



Avigilon Control Center™ Virtual Matrix User Guide

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What Is the Avigilon Control Center Virtual Matrix?

The Avigilon Control Center Virtual Matrix software is an optional Enterprise Edition feature that allows you to control how video is monitored across multiple displays.

The Virtual Matrix software is used to connect a system with multiple monitors to the Avigilon Control Center system. Once connected, you can control what is displayed on each of the linked monitors through any instance of the Avigilon Control Center Client software. This includes choosing the cameras that are displayed, setting the View layout, and displaying maps, web pages and alarms.

A copy of the Virtual Matrix software can be downloaded from the Avigilon website: [avigilon.com/software-downloads/](https://www.avigilon.com/software-downloads/).

System Requirements

Avigilon Certified Solution

- 2 Monitor or 4 Monitor Professional High Performance Remote Monitoring Workstation
 - Preloaded with ACC Client software.
 - Supports high resolution monitors.
 - Includes the adapters and accessories for quick deployment.
 - Includes Avigilon warranty and support.

ACC™ Client Software Requirements

System Requirement	Minimum	Recommended
Monitor resolution	1280 x 1024	1920 x 1200
OS*	Windows 8.1 (64-bit) or Windows 10 (64-bit) with Microsoft .NET 4.6.2	Windows 10 (64-bit) with Microsoft .NET 4.6.2
CPU	Intel® dual-core CPU (2.0 GHz)	8th Generation Intel Celeron® CPU or higher
System RAM	4 GB DDR3	8 GB DDR4
Video card	PCI Express®, DirectX 10.0 compliant with 256 MB RAM	NVIDIA® Quadro® P620
Network card	1 Gbps	1 Gbps
Hard disk space	500 MB free disk space	500 MB free disk space

* Run Windows Update before launching the ACC software.

Getting Help

If you want to learn more about a feature or how to accomplish a task, visit help.avigilon.com/acc or see our in-product help. You must be logged in to a site to view the help.

1. Move your mouse across the screen to display the Monitor Settings dialog box.
2. In the bottom-left corner of the dialog box, click **Help**.

Updating the Help Files

Tip: Access the latest help online at help.avigilon.com/acc.

The help files for the ACC Client software and Virtual Matrix software are stored with the ACC Server application.

If one of these components is updated before the others, the help files may be out of date or describe features that are not currently supported by your system.

- If the help files describe a new feature that is not currently supported by your copy of the software, upgrade to the latest version of the software.
- If the help files are out of date, download the latest help files from avigilon.com. Once downloaded, run the help installer on the server.

The help file installers are divided into the following regional language packs:

- Americas
 - English
 - French
 - Spanish
- Asia
 - Japanese
- Western Europe
 - Dutch
 - French
 - German
 - Italian
 - Spanish
- Middle East
 - Arabic

For More Information


For additional product documentation and software and firmware upgrades, visit support.avigilon.com.

Technical Support

Contact Avigilon Technical Support at support.avigilon.com/s/contactsupport.

Getting Started

Important: To access and use the Avigilon Control Center Virtual Matrix, users must have the **Manage virtual matrix monitors** group permission enabled in the ACC Client software.

1. After you install the ACC Virtual Matrix software, the application automatically starts. If it does not, launch the application by doing one of the following:
 - Double-click the desktop shortcut icon .
 - In the Start menu, select **All Programs** or **All Apps > Avigilon > Avigilon Control Center Virtual Matrix**.
2. When you are prompted, log in to the Primary Site.

The Primary Site is the site that will be used to edit what is displayed in each monitor View.

- a. In the **Log in to:** drop-down list, select the site you want to connect to. If the site you want to access is not listed, click **Find Site...** For more information, see *Discovering sites* on page 10.
- b. Enter your **Username:** and **Password:** for the site.
- c. Click **Log In**.


Once you are logged in, a View is automatically added to each monitor that is connected to the system. When you move your mouse, the Monitor Settings dialog box is automatically displayed on all monitors. If you leave your monitor idle, the dialog box will automatically hide itself. For more information about editing monitor settings, see *Monitor Settings* on page 9.

To edit or control what is displayed in each View, you must log in to the Primary Site in the ACC Client software. Using the ACC Client software, you can add cameras, maps and web pages to each View, and you can change the View layout of each monitor. For more information, see *The Avigilon Control Center Enterprise Client User Guide*.

Starting Up and Shutting Down the Virtual Matrix

Starting Up the Virtual Matrix

To start the Virtual Matrix software:

- Double-click the desktop shortcut icon .
- In the Start menu, select **All Programs** or **All Apps > Avigilon > Avigilon Control Center Virtual Matrix**.

By default, the application automatically logs in to all of the sites it was previously logged in to.

Shutting Down the Virtual Matrix

- Move your mouse across the screen to display the Monitor Settings dialog box. Click **Exit Application**.

This will shut down the Virtual Matrix software on the system and close all monitor Views.

While the Virtual Matrix software is shut down, the monitors remain listed in the Avigilon Control Center Client software. Any changes made to the monitor display settings are applied when the Virtual Matrix software is next launched.

Avigilon Certificates

By default, the ACC system uses a self-signed certificate for verifying client communications and site management.

If your system is configured to use other trusted certificates, you can disable trusting the Avigilon certificate authority.

Important: Make sure that you have set up trusted certificates on your ACC Servers and Clients before disabling trust for the Avigilon certificate authority. For more information, see the *Avigilon System Hardening Guide* or the [ACC Server User Guide](#).

1. Click **Client Settings**.
2. In the Security tab, select the **Require trusted server certificates** checkbox.
3. Click **OK**.

Monitor Settings

When you move your mouse across any monitor, the Monitor Settings dialog box automatically appears on every monitor. Each dialog box is specific to the monitor it is displayed on. If you leave the monitors idle, the dialog box will auto-hide on all monitors.

Naming the Monitor

By default, the monitor View is named *<Primary site computer name>-<monitor number>*


You can choose to provide each monitor View a name that is descriptive of what it displays.

1. Move your mouse across the screen to display the Monitor Settings dialog box.
2. In the Monitor Settings area, enter a meaningful name in the **Monitor Name** field.
3. In the **Monitor Logical ID** field, enter a unique number that can be used to access the monitor View through keyboard commands.
4. Click **Update** to apply your changes.

Changing the Primary Site

If you want to manage the monitor Views from a different site, you will need to change the Primary Site.

Note: In the Avigilon Control Center Client software, the Virtual Matrix Views will continue to be displayed under the original Primary Site as a disconnected monitor. To remove the monitor View from Primary Site, you will need to manually delete the monitor View from the System Explorer.

1. Move your mouse across the screen to display the Monitor Settings dialog box.
2. Click .
3. Click **OK**.
4. In the Site Login dialog box, select the site from the drop-down list then enter the **Username:** and **Password:**.
5. Click **Log In**.

Logging In and Out of Additional Sites

To display video from outside the Primary Site, you can log in to additional sites to gain access to more camera video. You will not be able to edit the Virtual Matrix monitors in the additional sites, but you will be able to display video and maps that are maintained by the site.


Note: In the Avigilon Control Center Client software, you must be logged into the Primary Site and the additional sites to display the required video in the same View monitor.

Logging In to New Sites

1. Move your mouse across the screen to display the Monitor Settings dialog box.
2. Click **Add Site**.
3. Click **OK**.
4. In the Site Login dialog box, select the site from the drop-down list then enter the **Username:** and **Password:**.

If the site you want is not listed, click **Find Site....** For more information, see *Discovering sites* below.
5. Click **Log In**.


Removing Additional Sites

1. Move your mouse across the screen to display the Monitor Settings dialog box.
2. In the Additional Sites area, select the site you want to remove.
3. Click .

Discovering sites

If the site you want is not automatically discovered, it may be connected to a different subnet and must be manually discovered. After you locate the site, you will be able to log in to it as the Primary Site or add it as an additional site.

1. Move your mouse across the screen to display the Monitor Settings dialog box.
2. Open the Find Site dialog box by completing one of the following:

If	Do this...
If you are logging in to a site	In the Site Login dialog box, click Find Site....
If you have already logged in to a site	Click Client Settings > Site Networking > Find Site....
If you want to locate a new Primary Site	Click  > Find Site...
If you want to locate an additional site.	Click Add Site > Find Site...

3. In the Find Site dialog box, complete the following:

Note: All users with access to the Virtual Matrix are able to see the manually discovered sites.

- a. Enter the **IP Address/Hostname:** of the site you want to connect to.
- b. The Base Port: is 38880 by default. Consult with your System Administrator if the Base Port: has been changed in the Admin Tool. For more information, see *The Avigilon Control Center Server User Guide*.
- c. Click **OK**
- d. Enter your site **Username:** and **Password:**.

The new site is automatically added to the available sites list.

Adding and Removing a Monitor View

By default when the Virtual Matrix software is launched, a View from the Avigilon Control Center Client software is added to each monitor that is connected to the system. You can add or remove monitor Views as required.

Adding a Monitor View

- Move your mouse across the screen to display the Monitor Settings dialog box. Click **Add Monitor**.

A new View is automatically added to the same monitor. In the Avigilon Control Center Client software, the new View is added to the Primary Site as a new monitor and can be controlled like the other Views displayed by the Virtual Matrix.

Removing a Monitor View

- Move your mouse across the screen to display the Monitor Settings dialog box. Click **Remove Monitor**.

The View is closed and the monitor is deleted from the Avigilon Control Center software. Any rules or settings that are linked to the removed monitor will need to be reset.

Resizing a Monitor View

When the Virtual Matrix software is initially launched, the View on each monitor is displayed in fullscreen mode, but you can restore and resize the View as needed.

- To restore down a View, move your mouse across the screen to display the title bar, then click .

When the View is restored down, you can resize it to fit your needs by clicking and dragging any corner of the window.

- To maximize a View, move your mouse across the View to display the title bar, then click .

Display Settings

You can update the Site View to change the order of the System Explorer and configure how the ACC Client software displays video.

Changing the Theme

You can adjust whether the application display uses a light or dark theme. By default, the light theme is used.

Use a dark theme to reduce eye strain when using the software in a dark room.

1. In the Display tab, select a theme.
2. Click **OK** to save your changes.

Changing the Video Display Settings

There are multiple settings that impact color and quality of the image displayed from a camera. These settings do not impact quality or image rate on the server.

1. Move your mouse across the screen to display the Monitor Settings dialog box.
2. Click **Client Settings > Display**.
3. Update any of the following settings.
 - **Display Deinterlaced Images** — Smooths the blur occasionally seen in analog video.
 - **Display Quality:** — Adjusts image quality based on bandwidth or processing power. Increasing the quality allows you to make out objects and faces while lowering quality is better for viewing moving events.
4. Click **OK** to save.

Hardware Rendering

Hardware rendering is enabled by default in ACC. You can choose to enable or disable hardware rendering explicitly to troubleshoot any GPU driver issues affecting ACC applications.

1. Move your mouse across the screen to display the Monitor Settings dialog box.
2. Click **Client Settings > Graphics**.
3. Select the **Enable Hardware Rendering** check box to enable hardware rendering and click **OK** in the confirmation dialog.
4. Click **OK** to save.

Note: The hardware rendering option only affects how video is rendered in ACC. It has no effect on recorded footage or on video output by cameras.

Video Overlays

Overlays display additional contextual information over video.

1. Move your mouse across the screen to display the Monitor Settings dialog box.
2. Click **Client Settings > Overlays**.
3. Enable any of the following overlays.
 - **Device Name** — Displays the device's assigned name.
 - **Device Location** — Displays the custom location of the device.
 - **Playback Timestamp** — Displays either the device's local timestamp or your local timezone during recorded playback.
 - **Motion Activity** — Highlights motion.
 - **Video Analytics Activity** — *For video analytics devices*. Highlights people and vehicles in live and recorded video.
 - **Live Video Analytics Activity:** — *For video analytics devices*. Select when overlays are displayed in live video.
 - **Off** — Hides video analytic overlays.
 - **Motion Only** — For H5A cameras, highlights only moving objects. For all other video analytics cameras, highlights people and vehicles.
 - **All** — For H5A cameras, highlights stationary and moving objects. For all other video analytics cameras, highlights moving objects only.
4. Click **OK** to save.