WOLFVISION®

vSolution App – BYOM web conferencing BYOD screen sharing

Quick Guide

Cynap Series

Windows

macOS

General Information

This Quick Guide has its focus on BYOM (Bring your Own Meeting) web conferencing, and BYOD (bring your own device) wireless screen sharing (using WolfVision vSolution Cast protocol).
A fully integrated Wolfvision Cynap system in a room allows you to present wirelessly from your Windows or macOS laptop. Additionally it allows you to utilise the in-room camera, microphone, and speakers, to provide high quality audio and video for your MS Teams, Zoom, or other web conference call, running on your laptop.
For details of the other functions of vSolution App, consult the app-integrated help for details.

A few prerequisites are necessary for full functionality, please check the appendix of this guide for details.
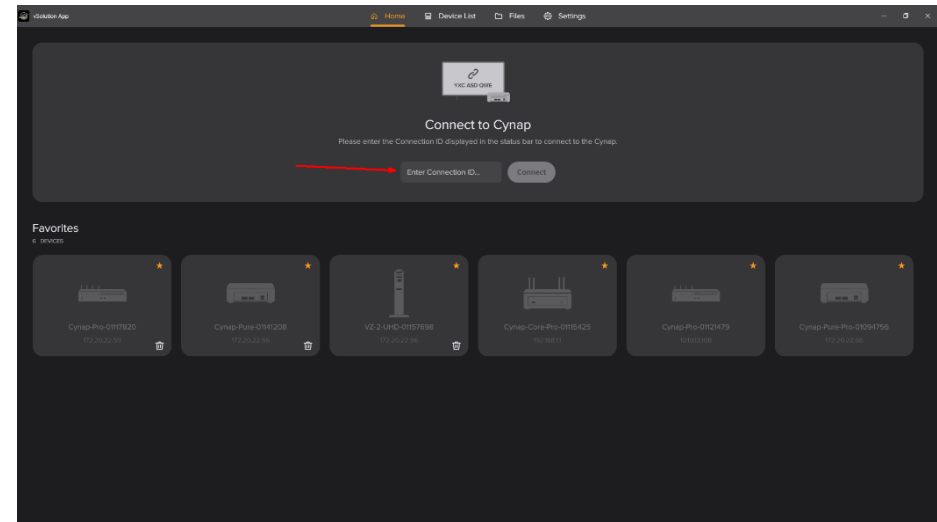
Connect to a unit

Connection ID

To connect to a WolfVision Cynap system you will need to open **vSolution App** on your device and enter the connection ID shown at the top of the screen in your meeting room.
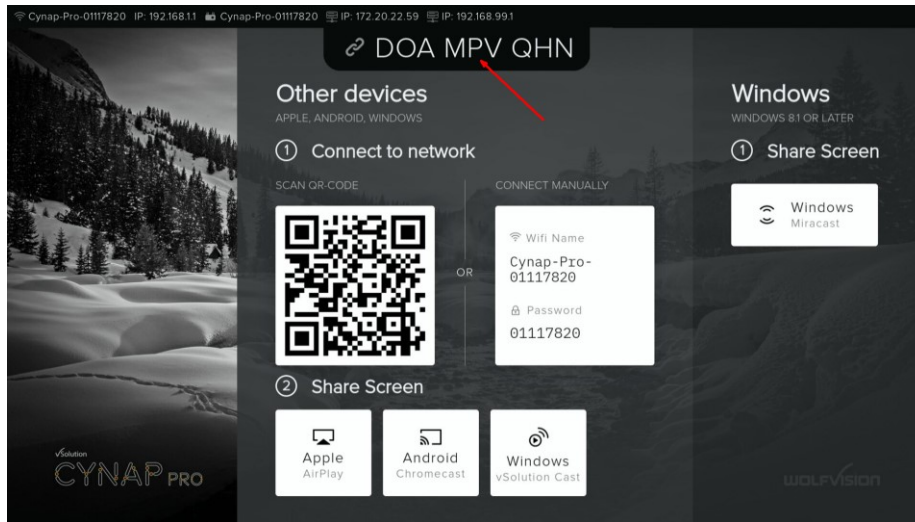

Monitor view

vSolution App view

Connect to a unit

Using the Device List – when Connection ID is not activated

The Device List allows devices to be marked as favourites, which are then shown on the Home Screen for easy access.
In networks where device discovery is blocked, devices can be added manually by clicking the Add Device button and entering the IP address of the Cynap system.
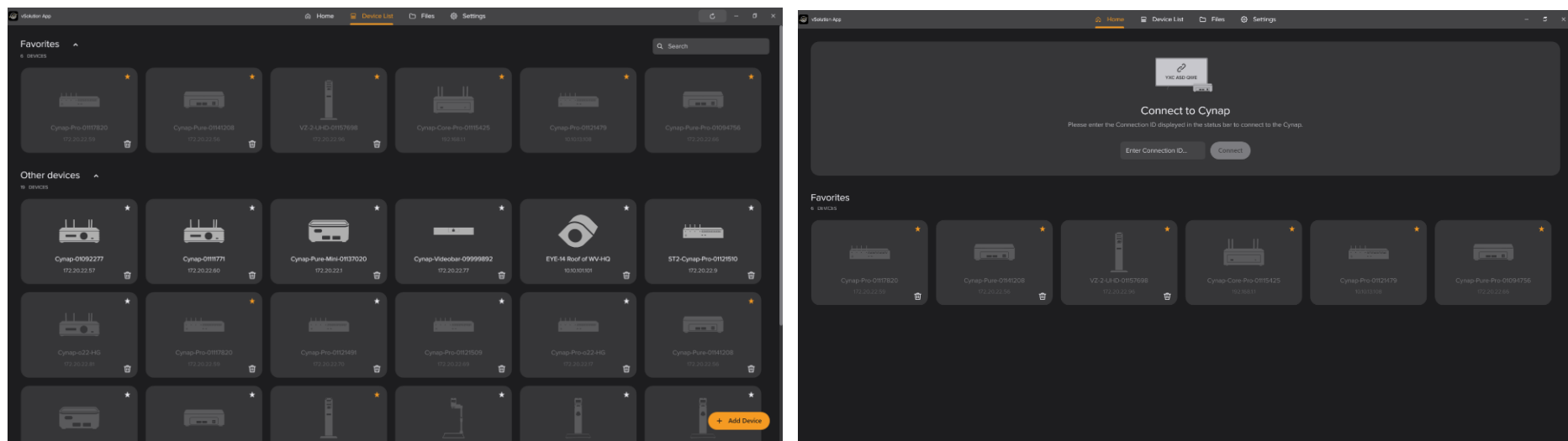

- Devices Near You are discovered via Bluetooth (network accessible units listed only).
- Favourites need to be marked in the Devices List with an asterisk in advance.
- Other devices are discovered over the network discovery protocol.
- Manually added devices can be removed using the trash icon.
- Greyed-out devices are already discovered, but are not currently accessible (e.g. powered off or disconnected units).

Mode Selector

Once a WolfVision system is selected, the Mode Selector lists all available functions. Availability of certain features depends on the settings of your Cynap system.

- Control Device, shown when enabled in Cynap settings.
- Start Viewer Mode, shown when enabled in Cynap settings
- Share Screen, shown when enabled in Cynap settings.
- Connect Room Audio/Video, shown when enabled in Cynap settings, and Cynap system already set up with camera, speaker, and microphone peripherals.
- View/Record Stream, shown when streaming feature has been already started on the Cynap system.
- Zoom, Teams, and/or WebRTC will be shown additionally when enabled in Cynap settings.
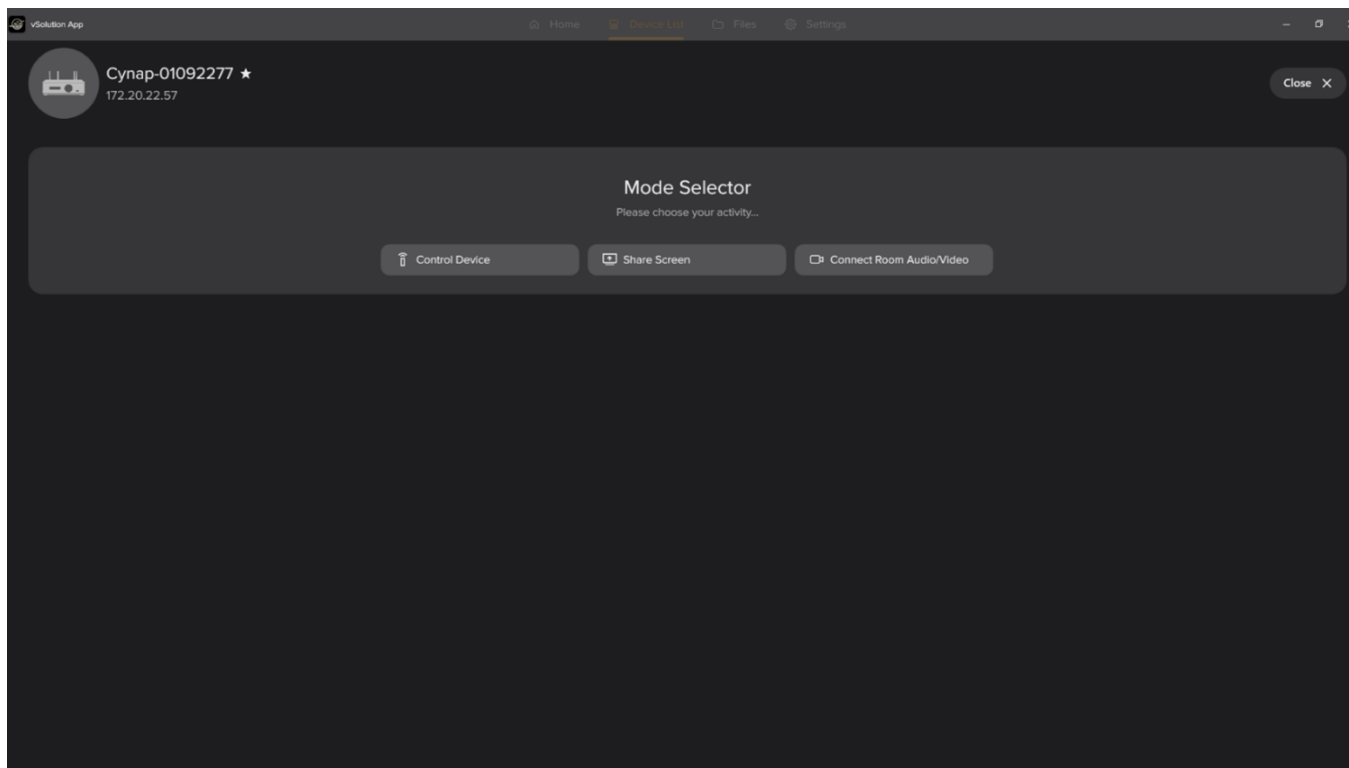
Please note: More info on Control Device, Start Viewer Mode, View/Record Stream, Zoom, Teams, and WebRTC in the in-app help.

Share Screen

## Bring Your Own Device – BYOD

Select this mode if you simply want to share your screen wirelessly to the audience, but do not need to host a web conference call.
vSolution App allows you to share either a single application window, or the complete content of a screen, and it features an extended screen to your laptop.
Simply select the content you want to share with your colleagues in the meeting.
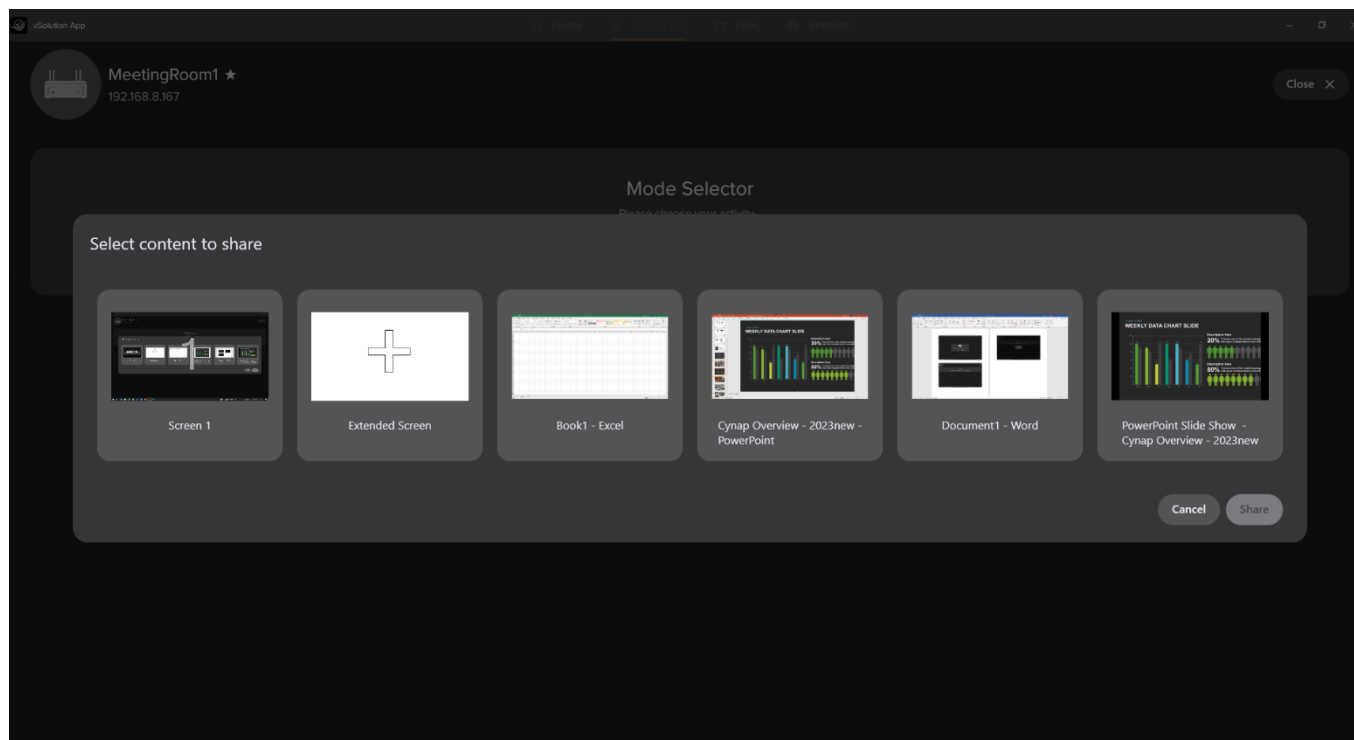
Share Screen

Manage the shared content

The floating tool bar that appears at the top of your screen allows you to manage your connection.
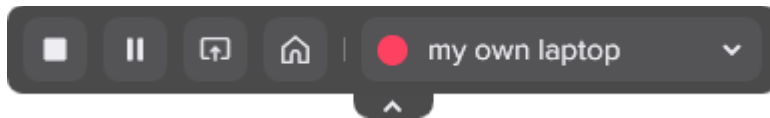

The floating tool bar can be used to stop and pause your connection or select a different application window to share. The drop-down menu allows you to handle other Cynap content, such as content from other user devices if they have also connected to the Cynap system to share their screen.

Connect Room Audio / Video

Bring Your Own Meeting – BYOM web conferencing

Select this option if you wish to share your screen wirelessly and utilize the in-room camera, microphone and speakers, or a connected videobar, for your web conference calls.

You can now start a call with your preferred web conference application on your laptop.
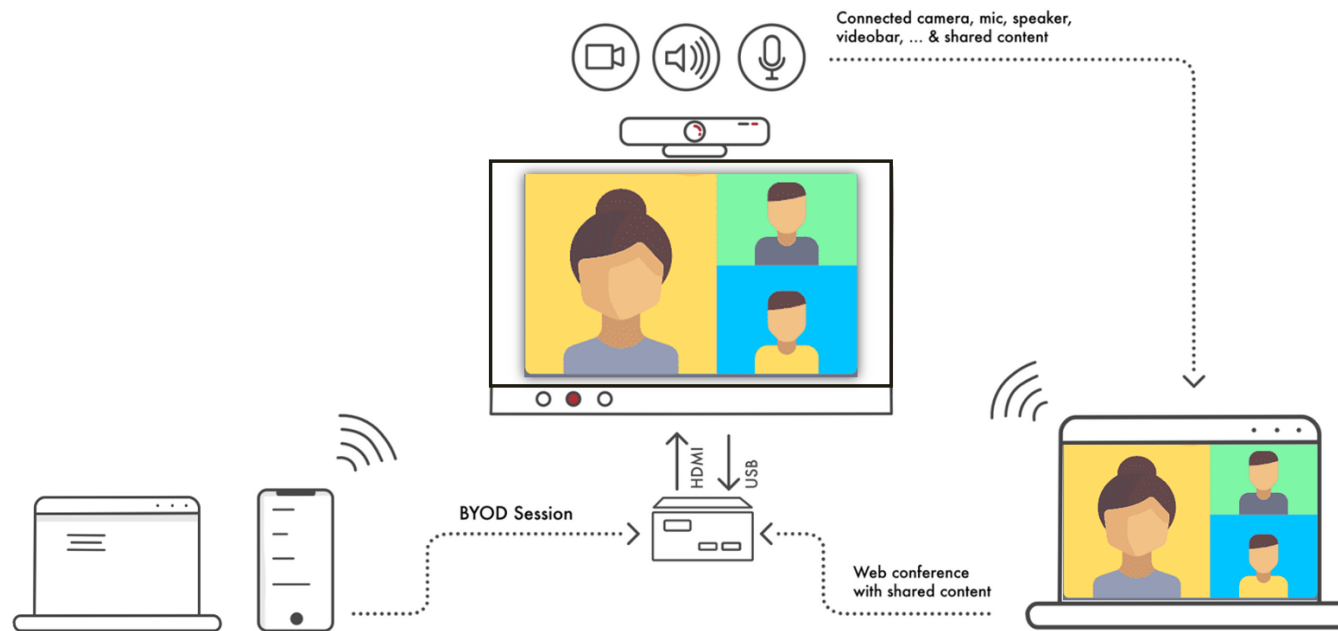
For the best experience, your devices must be in the same network. Internet access is required depending on the service used.

Connect Room Audio / Video

Example, using Room Audio / Video in Microsoft Teams

Simply ensure the Wolfvision Audio Devices and Room Camera video device are selected in your web conferencing application device settings. The use of Room Audio / Video in other applications works in the same way.

After starting Room Audio / Video, a second tab is available in the taskbar to check the content of the HDMI output of the Cynap system.

Connect Room Audio / Video

Manage the connection

The floating tool bar that appears at the top of your screen allows you to manage your connection.

The floating tool bar can be used to stop and pause your connection or select a different application window to share. The drop-down menu allows you to handle other Cynap content, such as content from other user devices if they have also connected to the Cynap system to share their screen.
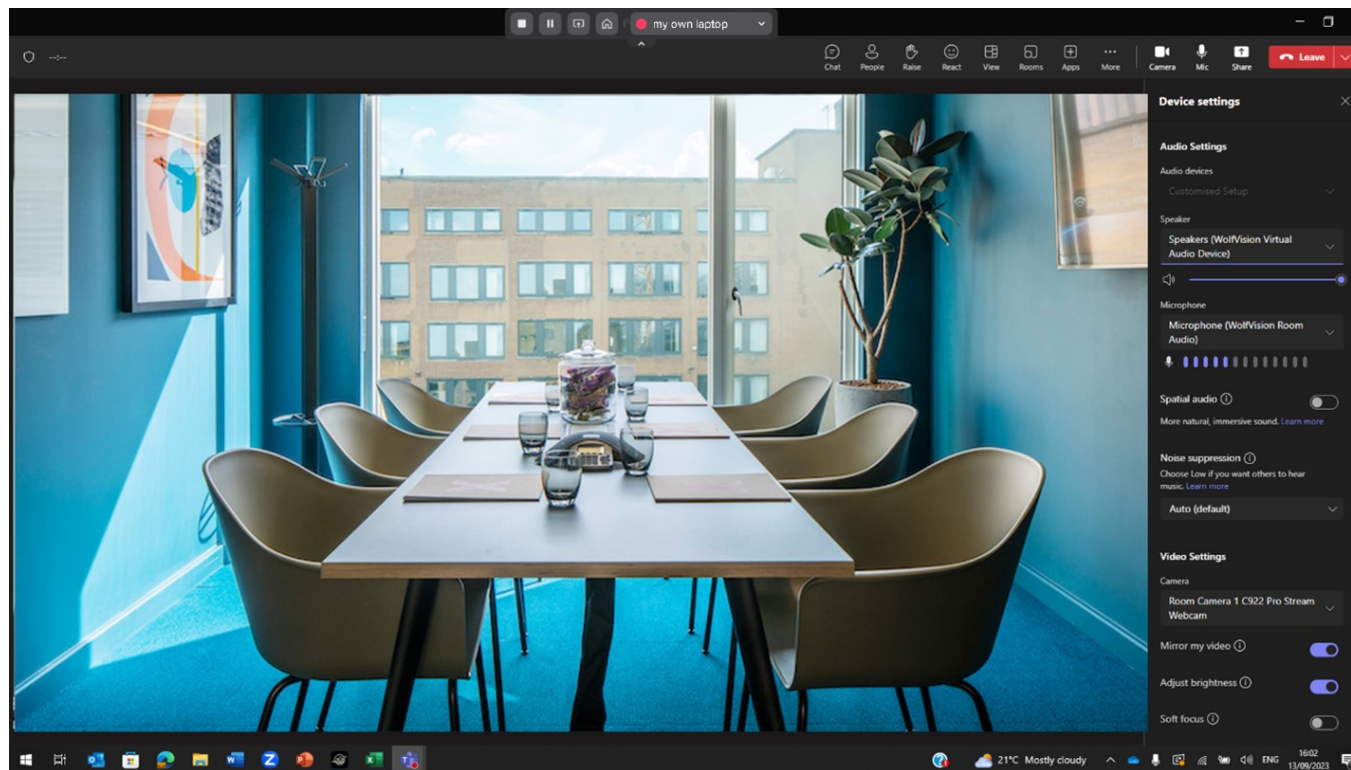

For the best experience, your devices must be in the same network. Internet access is required depending on the service used.

Connect Room Audio / Video

Meeting ended

When you have finished your meeting select Stop on the toolbar and confirm that you wish to disconnect.

Appendix

General

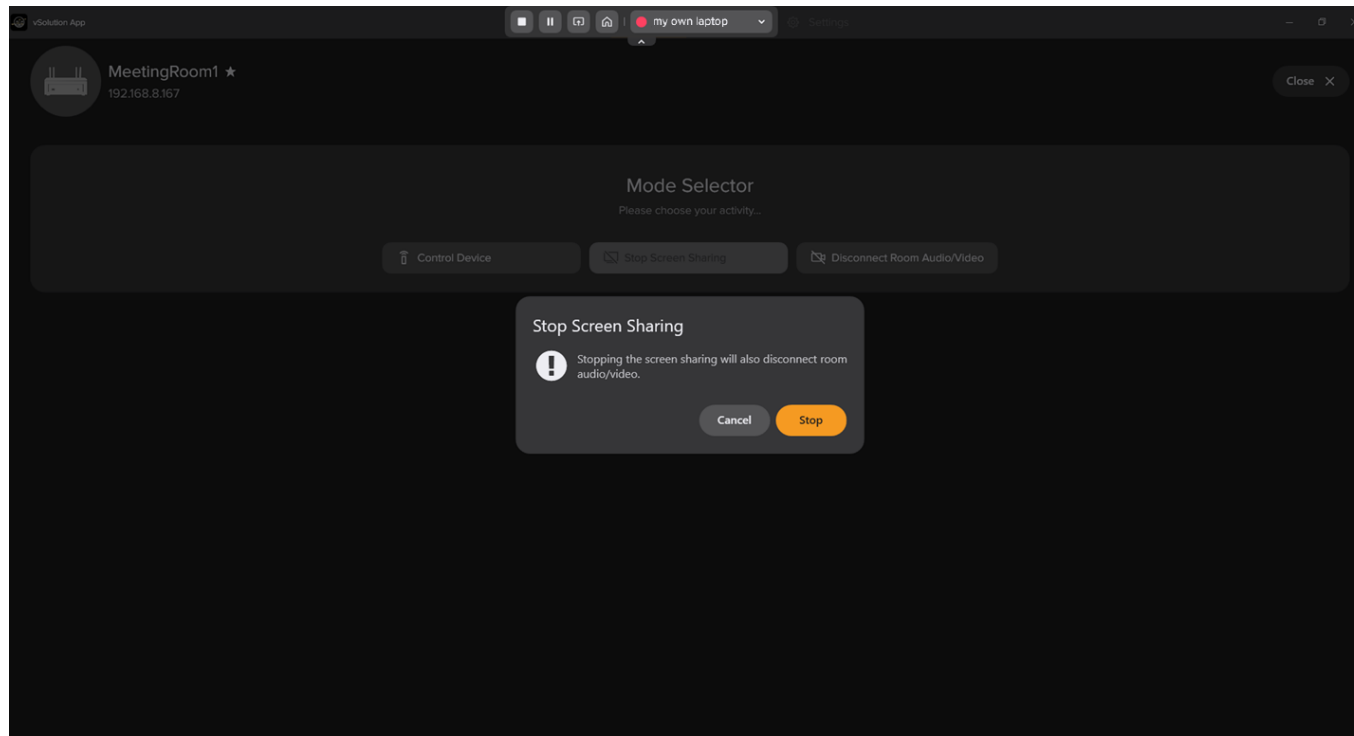- Keep your Windows, or macOS system up to date with the latest patches and drivers to ensure the best user experience and the highest level of security.
- Outdated systems may not be fully supported.
- USB audio and video devices connected to your Cynap system must support the UAC or UVC 1.0/1.1 standards respectively.
- Accurate time settings on your laptop and your Cynap system are essential, use a time server for automatic synchronisation.
- Web conferences and streaming services require high network throughput and low connection delay.
- In addition, consider up to approx. 7Mbit/s for sharing the screen to the Cynap system and approx. 6Mbit/s for receiving BYOM content (tested with FullHD content, higher resolution leads to higher bandwidth).

General vSolution App Information

- For the best experience, all devices (Cynap and iOS/iPadOS/Android/macOS/Windows devices) must be connected to the same subnet in your corporate network via Ethernet or Wi-Fi connection (secured connection recommended). If the devices are connected to different subnets, all the traffic must be routed accordingly.
- Ensure that all necessary ports, services, and IP addresses are available and not blocked by your firewall (external and personal). Acknowledgements ("ACKs") of TCP packets are not considered in the following table in order to be able to illustrate the direction of the data packets. Since acknowledgements are usually sent back via the same TCP port, to ensure smooth functioning, traffic in the other direction shall not be blocked.
- Depending on your local network and specific services used, additional firewall rules may apply. Consult the relevant documentation on your network infrastructure, and the services used by the respective provider (e.g. for the unrestricted use of web conference services).
- VPN and NAT networks are not supported.

Device Discovery

- vSolution App is able to discover Cynap systems via multicast DNS (mDNS) advertisement over an existing network (UDP port 5353).
  The mDNS broadcast is sent to the local subnets of each network interface the Cynap system is connected to.
- The DNS Hostname (device name) of the Cynap system must be resolvable via your DNS servers. You can achieve this by allowing the Cynap system to register automatically via Dynamic DNS or manually creating an A or AAAA record for the hostname of the Cynap system.
- The Cynap system can send a Bluetooth beacon via the integrated radio module with information about its network address (Eddystone beacon) to allow device discovery when mDNS is blocked in the network.

Appendix

Supported WolfVision Cynap systems

- Cynap
- Cynap PRO
- Cynap Core
- Cynap Core PRO
- Cynap Pure
- Cynap Pure Pro
- Cynap Pure SDM **(BYOD screensharing supported only)**
- Cynap Pure Mini **(BYOD screensharing supported only)**

Supported Windows systems

- Windows 10 x64, or Windows 11 x64 (running on officially supported hardware).
- Minimum Windows 10 version 2004 (Build 19041) to support all features.
- Minimum Windows 10 version 1809 (Build 17763) for basic functionality without BYOM support.

- Outdated devices (or low-end devices) may not be able to process the required amount of data in real time (at least one of the most recent Intel® Core™ i5, or AMD Ryzen™ 5, are recommended).

- During installation of the vSolution App, authorization requests may appear and these must be allowed. Consult the in-app help manual for more details.

Supported macOS systems

- macOS 13
- macOS 14 or higher

- During installation of the vSolution App, authorization requests may appear and must be allowed. Consult the full in-app help manual for more details.

Appendix

Firewall rules

vSolution App has firewall rules that must be adhered to in order to allow successful network communications, and the corresponding services to be used.
To use services with user-defined addresses and ports, ensure these are not blocked by your firewall and security applications.

Function / Application	Port	Type	Inbound / Outbound	Description
vSolution App				
http, ws	80	TCP	Inbound	To connect to the Cynap or Visualizer web interface (httpd).
DHCP	67 / 68	UDP	Inbound	DHCP communication between device and receiver.
NTP	123	TCP	Inbound	Synchronize time and date with set timeserver.
https, wss	443	TCP	Inbound	For cloud services and for secure connection to the Cynap web interface.
Device Discovery	5353	UDP	Inbound	mDNS device discovery.
Device Discovery	50000	UDP	Inbound	Device discovery.
Device Discovery	50913	UDP	Inbound	Device discovery.
Control purposes	50915	TCP	Inbound	For control purposes e.g., room control system, and others).
TLS control	50917	TCP	Inbound	For secure connection between vSolution App and Cynap, or Visualizer system.
Video Streams	50921	UDP	Inbound	Video streams between WolfVision App to Cynap. If this port is blocked, no streams are possible.
Touchback	50922	TCP	Outbound	For touchback between Cynap and WolfVision App, bi-directional inputs are not possible. (Windows and macOS systems only)
Video data stream	32768 ~ 61000	UDP	Inbound / Outbound	BYOM (Bring Your Own Meeting) Video data stream

Please note, this list only includes the network ports for using the vSolution App, other services may require additional ports.
BYOD screensharing uses the WolfVision vSolution Cast protocol.
BYOM Room Audio / Video uses the ONFIV standard.

Appendix

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THE USER MUST AGREE THE LICENSE TERMS BEFORE VSOLUTION APP CAN BE USED!
By using this software, the WolfVision License terms are accepted.

Appendix

General Data Protection Regulation

The vSolution App does not transfer any personal data to WolfVision GmbH.
By default, the vSolution App checks the WolfVision homepage for updates when the application is started.

Applicable only when using the Microsoft Teams and/or Zoom integration running on the Cynap system and where user credentials are stored locally:
The login to the web conferencing services is done in an integrated local sandboxed browser and via a secure connection (HTTPS). The login to the web conferencing services and also the API request are done with the official web services of Microsoft (https://teams.microsoft.com, https://graph.microsoft.com), and Zoom (https://zoom.us/signin, https://api.zoom.us/v2). All the cookies for the login and the access/refresh tokens to load user/meeting info are stored encrypted and safe in the user data folder (Windows) respectively in the user KeyStore (macOS/iOS), locally on your personal device.