

Datapath Agent How to Guide

Viewing and controlling sources with soft KVM

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Contents

Datapath Agent – Soft KVM for greater control	2
Datapath Agent – What is it?.....	2
View remote sources on a Datapath video wall	2
Setting up Datapath Agent on the remote PC	2
Starting a remote connection	4
Viewing remote streams on the video wall	4
Keyboard and Mouse control of the remote source.....	5
Keyboard and Mouse control of a captured source	6
Remote access to applications on the video wall controller	7
Datapath Agent Ports	7
Compatibility	10
Conclusion	10

Datapath Agent – Soft KVM for greater control

Datapath Agent is our software solution for providing a software based KVM solution for customers wishing to view and take control of remote PC sources. Datapath Agent is offered as part of WallControl 10 and can be installed on any Windows machine.

There are several ways of using Datapath Agent:

1. View remote sources on a Datapath video wall
2. Keyboard and Mouse control of remote sources through the WallControl 10 Interface
3. Keyboard and Mouse control of captured sources through the WallControl 10 Interface
4. Access to applications on the Datapath Video Wall Controller for Keyboard and Mouse control

Datapath Agent can be a powerful tool in any mission critical, command and control room. Datapath Agent gives the Operator the ability to both view and control any number of PCs and applications that are part of the wider environment.

Datapath Agent – What is it?

Datapath Agent is a screen sharing application that allows Datapath Video Wall Controller users to instantly stream the desktop of remote PCs to the video wall controller. Datapath Agent also includes KVM control of the sources. WallControl 10 users can quickly open the remote connection within the WallControl 10 interface and navigate the remote desktop, opening and adjusting applications or removing system messages as necessary. Datapath Agent is an entirely software-based solution, no additional hardware is required.

View remote sources on a Datapath video wall

There are times when it isn't possible to connect an HDMI cable from a PC to a capture card within the video wall controller. The PC can be located away from the control room which is better positioned as part of a production line where it is providing monitoring of the ongoing processes. Datapath Agent is perfect for streaming the Windows desktop of that PC back to the video wall controller on an on-demand basis. By installing Datapath Agent on the production PC and taking a note of the IP address and port number it is a simple operation to make the PC available as a source on the video wall controller.

Setting up Datapath Agent on the remote PC

There are 3 ways of getting Datapath Agent:

1. As part of the WallControl 10 full installer
2. As part of the WallControl 10 Client Only installer

During the above installations, select 'Options' and ensure the box for Datapath Agent is ticked.

Both of these are available [here](#).

3. A stand-alone Datapath Agent installer is available [here](#).

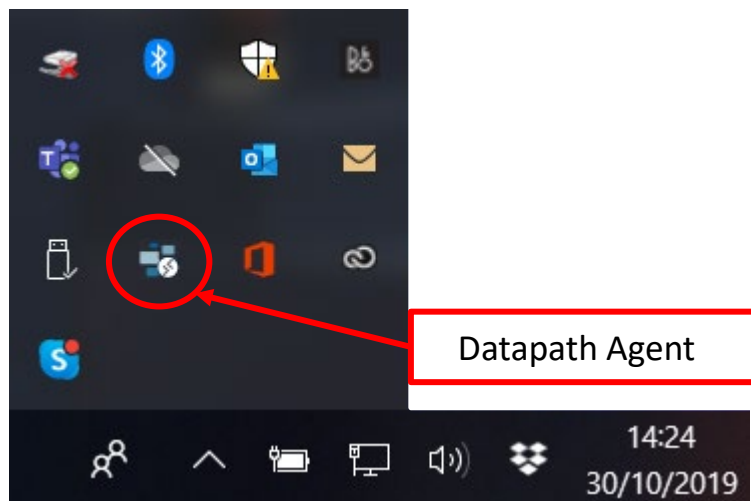
PLEASE NOTE:

- i) This should not be installed on a system with either WC10 or WC10 Client on it.
- ii) The installer is unsupported.

Start each installation by double clicking the icon and follow the instructions.

Once the installation has completed Datapath Agent is ready to use.

The application runs with Microsoft Windows and the interface can be found by clicking on the icon in the task bar.



Simply click the icon to open the main configuration page.

Starting a remote connection

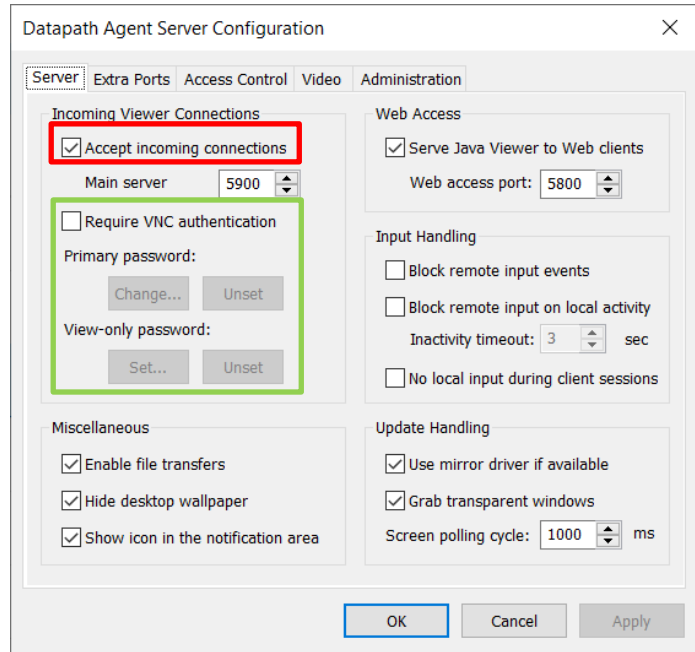
From the main configuration page tick the box marked 'Accept incoming connections' (see Red box) to make this desktop available for streaming.

If you wish to set a password, tick the box 'Require VNC authentication' (see Green box) and create a password.

A password can be set for Full Control (Primary) or for "View-only". Full control will allow remote viewers to use the local Keyboard and Mouse.

Now the installation is complete, and the video wall controller is able to stream the remote desktop.

Before you can stream you need to determine the IP address of the remote PC. To do this open 'Command Prompt' and type ipconfig <Enter>. This will provide your IP address. Take a note of this for later.

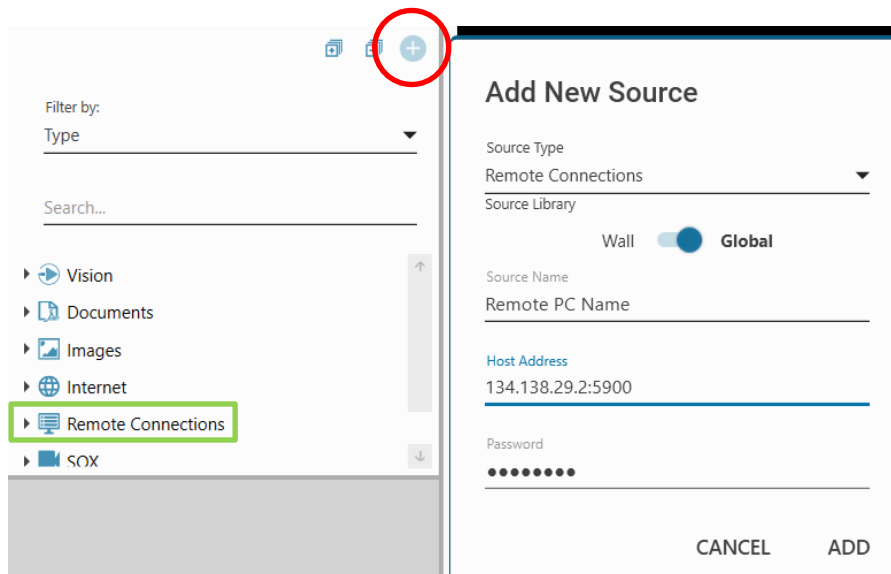


Viewing remote streams on the video wall

Now the remote Datapath Agent server is running, you can stream this desktop to the video wall.

Open WallControl 10.

To create a remote connection for your source, follow these instructions:

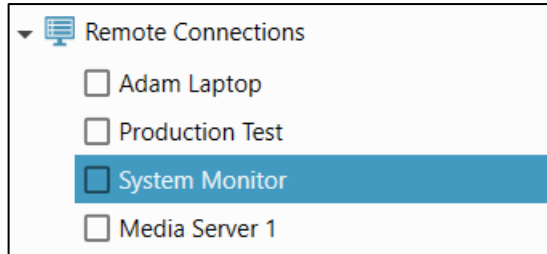


1. Click the Plus button (circled)
2. Select Remote Connections from the drop-down box
3. Provide a name

4. Provide the IP address and the port number*
5. Provide the password if one has been set
6. Click Add

*See Datapath Agent Ports on Page 7

The New Remote Connection will now appear as a source in the Sources tab under 'Remote Connections' (marked in Green). In the example below, four Remote Sources have been created called: Adam Laptop, Production Test, System Monitor & Media Server 1.



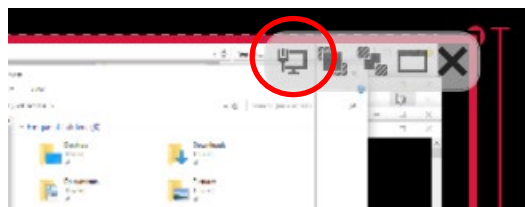
Simply drag the source onto your wall to display it.

Keyboard and Mouse control of the remote source

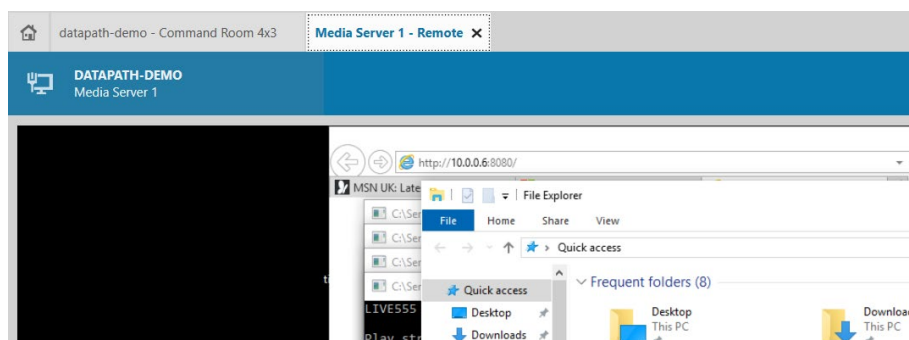
Now that the remote source has been set up it is possible to gain Keyboard and Mouse access through the Datapath Agent interface.

There are two ways to open the remote connection for KVM:

1. Right click the source name and select 'Open Remote Connection'
2. On the Window open on the wall click the Remote Connection adorer as per below



Either of these two options will open a new Window within WallControl 10. Simply use your Keyboard and Mouse to control the remote PC.

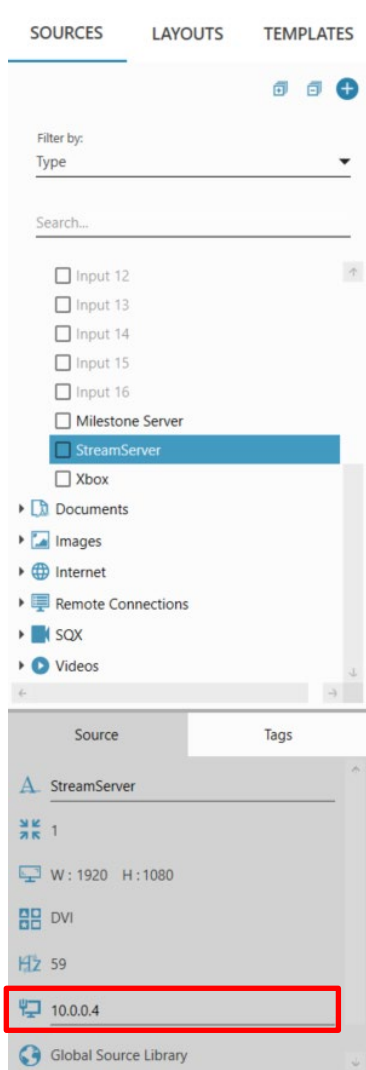


Keyboard and Mouse control of a captured source

In any complex command and control environment there are many PC sources that act as unattended collators of data that are used to visualise all aspects of the facility. The data is collected by the PCs, which in turn have outputs to the video wall controller. Capture cards are then used to get the visualisations onto the video wall for teams of operators to see and review.

The benefit of this process is that the data being shown on the video wall is full fidelity 1080p or 2160p both at 60 frames per second. Given the importance of the data it is important to ensure the best possible quality is on display. One drawback, however, is that unattended PCs are difficult to control and manage as they are often away from team members. Datapath Agent is the perfect way to control these PCs all through WallControl 10.

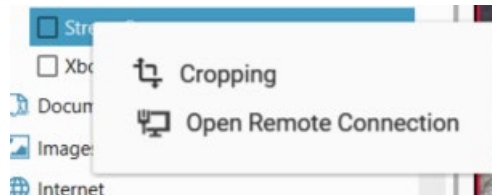
As per the instructions above, install Datapath Agent on the remote PC. Within WallControl 10 you can add the remote connection details directly to the source.



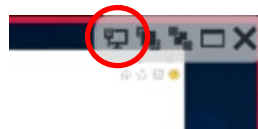
Select the PC you wish to associate with a Datapath Agent server. In the bottom section simply add the IP address and any Port number to the Remote Connection section (see Red box).

Once this is done there are two ways to access the PC remotely:

1. Simply right click the Source Name and Select 'Open Remote Connection'.



2. When the source is open on the video wall, simply click the Remote Connection Icon that appears in WallControl 10 when the mouse hovers over the window, the remote connection screen will appear.



Now the operator is free to remotely control the unmanned PC from any PC that has WallControl 10 installed.

Remote access to applications on the video wall controller

In order to reduce the amount of hardware in the control room, many customers use the video wall controller itself to run applications rather than purchasing a separate PC for the task. Customers run into difficulties when it comes to controlling these applications. The controller is often located in a server room or directly behind the screens. Keyboard and Mouse extension is then required for an operator to manipulate the sources and view the video wall at the same time. Datapath Agent can solve these issues without the operator leaving their workstation.

Use Datapath Agent to:

- Log into a website
- Click a link or refresh the data
- Move the pages of a document up or down
- Change the text within a document

How can you do this? As we've seen throughout this paper, Datapath Agent can run on any Windows based PC, video wall controllers included. However, the sheer size of a Datapath video wall make remote desktop access impossible. Datapath Agent solves this by allowing the very large video wall desktop to be segmented into smaller more manageable parts. Datapath Agent does this by using Ports:

Datapath Agent Ports

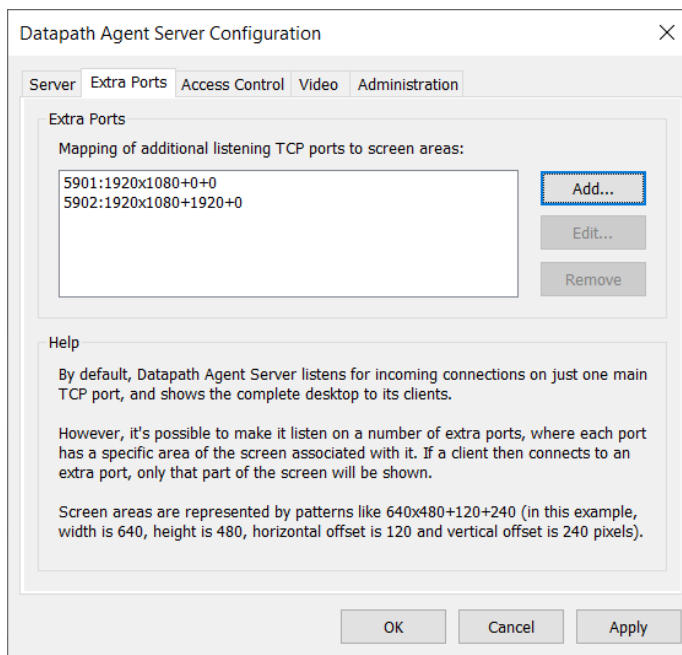
The Ports tab within Datapath Agent allows a desktop to be segmented into smaller sections that each have a unique address.

A Datapath video wall is a desktop that starts at pixel number 0 and continues horizontally and vertically until the end of the last screen.

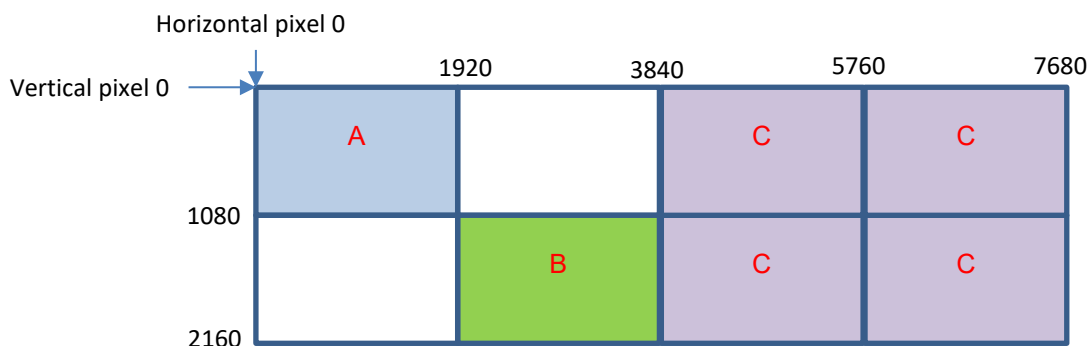
A 4 x 2 video wall comprising eight, 1920 x 1080 HD screens has a horizontal pixel count of 7,680 pixels (4 x 1920) and a vertical pixel count of 2160 pixels (2 x 1080).

Datapath Agent is then capable of delivering any section (up to 4K in size) to the remote viewer in WallControl 10. The remote viewer cannot see the entire desktop, only the section that has been provisioned.

To set up the ports, open Datapath Agent on the video wall controller and select the 'Extra Ports' tab.



It is a good idea to map out the areas that need to be viewed remotely, as per below for a 4 x 2 video wall.



In the example above there are three areas that need to be viewed remotely.

With Datapath Agent, simply add Extra Ports using the following instructions:

Click 'Add', provide a Port Number, and provide the Geometry Specification. For the above example the following geometry will be required.

The format that you enter is:

Horizontal Size x Vertical Size + Starting Horizontal Pixel + Starting Vertical Pixel

A. $1920 \times 1080 + 0 + 0$

The area to be viewed remotely is 1920 pixels wide by 1080 pixels high. The starting horizontal pixel is 0 and the starting vertical pixel is 0.

B. $1920 \times 1080 + 1920 + 1080$

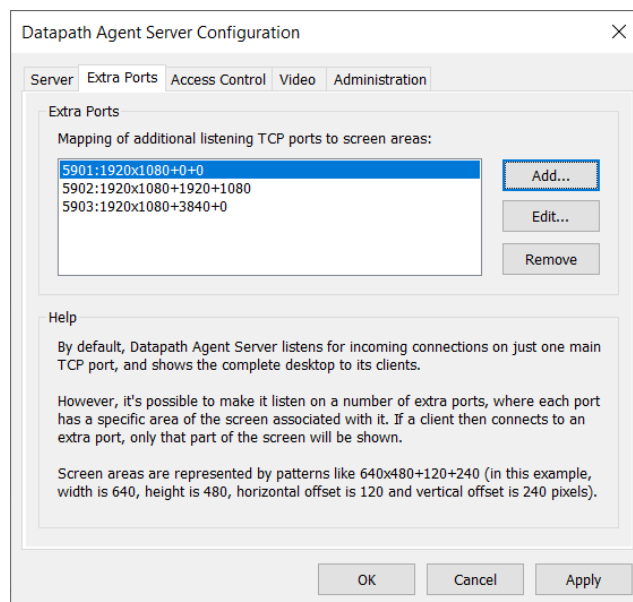
The area to be viewed remotely is 1920 x 1080. The starting horizontal pixel is 1920 the starting vertical pixel is 1080.

C. $3840 \times 2160 + 3840 + 0$

The area to be viewed remotely is 3840 x 2160. The starting horizontal pixel is 3840 and the starting vertical pixel is 0.

As these are entered into Datapath Agent a new unique Port Number is required.

Once complete, the Datapath Agent Extra Ports tab should look like this:



It is possible to add more ports as required for each project.

These sections are now available for remote viewing in WallControl 10.

To set up WallControl 10, simply add a new Remote Source for each of the areas as per the instructions above. In addition, when adding the IP address be sure to include the Port number i.e. 10.20.0.12:**5901**.

Important: It is important to note that these new remote sources are not suitable for adding to the video wall. These are simply sources that you can access remotely by right clicking on the Name with WallControl 10.

It is highly recommended that Extra Ports be used in conjunction with WallControl 10 Layout Files. These Remote Viewing sections will only work with applications that are running on the

video wall controller PC, namely Internet windows and PDF files. These will not work with Vision or SQX windows.

Also, ensure that the ports have been set up to match where the applications lay within the Layout File. Verify that the name given to the remote source easily identifies the application that needs to be accessed.

Compatibility

Datapath Agent is compatible with most common VNC viewers. This means that any desktop that has Datapath Agent installed on it can be viewed and controlled remotely by 3rd party PCs, laptops and tablets. Simply use the IP addresses and Ports as described above and add them to a remote VNC viewer for instant access and KVM control of the electronic environment.

Conclusion

As we've seen, Datapath Agent is a powerful KVM tool within the Command and Control market. Fully incorporated into WallControl 10, Datapath Agent can allow the operator to:

- Stream remote sources to the Video Wall Controller
- Have Keyboard and Mouse control over remote sources directly within WallControl 10
- Have Keyboard and Mouse control over captured sources within WallControl 10
- Allow Keyboard and Mouse access to applications running on the video wall controller.

Datapath Agent comes at no additional cost with WallControl 10 Standard and Pro and can be installed on any Windows PC.