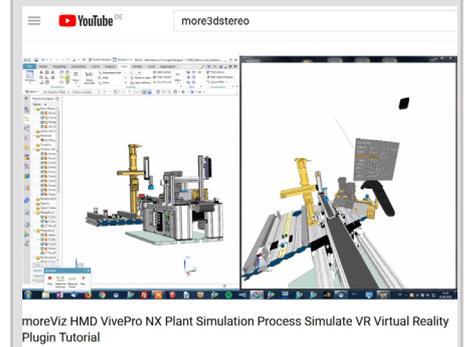
10. Start the moreViz Client(s) and SAP.

Do not hesitate to contact us for technical assistance at support@more3d.com.

In case there are any issues with the visualization in the moreViz client, make sure to have followed these guides:

- * Enable perspective mode, as per individual app guide: For stretched and "glued to the center of HMD" error type
- * Dual GPU & Quadro guide: For frozen or black image in client
- * Fit the 3D into the host app's viewport: in case geometry is missing in the moreViz client

There are many tutorial videos available on more3D's youtube channel: [more3DStereo](https://www.youtube.com/more3DStereo).



moreViz Setup Guide: Catia / Delmia

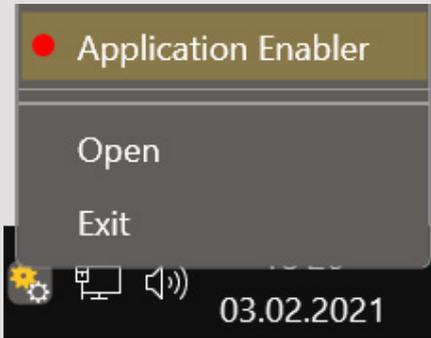


This quick guide shows the necessary configuration steps to bridge Catia / Delmia into VR

1. Start the moreViz Launcher



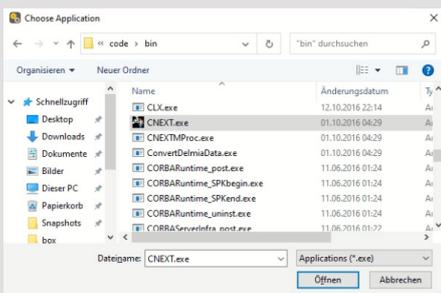
2. Notice the moreViz-Tray icon (next to system time) and right-click it, select "moreViz Application Enabler".



3. Click "Locate known Apps". The more3D application enabler will search the standard program files folders for known Catia / Delmia installations and add them to the list.



4. If your Catia/Delmia is installed to a non standard directory, please click "Add", locate your "CNext.exe". The standard path is X:\Program Files\Dassault Systemes\Bxx\win_b64\code\bin (xx = version number).



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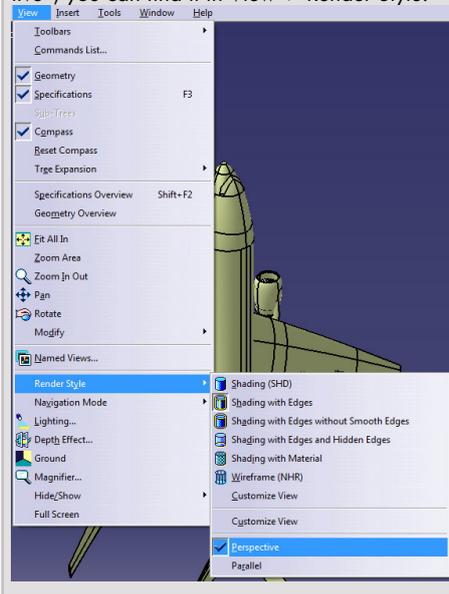
5. Click the "Enable" button for Catia / Delmia



6. Close the Application Enabler.

7. The moreViz VR bridging function is now available for the Catia / Delmia installation. Start the moreViz Client(s) and Catia / Delmia. Ignore any messages about uncertified OpenGL32.dll's on startup of Catia/Delmia.

8. When working in VR, please make sure to set the Visualization mode in Catia to "Perspective", you can find it in View -> Render Style:



In case there are any issues with the visualization in the moreViz client, make sure to have followed these guides:

- * Enable perspective mode, as per individual app guide: For stretched and "glued to the center of HMD" error type
- * Dual GPU & Quadro guide: For frozen or black image in client
- * Fit the 3D into the host app's viewport: in case geometry is missing in the moreViz client

Do not hesitate to contact us for technical assistance at support@more3d.com.

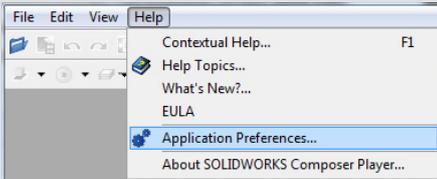
moreViz Setup Guide: Composer (Player)



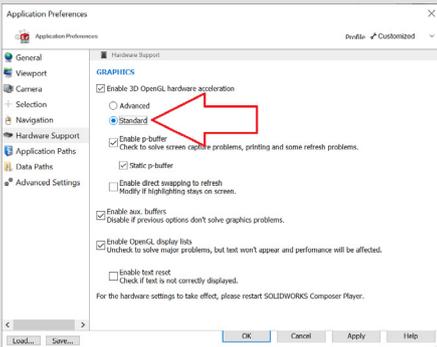
This quick guide shows the necessary configuration steps to bridge Catia Composer into VR. This guide works similarly for SolidWorks Composer.

Please proceed as follows:

1. Launch Composer (Player)
2. Click "Help" and "Application Preferences"



3. Switch to the "Hardware Support" Tab and set the "OpenGL Acceleration Level" to "Standard".

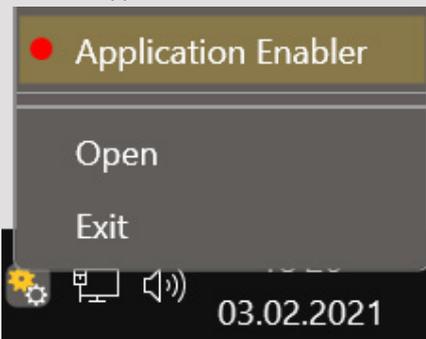


4. Exit Composer (Player).

5. Start the moreViz Launcher

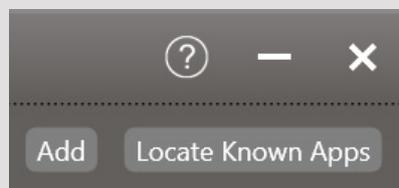


6. Notice the moreViz-Tray icon (next to system time) and right-click it, select "moreViz Application Enabler".

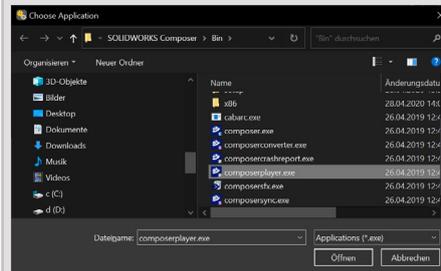


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7. Click "Locate known Apps". The more3D application enabler will search the standard program files folders for known Composer (Player) installations and add them to the list.



8. If your Catia Composer (Player) is installed to a non standard directory, please click "Add Application", locate your "ComposerPlayer.exe" / "CatiaComposer.exe" file. It is usually located in "X:\Program Files\Dassault Systemes\CATIAComposer\x.x\Bin".

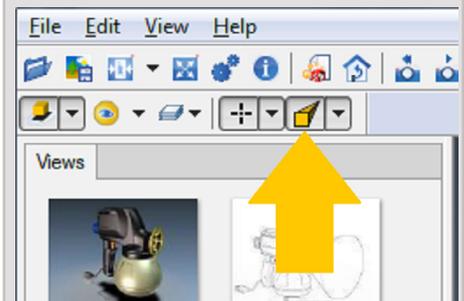


9. Place the checkmark in the "enabled" column for Composer (Player) / Composer.



10. Click "Save & Close", Composer (Player) is now properly configured for use with moreViz. Launch the moreViz Client(s) and then Composer (Player).

11. When working in VR: make sure Catia Composer (Player) is running in perspective view mode.



12. In case there are any issues with the visualization in the moreViz client, make sure to have followed these guides:

- * Enable perspective mode, as per individual app guide: For stretched and "glued to the center of HMD" error type
- * Dual GPU & Quadro guide: For frozen or black image in client
- * Fit the 3D into the host app's viewport: in case geometry is missing in the moreViz client

13. Do not hesitate to contact us for technical assistance at support@more3d.com.

moreViz Setup Guide: Solid Works

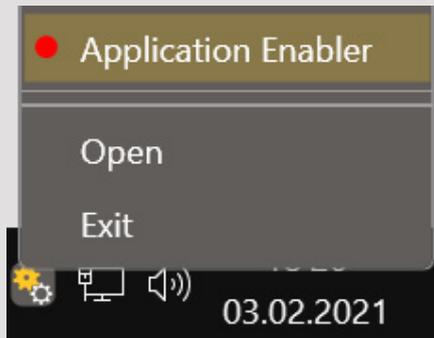


This quick guide shows the necessary configuration steps to bridge Solid Works into VR. Please update the Nvidia graphics driver to version 471.68 or newer!

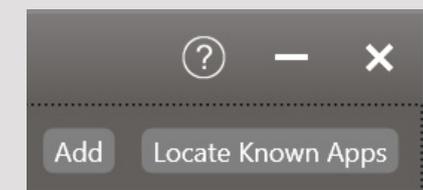
1. Start the moreViz Launcher



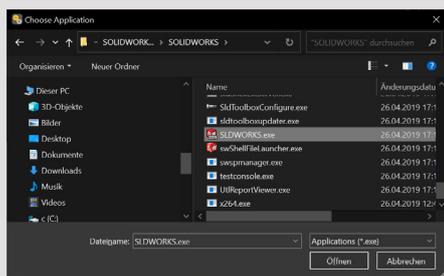
2. Notice the moreViz-Tray icon (next to system time) and right-click it, select "moreViz Application Enabler".



3. Click "Locate known Apps". The more3D application enabler will search the standard program files folders for known Solid Works installations and add them to the list.



4. If SolidWorks is installed to a non standard directory, please click "Add", locate your "SLDWORKS.exe". The standard path is X:\Program Files\SOLIDWORKS Corp\SOLIDWORKS\.



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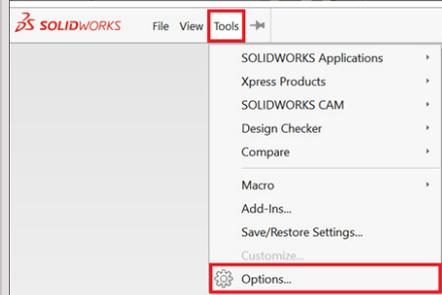
5. Click the Enable button right next to the newly created entry.



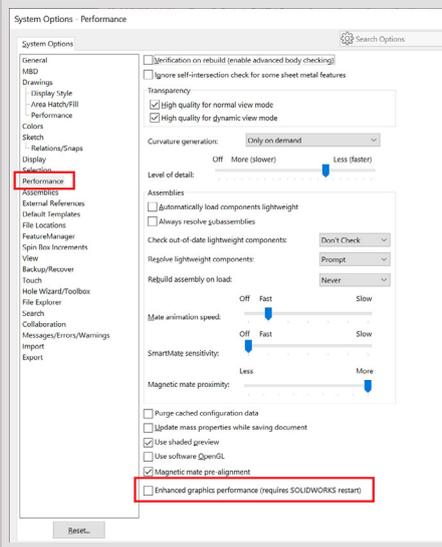
6. Close the Application Enabler.

7. The moreViz VR bridging function is now available for the Solid Works installation.

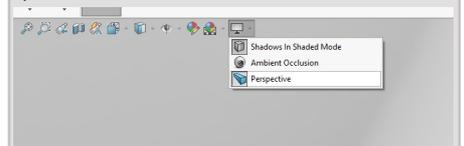
8. If your Solid Works version is 2020 or newer, please open the SolidWorks Settings



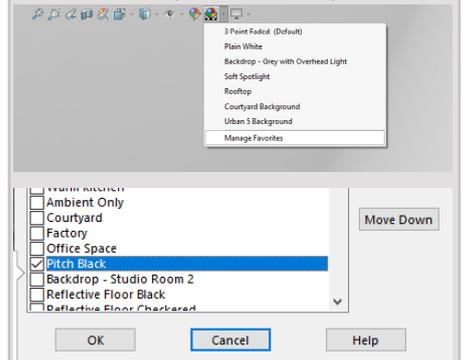
9. In the left list, select "Performance" and then uncheck the "Enhanced Graphics Performance" checkbox.



10. When working in VR, please make sure to set the visualization mode in SolidWorks to "Perspective":



11. To get the best immersion effect, it is beneficial to set for the pitch black background:



12. In case 3D data is not transmitted from SolidWorks to the moreViz client, please set the "Connection Type" to "TCP/IP" and use local-host IP 127.0.0.1 on port 8700. See Launcher settings -> Connection.

13. When updating to a newer version of moreViz, please open the windows task manager and kill the process "sldworks_fs.exe" before opening the application enabler. The sldworks_fs.exe locks the moreViz function file and therefore needs to be closed to unlock the moreViz file for updating.

14. Please update the nvidia graphics driver to version 471.68 or newer!

moreViz Setup Guide: PTC Creo

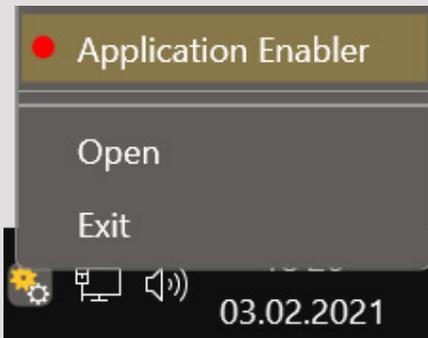


This quick guide shows the necessary configuration steps to bridge PTC Creo into VR.

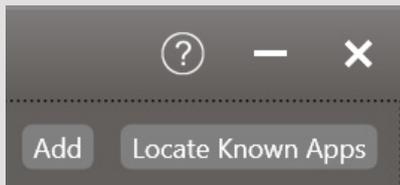
1. Start the moreViz Launcher



2. Notice the moreViz-Tray icon (next to system time) and right-click it, select "moreViz Application Enabler".

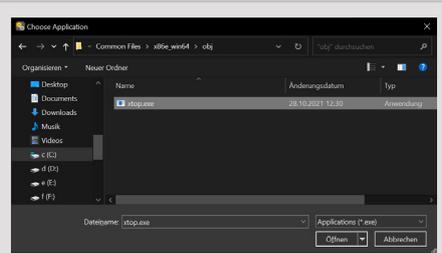


3. Click "Locate known Apps". The more3D application enabler will search the standard program files folders for known PTC Creo installations and add them to the list.



4. If your PTC Creo is installed to a non standard directory, please click "Add Application", locate your "xtop.exe". The standard path is X:\Program Files\PTC\Creo 8.0.2.0\Common Files\x86_win64\obj".

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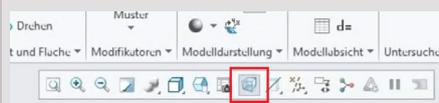
5. Place the checkmark in the "enabled" column for PTC Creo.



6. Close the Application Enabler.

7. The moreViz VR bridging function is now available for the PTC Creo installation. Start the moreViz Client(s) and then start PTC Creo.

8. Load a 3D model in PTC Creo and enable the perspective view mode.



9. In case there are any issues with the visualization in the moreViz client, make sure to have followed these guides:

- * Enable perspective mode, as per individual app guide: For stretched and "glued to the center of HMD" error type
- * Dual GPU & Quadro guide: For frozen or black image in client
- * Fit the 3D into the host app's viewport: in case geometry is missing in the moreViz client

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moreViz Setup Guide: Autodesk Alias Design

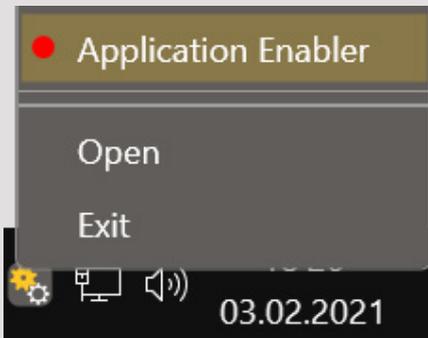


This quick guide shows the necessary configuration steps to bridge Alias Design into VR.

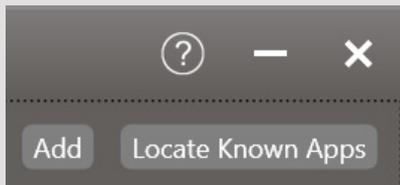
1. Start the moreViz Launcher



2. Notice the moreViz-Tray icon (next to system time) and right-click it, select "moreViz Application Enabler".

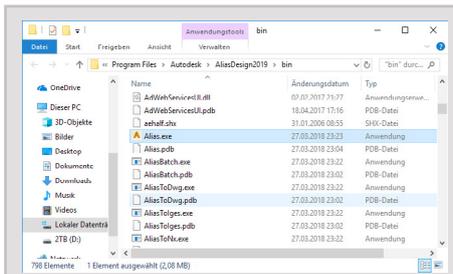


3. Click "Locate known Apps". The more3D application enabler will search the standard program files folders for known Alias Design installations and add them to the list.



4. If your Alias is installed to a non standard directory, please click "Add Application", locate your "Alias.exe". The standard path is X:\Program Files\Autodesk\AliasDesign2019\bin. Depending on your Alias Version the pathname might be different, yet the "bin" subfolder in the Alias"Version""Year" (e.g. AliasDesign2019) level is where we find the targeted "Alias.exe".

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5. Place the checkmark in the "enabled" column for Alias / Alias.exe.



6. Close the Application Enabler.

7. The moreViz VR bridging function is now available for the Alias Design installation. Start the moreViz Client(s) and then start Alias Design.

8. In case there are any issues with the visualization in the moreViz client, make sure to have followed these guides:

- * Enable perspective mode, as per individual app guide: For stretched and "glued to the center of HMD" error type
- * Dual GPU & Quadro guide: For frozen or black image in client
- * Fit the 3D into the host app's viewport: in case geometry is missing in the moreViz client

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moreViz Setup Guide: ICEM Surf

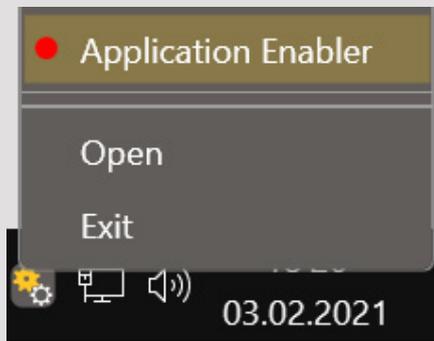


This quick guide shows the necessary configuration steps to bridge ICEM Surf into VR.

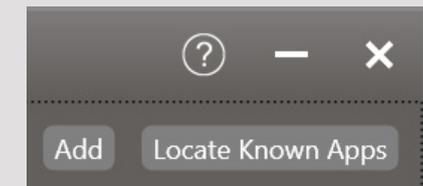
1. Start the moreViz Launcher



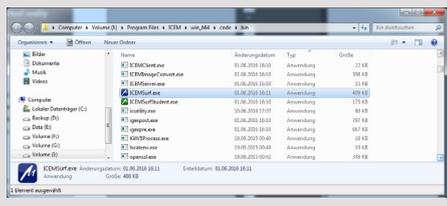
2. Notice the moreViz-Tray icon (next to system time) and right-click it, select "moreViz Application Enabler".



3. Click "Locate known Apps". The more3D application enabler will search the standard program files folders for known ICEM Surf installations and add them to the list.



4. If your ICEM Surf is installed to a non standard directory, please click "Add Application", locate your "ICEMSurf.exe". The standard path is X:\Program Files\ICEM\win_b64\code\bin".



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5. Click the Enable button right next to the newly created entry.

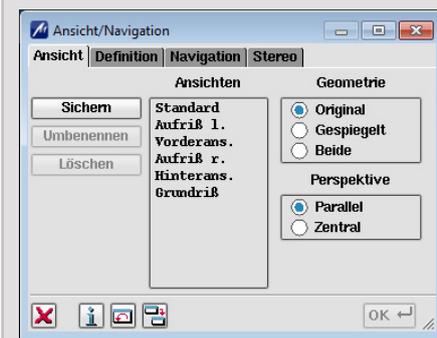


6. Close the Application Enabler. The moreViz VR bridging function is now available for the ICEM Surf installation.

7. Start the moreViz client and then launch ICEM Surf. Load a ICEM Surf project file. In ICEM Surf, click on "View" (eye symbol with three arrows in lower button bar).



Then the "Perspective" option "Central" (instead of "Parallel").



8. In case there are any issues with the visualization in the moreViz client, make sure to have followed these guides:

- * Enable perspective mode, as per individual app guide: For stretched and "glued to the center of HMD" error type
- * Dual GPU & Quadro guide: For frozen or black image in client
- * Fit the 3D into the host app's viewport: in case geometry is missing in the moreViz client

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moreViz Setup Guide: IPS

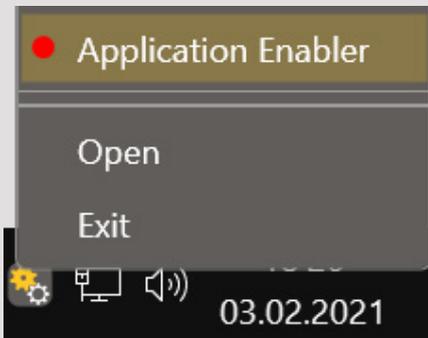


This quick guide shows the necessary configuration steps to bridge IPS into VR.

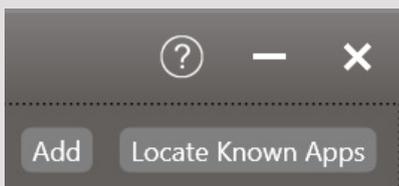
1. Start the moreViz Launcher



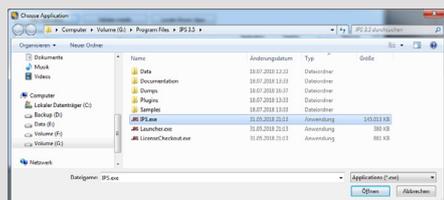
2. Notice the moreViz-Tray icon (next to system time) and right-click it, select "moreViz Application Enabler".



3. Click "Locate Known Apps". The more3D Application Enabler will search the standard program files folders for known IPS installations and add them to the list.



4. If your IPS is installed to a non standard directory, please click "Add", locate the "IPS.exe" file. It's usually located in X:\IPS x.x (xx =version, e.g. IPS 3.5).



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5. Click the Enable button right next to the newly created entry.



6. Close the Application Enabler.

7. The moreViz VR bridging function is now available for the NX installation. Start the moreViz Client(s) and then start IPS.

In case there are any issues with the visualization in the moreViz client, make sure to have followed these guides:

- * Enable perspective mode, as per individual app guide: For stretched and "glued to the center of HMD" error type
- * Dual GPU & Quadro guide: For frozen or black image in client
- * Fit the 3D into the host app's viewport: in case geometry is missing in the moreViz client

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moreViz Setup Guide: Ansys Mechanical

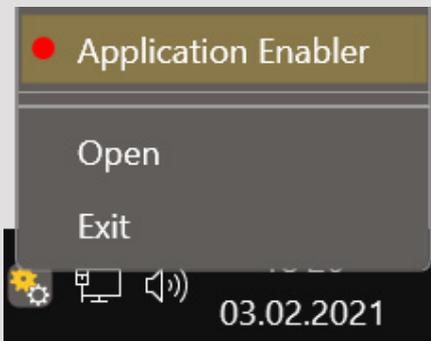


This quick guide shows the necessary configuration steps to bridge Ansys Mechanical into VR.

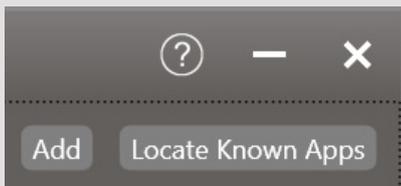
1. Start the moreViz Launcher



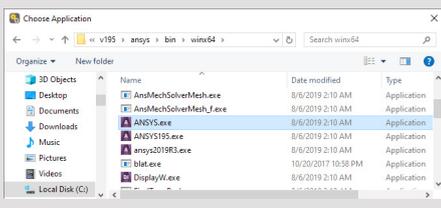
2. Notice the moreViz-Tray icon (next to system tray) and right-click it, select "moreViz Application Enabler".



3. Click "Locate Known Apps". The more3D Application Enabler will search the standard program files folders for known Ansys Mechanical installations and add them to the list.



4. If your Ansys is installed to a non standard directory, please click "Add Application", locate your "Ansys.exe". The standard path is X:\Program Files\ANSYS Inc\v195\ansys\bin\winx64".



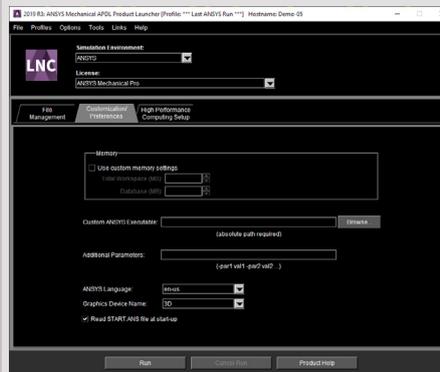
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5. Click the Enable button right next to the newly created entry.

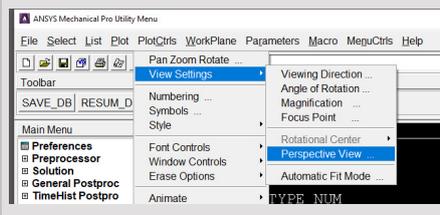


6. Close the Application Enabler. The moreViz VR bridging function is now available for the Ansys Mechanical installation.

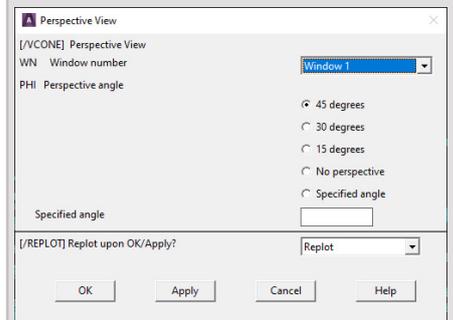
7. Open the Ansys Launcher and switch to the "Customization/Preferences" tab. Set the "Graphics Device Name" to "3D", then "run".



9. Start the moreViz client and then launch Ansys. Load an Ansys project file. In Ansys, click on "PlotCtrls" and then "View Settings" -> "Perspective View".



10. Select "45,30,15 degrees" or a "specified angle". Do not choose "no perspective". Then click OK.

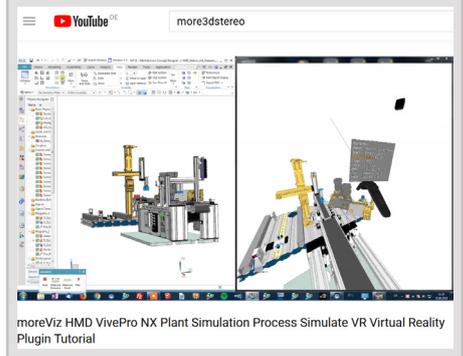


11. Ansys is now shown in your VR device. In case there are any issues with the visualization in the moreViz client, make sure to have followed these guides:

- * Enable perspective mode, as per individual app guide: For stretched and "glued to the center of HMD" error type
- * Dual GPU & Quadro guide: For frozen or black image in client
- * Fit the 3D into the host app's viewport: in case geometry is missing in the moreViz client

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moreViz Setup Guide: Ansys Ensignt

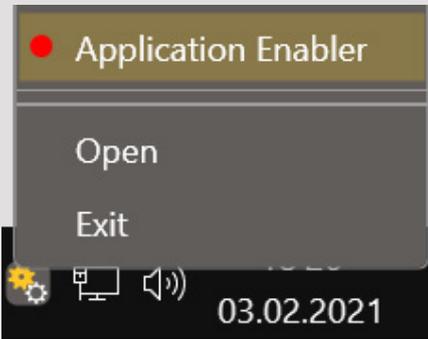


This quick guide shows the necessary configuration steps to bridge Ansys Ensignt into VR.

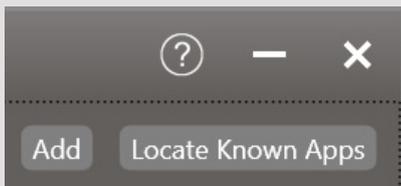
1. Start the moreViz Launcher



2. Notice the moreViz-Tray icon (next to system time) and right-click it, select "moreViz Application Enabler".



3. Click "Locate Known Apps". The more3D Application Enabler will search the standard program files folders for known Ansys Ensignt installations and add them to the list.



4. If your Ansys Ensignt is installed to a non standard directory, please click "Add Application", locate your "ens195cl.exe". The standard path is X:\Program Files\ANSYS Inc\v195\CEI\ensight195\machines\win64\ ("v195" in the path might differ, based on the ansys/ensight version).



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5. Click the Enable button right next to the newly created entry.



6. Close the Application Enabler.

7. The moreViz VR bridging function is now available for the Ansys Ensignt installation.

8. Start the moreViz Client(s) and then start Ansys Ensignt.

In case there are any issues with the visualization in the moreViz client, make sure to have followed these guides:

- * Enable perspective mode, as per individual app guide: For stretched and "glued to the center of HMD" error type
- * Dual GPU & Quadro guide: For frozen or black image in client
- * Fit the 3D into the host app's viewport: in case geometry is missing in the moreViz client

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moreViz Setup Guide: Ansys Workbench

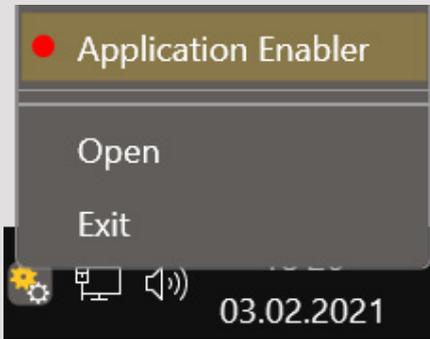


This quick guide shows the necessary configuration steps to bridge Ansys Workbench into VR.

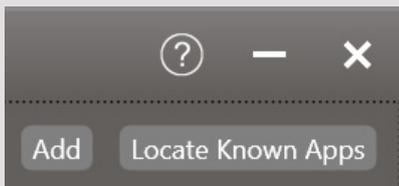
1. Start the moreViz Launcher



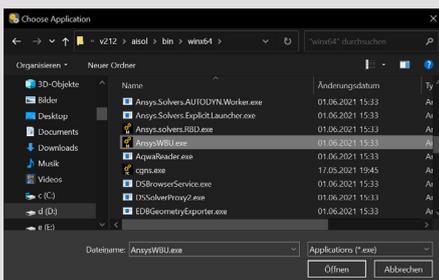
2. Notice the moreViz-Tray icon (next to system time) and right-click it, select "moreViz Application Enabler".



3. Click "Locate Known Apps". The more3D Application Enabler will search the standard program files folders for known Ansys Workbench installations and add them to the list.



4. If Ansys Workbench is installed to a non standard directory, please click "Add Application", locate your "AnsysWBU.exe". The standard path is X:\Program Files\ANSYS Inc\v212\aisol\bin\winx64".



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5. Click the Enable button right next to the newly created entry.



6. Close the Application Enabler. The moreViz VR bridging function is now available for Ansys Workbench.

7. Start the moreViz Client and then start Ansys Workbench. Load any 3D scene. Enjoy using Ansys Workbench in your VR environment.

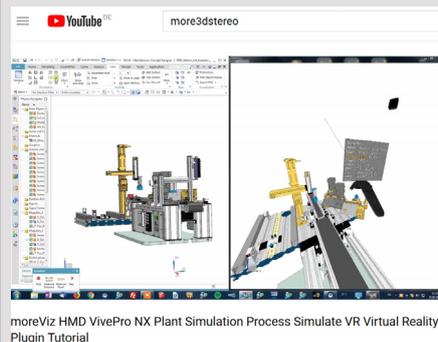
8. Ansys Workbench is now shown in your VR device.

In case there are any issues with the visualization in the moreViz client, make sure to have followed these guides:

- * Dual GPU & Quadro guide: For frozen or black image in client
- * Fit the 3D into the host app's viewport: in case geometry is missing in the moreViz client

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moreViz Setup Guide: LS PrePost

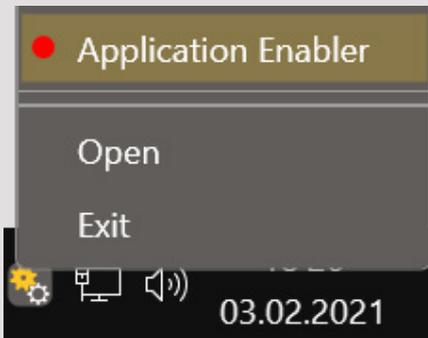


This quick guide shows the necessary configuration steps to bridge LS PrePost into VR.

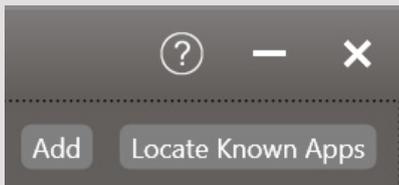
1. Start the moreViz Launcher



2. Notice the moreViz-Tray icon (next to system time) and right-click it, select "moreViz Application Enabler".

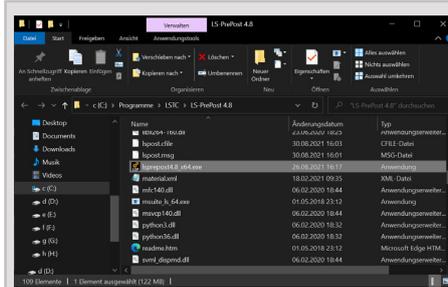


3. Click "Locate known Apps". The more3D application enabler will search the standard program files folders for known LS PrePost installations and add them to the list.



4. If your LS PrePost is installed to a non standard directory, please click "Add Application", locate your "lsprepost4.8_x64.exe". The standard path is "X:\Program Files\LSTC\LS-PrePost x.x". Depending on your LS PrePost version the pathname might be different, replace x.x in the path with e.g. 4.8.

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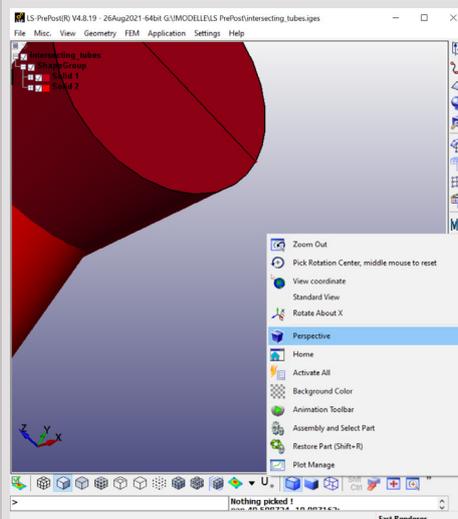
5. Place the checkmark in the "enabled" column for LS PrePost / lsprepost4.8_x64.exe.exe.



6. Close the Application Enabler.

7. The moreViz VR bridging function is now available for the LS PrePost installation. Start the moreViz Client(s) and then start LS PrePost.

8. After loading a project, make sure to enable the perspective view mode in LS PrePost.



In case there are any issues with the visualization in the moreViz client, make sure to have followed these guides:

- * Enable perspective mode, as per individual app guide: For stretched and "glued to the center of HMD" error type
- * Dual GPU & Quadro guide: For frozen or black image in client
- * Fit the 3D into the host app's viewport: in case geometry is missing in the moreViz client

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moreViz Setup Guide: Coin3D / CVExperimentsLab

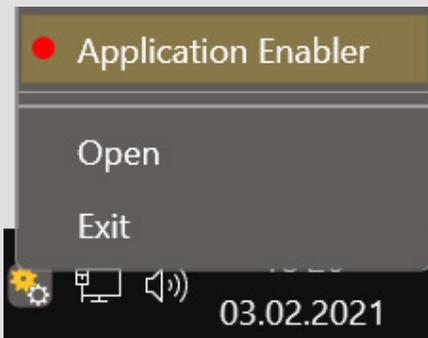


This quick guide shows the necessary configuration steps to bridge Coin3D / CVExperiment-slab into VR.

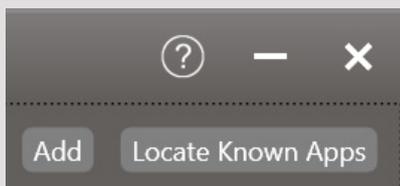
1. Start the moreViz Launcher



2. Notice the moreViz-Tray icon (next to system time) and right-click it, select "moreViz Application Enabler".

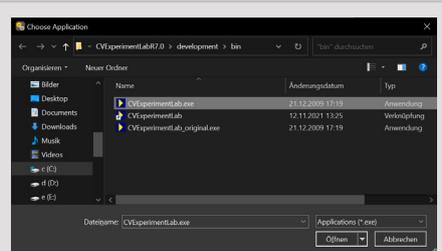


3. Click "Locate known Apps". The more3D application enabler will search the standard program files folders for known Coin3D / CVExperimentsLab installations and add them to the list.



4. If your Coin3D / CVExperimentsLab is installed to a non standard directory, please click "Add Application", locate your "CVExperimentLab.exe" (or the according Coin3D based exe). The standard path is X:\Program Files (x86)\CAMEL\CVExperimentLabR7.0\development\bin".

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5. Make sure to select Win64 for a 64bit version of the application or Win32 for a 32bit version. Place the checkmark in the "enabled" column for Coin3D / CVExperimentsLab.



6. Close the Application Enabler.

7. The moreViz VR bridging function is now available for the Coin3D / CVExperimentsLab installation. Start the moreViz Client(s) and then start Coin3D / CVExperimentsLab.

8. In case there are any issues with the visualization in the moreViz client, make sure to have followed these guides:

- * Enable perspective mode, as per individual app guide: For stretched and "glued to the center of HMD" error type
- * Dual GPU & Quadro guide: For frozen or black image in client
- * Fit the 3D into the host app's viewport: in case geometry is missing in the moreViz client

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moreViz Setup Guide: TecPlot 360

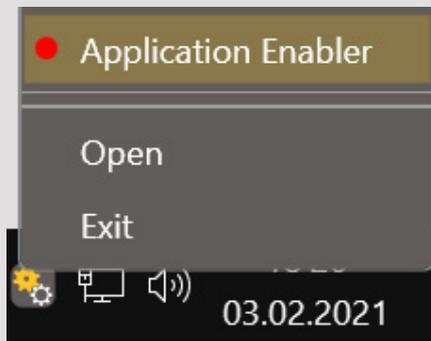


This quick guide shows the necessary configuration steps to bridge TecPlot 360 into VR.

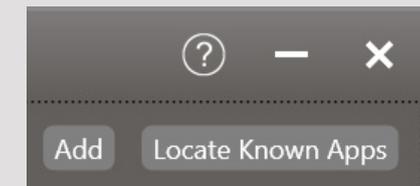
1. Start the moreViz Launcher



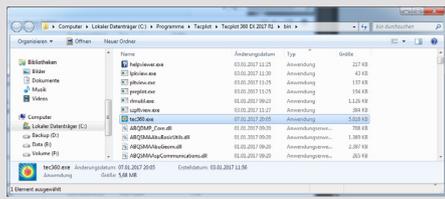
2. Notice the moreViz-Tray icon (next to system time) and right-click it, select "moreViz Application Enabler".



3. Click "Locate Known Apps". The more3D Application Enabler will search the standard program files folders for known TecPlot 360 installations and add them to the list.



4. If your TecPlot is installed to a non standard directory, please click "Add Application", locate your "tec360.exe". The standard path is X:\Program Files\Tecplot\Tecplot 360 EX 2017 R1\bin".



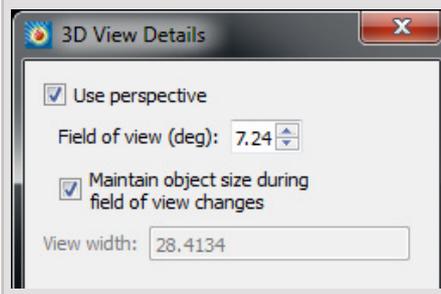
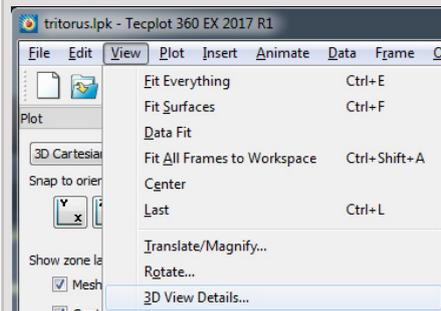
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5. Click the Enable button right next to the newly created entry.



6. Close the Application Enabler.

7. Start the moreViz client and then launch TecPlot. Load a TecPlot project file. In TecPlot, click on "View" -> "3D View Details" and place the checkmark at "Use Perspective".

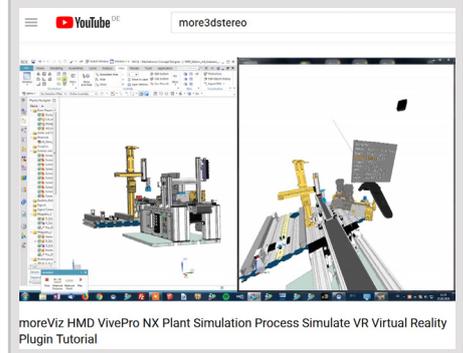


In case there are any issues with the visualization in the moreViz client, make sure to have followed these guides:

- * Enable perspective mode, as per individual app guide: For stretched and "glued to the center of HMD" error type
- * Dual GPU & Quadro guide: For frozen or black image in client
- * Fit the 3D into the host app's viewport: in case geometry is missing in the moreViz client

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Many tutorial videos are available on more3D's youtube channel: [more3DStereo](https://www.youtube.com/more3DStereo).



moreViz Setup Guide: SimPack

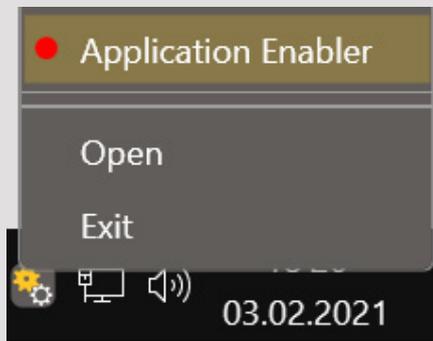


This quick guide shows the necessary configuration steps to bridge SimPack into VR.

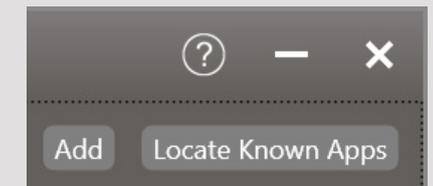
1. Start the moreViz Launcher



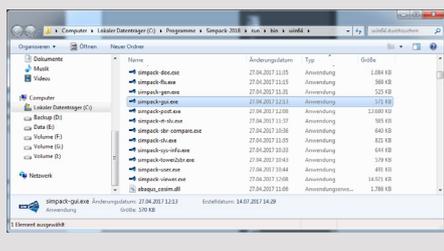
2. Notice the moreViz-Tray icon (next to system time) and right-click it, select "moreViz Application Enabler".



3. Click "Locate Known Apps". The more3D Application Enabler will search the standard program files folders for known SimPack installations and add them to the list.



4. If your SimPack is installed to a non standard directory, please click "Add Application", locate your "simpack-gui.exe". The standard path is X:\Program Files\Simpack-20xx\run\bin\win64" (xx= year release number, e.g. 18).



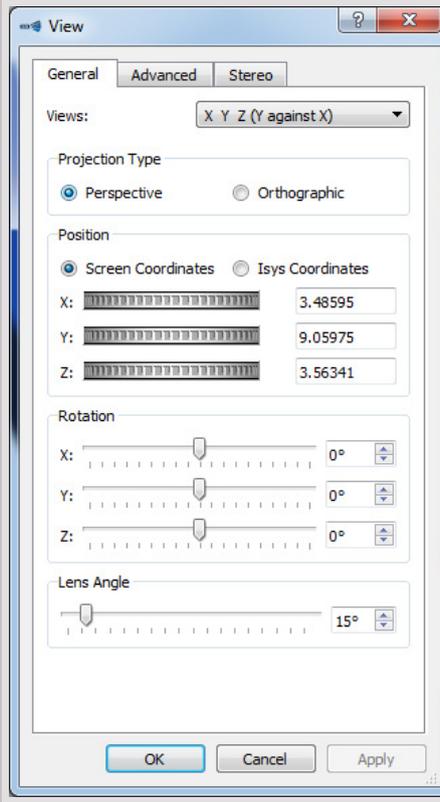
With over 15 years of experience, more3D provides superior stereoscopic and virtual reality software and solutions to clients in industry, trade and media. We create solutions for 3D VR CAVE, 3D projection, 3D monitors, 3D TVs, 3D HMDs. Inspire your customers and colleagues with 3D VR visualisation and its sustainable benefits.

5. Click the Enable button right next to the newly created entry.



6. Close the Application Enabler.

7. Start the moreViz client and then launch SimPack. Load a SimPack project file. In SimPack, click on "View" and select "Properties". Set the "Projection Type" to "Perspective".



8. In case there are any issues with the visualization in the moreViz client, make sure to have followed these guides:

- * Enable perspective mode, as per individual app guide: For stretched and "glued to the center of HMD" error type
- * Dual GPU & Quadro guide: For frozen or black image in client
- * Fit the 3D into the host app's viewport: in case geometry is missing in the moreViz client

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moreViz Setup Guide: Autodesk Moldflow Communicator

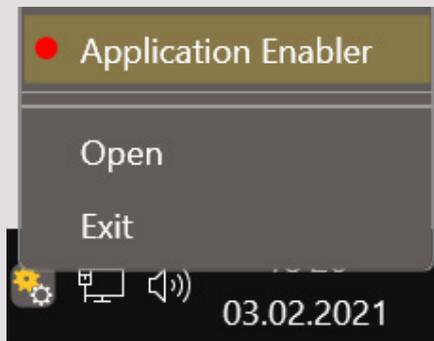


This quick guide shows the necessary configuration steps to bridge Moldflow Communicator into VR.

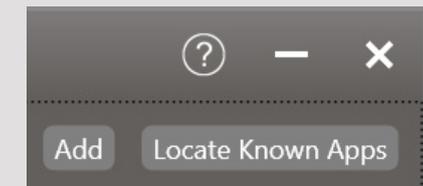
1. Start the moreViz Launcher



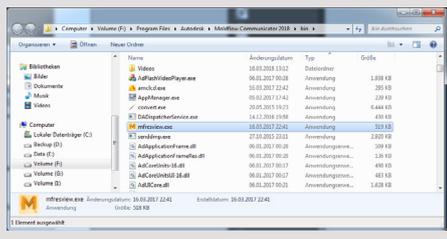
2. Notice the moreViz-Tray icon (next to system time) and right-click it, select "moreViz Application Enabler".



3. Click "Locate Known Apps". The more3D Application Enabler will search the standard program files folders for known Moldflow Communicator installations and add them to the list.



4. If your Moldflow Communicator is installed to a non standard directory, please click "Add" and locate the "mfesview.exe". The standard path is X:\Program Files\Autodesk\Moldflow Communicator 20xx\bin" (xx= year release number, e.g. 18).



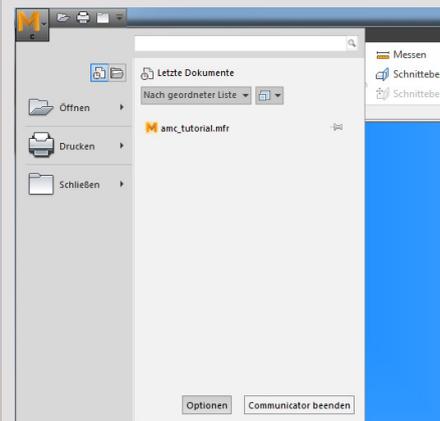
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5. Click the Enable button right next to the newly created entry.

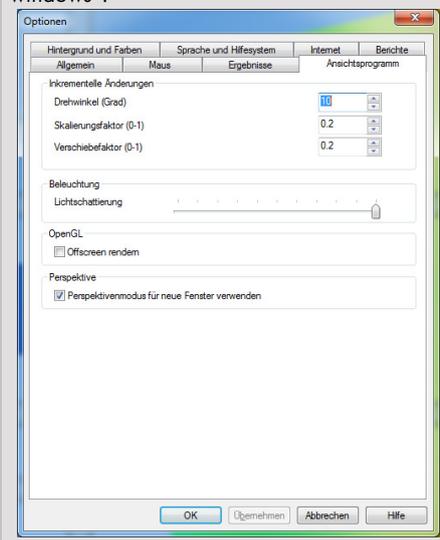


6. Close the Application Enabler.

7. Start the moreViz client and then launch Moldflow. Load a Moldflow project file. In Moldflow, click on "File" and select "Options".



8. Go To "Viewing Options" and tick the checkbox at "Use Perspective Mode for new windows".

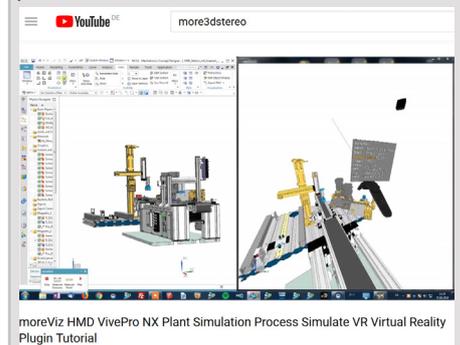


In case there are any issues with the visualization in the moreViz client, make sure to have followed these guides:

- * Enable perspective mode, as per individual app guide: For stretched and "glued to the center of HMD" error type
- * Dual GPU & Quadro guide: For frozen or black image in client
- * Fit the 3D into the host app's viewport: in case geometry is missing in the moreViz client

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moreViz HMD VivePro NX Plant Simulation Process Simulate VR Virtual Reality Plugin Tutorial

moreViz Setup Guide: Fledermaus

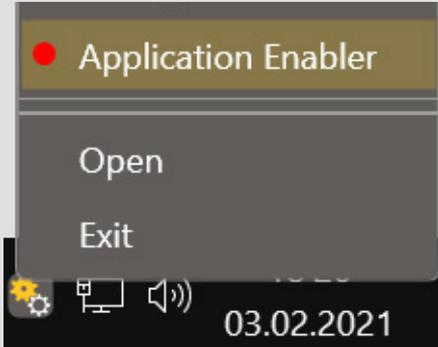


This quick guide shows the necessary configuration steps to bridge Fledermaus into VR.

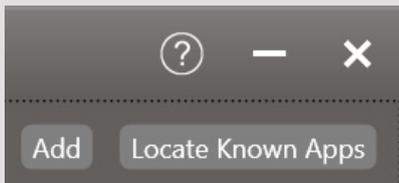
1. Start the moreViz Launcher



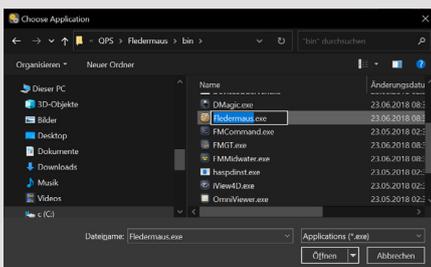
2. Notice the moreViz-Tray icon (next to system time) and right-click it, select "moreViz Application Enabler".



3. Click "Locate Known Apps". The more3D Application Enabler will search the standard program files folders for known Fledermaus installations and add them to the list.



4. If your Fledermaus software is installed to a non standard directory, please click "Add", locate the "Fledermaus.exe" file. It is usually located in X:\Program Files\QPS\Fledermaus\bin".



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5. Click the Enable button right next to the newly created entry.



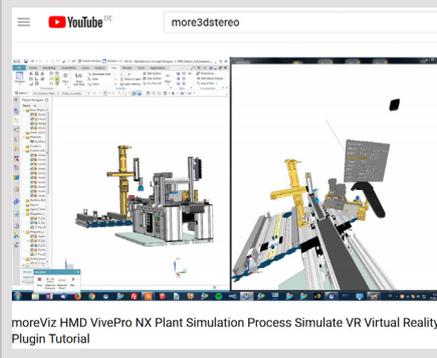
6. Close the Application Enabler.
7. The moreViz VR bridging function is now available for the Fledermaus installation.
8. Start the moreViz Client(s) and then start Fledermaus.

In case there are any issues with the visualization in the moreViz client, make sure to have followed these guides:

- * Enable perspective mode, as per individual app guide: For stretched and "glued to the center of HMD" error type
- * Dual GPU & Quadro guide: For frozen or black image in client
- * Fit the 3D into the host app's viewport: in case geometry is missing in the moreViz client

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moreViz Setup Guide: Qimera

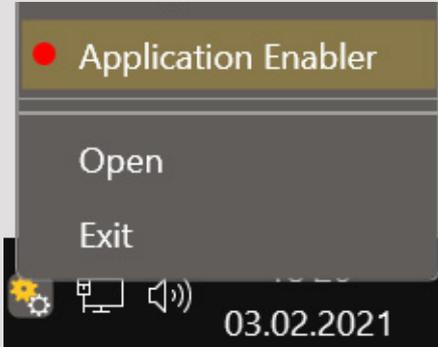


This quick guide shows the necessary configuration steps to bridge Qimera into VR.

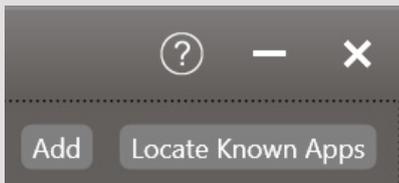
1. Start the moreViz Launcher



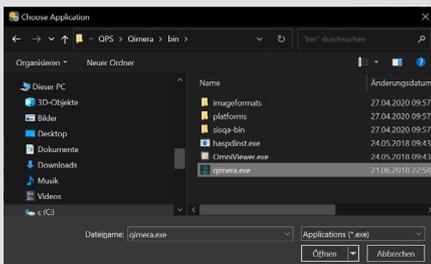
2. Notice the moreViz-Tray icon (next to system time) and right-click it, select "moreViz Application Enabler".



3. Click "Locate Known Apps". The more3D Application Enabler will search the standard program files folders for known Qimera installations and add them to the list.



4. If your Qimera is installed to a non standard directory, please click "Add" and locate the "Qimera.exe" file. It is usually located in X:\Program Files\QPS\Qimera\bin".



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5. Click the Enable button right next to the newly created entry.



6. Close the Application Enabler.

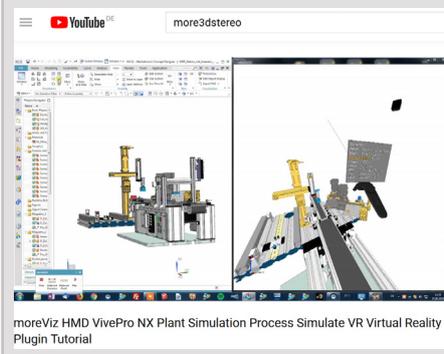
7. The moreViz VR bridging function is now available for the Qimera installation. Start the moreViz Client(s) and then start Qimera.

In case there are any issues with the visualization in the moreViz client, make sure to have followed these guides:

- * Enable perspective mode, as per individual app guide: For stretched and "glued to the center of HMD" error type
- * Dual GPU & Quadro guide: For frozen or black image in client
- * Fit the 3D into the host app's viewport: in case geometry is missing in the moreViz client

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moreViz Setup Guide: Petrel

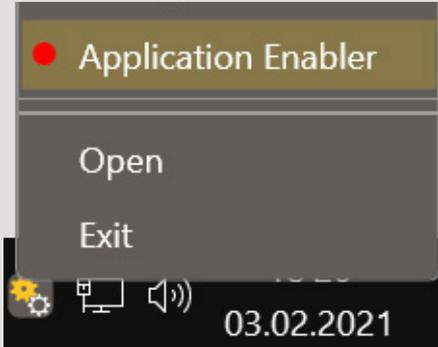


This quick guide shows the necessary configuration steps to bridge Petrel into VR.

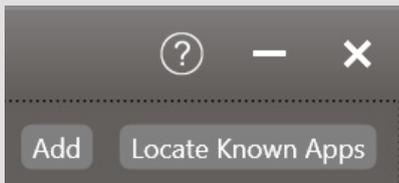
1. Start the moreViz Launcher



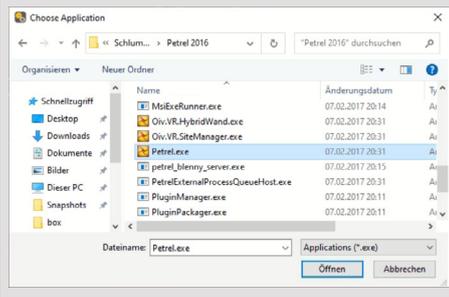
2. Notice the moreViz-Tray icon (next to system time) and right-click it, select "moreViz Application Enabler".



3. Click "Locate Known Apps". The more3D Application Enabler will search the standard program files folders for known Petrel installations and add them to the list.



4. If your Petrel is installed to a non standard directory, please click "Add" and locate the "Petrel.exe" file. It is usually located in "X:\Program Files\Schlumberger\Petrel 2017" for the 2017 version; 2018 /19 /20 alike.



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5. Click the Enable button right next to the newly created entry.



6. Close the Application Enabler.

7. The moreViz VR bridging function is now available for the Petrel installation.

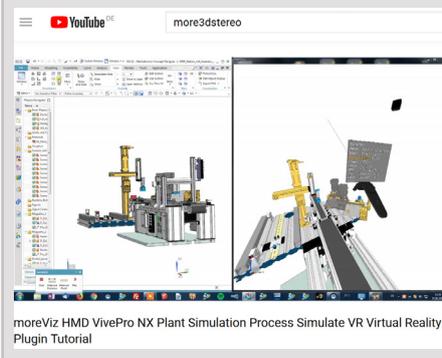
8. Start the moreViz Client(s) and then start Petrel.

In case there are any issues with the visualization in the moreViz client, make sure to have followed these guides:

- * Enable perspective mode, as per individual app guide: For stretched and "glued to the center of HMD" error type
- * Dual GPU & Quadro guide: For frozen or black image in client
- * Fit the 3D into the host app's viewport: in case geometry is missing in the moreViz client

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moreViz Setup Guide: Meshlab

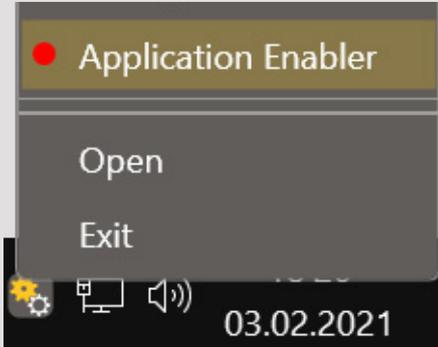


This quick guide shows the necessary configuration steps to bridge Meshlab into VR.

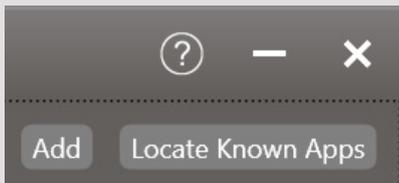
1. Start the moreViz Launcher



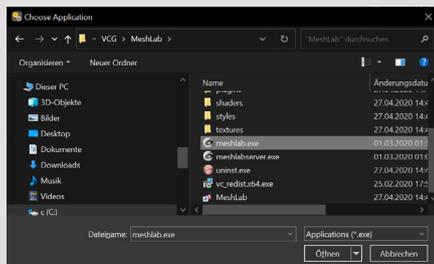
2. Notice the moreViz-Tray icon (next to system time) and right-click it, select "moreViz Application Enabler".



3. Click "Locate Known Apps". The more3D Application Enabler will search the standard program files folders for known Meshlab installations and add them to the list.



4. If Meshlab is installed to a non standard directory, please click "Add" and locate the "Meshlab.exe" file. It is usually located in "X:\Program Files\VCG\MeshLab\".



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5. Click the Enable button right next to the newly created entry.



6. Close the Application Enabler.

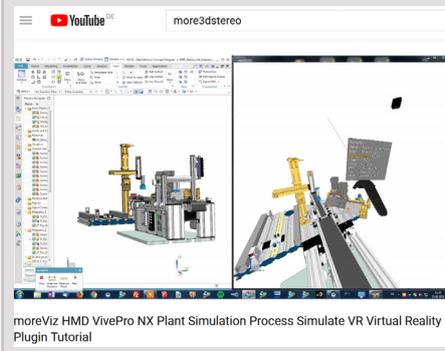
7. The moreViz VR bridging function is now available for the MeshLab installation. Start the moreViz Client(s) and then start MeshLab.

In case there are any issues with the visualization in the moreViz client, make sure to have followed these guides:

- * Enable perspective mode, as per individual app guide: For stretched and "glued to the center of HMD" error type
- * Dual GPU & Quadro guide: For frozen or black image in client
- * Fit the 3D into the host app's viewport: in case geometry is missing in the moreViz client

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moreViz Setup Guide: Voxler

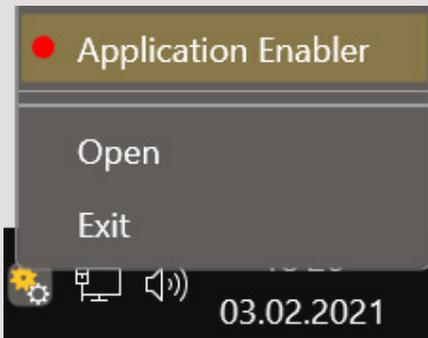


This quick guide shows the necessary configuration steps to bridge Voxler into VR.

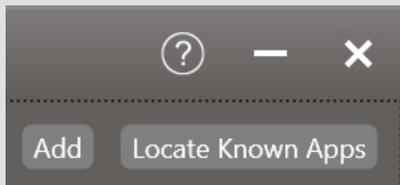
1. Start the moreViz Launcher



2. Notice the moreViz-Tray icon (next to system time) and right-click it, select "moreViz Application Enabler".

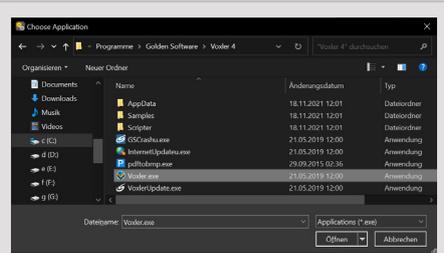


3. Click "Locate known Apps". The more3D application enabler will search the standard program files folders for known Voxler installations and add them to the list.



4. If Voxler is installed to a non standard directory, please click "Add Application", locate your "Voxler.exe". The standard path is "X:\Program Files\Golden Software\Voxler 4".

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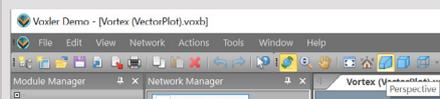
5. Place the checkmark in the "enabled" column for Voxler.



6. Close the Application Enabler.

7. The moreViz VR bridging function is now available for the Voxler installation. Start the moreViz Client(s) and then start PTC Creo.

8. Load a 3D model in Voxler and make sure the perspective view mode.



9. In case there are any issues with the visualization in the moreViz client, make sure to have followed these guides:

- * Enable perspective mode, as per individual app guide: For stretched and "glued to the center of HMD" error type
- * Dual GPU & Quadro guide: For frozen or black image in client
- * Fit the 3D into the host app's viewport: in case geometry is missing in the moreViz client

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moreViz Setup Guide: Bentley Context Capture

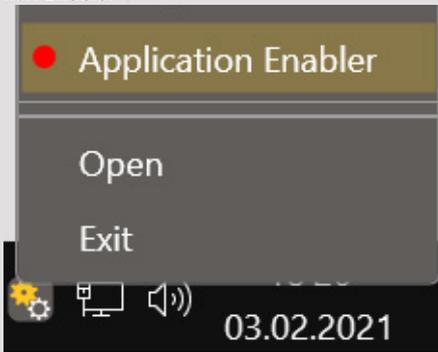


This quick guide shows the necessary configuration steps to bridge Bentley Context Capture Viewer into VR.

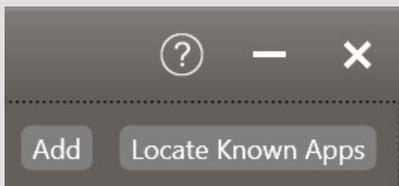
1. Start the moreViz Launcher



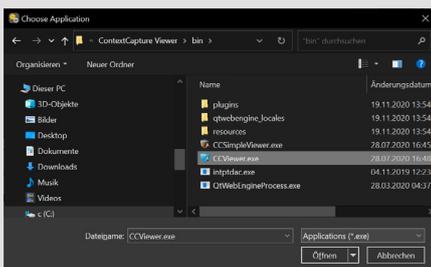
2. Notice the moreViz-Tray icon (next to system time) and right-click it, select "moreViz Application Enabler".



3. Click "Locate Known Apps". The more3D Application Enabler will search the standard program files folders for known Bentley Context Capture installations and add them to the list.



4. If your Bentley Context Capture Viewer is installed to a non standard directory, please click "Add" and locate the "CCViewer.exe" file. It is usually located in "X:\Program Files\Bentley\ContextCapture Viewer\bin\CCViewer.exe".



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5. Click the Enable button right next to the newly created entry.



6. Close the Application Enabler.

7. The moreViz VR bridging function is now available for the Bentley Context Capture Viewer installation. Start the moreViz Client(s) and then start Bentley Context Capture.

8. Models for CC Viewer should be generated with disabled LOD functions for best viewing experience in VR.

In case there are any issues with the visualization in the moreViz client, make sure to have followed these guides:

- * Enable perspective mode, as per individual app guide: For stretched and "glued to the center of HMD" error type
- * Dual GPU & Quadro guide: For frozen or black image in client
- * Fit the 3D into the host app's viewport: in case geometry is missing in the moreViz client

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moreViz Setup Guide: Metashape

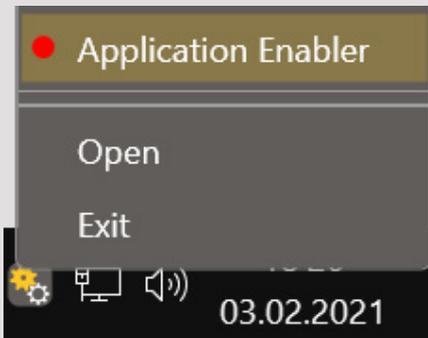


This quick guide shows the necessary configuration steps to bridge Metashape into VR.

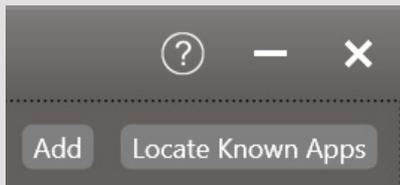
1. Start the moreViz Launcher



2. Notice the moreViz-Tray icon (next to system time) and right-click it, select "moreViz Application Enabler".

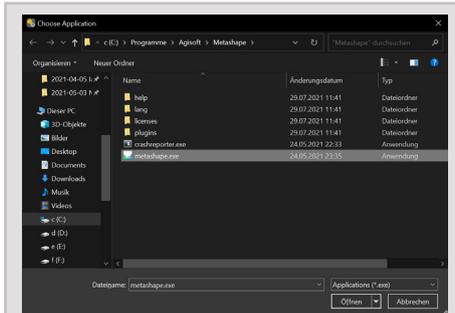


3. Click "Locate known Apps". The more3D application enabler will search the standard program files folders for known Metashape installations and add them to the list.



4. If Metashape is installed to a non standard directory, please click "Add Application", locate your "Metashape.exe". The standard path is "X:\Program Files\Agisoft\Metashape\".

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5. Place the checkmark in the "enabled" column for Metashape.



6. Close the Application Enabler.

7. The moreViz VR bridging function is now available for the Metashape installation. Start the moreViz Client(s) and then start Metashape.

8. In case there are any issues with the visualization in the moreViz client, make sure to have followed these guides:

- * Enable perspective mode, as per individual app guide: For stretched and "glued to the center of HMD" error type
- * Dual GPU & Quadro guide: For frozen or black image in client
- * Fit the 3D into the host app's viewport: in case geometry is missing in the moreViz client

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moreViz Setup Guide: ArcGIS Desktop / ArcScene

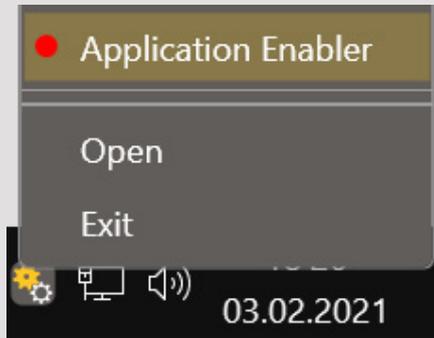


This quick guide shows the necessary configuration steps to bridge ArcGIS Desktop / ArcScene into VR.

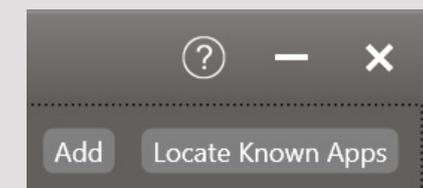
1. Start the moreViz Launcher



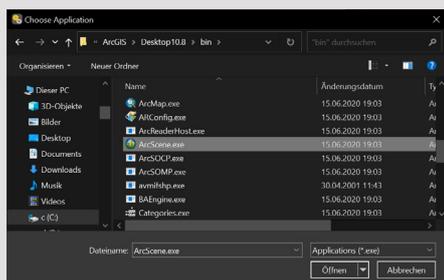
2. Notice the moreViz-Tray icon (next to system time) and right-click it, select "moreViz Application Enabler".



3. Click "Locate Known Apps". The more3D Application Enabler will search the standard program files folders for known ArcGIS Desktop / ArcScene installations and add them to the list.



4. If ArcGIS Desktop / ArcScene is installed to a non standard directory, please click "Add Application", locate your "ArcScene.exe". The standard path is "X:\Program Files (x86)\ArcGIS\Desktop10.8\bin".



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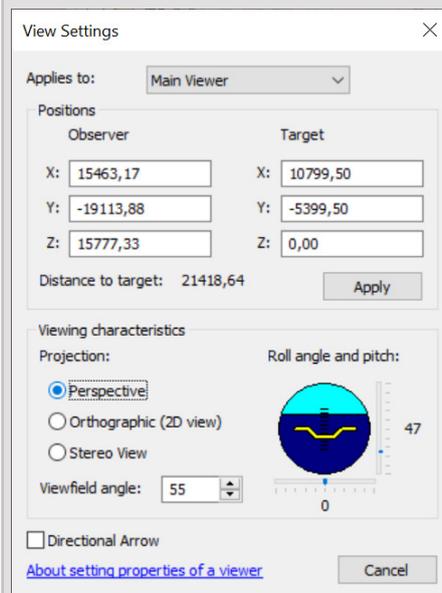
5. Click the Enable button right next to the newly created entry. Make sure to set Win64 for 64-Bit versions of ArcGIS, or Win32 for 32-Bit versions of the ArcGIS software.



6. Close the Application Enabler. The moreViz VR bridging function is now available for ArcGIS Desktop / ArcScene.

7. Start the moreViz Client and then start ArcGIS Desktop / ArcScene. Load any 3D scene. Enjoy using ArcGIS Desktop / ArcScene in your VR environment.

8. Make sure Perspective View is enabled in View -> View Settings



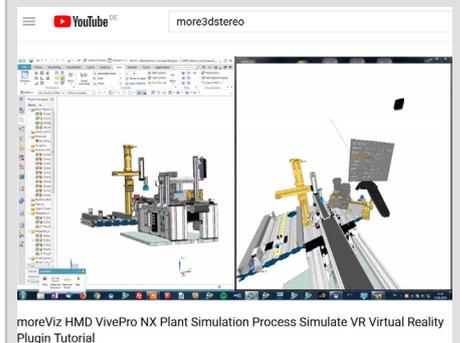
9. ArcGIS Desktop / ArcScene is now shown in your VR device.

In case there are any issues with the visualization in the moreViz client, make sure to have followed these guides:

- * Dual GPU & Quadro guide: For frozen or black image in client
- * Fit the 3D into the host app's viewport: in case geometry is missing in the moreViz client

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Many tutorial videos are available on more3D's youtube channel: <https://www.youtube.com/user/more3DSTEREO/videos>.



moreViz HMD VivePro NX Plant Simulation Process Simulate VR Virtual Reality Plugin Tutorial

moreViz Setup Guide: Sketchup

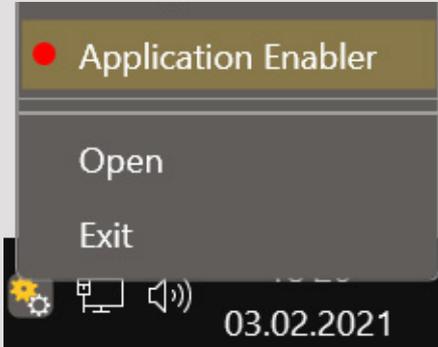


This quick guide shows the necessary configuration steps to bridge Sketchup into VR.

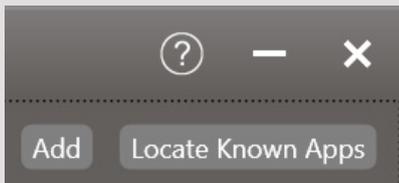
1. Start the moreViz Launcher



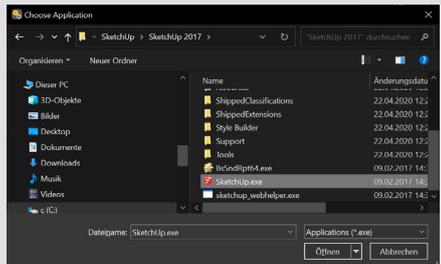
2. Notice the moreViz-Tray icon (next to system time) and right-click it, select "moreViz Application Enabler".



3. Click "Locate Known Apps". The more3D Application Enabler will search the standard program files folders for known Sketchup installations and add them to the list.



4. If Sketchup is installed to a non standard directory, please click "Add" and locate the "Sketchup.exe" file. It is usually located in "X:\Program Files\SketchUp\SketchUp 20xx\" (xx =year/version).



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5. Click the Enable button right next to the newly created entry.



6. Close the Application Enabler.

7. The moreViz VR bridging function is now available for the Sketchup installation. Start the moreViz Client(s) and then start Sketchup.

In case there are any issues with the visualization in the moreViz client, make sure to have followed these guides:

- * Enable perspective mode, as per individual app guide: For stretched and "glued to the center of HMD" error type
- * Dual GPU & Quadro guide: For frozen or black image in client
- * Fit the 3D into the host app's viewport: in case geometry is missing in the moreViz client

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moreViz Setup Guide: visTABLE 2.6+

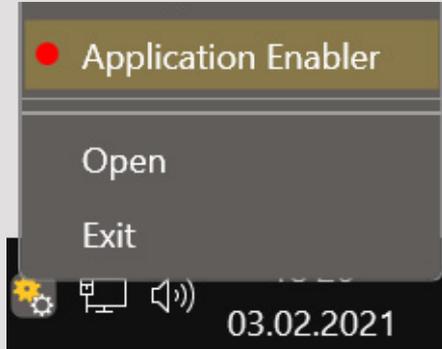


This quick guide shows the necessary configuration steps to bridge visTABLE 2.6+ into VR.

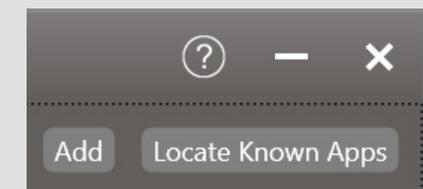
1. Start the moreViz Launcher



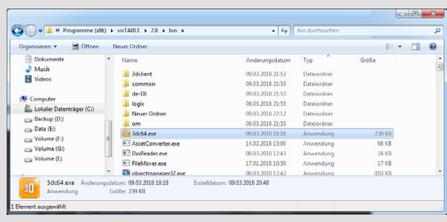
2. Notice the moreViz-Tray icon (next to system time) and right-click it, select "moreViz Application Enabler".



3. Click "Locate Known Apps". The more3D Application Enabler will search the standard program files folders for known visTABLE 2.6+ installations and add them to the list.



4. If visTABLE 2.6+ is installed to a non standard directory, please click "Add" and locate the "3dc64.exe" file. It is usually located in "X:\Program Files (x86)\visTABLE\2.x\bin\" (x = version).



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5. Click the Enable button right next to the newly created entry.



6. Close the Application Enabler.

7. Create a shortcut to 3dc64.exe and open its properties. Add the following parameter in the target line: -8c1b014c-2b6d-442c-a6b7-06e3112f5eeb, so the full path looks like this: "X:\Program Files (x86)\visTABLE\2.x\bin\3dc64.exe" -8c1b014c-2b6d-442c-a6b7-06e3112f5eeb. Hint: You can copy and paste the GUID / letter-number sequence from this PDF. Launching this shortcut launches the 3D viewer of VisTABLE in OpenGL mode - which is required for VR bridging with moreViz.

8. Launch the newly created/downloaded shortcut. Load a visTABLE file. Click the three bars in the top left corner and select "Settings" ("Einstellungen" in German).



9. Disable "Show Environment" ("Umgebung anzeigen" in German).



10. Now close visTABLE and the 3dc64.exe. For the daily use, launch the software components in the following order:

- moreViz Server Control
- moreViz Client
- 3dc64.exe custom shortcut
- visTABLE

In case there are any issues with the visualization in the moreViz client, make sure to have followed these guides:

- * Enable perspective mode, as per individual app guide: For stretched and "glued to the center of HMD" error type
- * Dual GPU & Quadro guide: For frozen or black image in client
- * Fit the 3D into the host app's viewport: in case geometry is missing in the moreViz client

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moreViz Setup Guide: 3ds Max

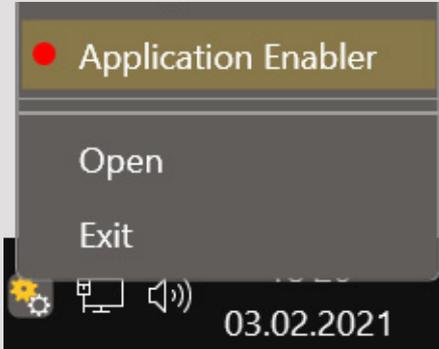


This quick guide shows the necessary configuration steps to bridge 3ds Max into VR.

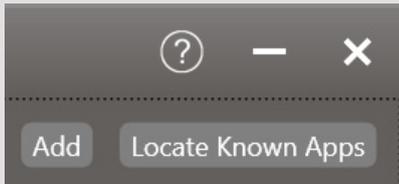
1. Start the moreViz Launcher



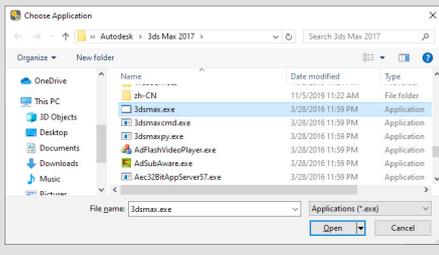
2. Notice the moreViz-Tray icon (next to system time) and right-click it, select "moreViz Application Enabler".



3. Click "Locate Known Apps". The more3D Application Enabler will search the standard program files folders for known 3ds Max 2017 installation locations and add them to the list.



4. If 3ds Max is installed to a non standard directory, please click "Add" and locate the "3dsmax.exe" file. It is usually located in "X:\Program Files\Autodesk\3ds Max 20xx\" (xx = version number).



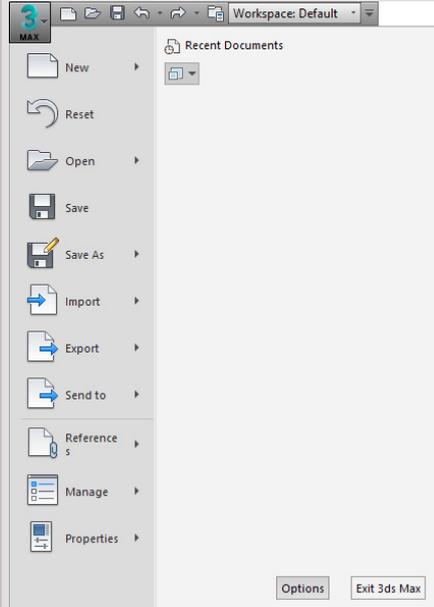
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5. Click the Enable button right next to the newly created entry.

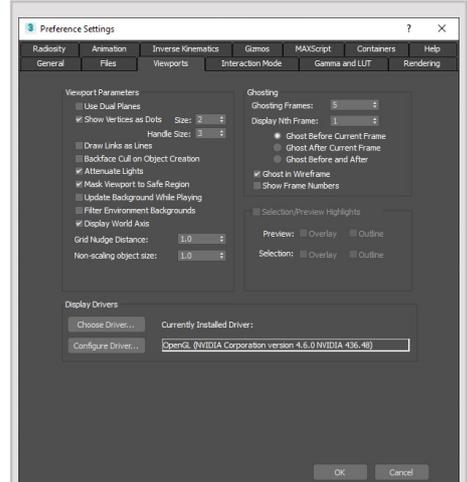


6. Close the Application Enabler.

7. Start 3ds Max. Click the button in the top left corner to display the menu, select "Options".



8. Switch to the "Viewports" tab. Click on "Choose Driver". Select "Legacy OpenGL" and exit 3ds Max.



9. The moreViz VR bridging function is now available for the 3ds Max installation. Start the moreViz Client(s) and then start 3ds Max.

In case there's issues with the visualization in the moreViz client, make sure to have followed these guides:

- * Cycle through the available OpenGL Windows, see the "in app control panel".
- * Some high end render modes may be unsupported
- * Enable perspective mode, as per individual app guide: For stretched and "glued to the center of HMD" error type
- * Dual GPU & Quadro guide: For frozen or black image in client
- * Wrong Viewport in VR: Bring up the in-app control panel and choose the correct viewport of 3DS max for VR bridging.

Do not hesitate to contact us for technical assistance at support@more3d.com. Many tutorial videos are available on more3D's youtube channel: [more3DStereo](https://www.youtube.com/more3DStereo).

moreViz Setup Guide: 3D Tool

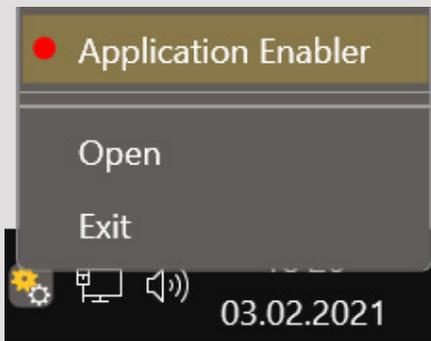


This quick guide shows the necessary configuration steps to bridge 3D Tool into VR.

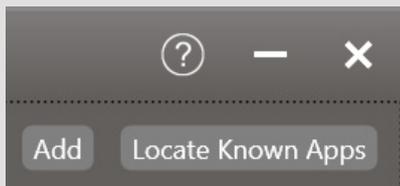
1. Start the moreViz Launcher



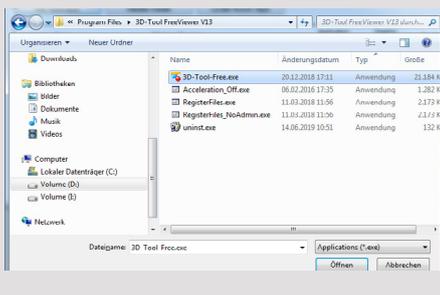
2. Notice the moreViz-Tray icon (next to system time) and right-click it, select "moreViz Application Enabler".



3. Click "Locate known Apps". The more3D application enabler will search the standard program files folders for known 3D Tool installations and add them to the list.



4. If your 3D Tool is installed to a non standard directory, please click "Add", locate the "3D-Tool.exe" file. It is usually located in "X:\Program Files\3D-Tool FreeViewer Vxx\", 3D Tool Basic, Advanced and Premium are configured similarly to the free viewer.



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5. Click the Enable button right next to the newly created entry.

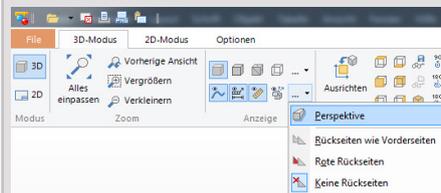


6. Close the Application Enabler.

7. The moreViz VR bridging function is now available for the 3D Tool installation.

8. Start the moreViz Client(s) and then start 3D Tool.

9. Make sure to enable the perspective view mode in 3D Tool, under 3D Mode -> Perspective.



In case there's issues with the visualization in the moreViz client, make sure to have followed these guides:

- * Enable perspective mode, as per individual app guide: For stretched and "glued to the center of HMD" error type
- * Dual GPU & Quadro guide: For frozen or black image in client

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moreViz Setup Guide: RoboDK

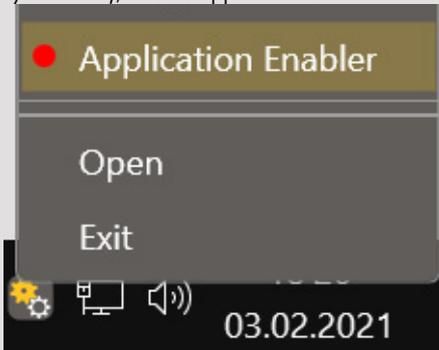


This quick guide shows the necessary configuration steps to bridge RoboDK into VR.

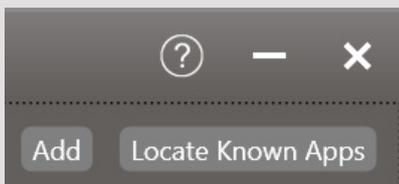
1. Start the moreViz Launcher



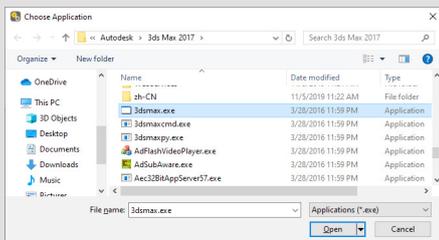
2. Right click the moreViz-Tray icon (next to system time), select "Application Enabler".



3. Click "Locate Known Apps". The more3D Application Enabler will search the standard program files folders for known RoboDK installation locations and add them to the list.



4. If RoboDK is installed to a non standard directory, please click "Add" and locate the "RoboDK-GL2.exe" file. It is usually located in "C:\RoboDK\bin".



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5. Click the Enable button right next to the newly created entry.



6. Close the Application Enabler.

7. Create a shortcut to RoboDK-GL2.exe for later everyday use.

8. The moreViz VR bridging function is now available for the RoboDK installation. Start the moreViz Client(s) and then start RoboDK.

In case there's issues with the visualization in the moreViz client, make sure to have followed these guides:

- * Cycle through the available OpenGL Windows, see the "in app control panel", page 25
- * For stretched and "glued to the center of HMD" error type: Enable perspective mode
- * For frozen or black image in client: Dual GPU & Quadro guide, page 4

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moreViz Setup Guide: BIM Collab Zoom

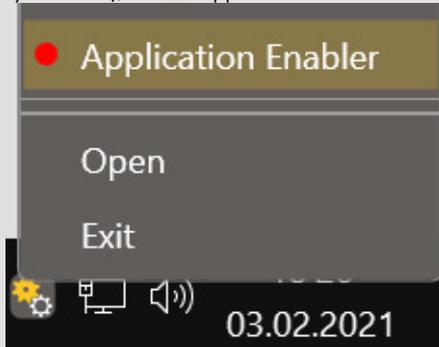


This quick guide shows the necessary configuration steps to bridge BIM Collab Zoom into VR.

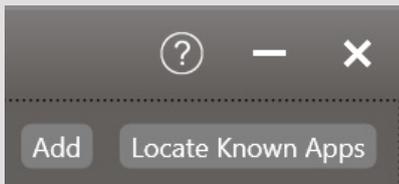
1. Start the moreViz Launcher



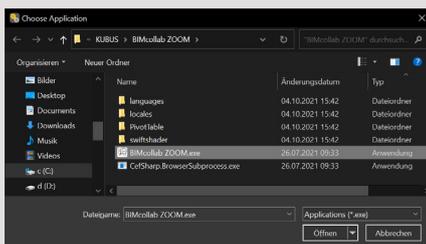
2. Right click the moreViz tray icon (next to system time), select "Application Enabler".



3. Click "Locate Known Apps". The more3D Application Enabler will search the standard program files folders for known BIM Collab Zoom installation locations and add them to the list.



4. If BIM Collab Zoom is installed to a non standard directory, please click "Add" and locate the "BIMcollab ZOOM.exe" file. It is usually located in "C:\Program Files\KUBUS\BIMcollab ZOOM".



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5. Click the enable button right next to the newly created entry.



6. Close the Application Enabler.

7. The moreViz VR bridging function is now available for the BIM Collab Zoom installation. Start the moreViz Client(s) and then start BIM Collab Zoom.

Check page 12 of this manual to see how to operate BIMcollab Zoom's user interface from within your VR environment.

In case there's issues with the visualization in the moreViz client, make sure to have followed these guides:

- * Cycle through the available OpenGL Windows, see the "in app control panel", page 25
- * For stretched and "glued to the center of HMD" error type: Enable perspective mode
- * For frozen or black image in client: Dual GPU & Quadro guide, page 4

Do not hesitate to contact us for technical assistance at support@more3d.com. Many tutorial videos are available on more3D's youtube channel: [more3DStereo](https://www.youtube.com/channel/UCm3D3Stereo).

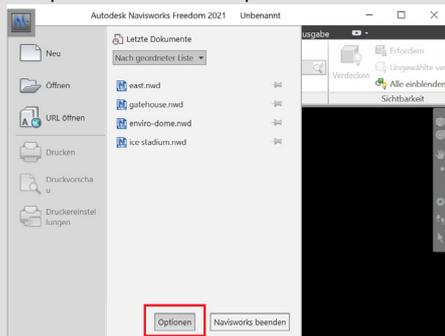
moreViz Setup Guide: Autodesk Navisworks



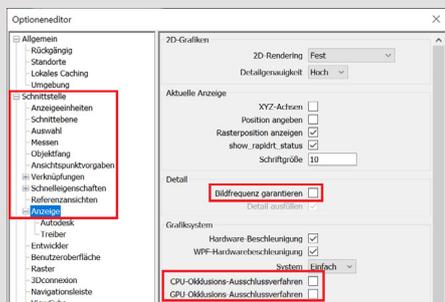
This quick guide shows the necessary configuration steps to bridge Autodesk Navisworks into VR.

1. Start Autodesk Navisworks

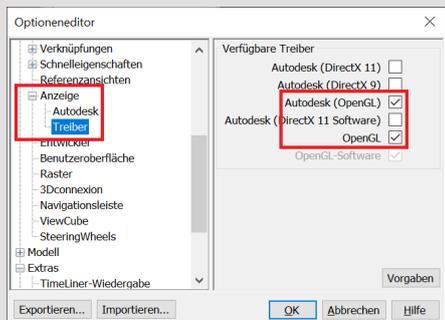
2. Open Navisworks'es options.



3. Click "Interface -> Display" in the left hand list. Uncheck "Guarantee Framerate". For better performance check GPU / CPU Occlusion. For more details in VR uncheck the Occlusion options.



4. Switch to Interface -> Display -> Driver. Uncheck all options except Autodesk (OpenGL) and OpenGL. Click OK and exit Navisworks.

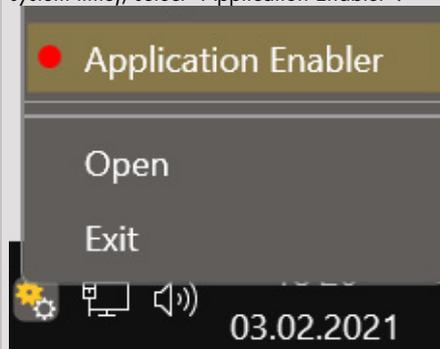


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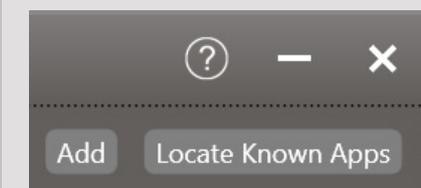
5. Start the moreViz Launcher



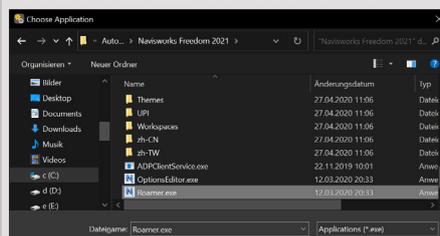
6. Right click the moreViz tray icon (next to system time), select "Application Enabler".



7. Click "Locate Known Apps". The more3D Application Enabler will search the standard program files folders for known Autodesk Navisworks installation locations and add them to the list.



8. If Navisworks is installed to a non standard directory, please click "Add" and locate the "Roamer.exe" file. It is usually located in "C:\Program Files\Autodesk\Navisworks Freedom 2021" or "C:\Program Files\Autodesk\Navisworks Manage 2021" or "C:\Program Files\Autodesk\Navisworks Simulate 2021".



9. Click the enable button right next to the newly created entry.



10. Close the Application Enabler.

11. The moreViz VR bridging function is now available for the Autodesk Navisworks installation. Start the moreViz Client(s) and then start Autodesk Navisworks.

Check page 12 of this manual to see how to operate Autodesk Navisworks'es user interface from within your VR environment.

In case there's issues with the visualization in the moreViz client, make sure to have followed these guides:

- * Cycle through the available OpenGL Windows, see the "in app control panel", page 25
- * For stretched and "glued to the center of HMD" error type: Enable perspective mode
- * For frozen or black image in client: Dual GPU & Quadro guide, page 4

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Many tutorial videos are available on more3D's youtube channel: [more3DStereo](https://www.youtube.com/more3DStereo).

FAQ / Troubleshooting

1. The moreViz **Client stays grey**, it does not show 3D model when loading 3D data.

* Is the 3D data correctly grabbed from your app? Check the more3D application enabler for correct configuration, confirm with the matching app guide.

* Check if the moreViz Launcher is active

* Check if your connection type is correct

Try TCP/IP 127.0.0.1:8700

Try TCP/IP (Auto)

(Restart Host-app after for new connection type)

* Check if your app is set for OpenGL mode

2. Tracking does not work

* Check if your app runs in perspective mode.

Orthographic / parallel projection will result in distorted graphics in the moreViz client and dysfunctional tracking.

* Check for the generic tracking system

properly detecting head and hand targets

* Check for your generic tracking system

outputting it's data to the matching computer

* Check for VRPN server running. Also, check if the VRPN server runs on a custom port.

* Check for the VRPN Translator's target index.

* Verify for the Quadro Config Guide being applied properly

3. The graphics inside VR are distorted

* Check if you properly configured the

OpenGL version for your app, see app guide.

* Check for the host app running in

perspective mode, see app guide.

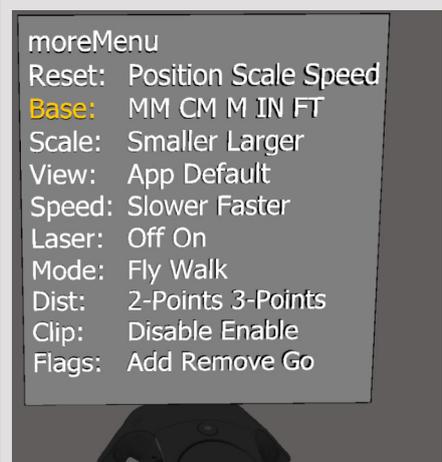
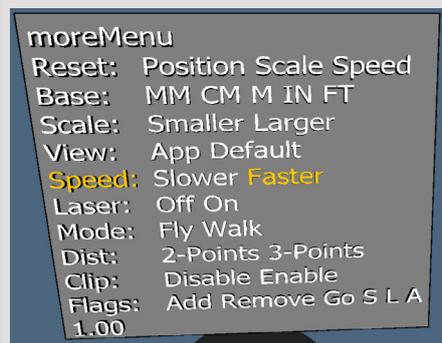
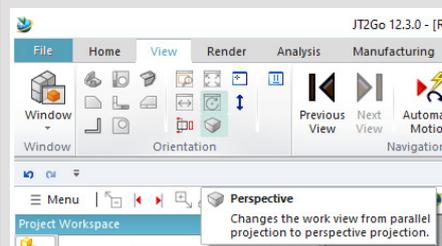
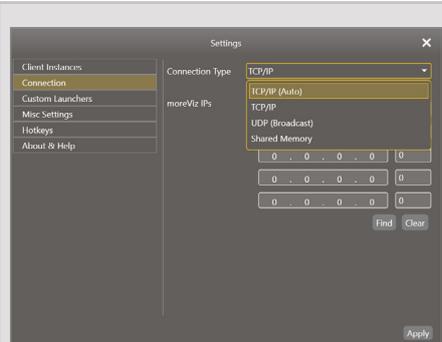
4. Movement in VR is very slow

* Increase movement speed in the inVR menu.

5. SteamVR loading screen is shown in HMD when playing an animation.

* Follow the SteamVR Fine tuning guide, disable the "fade to gride when app hangs" option.

* Use the "Shared Memory" connection type in the moreViz Launcher settings.



6. General Performance in VR is low / laggy

* VR is expensive on the hardware. Try reducing the amount of data you're pushing. E.g. remove standard bolts/screws/nuts from your model file. Further, try using a simple shaded mode.

7. Client windows stays black on data load.

* If your system is equipped with multiple GPUs, make sure your HMD is connected to the high power GPU. If possible, remove the low power GPU or disable it in BIOS/UEFI.

* Update SteamVR version

* Update GPU driver

Make sure to have followed the GPU config guide on page 4

8. Objects seem flat

Check if the scaling of the app is correct.

When the scaling is too big, movement will seem very slow and stereo effect ("3D") is very little. Try scaling smaller through the VR menu.

9. moreViz Client hangs on start

* Delete the moreViz configuration file in %localappdata%\moreViz

10. moreViz client(s) doesn't start

* Check if the m3DLauncherService is running on all target computers

* Check if the network connection is active

* Check in task manager for a crashed moreViz.exe and end it

11. License Error shown in client

* Verify in Launcher -> Settings -> Client instances that an output mode matching the available license is chosen.

Do not hesitate to contact us for technical assistance at support@more3d.com.

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