



Avigilon Control Center™ Server User Guide

Version 7.14

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What Is the ACC Server Software?

The ACC Server software is the application that captures and records surveillance data from Windows-based network cameras and encoders. The captured data is then sent to the ACC Client software for you to review. For Avigilon Hardened OS appliances, the ACC Server software is built-in. Refer to your [server documentation](#) for details.

The ACC Server software contains two key parts — the Windows service and the Admin Tool. The Windows service directs video to where it needs to be stored or streamed in the network. The Admin Tool allows you to configure the system administrative settings.

There are three editions of the Server software available: Core, Standard and Enterprise. The edition of the Server software determines how many cameras can be connected to the system and the number of simultaneous client connections. The edition of the Server software also determines what features are available in the ACC Client software.

System Requirements

Note: Network video recording and retention times vary according to the number of cameras, camera resolution, estimated percent of motion, continuous recording settings and predefined retention period. For full server performance, use the Avigilon certified solution options.

Avigilon Certified Solution

- Servers — NVR Premium, Standard, or Value
 - Optimized for video surveillance applications in a 24/7/365 environment.
 - ACC software is preinstalled, configured and enhanced for optimal system compatibility.
 - Certified for the Avigilon surveillance environment — ACC software, LPR, Web Endpoint, Analytics, HDSM™ and 1-30 MP cameras.
 - High throughput of up to 1800 Mbps.
 - Documented network architecture for a wide-variety of applications.
 - Avigilon warranty and support included.
 - Access to Avigilon System Design Tool (SDT) to calculate storage requirements.
- Workstations — HD Video Appliance or NVR Workstation
 - Preloaded and configured with ACC video management software.
 - High-performance recording capacity.
 - Supports high resolution monitors.

- Throughput of up to 400 Mbps.
- Avigilon warranty and support included.
- Access to Avigilon SDT to calculate storage requirements.

ACC™ Server Software Requirements

Important: Do not install the ACC software on servers running Active Directory or DNS services. These services can severely impair ACC functionality.

ACC Server Software

System Requirement	Recommended	Minimum
Recording capacity:	256 Mbps up to 120 cameras <small>*Remote viewing only.</small>	
OS*	Windows Server 2016	Windows Server 2012 R2 / 2016 / 2019, Windows 8.1 (64-bit) or Windows 10 (64-bit)
Processor	Intel® Xeon® E5 v3 (6 cores, 1.9 GHz)	x86 64-bit (dual-core, 1.9 GHz)
Memory	16 GB DDR4	4 GB DDR3
Storage	SATA-III 7200 RPM Enterprise Class	SATA-II 7200 RPM Enterprise Class

ACC Server Workstation

System Requirement	Recommended	Minimum
Recording capacity:	80 Mbps up to 60 cameras <small>*Can view live and recorded images locally</small>	
OS*	Windows 10 (64-bit)	Windows 8.1 (64-bit) or Windows 10 (64-bit)
Processor	8th Generation Intel Celeron® CPU or higher	Intel Quad-core (2.0 GHz)
Memory	8 GB DDR4	4 GB DDR3
Video	NVIDIA® Quadro P620	PCI Express®, DirectX 10.0 compliant with 256 MB RAM
Storage	SATA-III 7200 RPM	SATA-II 7200 RPM

* 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.

- In the bottom-left corner of the Admin Tool, click **Help**.

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

The Avigilon Control Center Server software contains two parts: the Windows service and the Admin Tool.

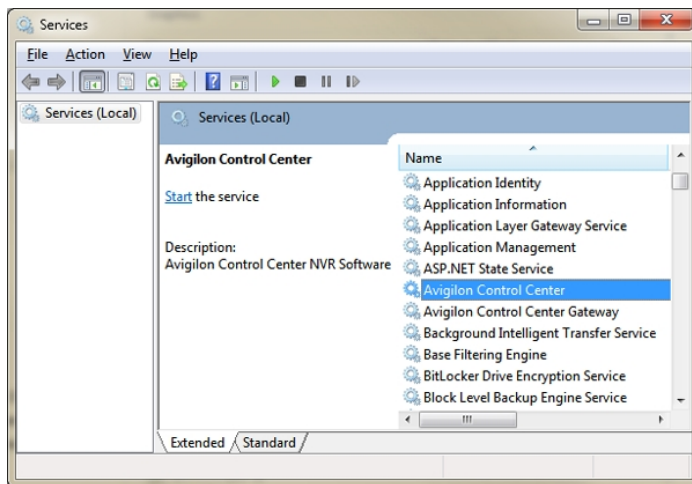
The Windows service runs automatically when your computer starts.

The Admin Tool is used to configure the Windows service. From the Admin Tool you can define the network and configure the backup and storage settings for the Avigilon Control Center System.

Windows Service

The Avigilon Control Center Server software includes a Windows service that runs automatically in the background.

If required, you can configure the service properties in the **Services** window.




Admin Tool

The Admin Tool is used to configure your Avigilon Control Center Server settings. From the Admin Tool, you can configure the size of the surveillance data storage space, the file backup location, and network ports.

Accessing the Admin Tool

The Admin Tool can be accessed in the following ways:



- From the Start menu, select **All Programs** or **All Apps** > **Avigilon** > **Avigilon Control Center Server** > **Admin Tool**
- Double-click the desktop shortcut icon .

Admin Tool Window




From the Admin Tool, you can start up or shut down the Avigilon Control Center Server at any time. For more information, see *Starting Up and Shutting Down* on page 17.

The Admin Tool window contains two tabs: the General tab and the Settings tab. The following tables describe what options are available in each tab.

General

Icon	Description
	Launch the Avigilon Control Center Client software.
	View the Avigilon Control Center Server error logs.

Settings

Icon	Description
	Define the amount of server space allocated to surveillance data storage. For more information, see <i>Configuring the Server Storage Settings</i> on the next page.
	Define the network ports. For more information, see <i>Configuring the Server Network Settings</i> on page 14.
	Define where backup files are stored. For more information, see <i>Enabling Storage Management</i> on page 13.

System Settings

Complete the following procedures to configure the Avigilon Control Center Server to fit your requirements.

Configuring the Server Storage Settings

You must configure the server storage settings so the Avigilon Control Center Server software knows how much space is allocated for storing surveillance data, and where it is located.

If the Admin Tool detects that there is no existing storage configuration, it will launch the Set Up Storage Configuration dialog box.

By default the software will assign most of the available storage to the Primary Data Volume for storing recorded video.

- If the recommended configuration is acceptable, click **Finish**
- If you want to change the configuration click **Change Storage Configuration**. For more information, see *Changing the Storage Configuration* on the next page.

Erasing Storage Configuration


Note: If you choose to erase all stored data, be aware that all recorded surveillance data and server settings will be lost.

1. Open the **Storage** dialog box. For more information, see *Accessing the Server Storage Configuration* below.
2. Click **Erase All Data**.
3. Click **Yes**.
4. You will need to create a new storage configuration before you can start up the Avigilon Control Center Server again. For more information, see *Changing the Storage Configuration* on the next page.

Accessing the Server Storage Configuration

1. In the Admin Tool, click **Shut Down**.

The Avigilon Control Center Server must be shut down before the storage configuration can be viewed or edited.

2. In the Settings tab, click  .
3. In the Storage dialog box, you can see the current storage configuration.

Setting Up the Initial Server Storage Configuration

When the Admin Tool detects that there is no existing storage configuration, it will launch the Set Up Storage Configuration dialog box with the recommended storage configuration.

By default the software will assign most of the available storage to the Primary Data Volume for storing recorded video.

- If the recommended configuration is acceptable, click **Finish**
- If you want to change the configuration click **Change Storage Configuration**. For more information, see *Changing the Storage Configuration* below.

Changing the Storage Configuration

You may need to change the storage configuration in the following situations:

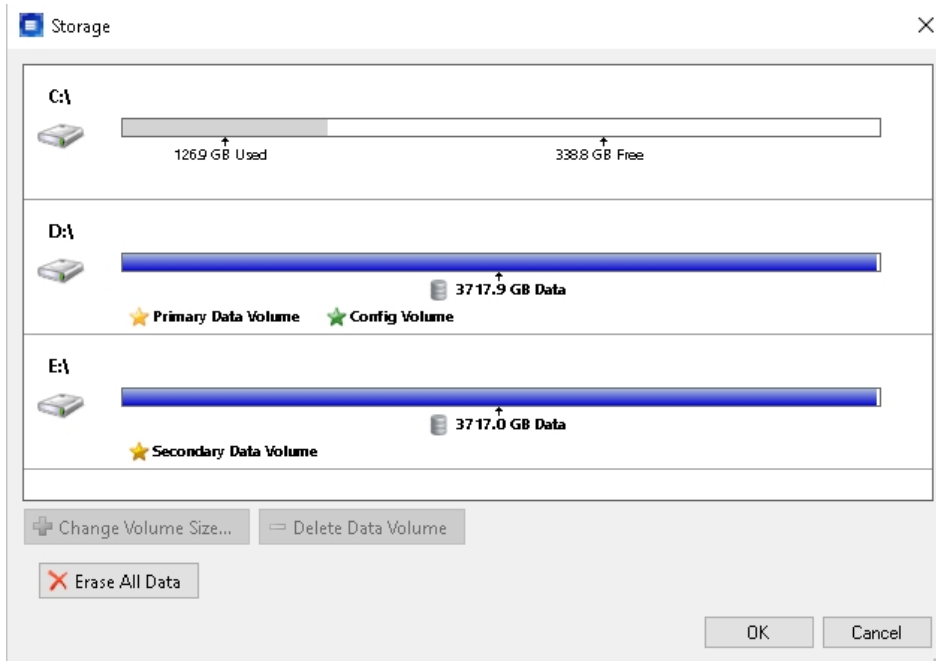
- If you are unsatisfied with the storage configuration suggested by the application, click **Change Storage Configuration** to define the storage settings to fit your needs.
- If you recently chose to Erase All Data, you must reset the Storage configuration before you can continue.

Complete the following procedure in the Storage dialog box:

If the Storage dialog box is not already open, see *Accessing the Server Storage Configuration* on the previous page.

Note: Place the Config Volume and the Data Volume on separate drives apart from the OS (C:\ by default).

1. In the Storage dialog box, select the drive for storing the Config Volume and click **Set Config Volume**.



Note: Some of the buttons in the figure may not be available if the drive cannot accommodate the setting.

2. To add a data volume, select the drive and click **Add Data Volume...** The button is not available if the drive already has a data volume.
 - a. In the Add Data Volume dialog box, enter the preferred data volume size.

WARNING — Adding a Primary Data Volume value that is substantially larger than the Secondary Data Volume value, or adding a Secondary Data Volume value that is substantially larger than the Primary Data Volume value may lead to recordings being deleted earlier than the time specified in your retention policies.

Note: ACC Server will show a warning message if either the Primary Data Volume value or the Secondary Data Volume value is set to a substantially larger value than the other.

- b. Click **OK**.

3. To delete a Secondary Data Volume, select the drive and click **Delete Data Volume**. Deleting a data volume will erase all recorded data from that drive.

Note: You cannot delete a Primary Data Volume, you can only erase all data. For more information, see *Erasing the Storage Configuration* below.

4. If you are not satisfied with the location of the Primary Data Volume, select the drive you prefer and click **Set Primary Data Volume**.

The Primary Data Volume contains the database that indexes the surveillance data.

Note: The drive must have a data volume before it can be set as the Primary Data Volume.

5. When you are satisfied with the storage configuration, click **OK**.

Erasing the Storage Configuration


Note: If you choose to erase all stored data, be aware that all recorded surveillance data and server settings will be lost.

1. Open the **Storage** dialog box. For more information, see *Accessing the Server Storage Configuration* on page 10.
2. Click **Erase All Data**.
3. When the confirmation dialog box appears, click **Yes**.
4. You will need to create a new storage configuration before you can start up the Avigilon Control Center Server again. For more information, see *Changing the Storage Configuration* on page 11.

Enabling Storage Management

FOR STANDARD AND ENTERPRISE EDITION

To allow users to archive video from the ACC network video management server, you must enable the **Storage Management** feature in the Admin Tool and assign a location for the archived files.

1. In the Admin Tool, select **Settings** > .
2. In the Storage Management dialog box, select the **Enable Storage Management** checkbox to allow the server to archive video files.
3. Enter a location for the **Archive Folder**. Click [...] to navigate to the preferred folder location.

Tip: The archive folder can be on any Windows file system that is accessible by the server. A common file system can be referenced by multiple servers to create a centralized video archive.

4. Click **OK**.


Tip: If ACC is running as a specific user account, allow the Modify, Read & execute, and Write permissions for that user account on the archive folder location.

Once Storage Management is enabled, you can archive video on demand. If you have an Enterprise Edition system, you can also set up the Storage Management Continuous Archive feature.

For more information about archiving video, see the *Avigilon Control Center Client User Guide*.

Configuring the Server Network Settings

The server communicates with the Avigilon Control Center Client software through a range of UDP and TCP ports. The port ranges only need to be changed if the Client software is trying to access two or more servers that are behind the same NAT device (e.g. router), or if there is a port conflict with other software running on the same computer as the Avigilon Control Center Server software.

1. In the Admin Tool, select **Settings** > .
2. In the Network dialog box, enter a new base port then click **OK**.
 - The service ports used by the Server software are updated as the base port changes.
 - The RTP port range must be accessible by the Client computer and can be forwarded on any router or network address translation point between the Client and Server.

Note: Time differences between Avigilon Cloud Services and your ACC Service can cause unexpected behavior. To prevent differences in Avigilon Cloud Services time and ACC Server time, configure your server or appliance to synchronize with a network time protocol (NTP) time server.

Managing Certificates on the ACC Server

By default, the ACC server uses a self-signed certificate for verifying client communications. Avigilon recommends using a trusted CA-signed certificate or other intermediate certificate, such as a Windows CA or custom CA certificate. You must be a Windows Administrator to make these changes.

If you are using a CA-signed certificate, you will need to disable trust of the default Avigilon certificates after setting up your CA-signed certificates to ensure the default certificate can no longer be used.

Important: When logging into the server from a client after setting up your certificate, you will need to use the full hostname, including the domain.

Generating the Certificate

1. On the Windows machine running the ACC server, open the Certificate Manager. Select **Run** in the **Start** menu and enter *certlm.msc*.
2. Navigate to the **Personal > Certificates** folder.
3. Right-click in the folder contents area and select **All Tasks > Request New Certificate...**
4. Click **Next**.
5. In the Select Certificate Enrollment Policy window, select the **Active Directory Enrollment Policy** and click **Next**.
6. In the Request Certificates window, select the **Avigilon Computer** checkbox, then expand the **Details** drop-down arrow and click **Properties**.
7. On the **General** tab, enter the **Friendly Name** as **AccServerCert**.

Important: Make sure to enter the correct Friendly Name, **AccServerCert**, or the ACC server and clients will not recognize the certificate and will fail to connect.

8. On the **Private Key** tab, in the **Key options** area, fill the **Make private key exportable** check box.
9. If ACC is running as a specific user account, configure permissions on the private key:
 - a. On the **Private Key** tab, in the **Key permissions** area, fill the **Use custom permissions** check box.
 - b. Click **Set permissions...** and add the corresponding user account to the group or user list.
10. Click **OK**.
11. On the Request Certificates window, click **Enroll**. Click **Finish** when the operation is complete.

Exporting the Certificate and Private Key

1. Using the certlm.msc tool, right-click the new certificate and select **All Tasks > Export...**
2. Click **Next**.
3. Select **Yes, export the private key** and click **Next**.
4. Leave the Export File Format settings as default and click **Next**.
5. On the Security window:
 - a. Select the **Group or user names (recommended)** check box and select the Active Directory group or user to which you want to assign access to the certificate and private key.
 - b. Click **Add**.
 - c. Click **Next**.
6. Enter the name and location for the exported certificate, or click **Browse** to navigate to the location where you want to save the exported certificate. Click **Next**.
7. Click **Finish** to export the certificate and private key.

Importing the Private Key

1. Using the certlm.msc tool, right-click in the **Personal > Certificates** folder contents area and select **All Tasks > Import...**
2. Click **Next**.
3. On the File to Import window, enter the certificate name and path in the **File name** field or click **Browse** to navigate to the certificate you want to import. Click **Next**.
4. Select the Import option to **Mark the key as exportable** and **Include all extended properties**, then click **Next**.
5. Leave the settings as default and click **Next**.
6. Click **Finish**.

Managing Private Key Permissions on Existing or Imported Certificates

1. On the Windows machine running the ACC server, open the Certificate Manager. Select **Run** in the **Start** menu and enter *certlm.msc*.
2. Navigate to the **Personal > Certificates** folder.
3. Locate and right-click on the **AccServerCert** certificate and select **All Tasks > Manage Private Keys...**
4. In the Permissions for AccServerCert private keys window, add the Network Service account to the group or user list.
5. Click **OK**.

Using the Admin Tool

In addition to configuring the server, the Admin Tool can also be used to start up and shut down the Avigilon Control Center Server software, launch the Client software, and display the Application Logs.

Starting Up and Shutting Down

The Avigilon Control Center Server software automatically starts when Windows starts, but it can be manually started and shut down through the Admin Tool.

Starting Up the Server Software

- In the Admin Tool, click **Start Up**.

When the Avigilon Control Center Server has started properly, the Admin Tool displays this message:

The Avigilon Unity Server is Running.

Shutting Down the Server Software

When the Avigilon Control Center Server is shut down, all video recording is stopped until the Avigilon Control Center Server is started again.


- In the Admin Tool, click **Shut Down**.

When the Avigilon Control Center Server has shut down properly, the Admin Tool displays this message:

The Avigilon Unity Server is Not Running.

Starting the ACC Client Software

The Avigilon Control Center Client software can be launched from the Admin Tool.


- In the Admin Tool, select **General** > .

If the ACC Client software is not installed, the Admin Tool will prompt you to install it.

Viewing Application Logs

You can view the Avigilon Control Center application error logs through the Admin Tool. This can assist in diagnosing problems with your system.




1. In the Admin Tool, select **General** > .
2. In the Application Logs dialog box, double-click an error to view the details.
3. Click **OK** to close the dialog box.

Appendix

Resetting the Administrator Password

To reset the administrator password for the Avigilon Control Center Client software, you must delete all existing user and group account information from the server Config Volume.

Tip: You can avoid this procedure if you have a user account that has all the same permissions as an administrator. You can use this user account to reset the administrator password in the Avigilon Control Center Client software.

1. In the Admin Tool, click **Shut Down**. If you have multiple servers in your site, you need to shut down all the servers in your site.
2. Select **Settings** > .
3. In the Storage dialog box, make note of the drive that holds the Config Volume.
4. Access the Config Volume drive and navigate to the `AvigilonConfig\Db\DirectoryShared\Users` folder.

For example, `D:\AvigilonConfig\Db\DirectoryShared\Users`.
5. Delete all the files in this folder. If you have multiple servers in your site, you need to delete this folder from every server in your site before you do the last step.

The server automatically resets all the user and group settings back to the factory default.
6. In the Admin Tool, click **Start Up**. Repeat for each server in your site.

Once all the servers have come back online, you can log into the site using the default administrator credentials:

- **Username:** administrator
- **Password:** <leave blank>

To add users and groups to the server, see *The Avigilon Control Center Client User Guide*.