

VCS Control Software User Guide



Copyright © 2017 by Planar Systems, Inc. All rights reserved.

The contents of this publication may not be reproduced in any form without permission of Planar Systems, Inc.

Trademark Credits

Clarity™ Visual Control Station™ (VCS™) is a trademark of Planar Systems, Inc.

Windows™ is a trademark of Microsoft Corp.

All other names are trademarks or registered trademarks of their respective companies.

Disclaimer

The information contained in this document is subject to change without notice. Planar Systems, Inc. makes no warranty of any kind with regard to this material. While every precaution has been taken in the preparation of this manual, the Company shall not be liable for errors or omissions contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this material.

Warranty and Service Plans

Planar warranty and service plans will help you maximize your investment by providing great support, display uptime, and performance optimization. From post-sale technical support to a full suite of depot services, our services are performed by trained Planar employees. When you purchase a Planar product, you get more than a display, you get the service and support you need to maximize your investment. To find the latest warranty and service information regarding your Planar product, please visit

<http://www.planar.com/support/>

Part Number: 020-1311-00C

Contents

- Introduction 6**
 - VCS Control Software Main Features.....6
 - Terminology.....8
- Software Installation 10**
 - System Requirements 10
 - Client Installation 10
 - Server Installation 11
 - Ports..... 12
- Getting Started 14**
 - Workspace Overview 14
 - Drag and Drop 15
 - Tiling Mode 17
 - Layouts 17
 - Sub-regions..... 19
 - Source Preview 21
 - Content Grouping 21
- Managing Inputs.....22**
 - Inputs Properties..... 22
 - Input Zoom 23
- Managing Local Applications24**
 - Application Shortcuts..... 24

Saving Layouts with Local Applications	26
Virtual MousePad	26
Managing Remote Clients	27
Connect and Configure	27
VCS Control Lightweight Client	30
Manipulating Clients	31
Schedules	32
Scripts	39
Using Scripts	39
Creating and Editing Scripts	40
Network Scripting API	41
Browsers	42
Scrolling Text	42
User Management (VCS Control Software Enterprise only)	44
Active Directory	45
Secure Socket Layer (SSL) Connections	45
User Login	46
User Permissions	47
Managing Users	48
Managing Groups	48
Security Logging (VCS Control Software Enterprise only)	50
IP Devices for Network Stream Sources	51
Registering a Streaming Video IP Device in the VCS Control Client GUI	51

Registering a Video Streaming IP Device from the Scripting Tool.....	53
Registering an IP Device via the Network Scripting API	54
Surfaces and Bird’s Eye View	55
Web Server	58
Design Page	59
Control Panel Editor	60
Default Control Page	61
Manage Web Client.....	62
User Interface Localization	65

Introduction

VCS Control Software Main Features

VCS™ Control Software is a complete network-centric collaboration tool for control rooms. With it you can manage captured sources, run local applications on the video wall server, and control remote clients. VCS Control Software gives individual operators the ability to manage multiple video walls from their computers. Any operator can access any computer in the control room through the LAN. Multiple operators can work simultaneously on any of the video walls in the control room.

Control Features for Video Wall Control

- Microsoft Windows environment
- Intuitive and easy-to-learn graphical user interface (GUI)
- Remote control of the video wall from multiple client positions on the same network
- Simple layout configuration by using the mouse to “drag and drop” sources to the video wall
- Easy saving and retrieval of layout configurations
- Easy scheduling of predefined tasks
- Organize the video wall in sub-regions to easily manage windows in all sections of the video wall

Collaborative Tools

- **Client Capture:** Any remote operator can take control of any authorized computer (or portion of it), including the video wall controller itself. The captured screen is displayed locally to the operator without necessarily showing it on the video wall. It can fit to the client’s screen, or viewed at its original resolution.
- **Send local desktop to video wall:** Allows individual remote operators to send a clone of their Windows desktop (or portion of it) to the video wall in a picture-in-picture manner. The size and position of this window can be easily modified.
- **Send client to video wall:** Allows individual remote operators to send a clone of any client’s desktop (or part of it) to the video wall in a picture-in-picture manner. The size and position of this window can be easily modified.
- **Restrict features:** Allows clients to select whether they would like other operators to be able to control their PC when captured, or only view their screen and/or mouse (i.e., a manager wants to only show his screen without letting any of his employees control his PC).
- **Virtual MousePad:** Operators can work on the video wall using their mouse as a remote pointer directly on the video wall. Operators can send their keystrokes to the video wall as well. If remote clients are present on the video wall, the mouse and keyboard can also continue and control those clients.

Terminology

Video wall: An array of display devices (monitors, retro-projection cubes, projectors). The configuration of a video wall is identified by its number of columns and number of rows. For example, a 3 x 2 wall will be an array of 3 displays horizontally and 2 displays vertically (see image below):



Video wall controller: The server that drives the video wall. Also known as the “Server PC”.

Operator: Person running the client application to control the video wall from a networked computer.

Display: A Planar or Leyard display device. This could be a projection cube, an LCD monitor, or a LED. The figure above represents a video wall of 6 displays.

VCS Control: The name of the software package that allows operators to control video walls and collaborate in a control room. It consists of 3 main components:

- **VCS Control Server:** The name of the Planar video wall control software running on the video wall controller. It is the server portion of the software. The role of the VCS Control Server is to receive commands from the VCS Control Client and to translate them in order to manage the behavior of the video wall controller hardware and software.
- **VCS Control Client:** The name of the client portion of VCS Control Software. This software allows managing the content of the video wall from a remote computer (the remote computer needs to have a network connection with the video wall controller). All VCS Control Client commands are sent through the network to the VCS Control Server that manages the hardware and software behavior of the video wall controller.
- **VCS Control Lightweight Client:** The name of the client portion of VCS Control Software that is installed on remote client computers to make them visible to the other VCS Control Software operators and to the VCS Control Server.

Output: Video signal coming out of the video wall controller to the display devices. The controller has as many outputs as the number of display devices on the video wall (for example, a video wall controller driving a video wall of 6 displays has 6 outputs).

Input: Video source that is captured by the video wall controller. The nature of the input can be HDMI, DisplayPort, DVI, RGB, or Analog Video (S-Video, NTSC, PAL, SECAM).

Display Numbering: Each display of a video wall is identified by a number. The numbering of each device starts from the top left of the array and follows the numeric order from left to right and top to bottom as the operator sees them in front of him (see example below):



Software Installation

System Requirements

Server:

- Windows 7 SP1
- .NET 4 Runtime Extended
- .NET 2 Runtime (Web Server Component)

Client and Lightweight Client:

- Windows XP SP3 or greater
- .NET 4 Runtime Extended
- Recommended CPU: Intel Core i5 or above
- Recommended RAM: 4GB or more

Note: Windows XP 64-bit requires the Windows Imaging Component for the .NET 4 Runtime to install.

Client Installation

There are two types of clients: VCS Control Client and VCS Control Lightweight Client.

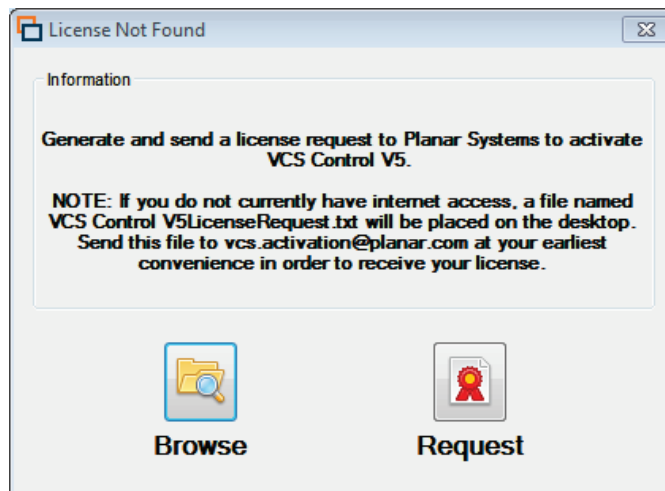
The VCS Control Client is to be installed on the computer(s) from which you want to control the video wall.

The VCS Control Lightweight Client is to be installed on the computers you want to be “seen” on the network by the server. These computers can be displayed and/or controlled by other clients in the network, and on the video wall.

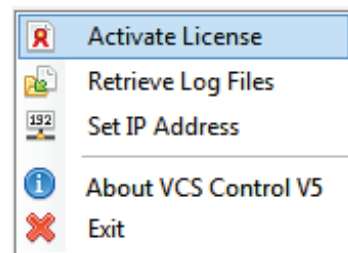
Server Installation

Note: New VCS Control Software installations include factory-installed software. Follow these instructions to reinstall the software.

- 1 Insert the installation CD.
- 2 Run *Setup.exe*.
- 3 Select **Server**.
- 4 If you want to control your video wall from the Web Interface, make sure **Web Server** is checked on the Select Components window.
- 5 When the VCS Control Server first starts, the following window opens:



- 6 If you do have a VCS Control Software license, click **Browse** and browse to your license file.
- 7 If you do not have a VCS Control Software license:
 - a Click **Request**. You will be asked for your Serial Number. You can find this number on the CD box. If you do not have this number, please contact support@planar.com or your local VCS Control Software distributor.
 - b If your computer is connected to the Internet, just follow the instructions and Planar will send you your license file within 1-2 business days. If your computer is not connected to the internet, just e-mail the *VCS Control V5LicenseRequest.txt* file on your desktop to vcs.activation@planar.com at your earliest convenience.



- c You can safely close the window. To return to it later, right-click the VCS Control Software tray notification icon in the bottom-right corner of the screen, and select **Activate License**.
- d Once you have received the license file, you can click **Browse**.

Your server is activated once you see the VCS Control Software logo appear on your desktop. You can then use the client software and connect to the IP address displayed on the splash screen.

Notes:

- For correct operation, the video wall resolution must not change once the server has started. If a change is detected, users are prompted to restart the server at the earliest opportunity.
- If you need to find the IP address of your computer, open a Run window (Windows key + R) and type the command "`cmd /k ipconfig`". This should open the CMD window with the IPConfig command line.

Ports

During the installation of VCS Control Software, an option will be offered to open these ports in the Windows Firewall. The default rules will be according to the following specifications:

- Opened on Private (Work, Home) and Domain networks
- Blocked for public or unidentified networks
- Opened for hosts with IP addresses within the same subnet

If you want to change these rules, you can configure them in the Windows Firewall Inbound Rules. If the firewall used is an external network device, these ports should be configured on this firewall device.

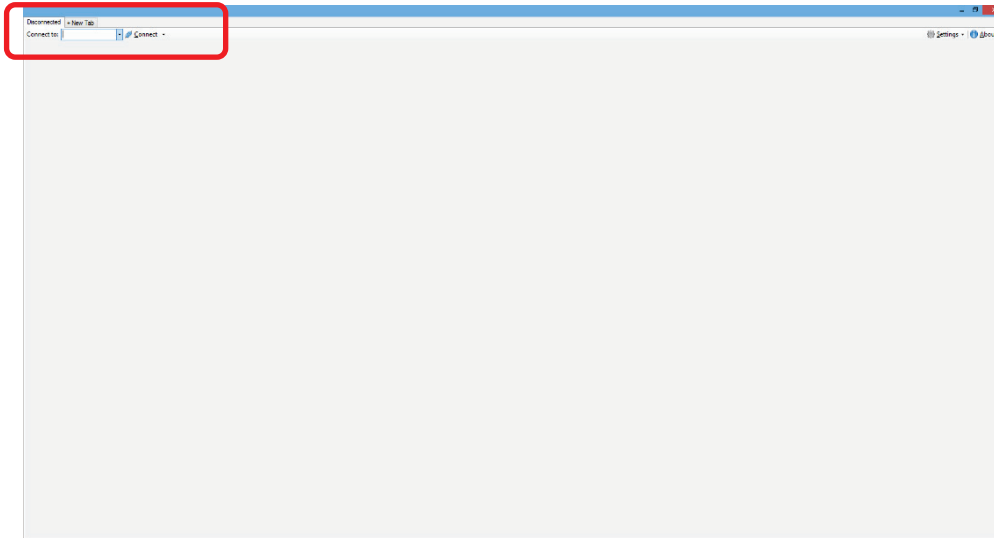
If you are using a proxy server, you must set an exception to the address of the VCS Control Software PCs in the proxy setup of Microsoft Windows. Otherwise, all HTTP communications will be redirected to the proxy server. This applies for the web server and the client-server control.

VCS Control Software uses a handful of ports in the 50000 region for communication between the client and the server. Here is a list of the ports required and what they are used for:

VCS Control Server			
Port	Protocol	Name	Description
80, 81	HTTP	Web Client	Embedded website: control panels, designer page, and Javascript API.
50000	UDP	Service Discovery	Discover and broadcast VCS Control Software compatible services on the local subnet.
50001	TCP	Network Scripting API	Network Command Interface (TCP/IP Command)
50002	TCP	Capture Receiver	Clients being captured and displayed on the video wall.
50080	HTTP	HTTP Services	Video wall query and control endpoints, required for the clients to interact with the video wall.
50081	TCP	Event Notifications	Required for the clients to receive changes made to the video wall.
VCS Control Client			
Port	Protocol	Name	Description
50005	TCP	Capture Transmitter	Legacy screen capture and Virtual MousePad keyboard/mouse control.
50006	TCP	VNC Transmitter	High performance remote screen capture.
5007	TCP	Capture Receiver	Clients being captured and displayed on the local client.

Getting Started

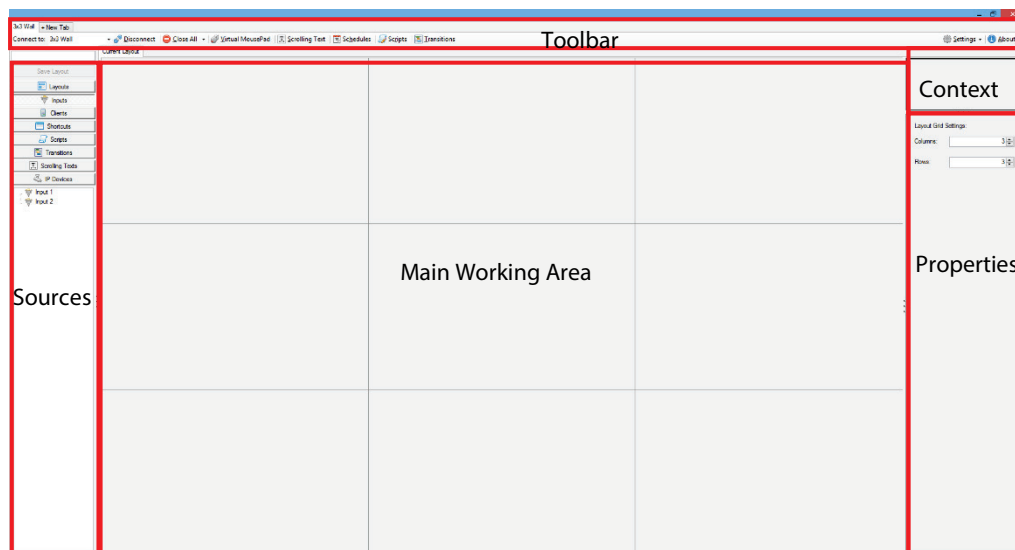
Workspace Overview



The first thing you'll need to do after opening VCS Control Client is connect to the video wall Server. In the top-left corner, type in the IP Address of the video wall Server and click **Connect** or press Enter. The client will save this IP Address for the future, so you only need to enter it once.

Note: If the client is running directly on the video wall controller (for example, on a console monitor), the local server's address will already be in the list of connections.

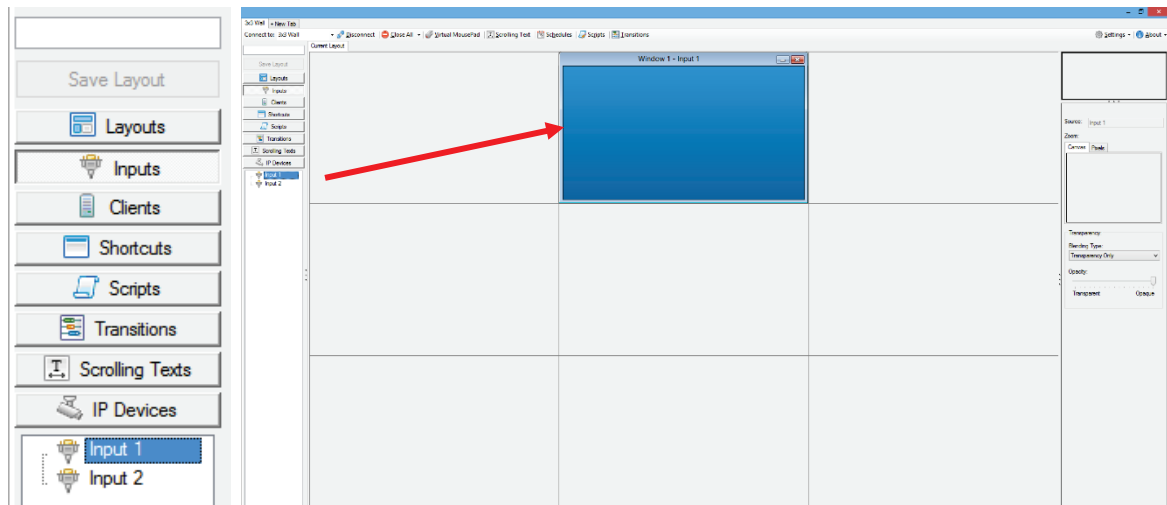
Next you'll see the connected VCS Control Client interface. There are 5 main parts to the interface that allow you to control the entire video wall: the Toolbar, the Properties, the Sources, the Context Control, and the Main Working Area.



- **Sources:** This contains all different types of content you may like to place on your video wall. These can be Inputs, Remote Clients, Local Applications, Scripts, or Layouts.
- **Properties:** This will present you with different properties depending on the type of source you have selected. If no sources are currently selected, it will allow you to adjust the grid on the Main Working Area.
- **Main Working Area:** This is automatically configured to represent the displays in your video wall, but can be set to any size in the Properties section. This is where you will control and position all the windows showing on the video wall.
- **Toolbar:** Allows you to access more features of VCS Control Software. Close All Windows on the desktop, or a specific subset of windows. Take control of the video wall using Virtual MousePad, create Schedules, edit and run Scripts, etc.
- **Context Control:** Keeps your absolute position within sub-regions, and allows for sub-region navigation.

Drag and Drop

You are able to take any type of source (i.e Input, an Application, a Remote Client, or Layout) and drag and drop the source on the Main Working Area to have that source size itself to the grid. You will then be able to move and resize this window as you wish.

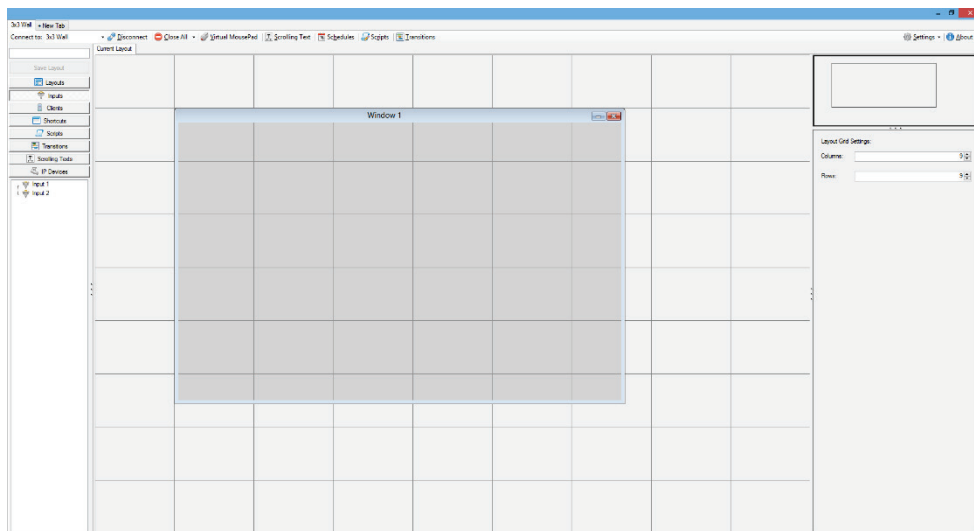


Windows will automatically snap to the grid while moving, and can be snapped to the next largest grid by double-clicking the title bar of the window. Press ALT while moving the window to prevent it from snapping, and press CTRL while resizing to keep the aspect ratio of the window intact.

While resizing a window, you can hold the CTRL key to preserve the original aspect ratio of the window. If the window is set to the desired aspect ratio, you won't accidentally lose it. To start, you can manually set the size of the window with pixel values that reflect the desired aspect ratio (for example, 160x90), and then enlarge it and snap to the layout.

You can also move windows using the arrow keys. Press Enter to select the next window currently displayed on the client, and then the arrow keys (Up, Down, Left and Right) to snap it to the closest grid line.

If you need a finer grid to organize the desktop of the video wall, you can adjust it by rolling the mouse wheel up and down or by manually setting the number of rows and columns you need.

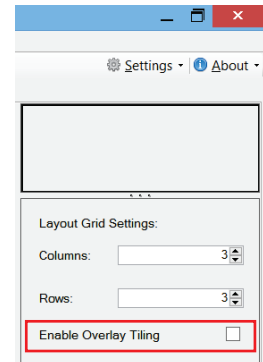


You can create an empty window by clicking and dragging along the video wall section. If you drag and drop a source in this window, it will fill the window entirely. You can always drag and drop sources on to windows, whether they are empty or not. This "empty" window tool can also be used to group sub windows or to organize the video wall in subsections. Read more in "Sub-regions" on page 19.

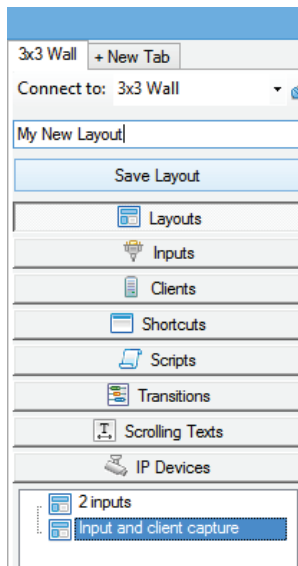
Tiling Mode

By default, when dragging a source over an existing window, the new source will replace the content of that window. By clicking the **Enable Overlay Tiling** mode (available when no windows are selected, in the properties pane) then sources dragged over existing windows will create a new window, sizing themselves to the underlying grid. For instance, consider having a source opened full screen on a 2x2 video wall, and dragging a new source with the **Enable Overlay Tiling** mode on. This will cause the new source to open in one quadrant of the video wall, while leaving the full screen source untouched.

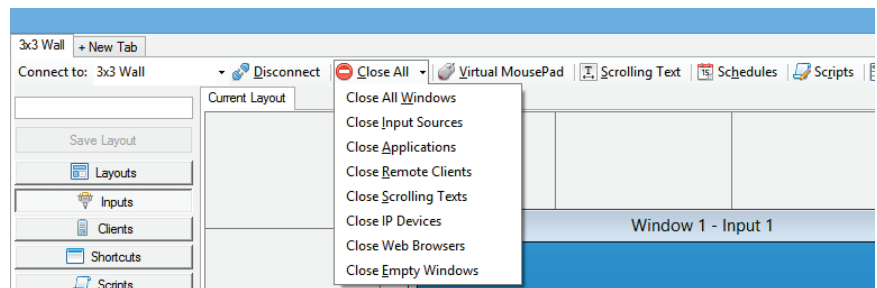
This feature is specific to each user and can be turned on and off at will.



Layouts

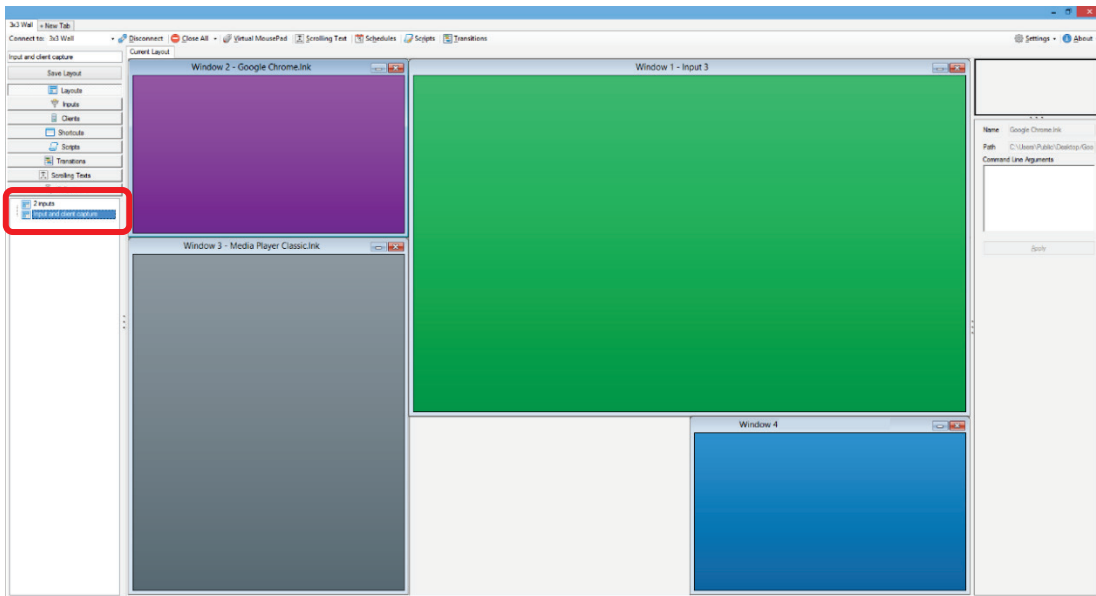


After you have positioned your windows, you can save the layout for later use. In the top-left corner, type the desired layout name and click **Save Layout** or press Enter. You can then close all windows through the toolbar:

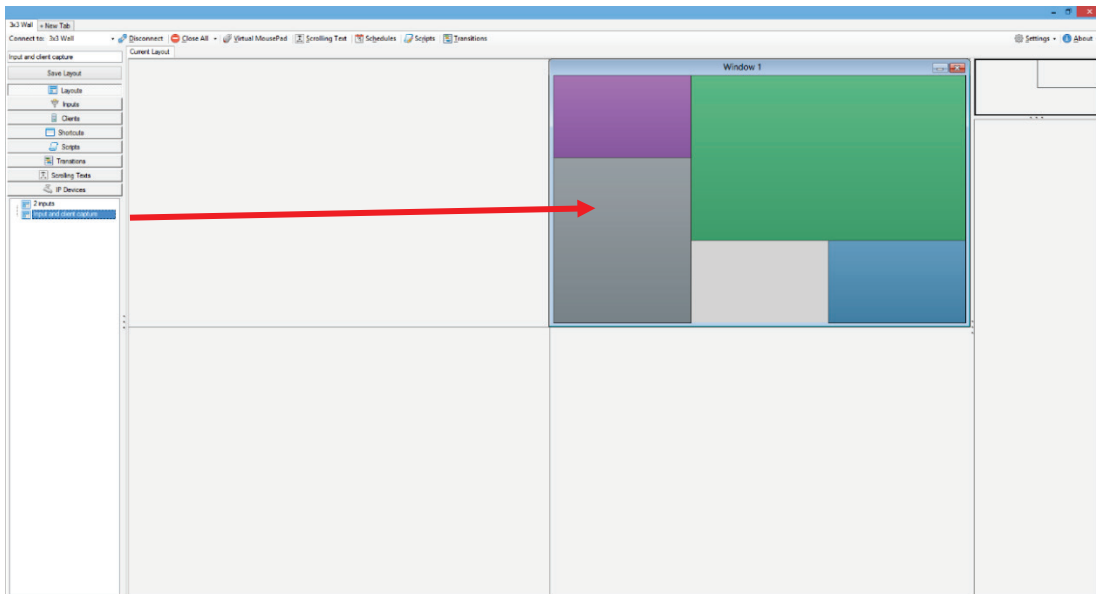


Getting Started

To retrieve your layout, on the left-hand side click the Layout tab and double-click the layout you want to open. This will automatically close all the windows on the video wall and open the new layout across the entire video wall.



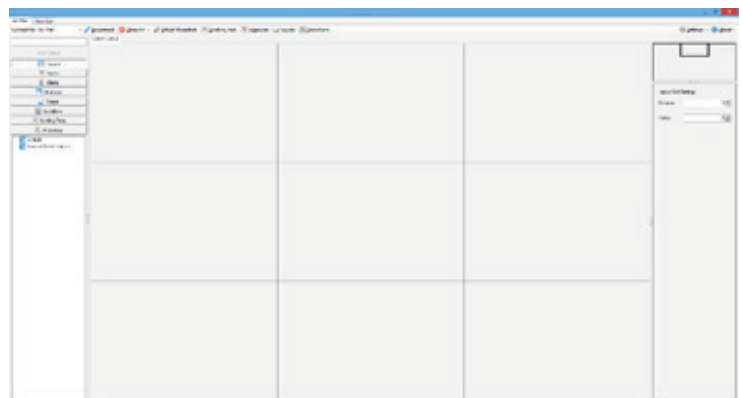
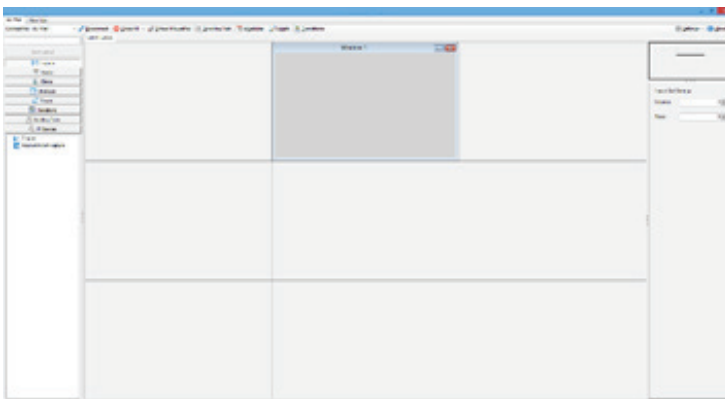
You can also drag and drop a layout to the video wall. In this case, the layout will adjust itself to fit the rectangle where it has been dropped. This group of windows can then be moved around and resized at will.



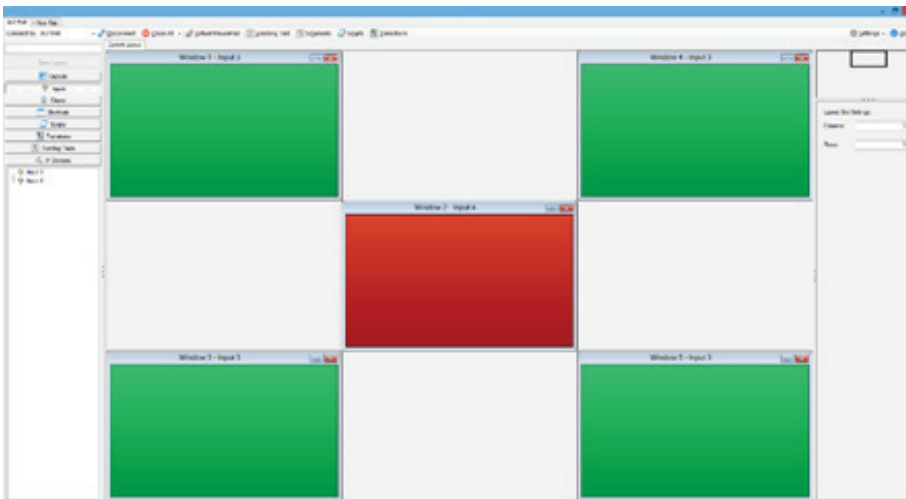
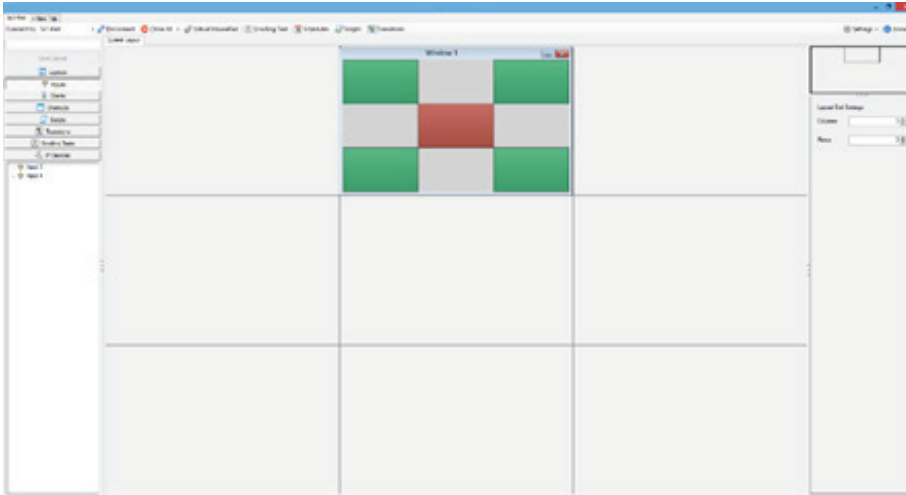
Sub-regions

Sub-regions help manage small spaces on large video walls. By creating an empty window on the video wall, it is possible to double-click that window to jump into that sub-region, and design that specific area as though it were a full-sized video wall. There is no limit to how many levels of sub-regions you can create.

For example, if you create an empty window the size of a single monitor on your video wall, and double-click inside the window, you will be moved inside of that window. You will notice the thick-black outline in the top-right corner, which we refer to as the **Context Control**. This helps you keep your position within sub-regions.



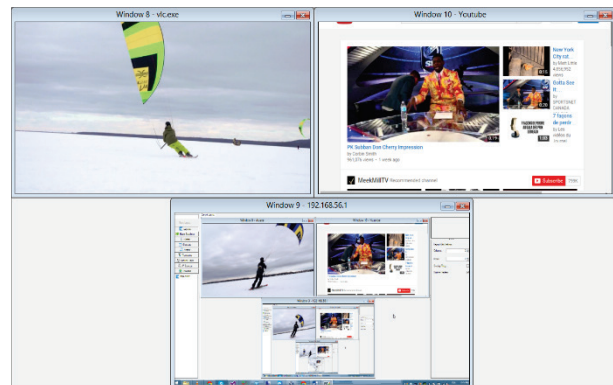
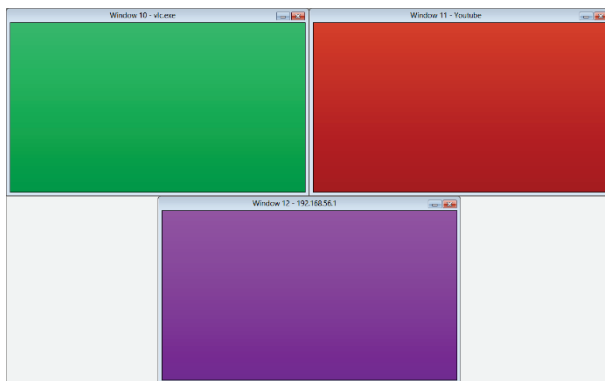
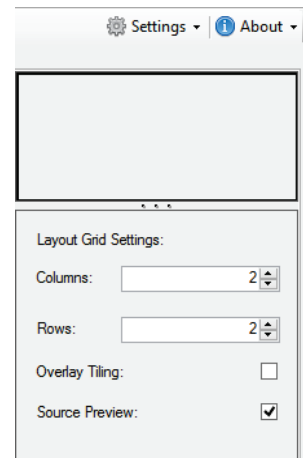
You can drag and drop sources in a sub-region as you would normally do in a full-sized interface while only affecting the area of the window you descended into. By clicking outside the thick-black outline in the Context Control or right-clicking and selecting **Up One Level**, you can return to the previous level. From there, you can move and resize the entire group of windows you just created.



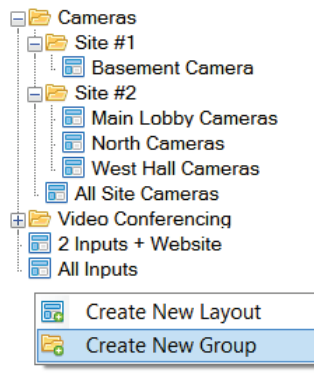
Source Preview

VCS Control Clients can receive a real-time stream of the sources available on the video wall controller. This is especially useful when manipulating sources from a room where the video wall is not visible, or when an operator wants to see the content of a source without interfering with the current layout. Sources can be previewed individually from their right-click menu, or as they appear on the video wall. Source preview streams are limited to one frame per second.

To enable source preview on the layout editor, select the **Source Preview** option found on the left, under the layout grid settings. This will replace the default colored content of layout windows by their respective video stream.



Content Grouping



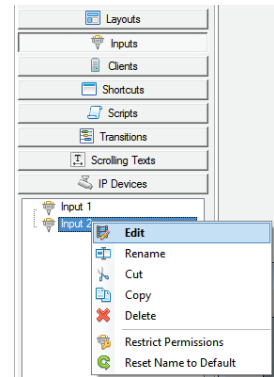
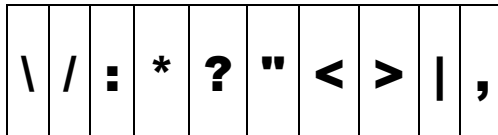
You can group together content based on type, and you can also restrict certain content to certain users. (For more information on restricting content, see the “Users Management (VCS Control Software Enterprise only)” section on page 44.) Content can be copied and pasted to exist in multiple groups at the same time. This makes navigating large amounts of sources, layouts, clients, scripts easier and faster. An example of grouped layouts is pictured on the left. We could restrict Site #1 layouts to Site #1 users, and Site #2 layouts for Site #2 users, while the Administrator could access all content.

Managing Inputs

Inputs Properties

The inputs connected to the video wall controller are listed under the Inputs tab on the left of the VCS Control Client interface. By default, they are listed as Input 1, Input 2, etc. The context menu allows you to rename or edit the source parameters.

Rename: A dialog box will invite you to enter a new name for the input. Names can contain spaces and some other special characters. However, the following characters are not permitted:



Edit: On VCS video input and output cards, the editing dialog box consists of the following:

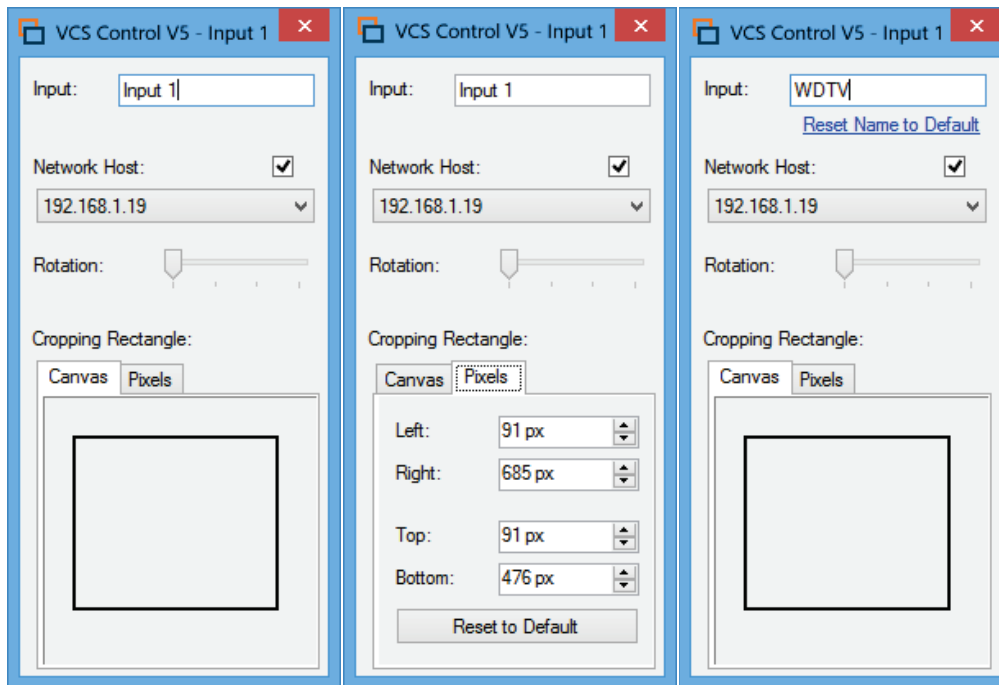
- **Network Host:** Allows you to associate a network client to the input. Each window displaying that input will then propagate the mouse and keyboard input to the specified client. This is useful to have remote control of a source, with the low-latency provided by input capture.

- **Rotation:** Allows you to rotate the input by either 0, 90, 180 or 270 degrees.

Note: This feature is currently unavailable when using both VCS input and output cards.

- **Canvas:** By dragging the edges or the corners with your mouse, you can select the amount of cropping you want to apply. You can also use a grid to help you crop equally on all edges. The grid appears by scrolling up or down when the mouse is hovering over the rectangle area.

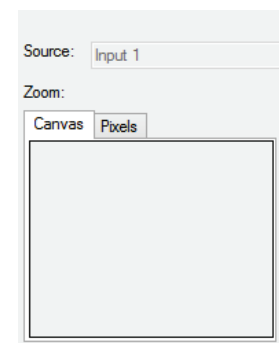
- **Pixels:** Allows you to crop using exact pixel values.



Input Zoom

The cropping of inputs as seen above is set in the input's properties and will be applied on each window displayed on the video wall. It is also possible to pan and zoom within an individual input window using the Zoom tool.

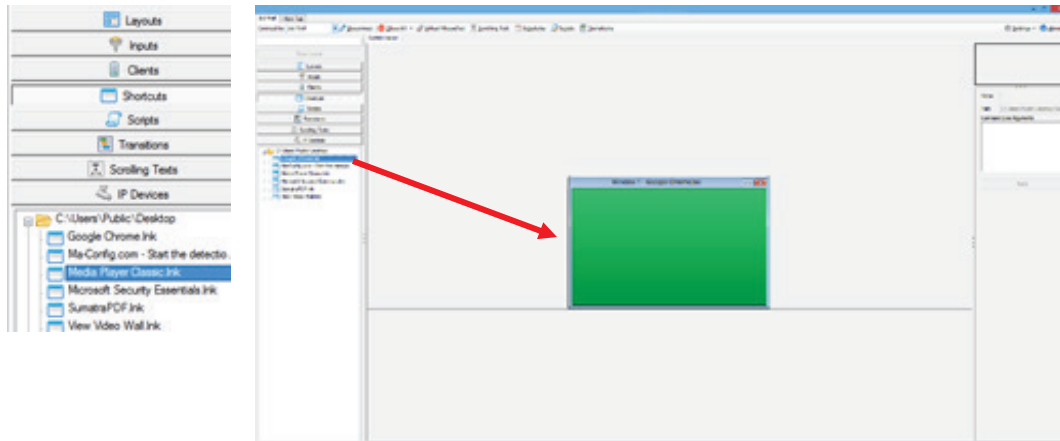
This tool appears on the bottom-right of the VCS Control Client interface only when an input or client window has been selected on the video wall section. This tool is used the same way as used in the cropping function. The difference is that the zoom applies only to the selected window and will not affect other windows containing the same input. So it is possible to open multiple windows showing different sections of the same input.



Managing Local Applications

Application Shortcuts

In VCS Control Client, all the video wall application shortcuts are listed on the left-hand side, in the Shortcuts tab. Drag and drop a shortcut to a specific rectangle on the video wall to have the application open in that rectangle.



Note: This feature is not operational with all applications. Some applications will always open where they were last closed. We try our best to support all types of applications, so if your application does not function with VCS Control Software, please email us at support@planar.com and we will try our best to accommodate your application in future releases.

It is possible to specify command line arguments to programs that accept them by using the **Command Line Arguments** field on the bottom-right of the interface. For example, to open a specific web page in a Google Chrome window, just type the web address in the Command Line Arguments field and click **Apply**.

Example: `www.planar.com`

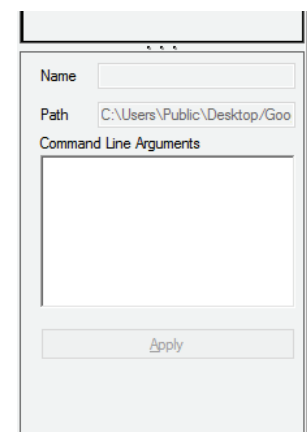
To open multiple tabs in the same window, separate each web page address by a space:

Example: `www.planar.com www.google.com`

To open a web page in an application window (no tabs), just precede the web page address with:

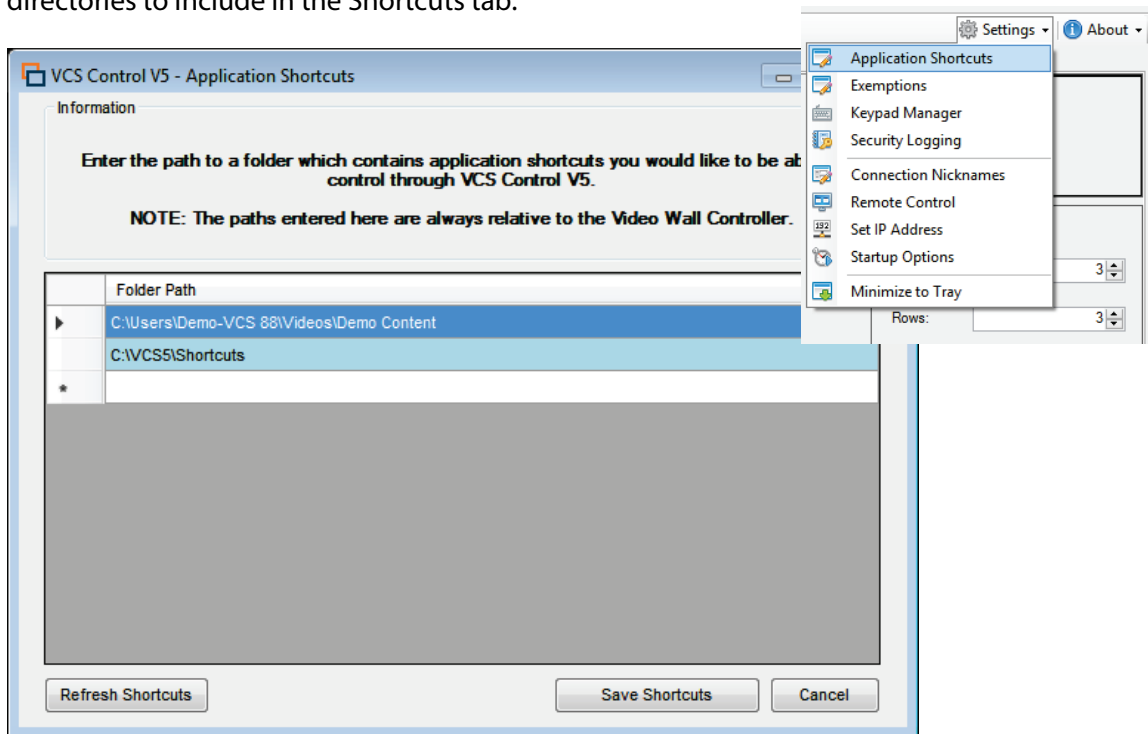
`--app=http://`

Example: `--app=http://www.planar.com`



For more information on command line arguments for a specific program, please refer to that application's documentation.

By default, shortcuts are taken from the desktop of the video wall. To customize which applications to make available through VCS Control Client, go to the **Settings** menu and select **Application Shortcuts**. This will open a new window where you will be able to specify which directories to include in the Shortcuts tab.



If new shortcuts are added to those directories, the shortcut list will not be automatically updated. To refresh the Shortcuts tab during operation, click the **Refresh Shortcuts** button.

Saving Layouts with Local Applications

Saving a layout automatically includes the local applications in the layouts. The Command Line arguments will also be saved.

Some programs are built with features that prevent multiple instances of the same program from opening. While we are able to circumvent some of these features, it is not always possible. Here is a brief list of programs we suggest for common use cases.

If you need to open multiple web browser windows, VCS Control Client has been optimized with Google Chrome (<http://chrome.google.com>). However, at this time each Chrome window will open with a new, temporary user profile. This makes it impossible to maintain extensions and bookmarks while using VCS Control Client.

For multiple windows of PDF documents, Adobe Acrobat reader will not let you open multiple windows in different locations. We recommend Sumatra PDF Reader (<http://blog.kowalczyk.info/software/sumatrapdf/download.html>).

For video clips or IP streams, we recommend VLC Media Player (<http://www.videolan.org/vlc/>).

Note: To prevent VLC Media Player from launching with the video size by default, use the parameter `--no-qt-video-autoresize` in the Command Line Arguments field of the VCS Control Client.

Virtual Mouse Pad

Virtual MousePad allows the operator to have his mouse and keyboard active on the video wall. To activate Virtual MousePad, click the **Virtual MousePad** button at the top of VCS Control Client. This will gray out the center of your VCS Control Client, and your mouse and keyboard will become active on the video wall. If remote clients are displayed on the video wall and they configured their client to allow remote control, your mouse and keyboard will affect them too.



Notes:

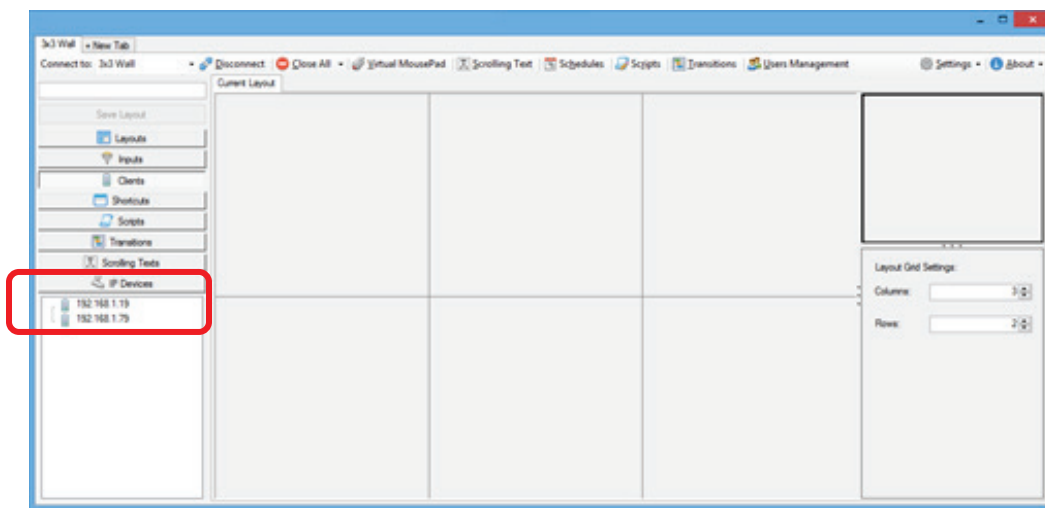
- On large video walls it might be difficult to locate the mouse. By pressing CTRL+Space you will generate a large image of the mouse pointer on the video wall, making it easy to locate it. Press CTRL+Space again to return the mouse to its original size.
- To avoid interference with the physical keyboard and mouse, Virtual MousePad is disabled from a client running directly on the video wall controller (for example, a console monitor).

Managing Remote Clients

VCS Control Client allows operators to control networked computers from their desktop and display them on the video wall. Each computer you would like to control must be connected to the VCS Control with the VCS Control Client or VCS Control Lightweight Client before they can be seen by other VCS Control Clients.

Connect and Configure

On the VCS Control Client user interface, as soon as you connect to a video wall, your PC will be listed on the Clients tab on the left-hand side.

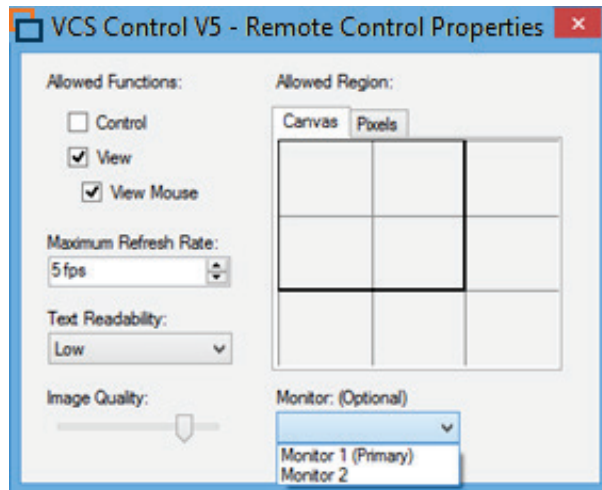


Note: The Clients tab will show the IP address of your own computer as well as the IP address of the video wall controller. Therefore, there should always be at least two IP addresses listed under the Clients tab.

Configure the way you want the client to be seen when displayed on the video wall or on other client's desktops is done by clicking **Settings > Remote Control**.

Under **Allowed Functions**, you have three checkboxes:

- **Control**: This allows your desktop to be controlled by other clients.
- **View**: This allows your client to be viewed by others and shown on the video wall.
- **View Mouse**: This option lets your mouse cursor be seen by other clients.

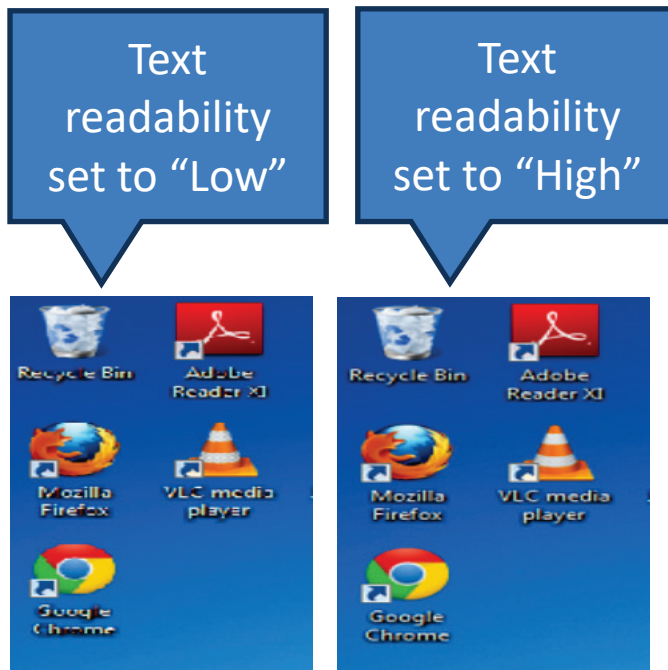


Maximum Refresh Rate

This option allows you to set the refresh rate of your client, the higher the refresh rate, the more CPU and the more network bandwidth will be required. This value is set by default to 5 frames per second.

Image Quality

When Image Quality is set to maximum, 100% of the pixels of the source image will be captured (up to 1600 x 900 pixels at a time). This requires a lot of CPU power and network bandwidth. As you lower the image quality, a proportional number of pixels will not be captured, resulting in less CPU/network usage. You can capture a lower quality image, while maintaining text readability by setting the **Text Readability** to **High**. See the difference below:

**Notes:**

- When **Image Quality** is set to **Maximum**, the **Text Readability** setting has no impact.
- Setting the **Text Readability** to **High** will slightly affect the CPU usage but will not affect the network bandwidth usage.

Allowed Region

The portion of your client that other clients have available to see can be determined by moving the rectangle on the Canvas Tab. It is possible to double-click in order to snap the rectangle to the next largest grid. You can get even finer control by using the Pixels Tab. Finally, if your client computer has multiple monitors, it is possible to pre-set the capture region to a specific monitor.

Note: The size of the allowed region has a major impact on the CPU/network usage, so we encourage you to use this tool and capture only the portion that is of interest.

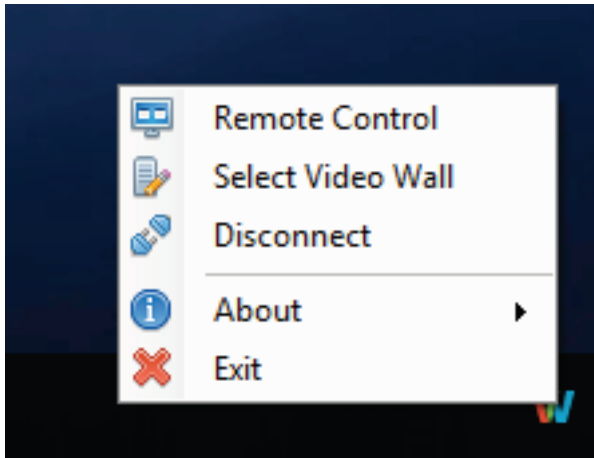
General recommendations to improve CPU and Network bandwidth:

- Set your desktop background to a solid color (preferably black).
- Reduce resolution of the capture region.
- Reduce frame rate.
- Reduce image quality.
- Reduce text readability.

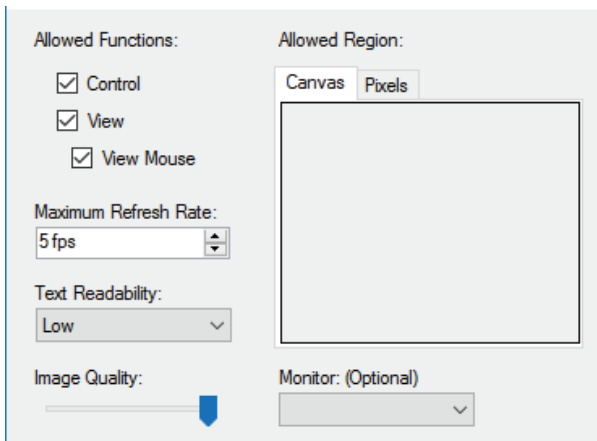
VCS Control Lightweight Client

The VCS Control Lightweight Client is to be installed on the computers you want to be “seen” on the network by the server. These computers can be displayed and/or controlled by other clients in the network, and on the video wall.

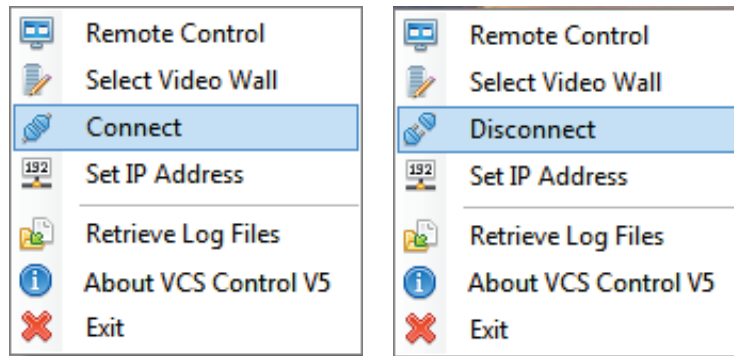
You can control the client by right-clicking its icon in the system tray.



By selecting the **Remote Control** option, you can restrict which options are available and what part of the screen will be accessible to the remote party. There are performance parameters available to you, to fine-tune the client behavior.



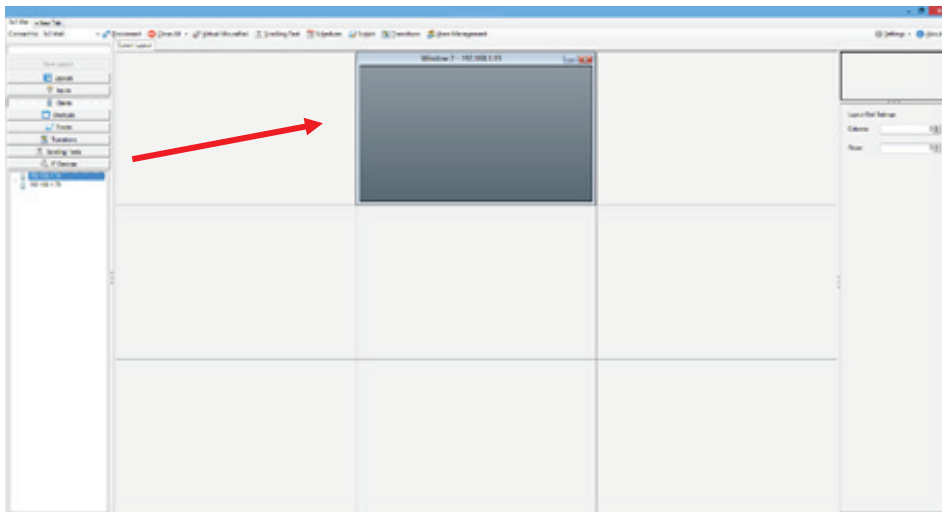
The VCS Control Lightweight Client will attempt to connect automatically to the last used video wall on start-up. To verify the connection, or to select another video wall, right-click the VCS Control Software icon in the Windows taskbar. Depending on the status of your connection, the menu will give you the option to connect or disconnect, respectively.



To connect to a different video wall, click **Select Video Wall** and type in the name of the host or its IP address.

Manipulating Clients

Now that clients have been configured and are connected, it is very easy to show them on the video wall through a drag and drop operation.



Once a client is opened, on the right-hand side you will find options that are the same as those seen above for the Remote Control Properties dialog box. The only difference is that the parameters set here will apply only to this specific client window. Also the settings cannot be set beyond what has been determined in the Client Properties.

For example, it will not be possible to set the refresh rate at a higher value than what was set in the Client Properties, but it's possible to reduce it. Also, the maximum visible region is the allowed region set in the Client Properties, but it is possible to zoom in a specific portion within this allowed region.

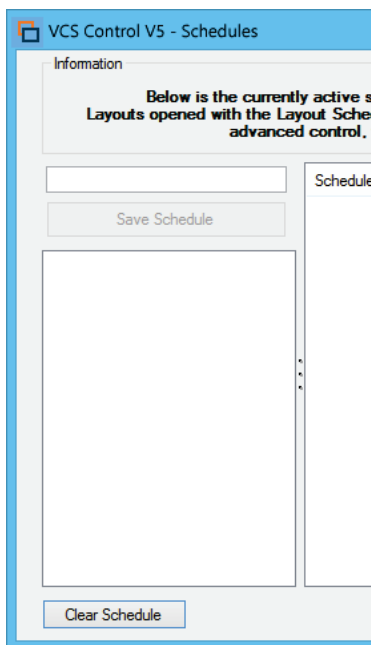
Schedules

With VCS Control Client, you have the ability to create complex schedules.

Click on the **Schedules** button on the top section of the client interface.



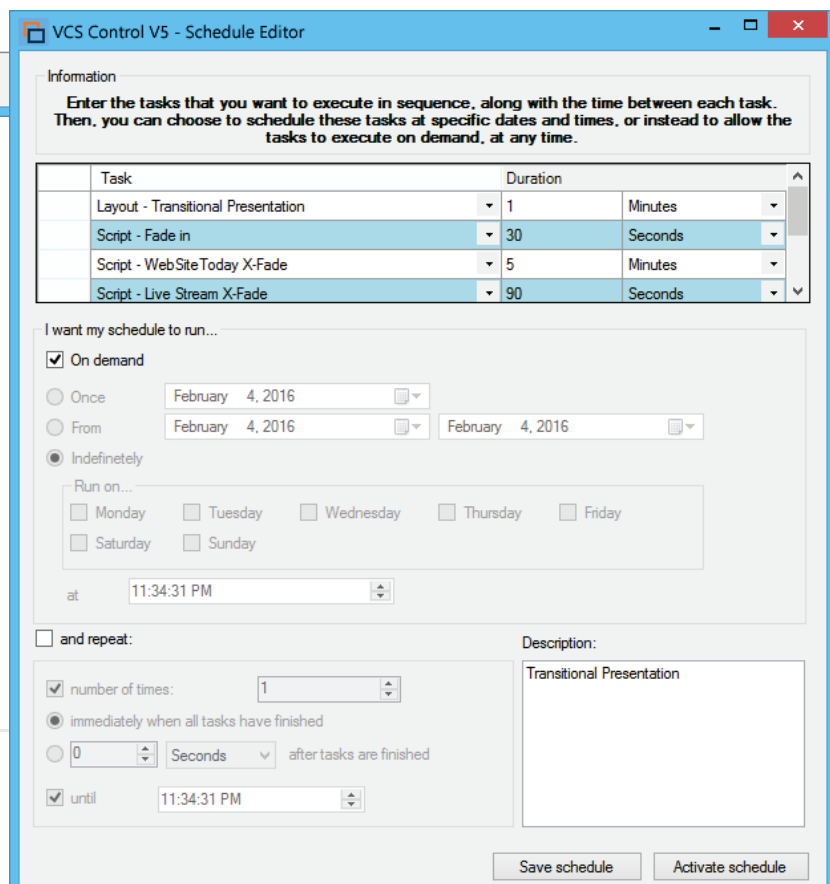
You will get to this schedule management window. The left section is for the list of predefined schedules that you have programmed. And the right section shows the active running ones.



This is where you can create, save and run schedules.

When you click **Create Schedule**, you will get the following window:

The top window is where you provide the sequence of tasks. The



tasks can be for loading layouts or running scripts. The duration determines the time period until the execution of the next task.

You can run the sequence:

- **On demand:** For executing the sequence of tasks on activation of the schedule. In other words in relative time.

Or in absolute time periods:

- **Once:** For executing the sequence of tasks only on one specific day.
- **From:** For executing the sequence of tasks only within a period of days.
- **Indefinitely:** For executing the sequence of tasks on everyday basis.
- **Run on...(weekdays):** Here you can exclude weekdays by unchecking them. This can be defined in conjunction with the **From** and **Indefinitely** time periods.
- **At:** This defines the absolute start time of day for starting the sequence.

When the Schedule is active in this absolute time period, the sequence will be executed.

The **Repeat** checkbox will allow you to loop the sequence of tasks. You can define and limit the repeat loop:

- A fixed **number of times**; Will only repeat a given number of times;
- Restarting the sequence **Immediately when all tasks have finished** or;
- To set a fixed time period **after tasks are finished**;
- **Until** what time of day you will allow the repeat to continue;

Enter a short description of the sequence in the white **description** box.

- **Activate schedule:** Will run the schedule and list it in the active schedule. If it is a relative schedule, the sequence will be executed immediately. If it is a schedule based on absolute time then it will wait for the next predefined absolute time to start the sequence.
- **Save schedule:** Will prompt for a name for this schedule for later activation.

Notes:

- You can make scripts to activate and clear schedules. You can also managed predefined schedules via the network API.
- Layout tasks are only functional if you have a single surface setup. Use a script to load a layout on a specific surface in this case.

Here's an example. Let's say that we want to schedule the following events.

- Turn on monitors at 8AM from Monday to Friday;
- Set a morning layout from at 8AM;

- Set a midday layout at 12PM;
- Set an afternoon layout at 1PM;
- Toggle between 3 sources every 5 minutes on a specific window in the morning layout;
- Launch a layout with a sequence of transitional effects at any desired time in the afternoon;
- Turn off the monitors automatically at 6PM.

What you need to prepare for this is:

- Make a script to turn on the monitors;
- Make a script to turn off the monitors;
- Prepare morning, noon and afternoon layouts;
- Make 3 unique scripts to set source on a specific window in the morning layout;
- Prepare a starting layout for a sequence of transitional effects;
- Use the transition designer and scripting tool for making a series of transitional events.

Now let's start with the easy things. The morning, noon and afternoon layout.

This is what you will set to load the morning layout. The task you set is the layout in question. Duration is irrelevant since there is nothing that will come right after loading the layout. Set Monday to Friday at 8AM

Information

Enter the tasks that you want to execute in sequence, along with the time between each task. Then, you can choose to schedule these tasks at specific dates and times, or instead to allow the tasks to execute on demand, at any time.

Task	Duration
Layout - Morning	1 Seconds

I want my schedule to run...

On demand

Once February 4, 2016

From February 4, 2016 February 4, 2016

Indefinitely

Run on...

Monday Tuesday Wednesday Thursday Friday

Saturday Sunday

at 8:00:00 AM

and repeat:

number of times: 1

immediately when all tasks have finished

0 Seconds after tasks are finished

until 11:17:09 PM

Description: Morning Layout

Save schedule Activate schedule

This is what you set for noon layout. And the afternoon schedule will also be similar but with the afternoon layout set to start at 1PM

Information

Enter the tasks that you want to execute in sequence, along with the time between each task. Then, you can choose to schedule these tasks at specific dates and times, or instead to allow the tasks to execute on demand, at any time.

Task	Duration
Layout - Noon	1 Minutes

I want my schedule to run...

On demand

Once February 5, 2016

From February 5, 2016 February 5, 2016

Indefinitely

Run on...

Monday Tuesday Wednesday Thursday Friday

Saturday Sunday

at 12:00:00 PM

and repeat:

number of times: 1

immediately when all tasks have finished

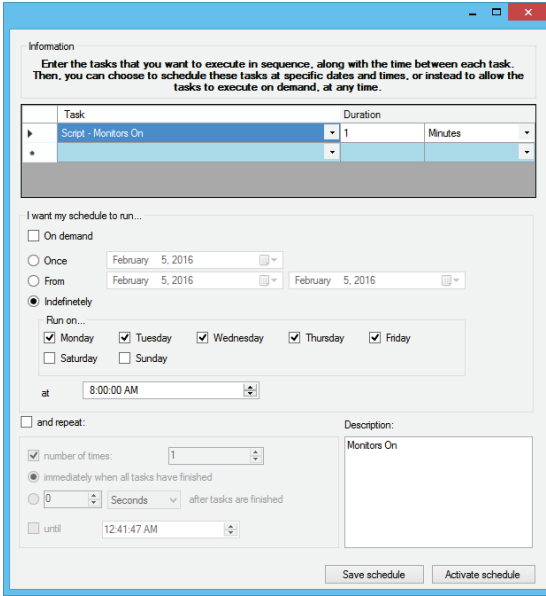
0 Seconds after tasks are finished

until 12:36:41 AM

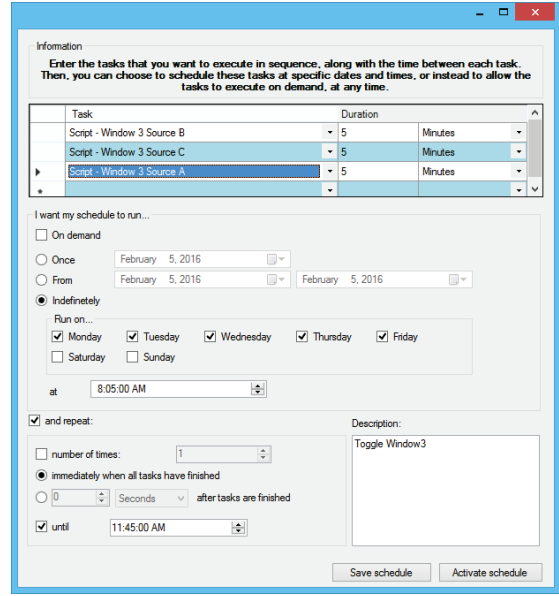
Description: Layout Noon

Save schedule Activate schedule

You'll need to create 2 schedules for the power switching for the monitors. This is what the Monitor On schedule will look like.



This schedule will toggle the source in windows using 3 distinct scripts. Note the repeat feature in this example.



This next schedule is for the transitional sequence. Note that it is set to run in relative time and the sequence has many variables. The first task is a simple startup layout and the following are scripts to execute transitional effects. The last task can be to load back the afternoon layout for example.

Below is an example of the active schedules that automates all daily activity.

The screenshot shows the 'VCS Control V5 - Schedule Editor' window. It contains the following information:

Information:
Enter the tasks that you want to execute in sequence, along with the time between each task. Then, you can choose to schedule these tasks at specific dates and times, or instead to allow the tasks to execute on demand, at any time.

Task	Duration
Layout - Transitional Presentation	1 Minutes
Script - Fade in	30 Seconds
Script - WebSite Today X-Fade	5 Minutes
Script - Live Stream X-Fade	90 Seconds

I want my schedule to run...

On demand

Once: February 4, 2016

From: February 4, 2016 to February 4, 2016

Indefinitely

Run on...

Monday Tuesday Wednesday Thursday Friday

Saturday Sunday

at 11:34:31 PM

and repeat:

number of times: 1

immediately when all tasks have finished

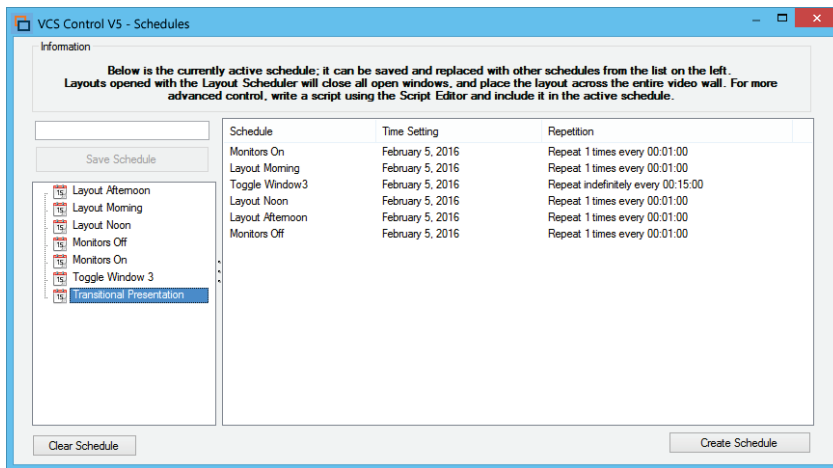
0 Seconds after tasks are finished

until 11:34:31 PM

Description: Transitional Presentation

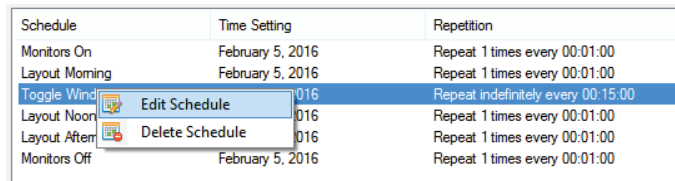
Buttons: Save schedule, Activate schedule

The transitional presentation is available for launch.



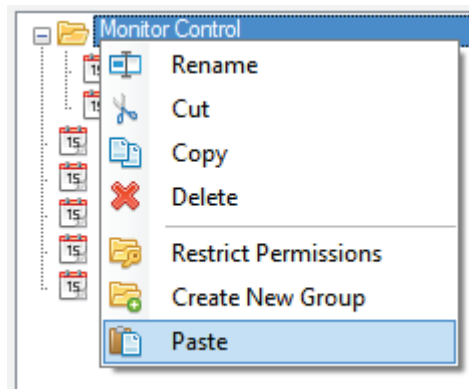
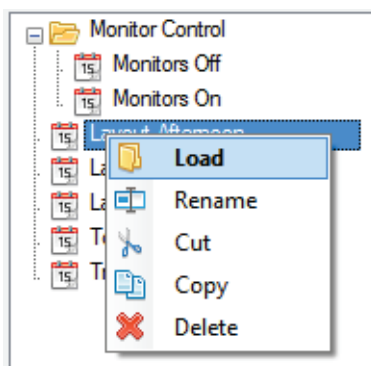
In the Schedule Management you can right-click on Active Schedules to:

- **Edit Schedule:** to go back to configure the sequence and time settings
- **Delete Schedule:** To remove from the active schedule list.



If you right-click a saved scheduled element, you will have the option to **Load** as active schedule, **Rename** it, **Cut**, **Copy** and **Delete**.

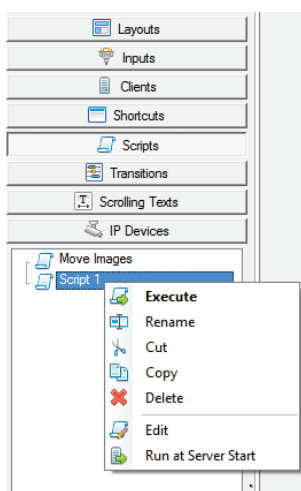
You can organize your schedules in sub folders. Right-clicking a sub folder will let you **Rename**, **Cut**, **Copy**, **Delete**, **Restrict Permissions** to prevent user to modify its contents, **Create New Group** within its group, **Paste** schedule content from the clipboard.



Scripts

VCS Control Client allows operators to manipulate the video wall programmatically, to simplify common tasks. This section will explain how to organize, use, and create scripts. A technical description of the scripting language's syntax and semantics can be found in the *VCS Control Software Scripting Language Reference*.

Using Scripts



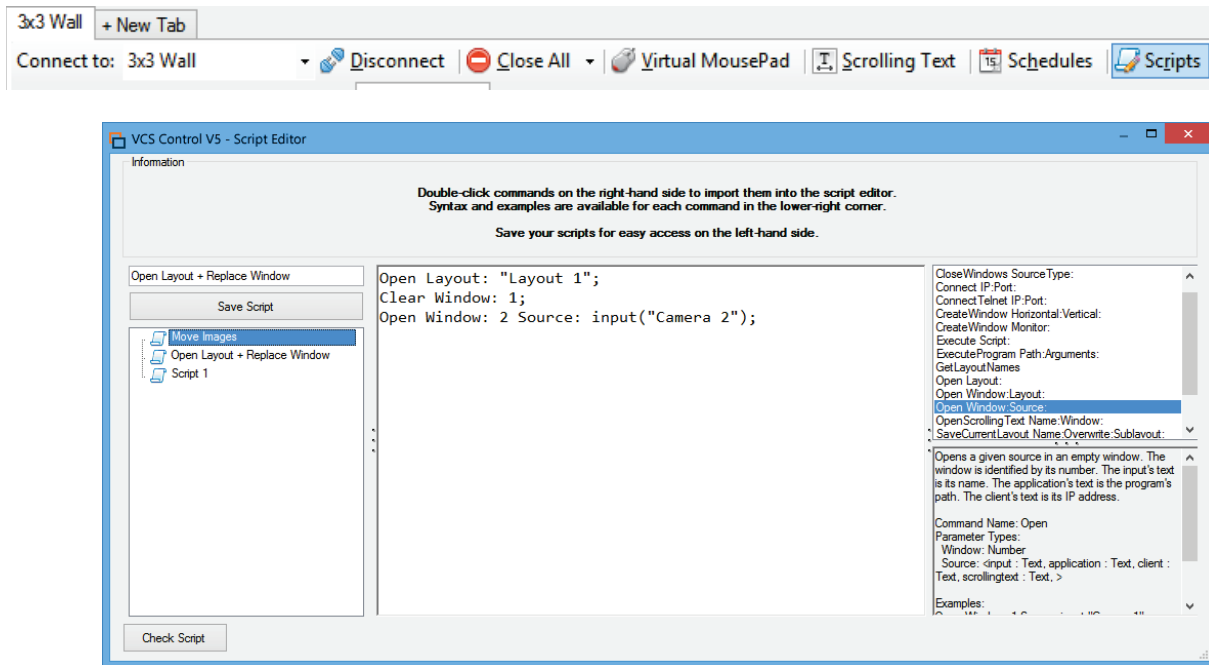
The scripts that are saved on the video wall are found in the **Scripts** content list, alongside the input and remote client lists. At a glance, the operator can see which scripts can be safely executed and which still contain errors that need to be corrected.

As with saved layouts, saved scripts can be renamed, copied, deleted and made to run when the VCS Control Server starts up. These actions are available by right-clicking the script that you want to manipulate.

The main purpose of a script is to be executed, and as such it cannot be drag and dropped on to the interface. A script can affect the current layout, manage any content available in VCS Control Client (sources, layouts, schedules, etc.) and communicate with services external to VCS Control Client. Scripts are always executed on the video wall controller and affect all connected clients.

Creating and Editing Scripts

To start editing scripts, either right-click a script and select **Edit**, or click the **Scripts** button at the top of the client interface. The script editor window allows the operator to modify existing scripts, or to execute one-time scripts without having to save them.



The main text area is where the operator can write the script. In the top-left corner, the name of the script being edited appears and can be changed. Modifications do not take effect immediately; the **Save Script** button must be clicked or the changes will be lost.

On the right is the list of commands that can be executed. Each command comes with a short description and a list of the expected parameters. Double-click a command to insert it into the script, complete with default values for the parameters.

The **Check Script** button will verify that every command used exists and has been given parameters with a correct name and value. Any error with the script is reported and must be dealt with before the script can be safely executed. Again, an in-depth description of what makes a script valid or invalid is found in the *VCS Control Software Scripting Language Reference*.

Executing a script might produce an error that was not found during validation. This is usually because the commands used depend on the changing state of the video wall, and cannot be verified once the state of the video wall has changed. For example, a script might contain the command: "Open Layout: "Layout 3", which will work properly if the layout "Layout 3" actually

exists. If the layout is later deleted, the next time the script is executed the operator will receive an error saying that "Layout 3" is not a known layout.

Network Scripting API

VCS Control Client provides developers access to its scripting commands through the Network Scripting API. In this way, programmers can send TCP/IP commands to the video wall controller using the same syntax as they would writing scripts locally in the VCS Control Client software.

To get started, do the following:

- Ensure the VCS Control Server is running.
- Send commands to the server on Port 50001.
- Commands are case-sensitive and must end with a carriage return and line feed (0x0D0A).
- If the command is successful, you will receive "Success - " followed by the result of the command. If the command is not valid, or fails during execution, you will receive "Error - " followed by an error message to help pinpoint the problem. The response is terminated by a line feed.

Two types of messages can be sent to the Network Scripting API.

- Command Invocations

These can alter the state of the video wall. These commands also produce a result, which can be assigned to a variable and used in subsequent messages. The result of the command, whether assigned to a variable or not, is sent to the client.

Example:

```
CloseWindows SourceType: all;
WindowNumber = CreateWindow Monitor: { 2, 1 };
Open Window: WindowNumber Layout: "Meeting Layout";
```

- Return Statements

These statements will not terminate communication with the Network API. It will instead evaluate the given command and send back the result. These commands can be useful for developers wishing to see the contents of variables, or the value of intermediate results.

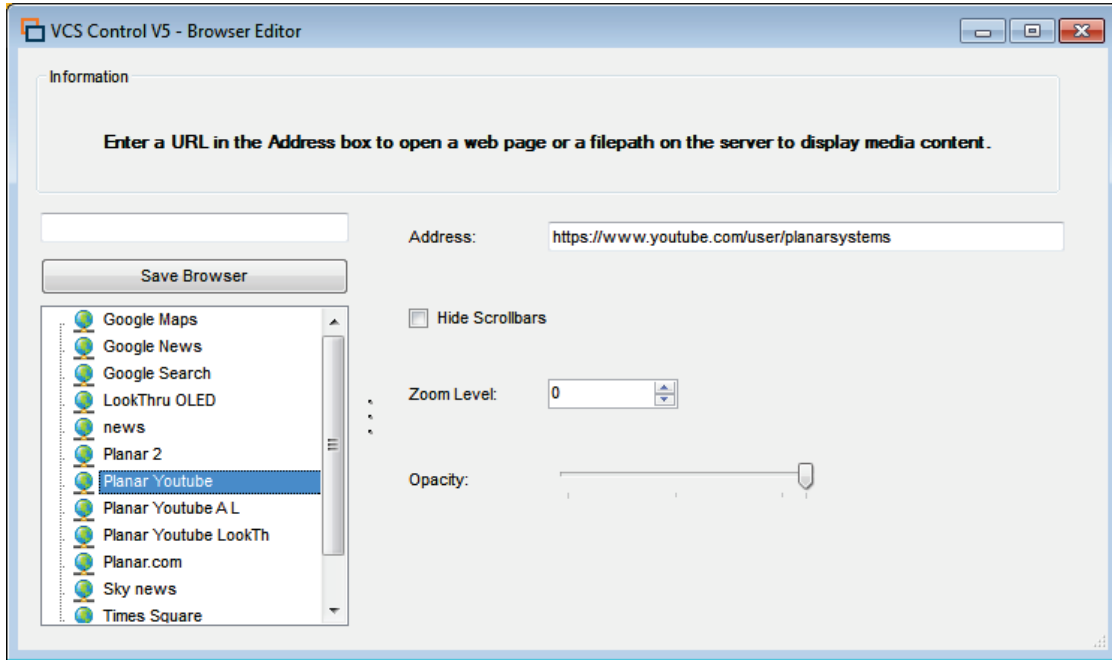
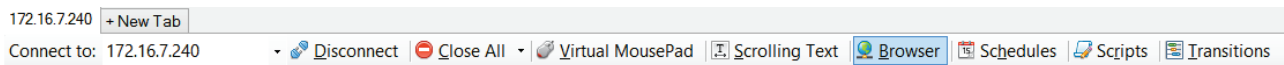
Example:

```
Names = GetLayoutNames;
return Names;
return { layout "Layout 1", script "Script 1" };
```

A complete guide, including examples, of the commands available with the Network Scripting API are available in the *VCS Control Software Scripting Commands Reference*.

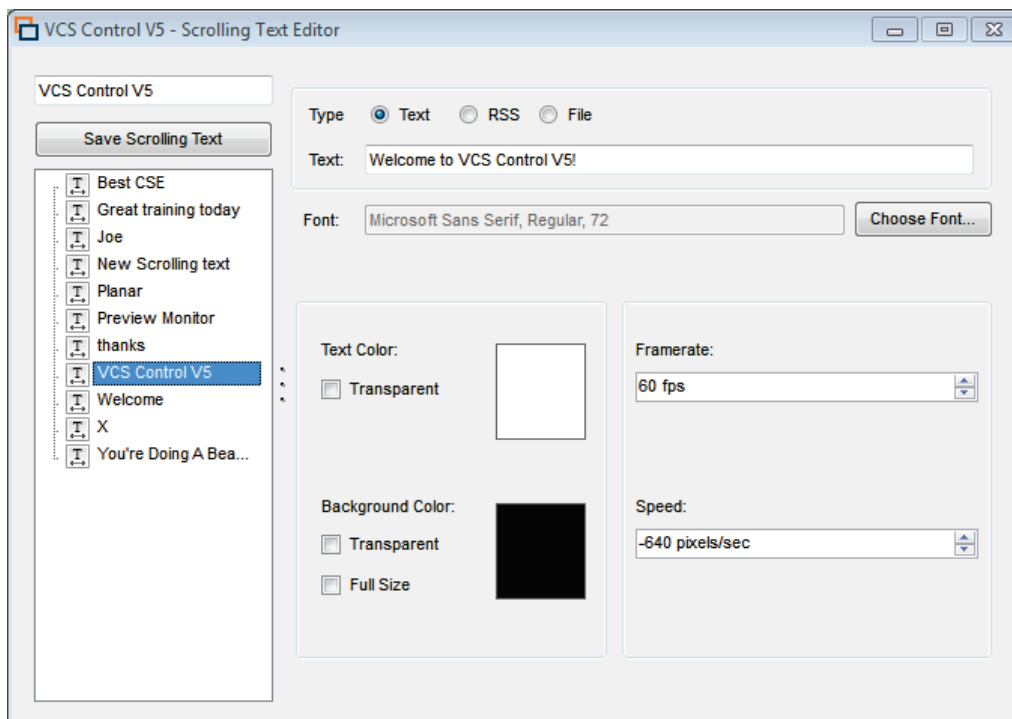
Browsers

In order to open webpages and local media files on the server, you can use the browser. To do so, open the Browser Editor and provide it with a URL to a website, or the location of an image/video/text/PDF file residing on the video wall controller. The advantage to using the Browser is that it is a fully featured WebKit browser, and has support for advanced features such as Opacity and Zoom, and is able to hide window decorations and scrollbars.



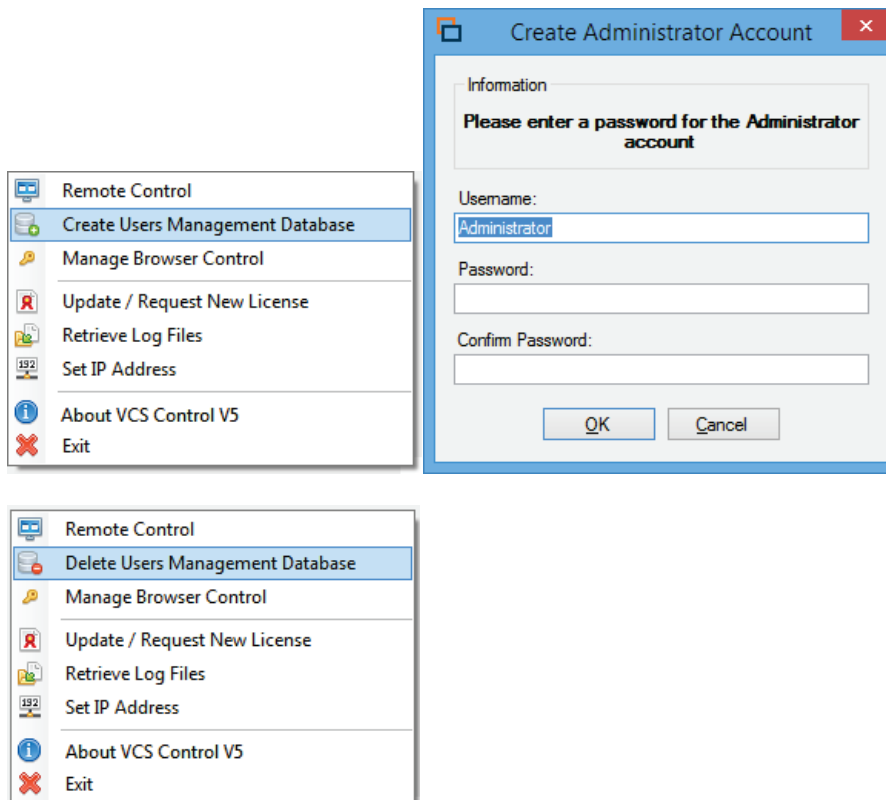
Scrolling Text

Display scrolling text at any size across the video wall using the Scrolling Text feature. You may enter some text that you would like displayed, as well as the font style and size, text color, background color, framerate, and scrolling speed. The background banner that appears behind the text can size to cover the length of your text, or can extend to cover the exact length of the scrolling text's area. If you would like to stop the scrolling text, set its speed to 0 pixels/sec. If you would like to scroll the text from left-to-right, set a positive value for its speed.



User Management (VCS Control Software Enterprise only)

By default, the video wall controller gives unrestricted access to its functionality. All the clients that are able to connect to the server can affect all aspects of the video wall. To start managing user restrictions, select **Create Users Management Database** on the server's tray notification menu. You will then be prompted to create the Administrator account.



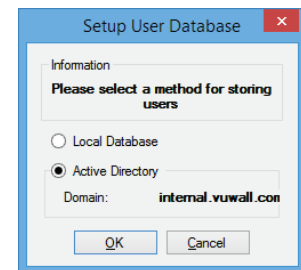
The Users Management functionality can later be removed by selecting **Delete Users Management Database** on the server's tray notification menu. You will require the Administrator username and password to perform this action.

All data related to Users Management will be erased and creating the Users Management Database again will start with none of the users and groups that you have created in the past.

Active Directory

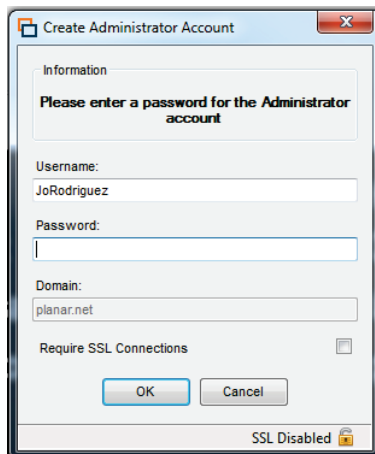
VCS Control comes with built-in support for Microsoft® Active Directory. VCS Control Server will automatically detect whether the video wall controller is in a domain, and prompt you to use Microsoft Active Directory when creating the Users Management Database. If you do not see this window, it is because VCS Control was unable to detect that it belongs in a domain in the network.

Upon selecting Microsoft Active Directory, you may choose a Microsoft Active Directory user to become the User Management Administrator for VCS Control Server Software. This user will have the responsibility to add any other users who should be allowed to access VCS Control Server Software with their Microsoft Active Directory credentials, as well as which group they belong to, and which permissions they possess. By default, the username entered here is that of the currently logged in user, and the password is the same as the Microsoft Active Directory password.



Note: The user you select to be the VCS Control Administrator does **not** have to be an Active Directory Domain Administrator.

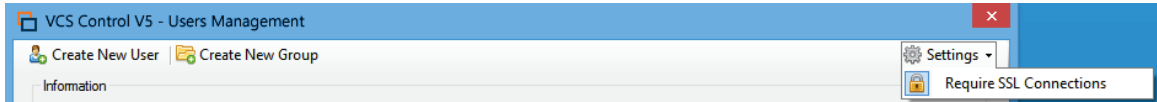
Secure Socket Layer (SSL) Connections



VCS Control supports authenticating to the Microsoft Active Directory server using SSL (LDAPS protocol). When creating the Users Management Database, you can select **Require SSL Connections**, which will force all client connection authentication requests to be sent over LDAPS on Port 636. In order for this to work, the Microsoft Active Directory domain must have enabled SSL connections and provide a valid SSL Certificate to the domain client computers.

This setting can then be changed by any user possessing the Users Management Database permission, by opening the Users Management window, going to settings, and selecting **Require SSL Connections**. It can also be re-enabled the same way. When enabling SSL Connections, VCS Control will prompt the user for their Microsoft Active Directory Username / Password in order to verify the SSL connection is functioning. If it is unable to validate using SSL, the feature will not be turned on to prevent unintentionally locking users out VCS Control.

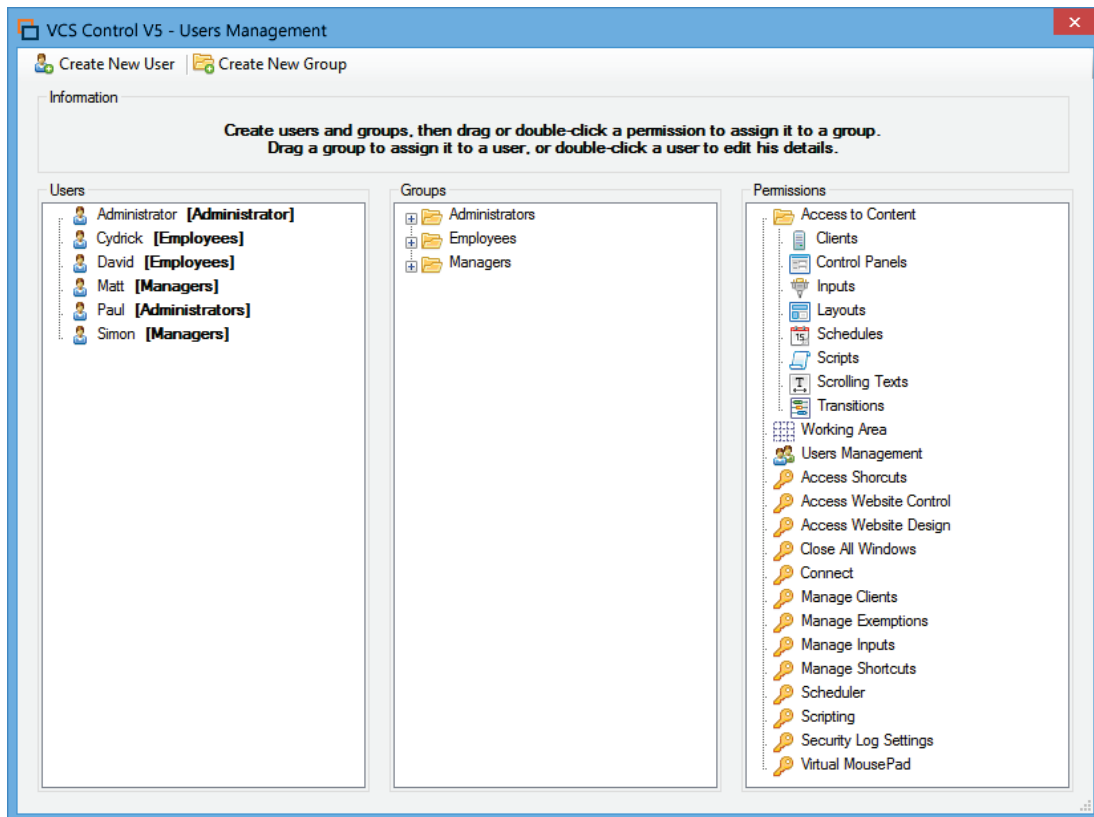
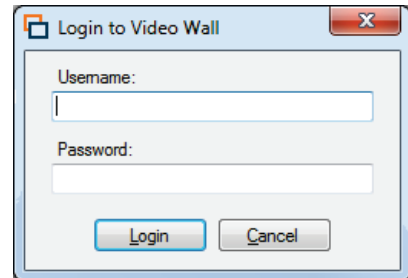
Connect to: 3x3 Wall Disconnect Close All Virtual MousePad Scrolling Text Schedules Scripts Transitions Users Management



User Login

All configuration of the Users Management functionality is done through the VCS Control client. Accessing the server will require an authorized username and password to connect. For the moment, the only user that exists is the Administrator.

After connecting to the video wall, you will see a new **Users Management** button in the toolbar at the top. This is where you will be able to create new users and assign them privileges to interact with different aspects of the video wall. This button is only available to Administrator and other users created with the Users Management privilege.

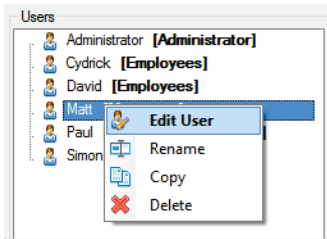


User Permissions

There are currently 16 different types of permission that can be assigned to a group. Each one allows access to a given component or functionality of the video wall.

- **Access to content:** To access groups and create, modify or delete layouts, scripts, schedules, inputs, clients, transitions or scrolling text.
- **Working Area:** To access and control a specific area of the video wall.
- **Users Management:** To manage users, groups and permissions.
- **Access Shortcuts:** To clear application windows, and to launch executables on the video wall.
- **Access Website Control:** To allow access to the Control page which gives users access only to predetermined Layout / Script / Close All Windows buttons.
- **Access Website Design:** To allow access to the Design page which allows fuller control of the video wall from a web browser.
- **Close All Windows:** To close all the windows on the video wall.
- **Connect:** To allow access to the video wall.
- **Manage Clients:** To create client capture windows, and to capture from the client itself.
- **Manage Exemptions:** Choose the applications that are ignored by Close All Windows.
- **Manage Inputs:** To create hardware input windows, and edit the inputs.
- **Manage Shortcuts:** Choose the shortcuts that appear in the Shortcuts tab.
- **Scheduler:** To schedule the opening of layouts and execution of scripts.
- **Scripting:** Execute scripts to affect the video wall or other network devices.
- **Security Log Settings:** To specify which features are tracked in the Security Log.
- **Virtual MousePad:** To control the video wall's cursor and keyboard from the client.

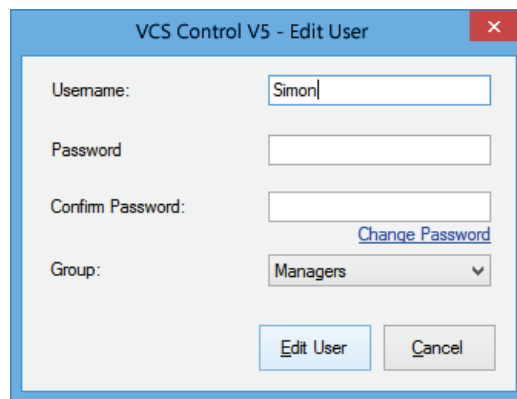
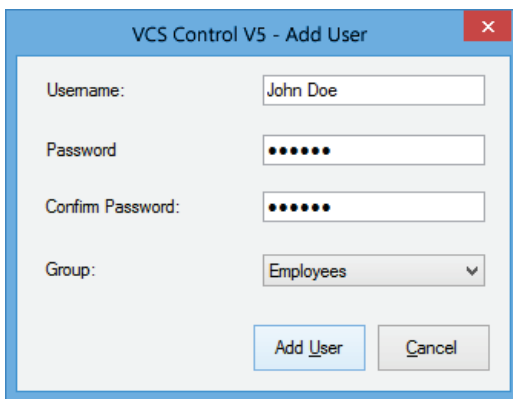
Managing Users



By selecting **Create New User**, you can create a user and assign him/her to a group. This information can later be modified by selecting or right-clicking the user and select **Edit User**. Selecting or right-clicking a user and selecting **Delete** will remove this user from the system permanently.

Note: The administrator user cannot be deleted.

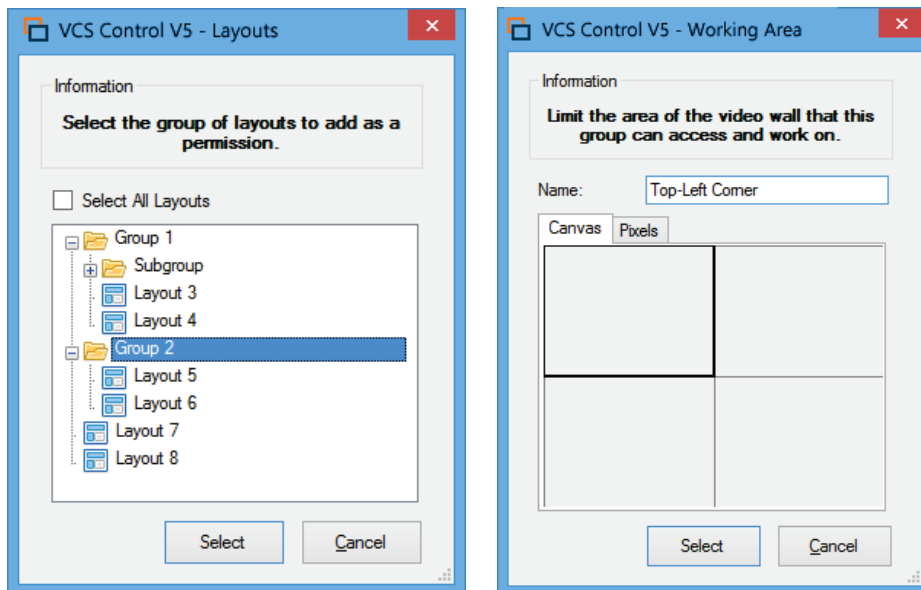
A user consists of a name that must be unique across all users, a password to restrict access to the user's privileges, and the group containing all the user's privileges.



Managing Groups

By selecting **Create New Group**, you can create a new set of privileges that can be assigned to users. You can also create nested groups to be shared between users, by right-clicking the containing group and selecting **Create New Group**.

A group consists of a name that must be unique across groups, and a collection of rights that are available to users who share this group. The group can be assigned a working area, to limit the region of the video wall that can be modified, or permission to access specific groups of content. To do so, select a group and then double-click one of the permission categories "Working Area" or "Layouts", "Scripts", etc.

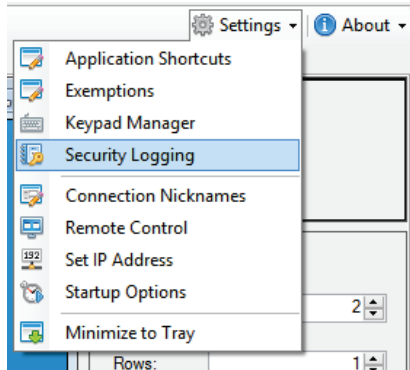


The working area available to a group can be configured like window positions, source cropping and client capture areas:

- In **Canvas** mode, by dragging the edges or the corners with your mouse, you can select the area you want to allow. You can also use a grid to help you position the rectangle. The grid appears by scrolling up or down when the mouse is hovering over the rectangle area.
- In **Pixels** mode, you can specify the exact position to allow, across the whole video wall's resolution.

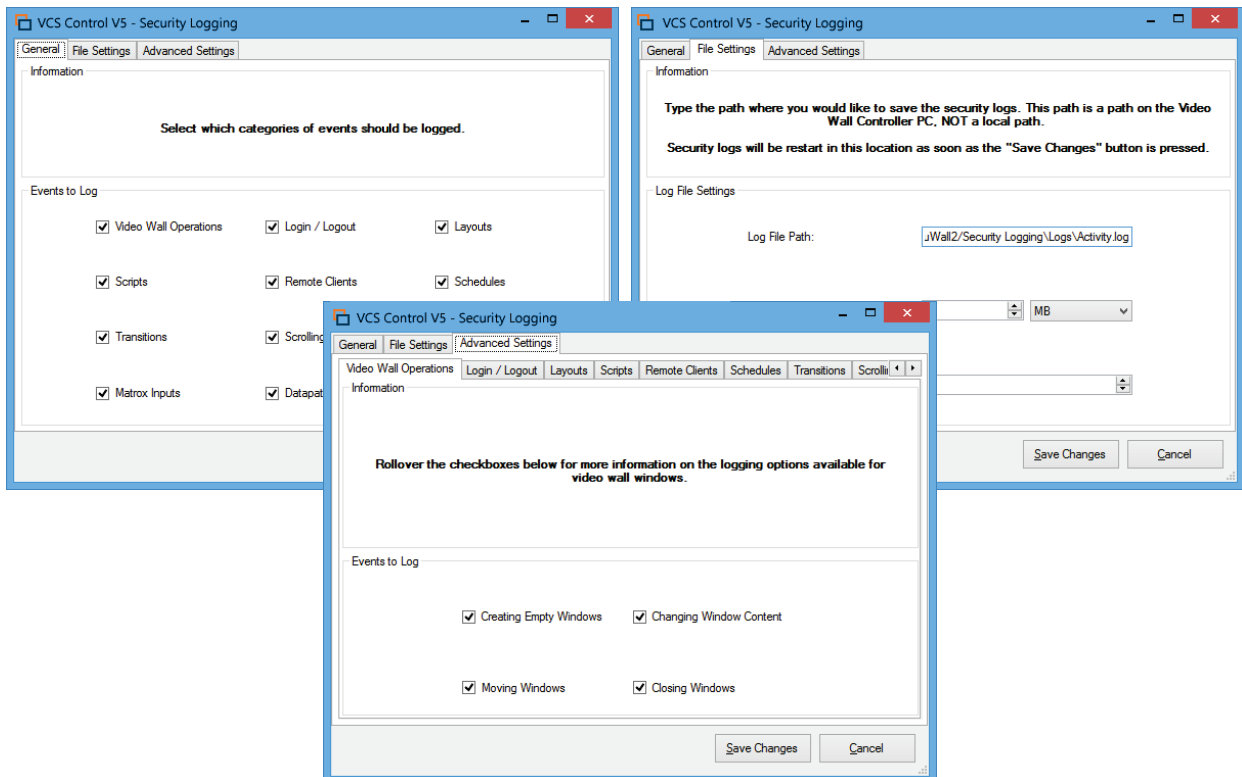
Security Logging (VCS Control Software Enterprise only)

When the Users Management functionality is enabled, VCS Control Server can log all user activity on the video wall controller. This information can later be processed for diagnostics or reporting. You can configure the Security Logging from the VCS Control Client by clicking the **Security Logging** in the **Settings** menu.



By default, all video wall events are logged, but you can select which category of events are relevant for your system. For even more control, you can go into **Advanced Settings** and select which events to log within each category.

You can also configure where the logs are to be stored, and how much memory can be used by the log.



IP Devices for Network Stream Sources

With this module you can view a network stream on the surface. The operation is similar to the drag and drop of a physical input.

There are currently 2 engines for viewing IP Devices on the surface:

- Server CPU decoding with VLC
- Hardware accelerated decoding with IPCapture cards

If you do not have IPCapture hardware accelerator then it will be required to install the 32-bit version of VideoLAN VLC application on the server. This VLC application is a popular open source media player. You can download this software for free via <http://www.videolan.org/>. The recommended version is 2.1.5, 32-bit. The download page should give you the option to download an earlier version if a newer is available. Newer versions should work but may appear compatibility issues. Note that the 64-bit version will not work. If your VCS Control Software product came preinstalled with the VCS Control Server, then you already have VLC preinstalled and ready to go.

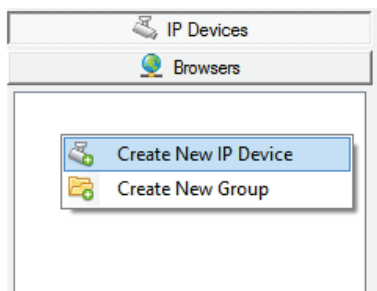
The supported network stream codec and format is whatever VLC or IPCapture supports and whatever your network can handle. The typical format would be H.264 RTSP stream.

There are many ways to register video streaming IP Devices:

- With the VCS Control Client GUI interface;
- Via the scripting tool;
- Via an API command from an external device on the network.

Registering a Streaming Video IP Device in the VCS Control Client GUI

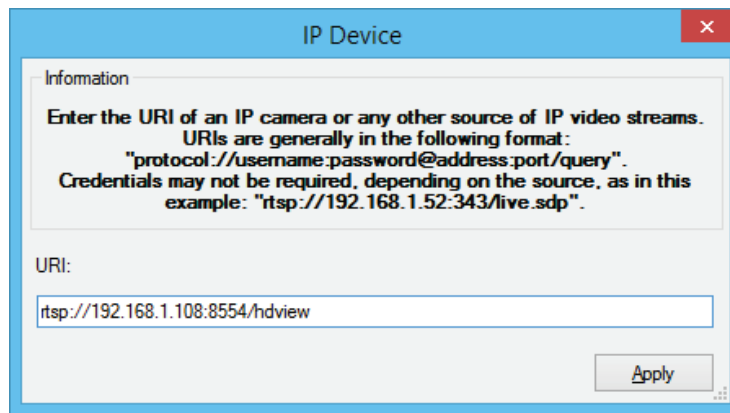
Select the **IP Devices** module and right click on the empty white space. Click on the **Create New IP Device**.



You will be prompted to enter a name for this IP device. This will be the name used for the source that you will drag & drop on the surface.



In this next window you will enter the URI for your video streaming IP Device. Refer to your video streaming device configuration to know the URI used for streaming.

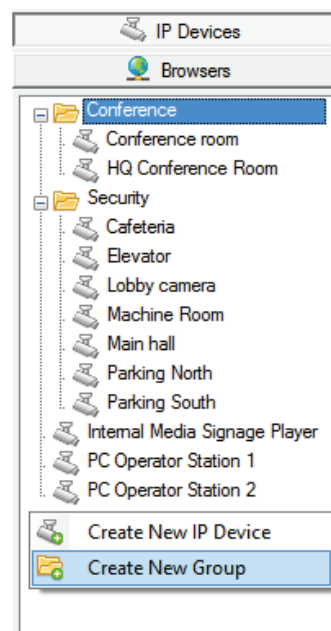
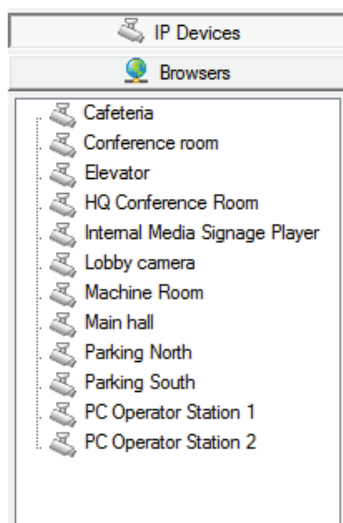


Please note that if your streaming source requires authentication you will need to embed the credentials in the URI like so: "protocol://username:password@address:port/query"

Example URI: rtsp://admin:123456@192.168.1.105:8554/hdview

All of the **IP Devices** will be listed alphabetically in the white space.

You can organize your sources in groups. Right click on the empty space and click **Create New Group**.



Once your devices are registered you can start dragging them on the surface. Doing so the server will load a window and display the streaming video.

If you right click on an **IP Device**, you will have the option to:

- **Edit Properties:** modify the URL link
- **Rename:** to change the name of the registered IP Device
- **Cut:** will move this source to a clipboard
- **Copy:** will copy this source to a clipboard
- **Delete:** will remove the registration of the IP Device

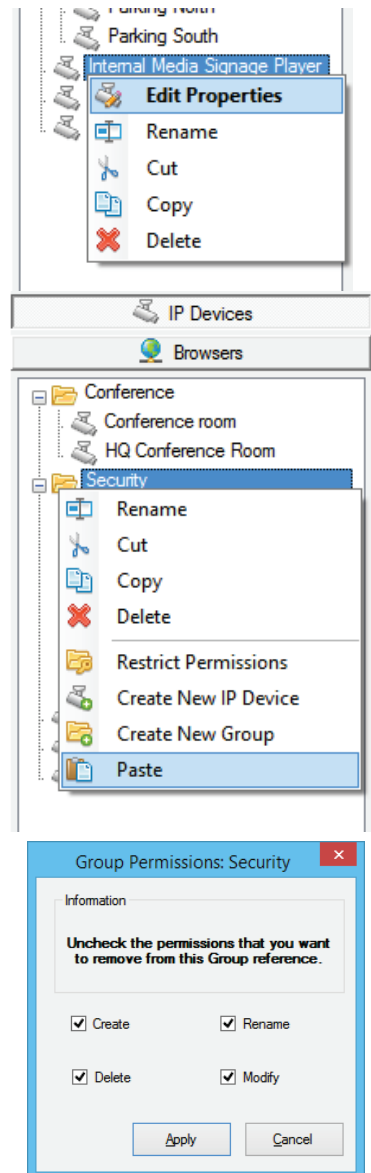
If you right-click on a group, you will have the option to:

- **Rename:** to change the name of the group
- **Cut:** to move the group including its contents to clipboard
- **Copy:** to copy the group and its contents to clipboard
- **Delete:** to completely remove the group including its contents
- **Restrict Permissions** (see details below)
- **Create New IP Device:** will register a new IP Device within that group
- **Create New Group:** Will create a sub group within the selected group
- **Paste:** Will paste the content from the clipboard

The **Restrict Permissions** will give the option to secure the data registered by disabling the **Create New IP Device, Rename, Delete** and to **Modify** its content.

Registering a Video Streaming IP Device from the Scripting Tool

You can programmatically register a video streaming IP device with a VCS Control Software script. Open a script editor and locate the RegisterStreamProvider template from the right and double click on it to send the template to the scripting area. Enter the desired name for your IP Device and the appropriate URI. You can enter multiple lines for the script to register multiple streams simultaneously.

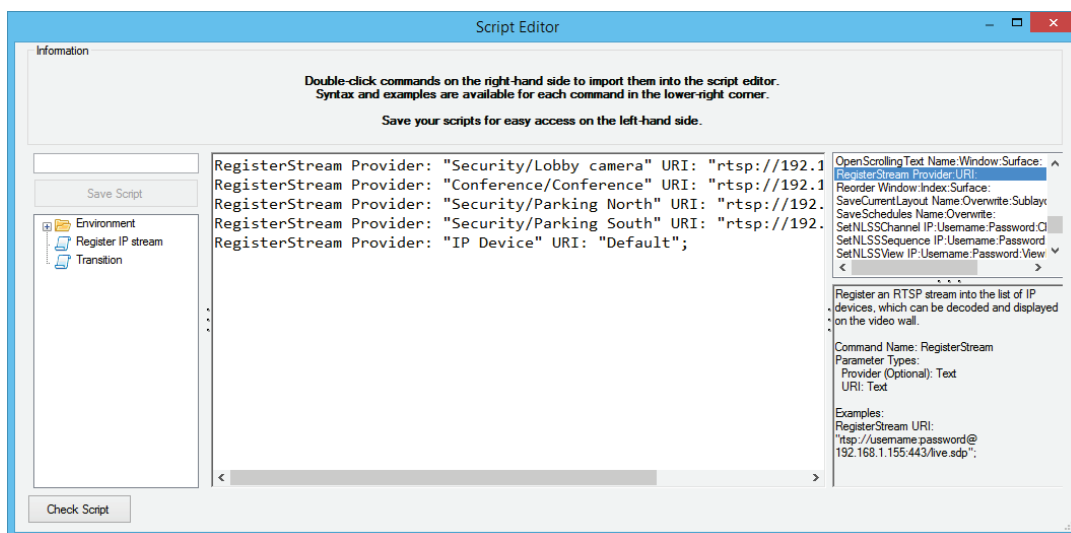


You can register an IP Device within a group by specifying the name as the group name followed by the IP Device name separated by a forward slash "/". Provider groups will be created automatically if they don't exist.

Example:

RegisterStream Provider: "Security/Lobby camera" URI: "rtsp://192.168.1.108:8554/hdview";

This will add an IP Device named "Lobby camera" in a group named "Security" with the specified URI "rtsp://192.168.1.108:8554/hdview"



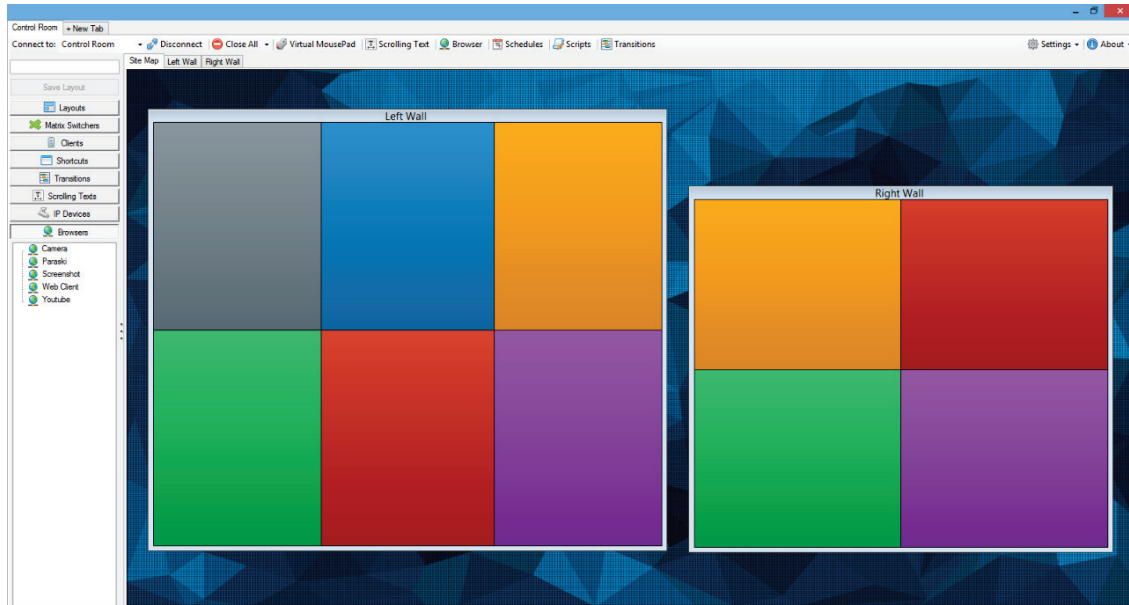
Run the script only once to register the IP Devices. If you run the script again, it will add duplicates.

This tool is useful when you want to streamline the registration of a large quantity of IP Devices. For example, if you have a Microsoft® Excel database of URI, you can format Excel to include the script command, syntax, and, names. Then you copy and paste it in Notepad. In Notepad, replace all the tabs generated in the paste for nothing. Copy all of the reformatted notepad text into the scripting tool and you save your script.

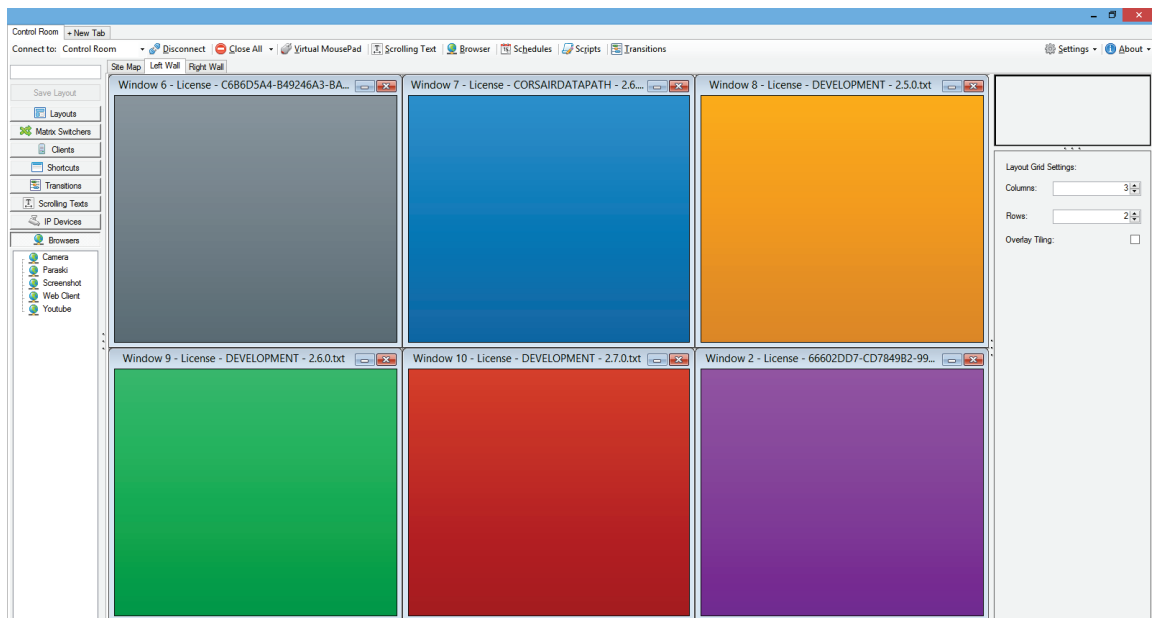
Registering an IP Device via the Network Scripting API

You can register IP Devices through the Network Scripting API. Refer to "Network Scripting API" on page 41 for the details of the connection and use the same scripting command as above to register IP Devices. Details of the script can be found in the *VCS Control Software Scripting Command Reference* bundled with the installer. You can also refer to the *VCS Control Software Scripting Language Reference* to validate your syntax.

Surfaces and Bird's Eye View



On many installations, a single video wall controller is used to drive multiple, physically separated video walls controlled by the same VCS Control Software. You can now configure VCS Control Software to be aware of this separation, so that the different video walls' layouts can be manipulated without interference.

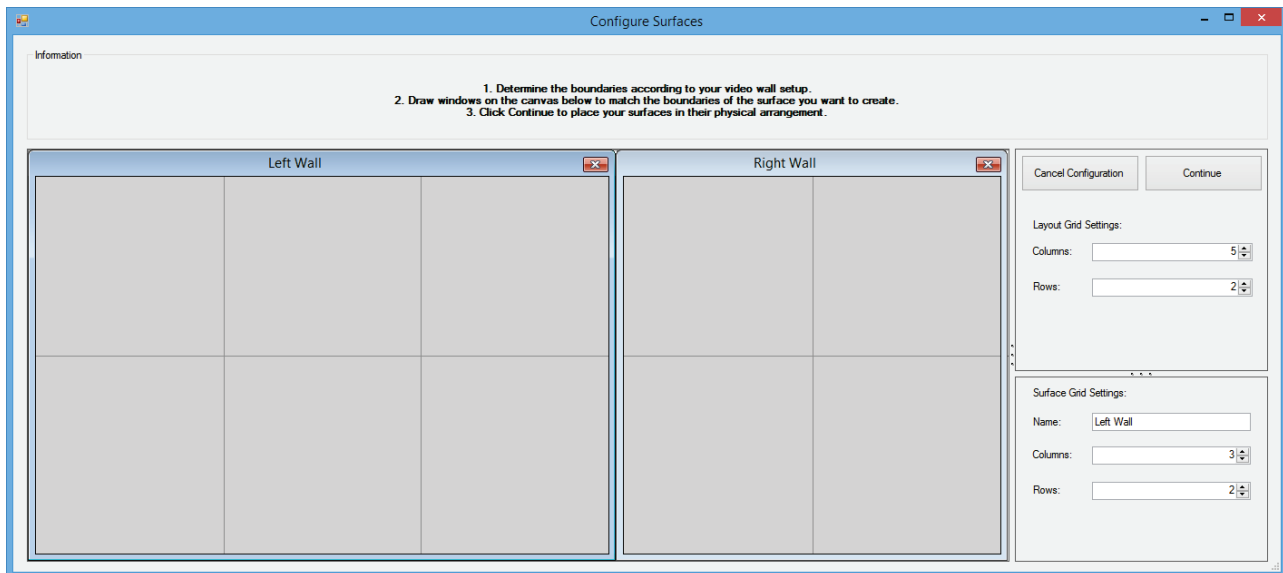
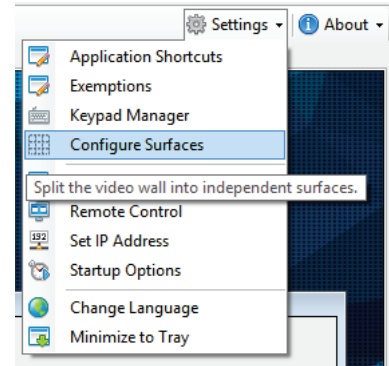


Prior to configuring surfaces, the graphics hardware must be set up so that the relevant areas are collocated on the Windows desktop. This is done in the TWIN tab or the Multi Res tool for VCS systems.

After installation, the active layout will initially have one surface, joining all the hardware outputs of the controller into a single rectangular area. To partition the outputs into separate surfaces, select **Configure Surfaces** from the **Settings** menu on the top right of the VCS Control Client.

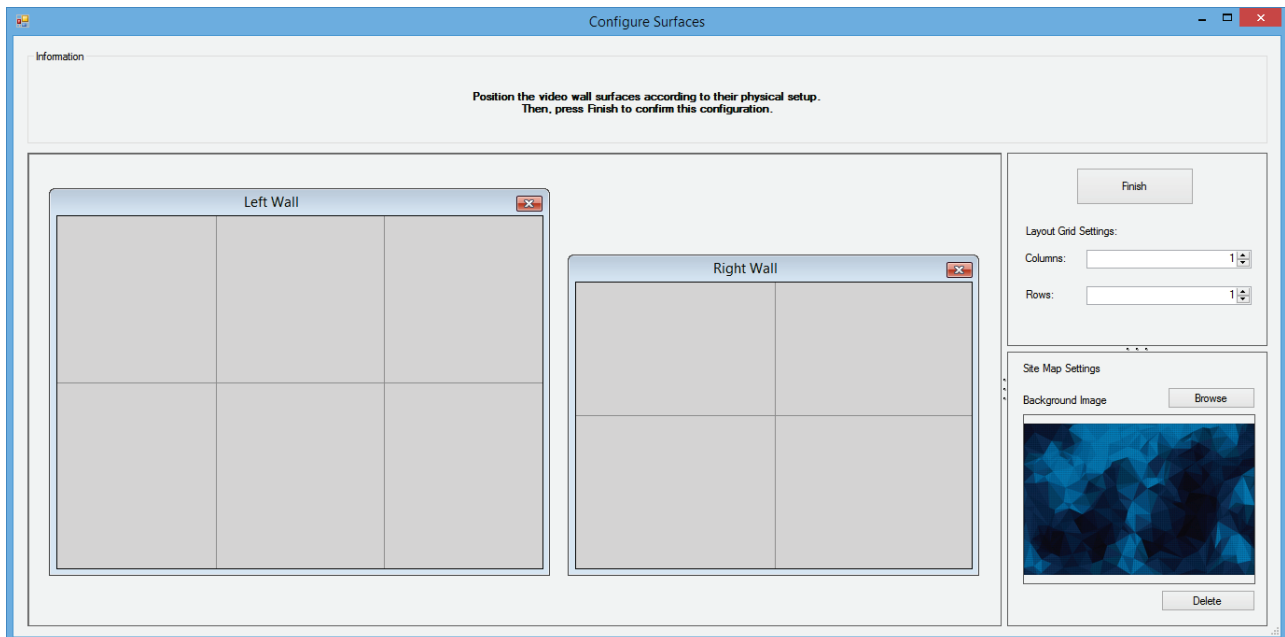
On the following form, you can select the appropriate video wall areas from the available outputs, assign them a unique name and modify their default grid setting. Area selection can be done free-form or by aligning to the output grid. At any time, you can come back to this form and select **Cancel Configuration**

Configuration to return to a single surface for all the controller outputs.



If you are unsure about a selected area, you can exit the form and place sources on its layout to view how well it correspond to the physical and hardware setup. Then, you can go back to **Configure Surfaces** and perform the necessary adjustments. When the surfaces are properly aligned, click the **Continue** button.

The next screen lets you reposition the surfaces, to appear on the Site Map panel of the VCS Control Client. Often, this will correspond to the physical emplacement of the video walls in a room or building. You can also select a background image to highlight the video wall areas on the panel; this is often an architectural map of the installation. This configuration is purely aesthetic and does not affect the way that sources appear on the different video walls.



Web Server

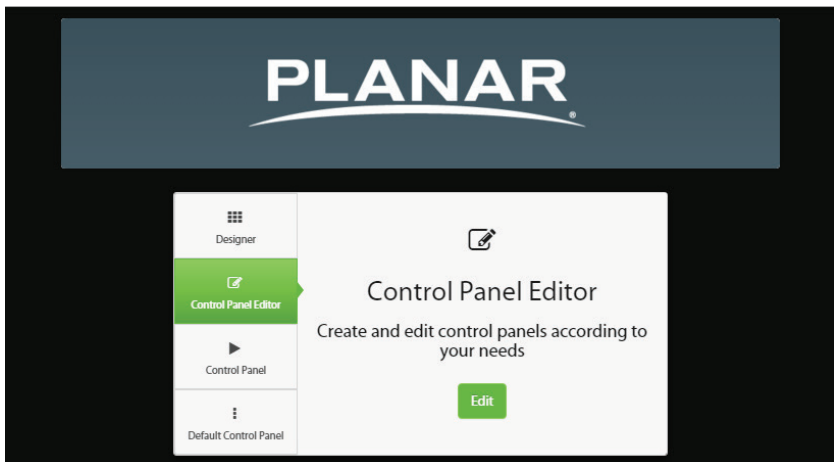
VCS Control Software's built-in web server provides a simple, multi-platform location from which you may control many aspects of your video wall. During the VCS Control Server installation, ensure **Web Server** is checked, and then start VCS Control Server. From then you'll be able to connect to the web client using any HTML5 compatible browser at `http://<ServerIP>/vcs`

Example: `http://192.168.1.103/vcs`

The web server offers different ways to control your system and allows administrators to build custom control panels for easy touch panel control over layouts, scripts, transitions, and various other actions on the video wall. These interfaces can be accessed from any devices with an HTML5 browser, including smartphones, tablets, laptops, and more.

Upon first connecting to the web client, you'll be presented the following options:

- Designer
- Control Panel Editor
- Control Panel
- Default Control Panel



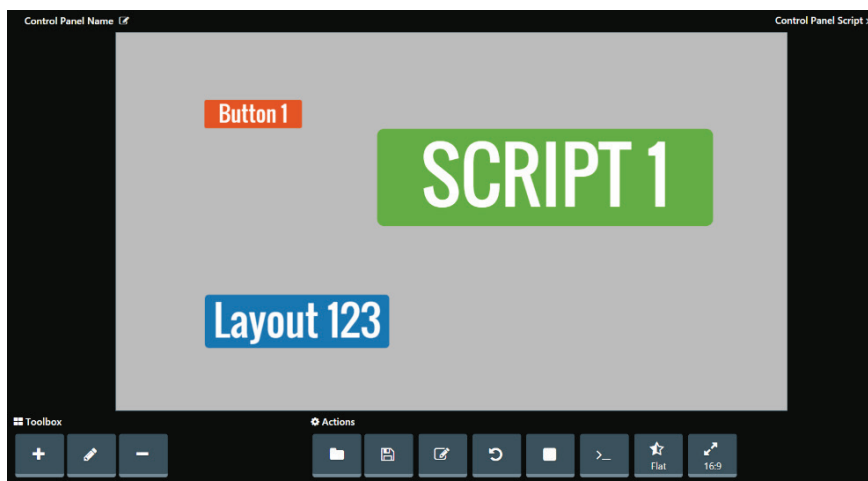
Design Page

This page allows for finer control over the video wall controller. Individually position windows, save layouts, and more from this page.



Control Panel Editor

This page features a simple way to create buttons to open layouts or start scripts that have been created in VCS Control Server, as well as informative text labels. Multiple individual panels can be created and linked together. This allows you to create specific panels for given situations, or a panel of your favorite layouts, etc. You can change the size, color, style, and action of an unlimited number of buttons.



Default Control Page

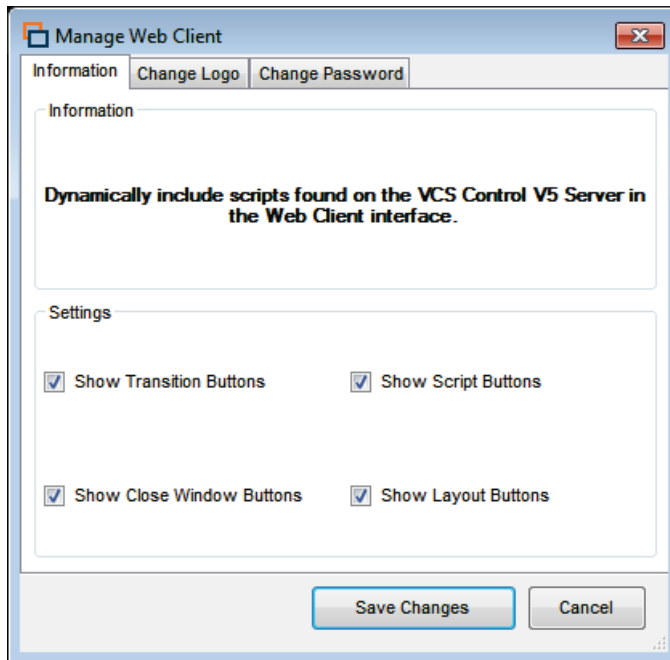
This page is an automatically populated list of all the layouts, scripts, and transitions that have been created on the VCS Control Server. As soon as any new layout/script/transition is saved, you'll see it appear on this page. You also have the ability to close all windows on the wall, or windows of a certain type.

Surfaces	Commands	Layouts	Scripts	Transitions
DirectLight	Close All Windows	10	DirectLight - 3	
Matrix2x2	Close All Input Sources	25	DirectLight - 9 Windows	
Preview Monitor	Close All Applications	26	DirectLight - Close	
	Close All Client Captures	27	Audio 1 Off	

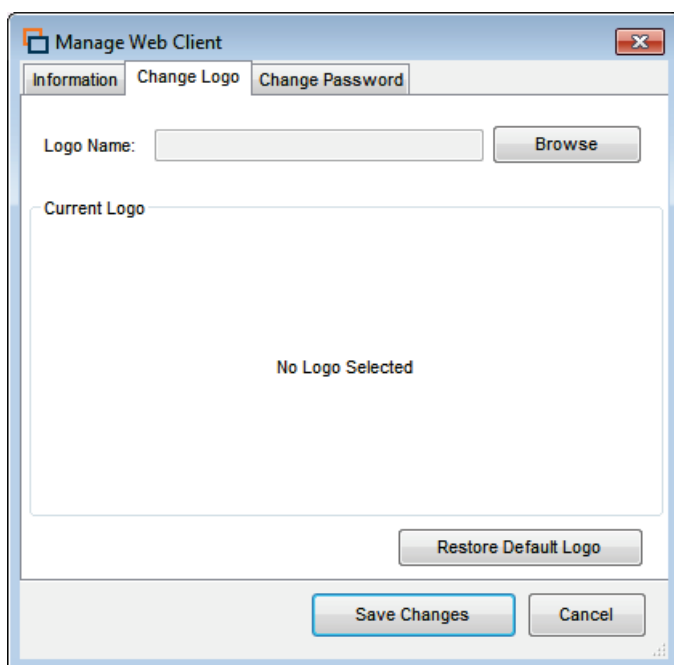
Manage Web Client

To start managing the web client, select the **Manage Web Client** button on the server's tray notification menu.

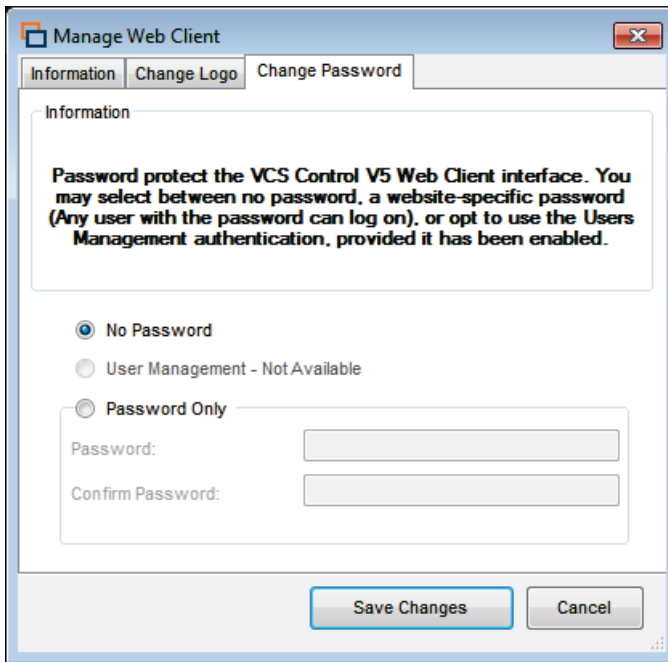
On the Information tab, it is possible to set up which buttons should be visible in the web client.



To change the logo, the Change Logo tab must be selected.

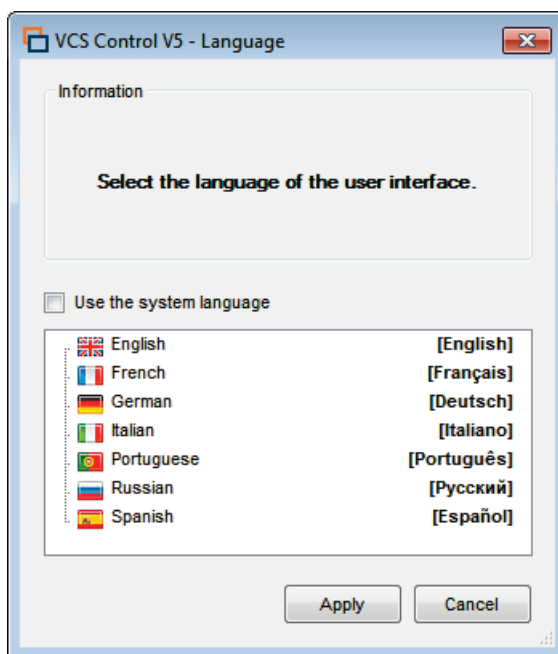
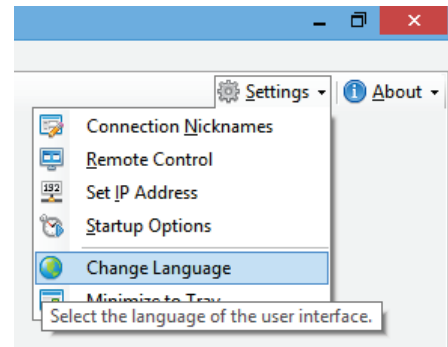


To use a password, the Change Password tab can be selected and a password can be set. If you have a Users Management Database set up, the web client can be used with those same users/groups to provide or restrict access accordingly.



User Interface Localization

By default, the VCS Control Client will display all names, descriptions and instructions in the language of the local Windows installation. By going into the **Settings** menu on the top right of the client, and selecting **Change Language**, you can choose among the supported localizations. This change will require the VCS Control Client to restart, so video wall connections will be closed.



Planar is always expanding support for different languages. For now, choose one of the following:

- English
- French
- German
- Italian
- Portuguese
- Russian
- Spanish