

S-VIDIA Security Video Digital System

V-CORE SERVER SOFTWARE MANUAL



DRAFT

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REVISION 3.1 VZ

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I

INTRODUCCION

It is common for h.264, h.265 and MJPEG cameras to consume excessive network bandwidth (MPEG), especially at night (h.264, h.265) blurry image. **SVIDIA VCore™** is an application used for reducing bandwidth from cameras when streaming video over a network and recording. This software is installed on a PC near the edge device and used to encode one or more data heavy H.264 or MJPEG video streams to Flexible Delta Compression (FDC). The FDC stream can be viewed and recorded remotely using SVIDIA Client and Server software. VCore performance is dependent on CPU speed and camera resolution and frame rate.

New technology:

Flexible Delta Compression™
Adaptive Network Streaming™
MultiCam Motion Search™

Video Client:

SVIDIA VClient PC computers
SVIDIA VClient for Mac OS
SVIDIA MMVC (Multi Monitor Video Client)
SVIDIA Android Video Client
SVIDIA iOS Video Client

Minimum Hardware Requirements (16 cameras 1080p 8fps):

- CPU: i5
- RAM: 16GB
- Chipset Q170
- Gigabit NIC
- System HDD SSD 250GB
- Video database HDD 4TB 7200RPM
- OS 64bit Windows 8.1 or Windows 10

Minimum Hardware Requirements (16 cameras 4MP 15fps):

- CPU: i7 8700K
- RAM: 16GB
- Chipset, Z370
- 2x Gigabit NIC
- System HDD SSD 250GB
- Video database HDD 4TB 7200RPM
- OS 64bit Windows 8.1 or Windows 10

System Security

The installer and user are responsible for password, security, configuration and settings.

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II

Release notes:

[VCore build 58.33] { Oct 14, 2021 }

- [x] added an optional persistent label to RCAD Alarm Panel Notification module
- [x] updated Cameras Alarm Zone signal behavior: a signal will not be triggered on camera faults
- [x] added network connection check to VCore Control Daemon self-healing functionality
- [x] added some informational messages from OD Workers to runtime logging

[VCore build 57.32] { Oct 08, 2021 }

- [x] updated default RCAD configuration to enable saving into database all analytics data/events
- [x] updated RCAD FCM module guard mechanism behavior filtering the similar messages only
- [x] added function to allow runtime logging to check/troubleshoot IPCam/OD Modules and Workers

[VCore build 57.31] { Sept 21, 2021 }

- [x] updated IPCam RTSP and RCAD ADATA modules to support build-in cameras analytics meta-data stream
- [x] updated RCAD IPCam IO module and Alarm Panel Notification module to support Analog IO devices
- [x] improved analytics confirmation mode for OD Workers
- [x] updated ODLPR Model to v6910

[VCore build 55.29] { Sept 02, 2021 }

- [x] introduced new IP Camera module with build-in analytics
- [x] added new RCAD ADATA Module to integrate analytics data

[VCore build 52.28] { Aug 19, 2020 }

- [x] optimized video database read/write functions
- [x] improved NVMe compatibility
- [x] added support for Samsung/Hanwha cameras with PTZ and IO functions
- [x] added PTZ Axis OpticsZoom API for cameras with motorized lens (ptz proto: Axis OpticsZoom)
- [x] fixed some errors while adjusting source camera settings
- [x] fixed CallPtzPreset RCAD function

[VCore build 49.25] { Jun 30, 2020 }

- [x] added key frame fast forward playback function
- [x] added ROI option for static archive pictures
- [x] improved handling wide range cameras aspect ratios by removing legacy double height dependencies
- [x] improved archive protocol for retrieving pictures
- [x] fixed unexpected extra lines in pictures for some cameras/resolutions
- [x] fixed UNV PTZ Point-and-Click functionality (ptz proto: UniView PnC APIv2)

[VCore build 47.23] { Jun 05, 2020 }

- [x] Various IP cameras compatibility and performance improvements (RTSP worker update)
- [x] Speeding up some archive access functions

[VCore build 43.21] { Oct 18, 2019 }

- [x] Added S-VIDIA Cloud feature to provide public DNS services
- [x] Various IP cameras compatibility and performance improvements (RTSP worker update)
- [x] Various video database stability improvements
- [x] Added support for Axis IP audio devices

[VCore build 42.20] { Oct 10, 2019 }

- [x] Fixed a bug that caused video database fill up all available space
- [x] Expanded video database logging

[VCore build 41.20] { Aug 26, 2019 }

- [x] Expanded authentication logging
- [x] Fixed search motion returns no results in some cases

[VCore build 39.20] { Jun 21, 2019 }

- [x] Fixed an unexpected error while cache initialization if video database is not defined
- [x] Fixed empty archive information is retrieved via monitoring protocol in some cases

[VCore build 38.20] { Jun 20, 2019 }

- [x] Fixed a bug introduced in the previous build (37.20) that causes playback stop if camera fault was encountered

[VCore build 37.20] { Jun 03, 2019 }

- [x] Fixed images corruption when using frame-by-frame archive view mode

[VCore build 36.20] { May 28, 2019 }

- [x] Fixed recurring FCM notifications for disabled cameras
- [x] Added support for IO functions in Hikvision cameras
- [x] Fixed PTZ functions authentication for some Hikvision cameras

[VCore build 36.19] { May 09, 2019 }

- [x] Added Alarm Zones retrieval option to display motion zone in MMVClinet app

- [VCore build 35.19] { Apr 17, 2019 }
 - [x] Added support for unregistering push notifications on client device
- [VCore build 34.19] { Apr 02, 2019 }
 - [x] Added support for push notifications available in SVIDIA iOS VClient
- [VCore build 33.19] { Mar 04, 2019 }
 - [x] Added logon extension for EDC ver SV3
- [VCore build 32.19] { Feb 22, 2019 }
 - [x] Added support for EDC (extended data channel) protocol
 - [x] Added EDC version SV3 256bit encryption
- [VCore build 31.19] { Feb 14, 2019 }
 - [x] Updated RTSP worker to the latest version
 - [x] Fixed PTZ functions for some Hikvision cameras
- [VCore build 31.18] { Jan 08, 2019 }
 - [x] Added support for push notification feature available in the mobile SVIDIA Android Client
- [VCore build 30.18] { Nov 13, 2018 }
 - [x] Minor video database logging improvements
- [VCore build 29.18] { Nov 1, 2018 }
 - [x] Updated VCore Control Daemon to insure compatibility w the latest Windows 10 updates
- [VCore build 29.17] { Oct 30, 2018 }
 - [x] Added support for Camera GPS Location feature available in the upcoming version of Android NVClient
- [VCore build 28.17] { Oct 24, 2018 }
 - [x] Updated a logging mechanism to decrease too frequent log messages
 - [x] Fixed search motion "not responding" error when a thumbnail for an inactive camera is selected
 - [x] Added support for UNV IP camera I/O functions
 - [x] Added support for "Digital Loggers" DIN Relay II as I/O device
- [VCore build 27.16] { Sep 18, 2018 }
 - [x] Fixed missed data required for VClient "Delta Statistics" function
- [VCore build 26.16] { Aug 08, 2018 }
 - [x] Added support for the latest Axis IP cameras
- [VCore build 26.15] { Aug 04, 2018 }
 - [x] Fixed inability to stream live while enhanced video playback in use
 - [x] Visual improvements in VCore Management Log Monitoring function
- [VCore build 24.14] { Jul 26, 2018 }
 - [x] Implemented video database server-side caching
 - [x] Added support for async handling of server-side events
 - [x] Fixed Set/Go preset function for ONVIF PTZ IPCAM protocol
- [VCore build 20.12] { Jul 03, 2018 }
 - [x] Fixed absence of log messages within web-based VCore Management
- [VCore build 20.11] { Apr 12, 2018 }
 - [x] Updated security layer to ensure compatibility with the latest mobile VClients versions
- [VCore build 19.11] { Apr 5, 2018 }
 - [x] Fixed ONVIF Zoom protocol for some IP cameras
- [VCore build 19.10] { Mar 21, 2018 }
 - [x] Added recording time estimation in the management interface
- [VCore build 19.9] { Mar 09, 2018 }
 - [x] Fixed a bug preventing access to stop recording function in the management interface
- [VCore build 19.8] { Feb 26, 2018 }
 - [x] Fixed erroneous camera settings when VServer migration is selected during an install
 - [x] Fixed occasional wrong ROI positioning in archive
- [VCore build 18.7] { Jan 16, 2018 }
 - [x] Added ONVIF protocol in RTSP module
- [VCore build 17.6] { Jan 12, 2018 }
 - [x] Fixed VCore management access in Windows AD Environment

[VCore build 17.5] { Dec 29, 2017 }

[x] Added ONVIF protocol in RTSP module

[x] Added RCAD Calendar daily/monthly/yearly interval feature (include "interval" tag in RCAD calendar name to activate)

[VCore build 16] { Sept 1, 2017 }

[x] Minor fixes and stability improvements

[x] Updated IPCam IO Module FlexWatch protocol

[VCore build 15] { Aug 22, 2017 }

[x] Initial prerelease

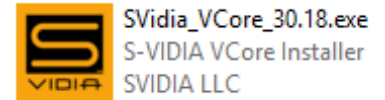
1. INSTALLATION

1.1 Install Client Software

Please install the S-VIDIA™ VCore Software from our website www.svidia.com, and run the installation file. You will need to be a registered member with our website to access the downloads section.

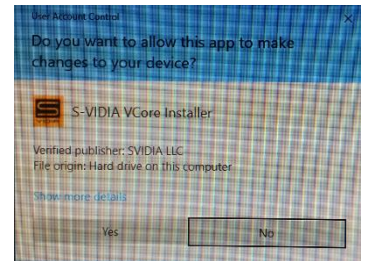
1.2 Double Click on Icon

Once the file is downloaded, run the installation file.



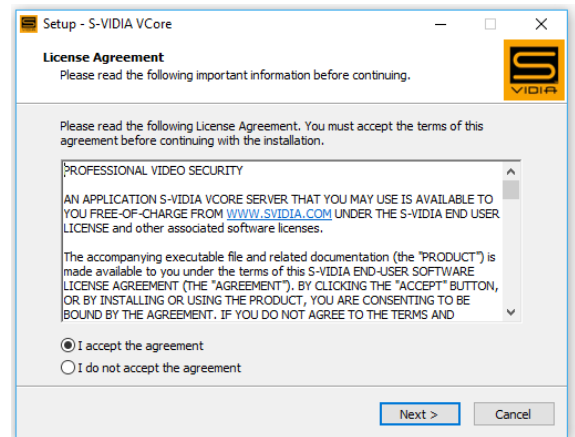
1.3 Click Install.

The windows UAC popup will appear, select yes to continue.



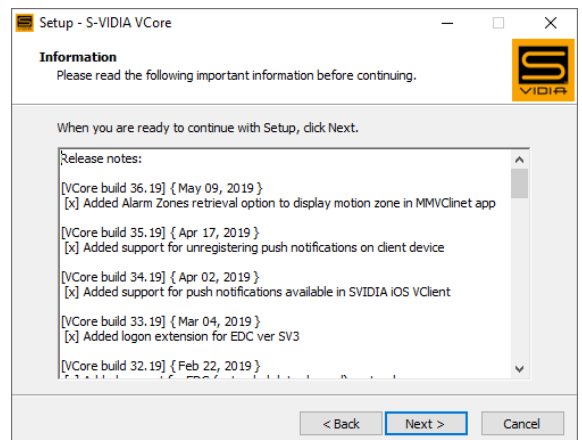
1.4 License Agreement.

Please read License Agreement and accept to proceed to the next step.



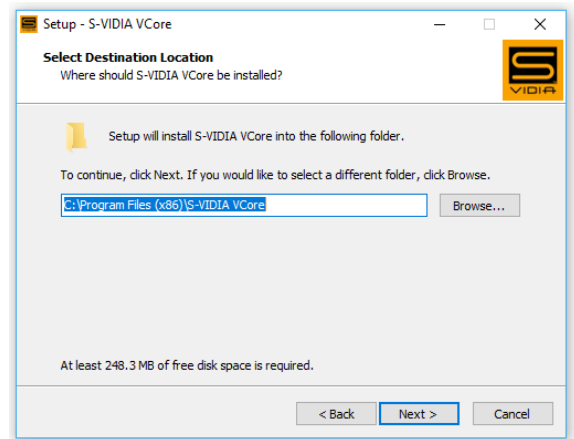
1.5 Information.

Information about the current and previous releases. (change log)



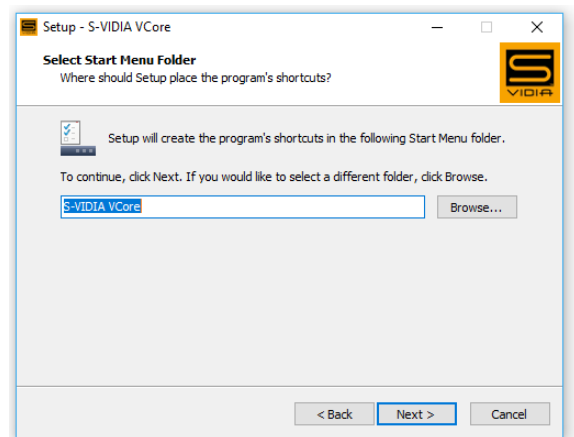
1.6 Select Destination Location.

Follow the onscreen prompt.



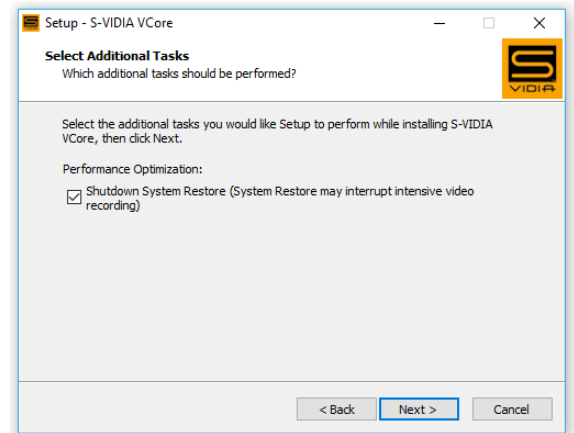
1.7 Select Start menu folder.

Follow the onscreen prompt.



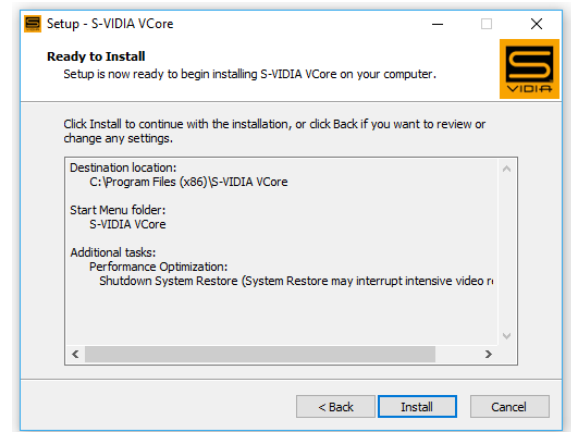
1.8 Select Additional Tasks

Follow the onscreen prompt.



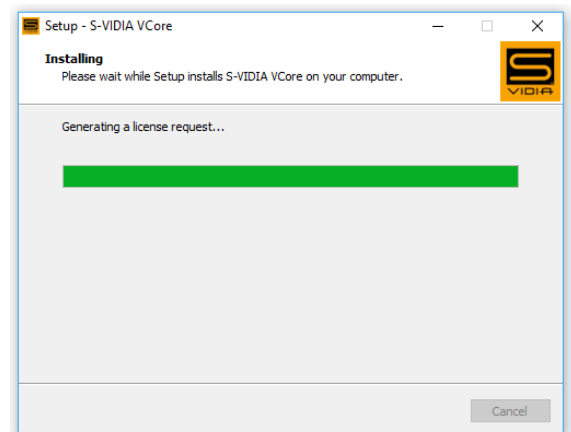
1.9 Ready to install.

Click Install



1.10 Installation progress.

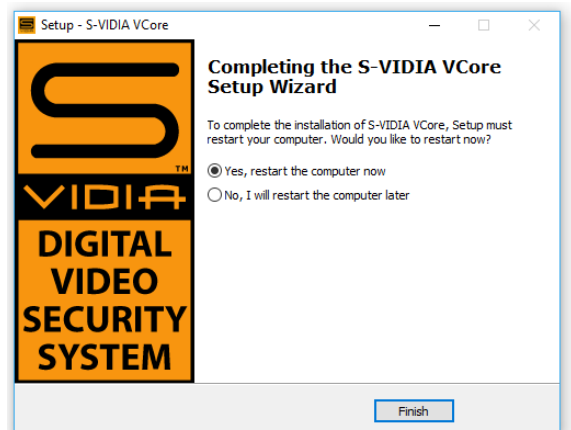
During the installation a license key request will be generated.



1.11 Complete the Installation.

Follow the onscreen prompt.

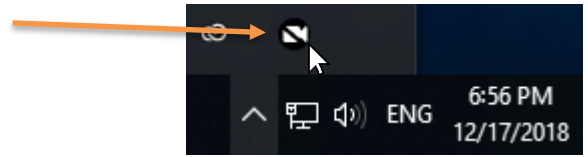
Restart required.



2. Prepare VCore

After you have restarted your computer:

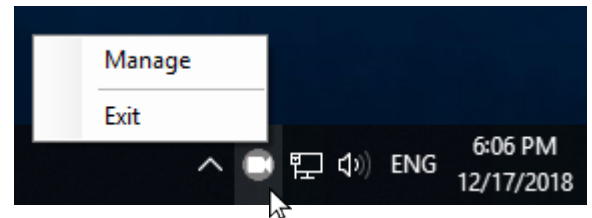
On the right-bottom on your screen in **Show hidden icons** you will see new icon.



Please click and drag this icon to the **Tool Bar**



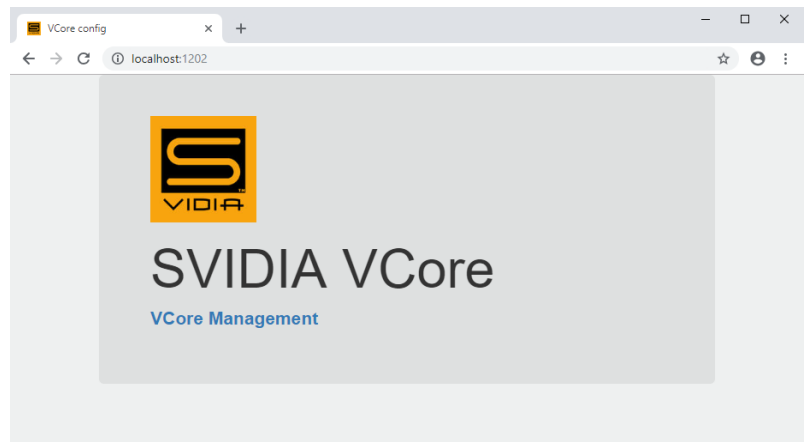
To manage VCore, right click using the mouse on the VCore icon. And click on **Manage**.



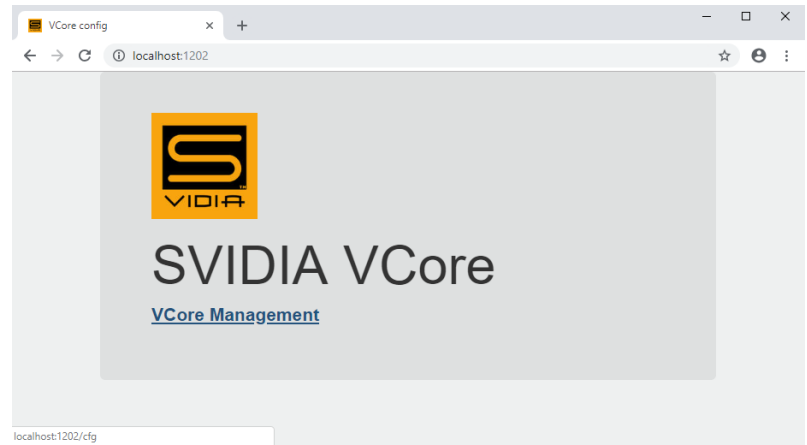
Your default web browser window will open to the VCore management page.

On Local PC <http://localhost:1202>

From remote PC <https://IP address:1203>



Please select [VCore Management](#) link to proceed.

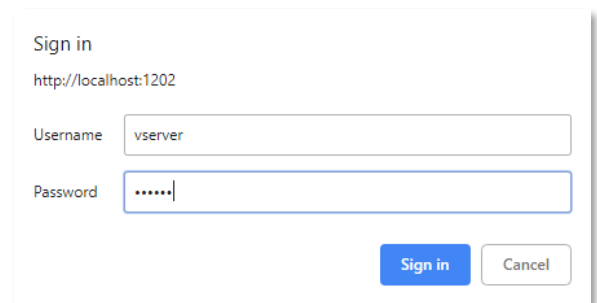


2.1 Connecting and Logging On

Please use Chrome browser.
To login type your Username and password in the popup window. **It will be the same user name and password you used to log into this computer.**

For security reasons there is no default Username and Password.

Username: *Username*
Password: *Password*



If you use Domain format for windows login then use this format for VCore login:
Username: *Domain\Username*
Password: *Password*

2.2 License

When logging in for the first time, VCore management will open the Licenses page. Your license file has already been generated when you installed the software. Press the download icon next to the generate button and save this file. If the license file can't be found, please press the generate button and follow the steps above. Save the generated file to a usb drive or email it to your Distributor, Dealer, or support@svidia.com. Please specify in your email how many cameras channels you wish to license.

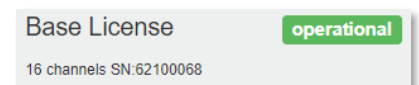
When you receive the license key (.sl), save to Documents or Download folder on the VCore computer. Open the VCore management page and Go to License> Base License> Choose File> Select (.sl) file> Open> Install.

After less a minute Icon in Toolbar change color to green and Base License to Operational.



(toolbar icon)

Now SVIDIA VCore is licensed and operational. If you have trouble with this step please contact support@svidia.com and provide any relevant screen shots and description of your issue.



2.3 Video Database

By default the system does not create a database, you will need to do this manually,

To setup a Video Database, go to the Setup > Database section in the VCore management. Select the storage device you wish to use from the list and click Use and follow the onscreen prompts.

#	Drive	Label	Total Size	Free Space	VDB Location	VMB Location	Reserved Space	Remarks	Excluded
1	C:		511.46 GB	432.38 GB				system drive	false
2	D:	DATA	4000.65 GB	3790.86 GB					false

The entire drive will be consumed to create the database file. Once the database is created your surface configuration will change to “OK”

2.4 Recording

After Video Database setup done you must turn recording on manually. Press On to turn on recording.

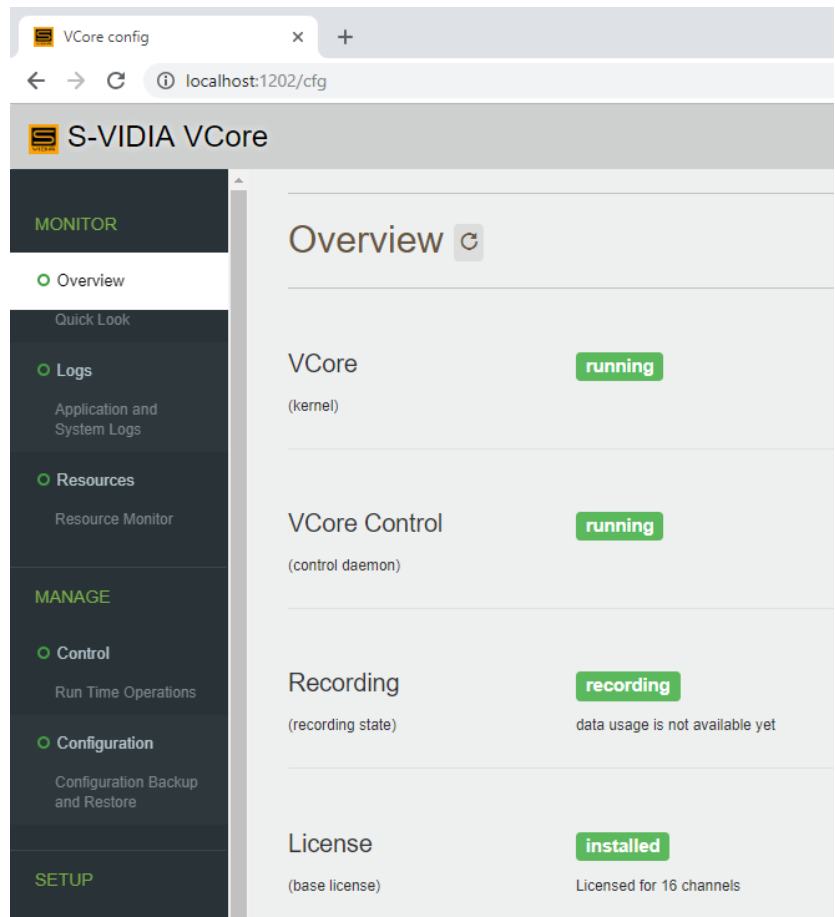
Recording (recording state) **inactive** **On** **Off**

Recording status will change to active.

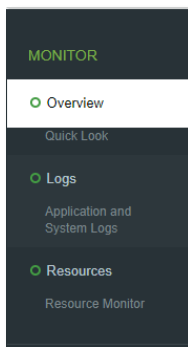
To add more storage please follow instructions for Video database.

2.5 Overview

This page shows the status of various VCore modules. Any modules with issues will be displayed in red while those that are functioning properly will be in green.



3.1 Monitor



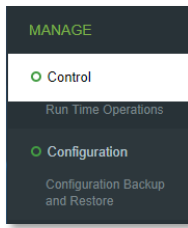
Overview: show status: VCore, VCore Control, Recording data usage days, active camera License

Logs: show Application and System Log.

Resources: show Process Monitor, Processor resources, Memory status, Network Activity.

3.2 Manage

Control: VCore control (Start, Restart, Stop), Recording (On, Off), Host (CPU Reboot)

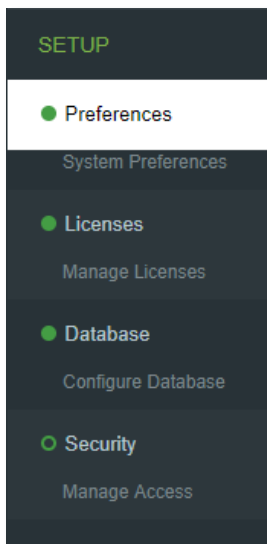


Configuration: Backup Configuration, click to Create and save current SVIDIA™ VCore configuration to a file with extension (.cfgx). This file can be used to restore SVIDIA™ VCore configuration settings in the event of a system failure or after any unwanted changes. It is recommended to save this file to a removable media device. You need to enter a file name and select a location for the backup file to be stored. Backup Configuration will save and restore VCore settings only, not the database:

Properties included in the file:

- Camera settings (IP address, Source Properties, Mask settings, Alarm zones, Delta settings)
- Users profile
- Licenses
- R-Cad
- Video Database settings (no video files)

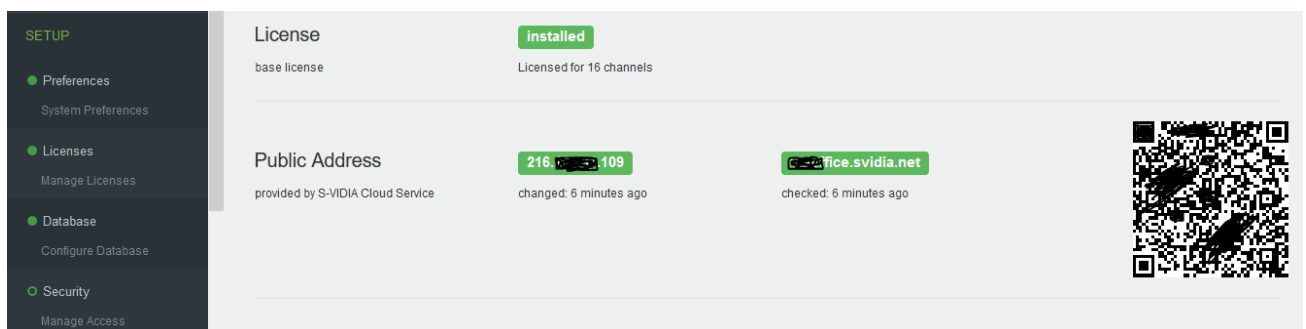
3.3 Setup

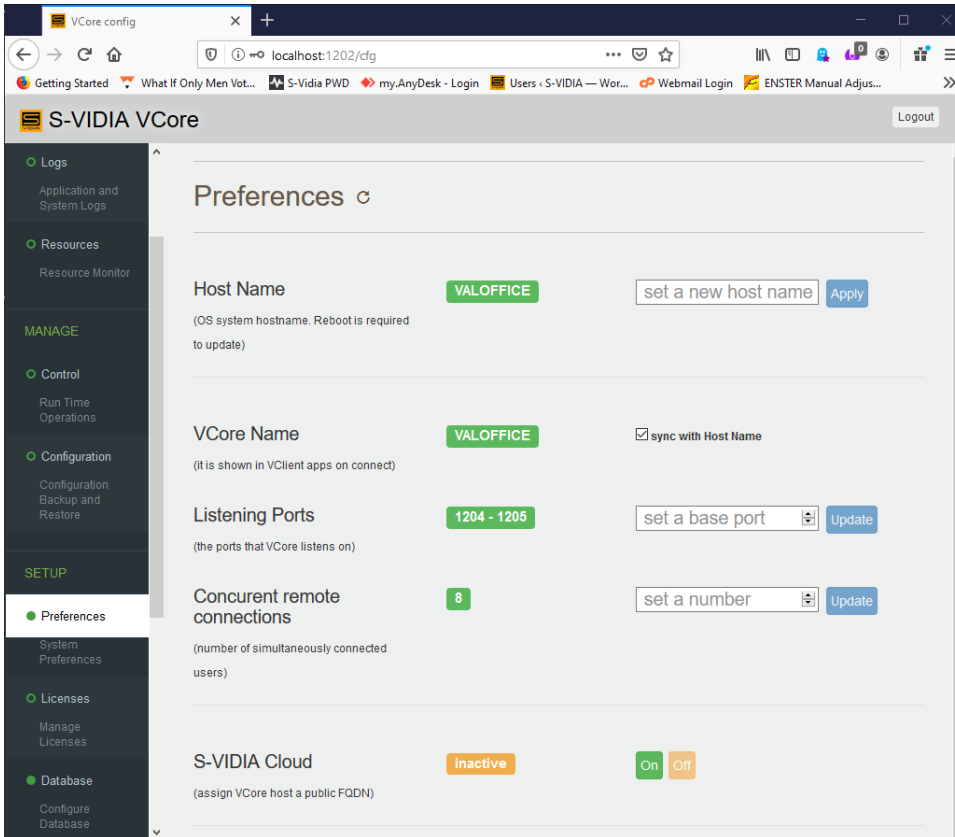


Preferences:

- **Host Name** (System Name)
- **VCore Name** (It will be showing on VClient apps then connected)
- **Listening ports** (Default port to view cameras remotely 1204-1205) (if you have additional VCore devices in same network and need to connect to from internet, select a different open port range as this value for example 1206-1207)
- **Concurrent remote connections** (number of simultaneously connected users) recommended 8 users (max 16).
- **S-VIDIA Cloud** (Fully qualified domain name) Utilize our dynamic DNS service, click on to activate service. After approximately 10min go to **Monitor > Overview**

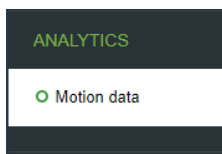
Public address, DNS and QR code will be showing. Scan QR code with a Mobile device to receive a link to the S-VIDIA web site which will show your Public Dynamic DNS Address. Copy address and paste into the S-VIDIA mobile application as your host name.





Security: Administrative Account (please change password for remote management account)

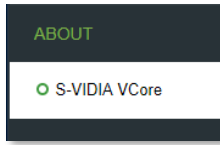
3.4 Analytics



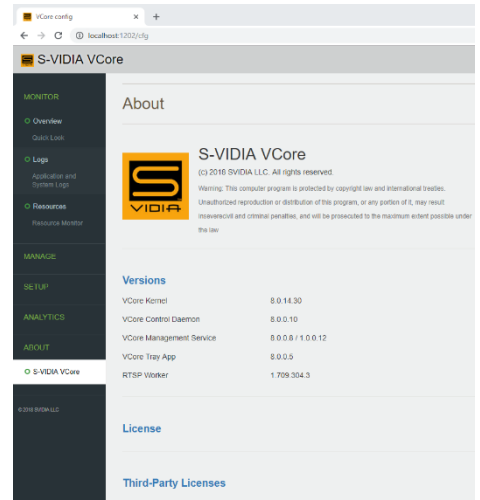
Collected sources: Collect cameras motion information (.stat)



3.5 About



S-VIDIA VCore: Information about software (Versions, licenses, Third-Party Licenses)



4. Cameras setup

To setup cameras please use: SVIDIA Camera manager, SVIDIA™ VClient, SVIDIA™ MMVC Video Client or Android video client.

Thank you for choosing the S-VIDIA™ Video Security System. We trust it serves you well as it has thousands of other users over the years.

If you have any problems or questions, please do not hesitate to contact us and we will endeavor to give you the best technical support available.

Respectfully Yours in Video Surveillance Technology
S-VIDIA™ Team

www.svidia.com

E-mail: support@svidia.com

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