



FortiCentral v7.2.0 GA Release Notes



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Change Log

Date	Change Description
2014-12-02	Initial release.
2015-03-05	V1.1 GA
2015-07-09	V1.2 GA
2016-02-25	V1.3 GA
2016-06-10	V1.4 GA
2016-08-05	V1.4.1 GA
2016-12-22	V1.5 GA
2017-04-21	V1.6 GA
2018-02-09	V1.7 GA
2018-08-08	V1.7.1 GA
2019-01-24	V1.8.0 GA
2019-05-27	V1.9.0 GA
2020-03-11	V6.0.0 GA
2020-10-09	V6.0.1 GA
2020-12-08	V6.0.2 GA
2021-07-23	V6.4.0 GA
2021-09-09	V6.4.1 GA
2023-03-14	V7.0.0 GA
2023-04-19	V7.2.0 GA

Introduction

This document provides a summary of enhancements, installation instructions, deployment scenarios and performance guidelines for FortiCentral v7.2.0 release build 0077. Please review this document before installing or upgrading FortiCentral.

For more information, see the FortiCentral User Guide available at <http://docs.fortinet.com/fortirecorder/admin-guides>. Search for “FortiCentral”.

Supported models

The following models are supported in FortiCentral v7.2.0:

- FortiRecorder-400F Network Video Recorder with 1x4TB (4x8TB max) HD
- FortiRecorder-400D Network Video Recorder with 2x3TB (4x4TB max) HD
- FortiRecorder-200D-Gen02 Network Video Recorder with 3TB HD
- FortiRecorder-200D Network Video Recorder
- FortiRecorder-100D Network Video Recorder
- FortiRecorder-100G Network Video Recorder
- FortiRecorder-VM (64bit) Network Video Recorder for
 - VMware vSphere Hypervisor ESX/ESXi v6.0, v6.7, v7.0 and higher
 - Microsoft Hyper-V 2008 R2, 2012, 2012 R2 and 2016
 - Citrix XenServer v5.6sp2, 6.0
 - KVM (qemu 2.12.1 and higher, OpenSource XenServer 7.4 and higher)
 - AWS (EC2 PAYG)
 - Azure (BYOL)
- FortiAPCam-214B Network Camera and Access Point
- FortiCam-20A Network Camera
- FortiCam-CB20 Network Camera
- FortiCam-CB50 Network Camera
- FortiCam-FB50 Network Camera
- FortiCam-FD20 Network Camera
- FortiCam-FD20B Network Camera
- FortiCam-FD40 Network Camera
- FortiCam-FD50 Network Camera
- FortiCam-FE120 Network Panoramic Camera
- FortiCam-MB13 Network Camera
- FortiCam-MB40 Network Camera
- FortiCam-MD20 Network Camera
- FortiCam-MD40 Network Camera
- FortiCam-MD50 Network Camera

- FortiCam-MD50B Network Camera
- FortiCam-OB20 Network Camera
- FortiCam-OB30 Network Camera
- FortiCam-PD50 Network PTZ Camera
- FortiCam-SD20 Network PTZ Camera
- FortiCam-SD20B Network PTZ Camera
- FortiCam-CD51 Camera
- FortiCam-CD55 Camera
- FortiCam-MC51 Camera
- FortiCam-CD51-C Camera
- FortiCam-CD55-C Camera
- FortiCam-MC51-C Camera
- FortiCam-FE120B Camera
- FortiCam-FD55-CA Camera

Summary of new features

The following is a list of enhancements in FortiCentral v7.2.0:

- Chart Manager with Traffic counting and Heatmaps
- Usability Improvements
- GUI enhancements
- System/FRC Enhancements
- FortiView improvements
- Bugfixes

FortiRecorder firmware for FortiCentral

Starting with FortiRecorder v2.0.0 firmware release FortiCentral is supported as a Windows client for all FortiRecorder models and FortiCameras.

It is recommended to use v7.2.0 of FortiCentral with v7.2.0 of FortiRecorder or higher.

Installation Information

For more information, see the FortiCentral User Guide.

- Enable connections to FortiCentral in the FortiRecorder Network Configuration: 'FRC-Central' access in the port interface (default).
- Connection between FortiRecorder and FortiCentral via TCP 8550 (configurable)
- After initial login admin/blank create a new admin with new password and add recorder connections in Settings.
- The user credentials presented for logging into FortiCentral are used to log into the connected recorders. Therefore, the local user account must be configured at the recorder as well for successful authentication. As an alternative a fixed login can be configured per recorder.
- FortiCentral does not require a plug-in to decode and display video from FortiCameras.
- To view video drag camera from device panel into pane.
- Fortinet recommends setting your monitor to a screen resolution of 1920x1080. This allows for sufficient desktop space so multiple videos can be viewed properly.

Note: Video analytics require a 64bit Windows version, so FortiCentral v6.0.x and higher is available in 32bit and 64bit versions.

Each analytics module is available as a separate file which should be placed in the same folder as the main installer.

If the main installer detects analytics packages it will ask whether to install each of them.

Download FortiCentral from <https://www.fortinet.com/support/product-downloads> in the FortiRecorder section.

Available AI modules are:

- Facial Recognition
- Object detection
- Video Privacy
- Face mask detection

Minimum system requirements

For best performance, install FortiCentral on a system with these minimum requirements:

- Windows 10 or 11
- 8GB DDR3 RAM or above
- Intel i7 multi-core CPU 12th gen (equivalent) or above
- 500GB HDD (1TB if using Chart manager caching)

FortiCentral does not support GPU decoding, therefore selection of graphics card is not critical. A better graphics adapter supports faster multithreading and transfer into video memory.

The CPU requirement to view multiple video streams in parallel depends strongly on the video resolution and framerate. The application scales well across multiple cores with each core enabling several standard video streams.

For applications requiring a monitor wall view of 16 or more live streams it is strongly recommended to use a lower resolution/framerate viewing stream and enabling auto-switching to high res video when zooming in or full screen mode.

New Features

The following section highlights new features in the FortiCentral v7.2.0 release.

Chart Manager with Traffic counting and Heatmaps

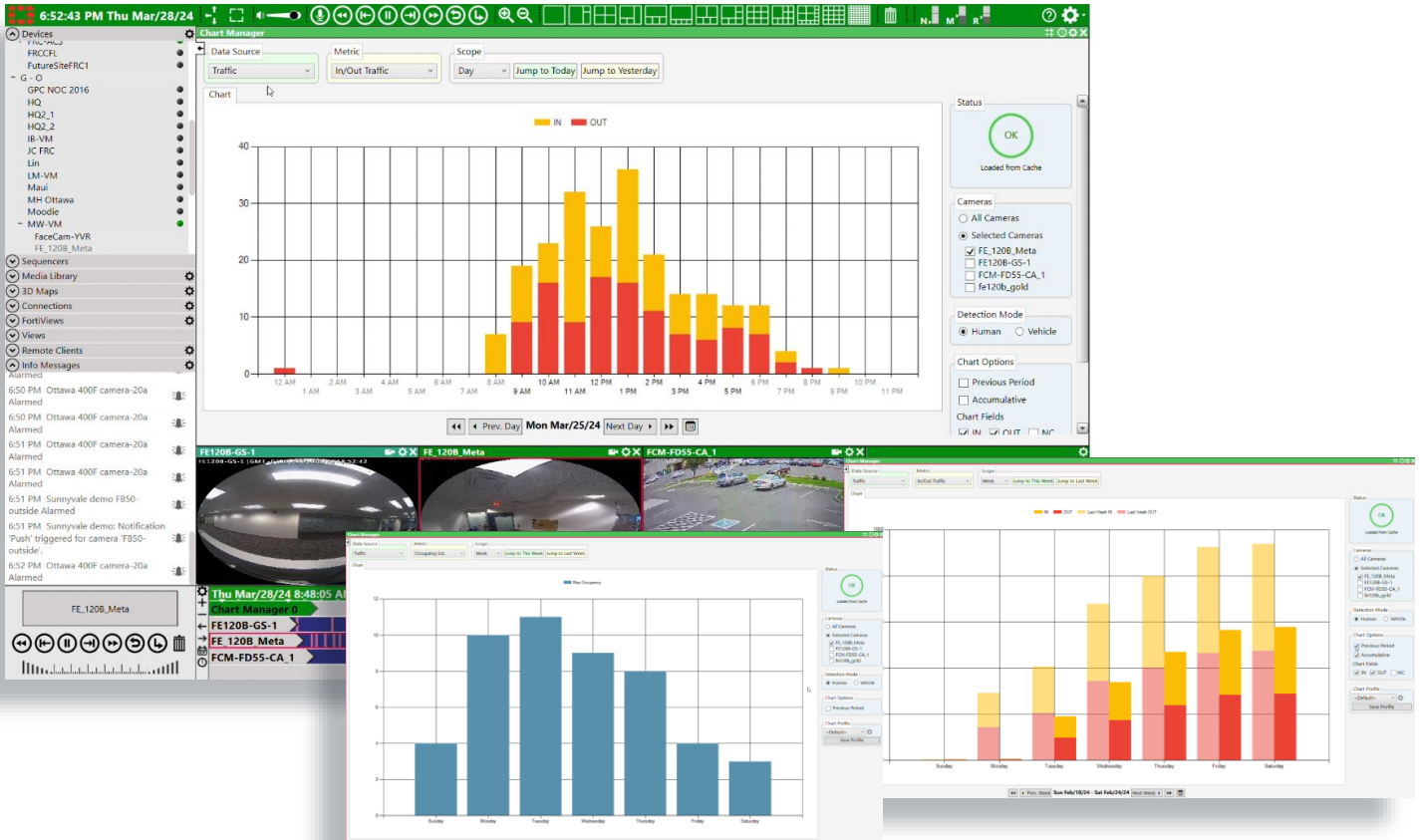
Chart Manager is a powerful business intelligence gathering tool that allows insight into the flow of customers using AI enabled cameras.

- Counting statistics of people and vehicle
- Powerful charts directly comparing previous business periods
- Multiple metrics like inflow, outflow, occupancy and estimated stay times
- Profiles to recall chart settings easily as recurring task
- Heatmaps and path overlays

The latest generation of cameras like FE120B fisheye or FD55-CA analytics is capable of tracking people and vehicles in their field of view. They create track data containing the path of a person in the video and store it in FortiRecorder. Using this track data FortiCentral can count human and vehicle traffic, determine if it was entering or leaving an area and derive other metrics like current occupancy estimates or stay times.

Business analytics in the form of charts provide an overview and history of those numbers. They show how busy a store was over the course of a day, week, month or year.

In order to maintain rapid switching between previous/next periods the data is fully cached within FortiCentral, so download times are minimized. The cache also offers virtually unlimited retention beyond what metadata is currently stored on the FortiRecorder.



Heatmaps and Path overlays are another way to visualize traffic. Heatmaps are more suitable for large sample numbers with a calibrated scale showing the local density. The path overlay reveals stray paths and abnormal behaviours.

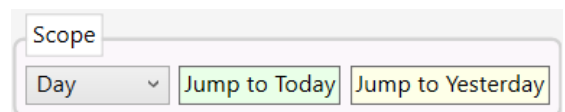


Chart Manager is available directly from the pane menu. Start with selecting the data source and Metrics from the top bar

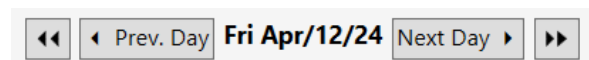
- Traffic
 - In/Out traffic
 - Occupancy Est
 - Stay Est
 - Gender/Age
- Paths
 - Heatmap
 - Path overlay

Next choose the length of time displayed in each chart

- Scope
 - Hour
 - Day
 - Week
 - Month
 - Year



Navigation to different dates is easy with



- Date selector
- Previous and next period
- << and >> to jump e.g from Monday to Monday or from first week of the month to first week of previous month
- Direct jump to today or yesterday in scope box

On the right side column select which cameras should be included in the charts and fine tune the chart options

- Cameras
 - Selecting tracking enabled cameras accessible across recorders
 - Multiple cameras
- Detection Mode
 - Human or vehicle
- Chart Options
 - Previous Period – overlay of one e.g week with the previous week in one graph
 - Accumulative – add traffic to see total values at end of business day or period
 - Chart Fields
 - In – paths originate in the out area or end in the in area
 - Out – paths originate in the in area or end in the out area
 - No Count – paths that do not match the in or out condition

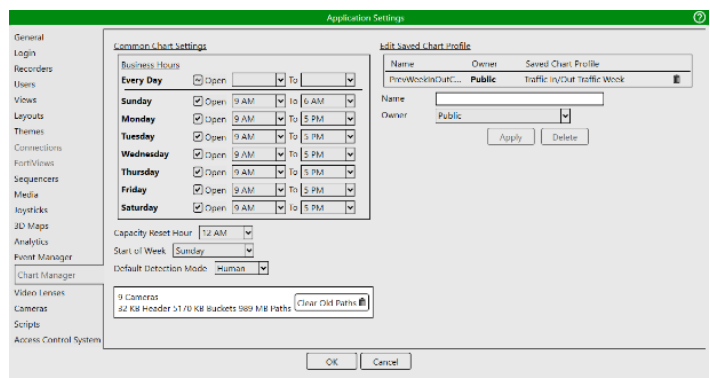


Chart Profiles store all the settings for a chart and make it easy to recall at another time. This is convenient for e.g. weekly reviews of specific business metrics.

- Chart Profile
 - List
 - Save
 - App settings

Chart manager settings

- Define business hours
- Capacity reset hour
- Start day of the week
- Default human or vehicle
- Manging the Chart profiles
- Cache overview



Usability Improvements

- Timeline will attempt to follow current time unless dragged away from current time
- Add ACS items to physical device tree in all 4 view types
- When map image is taken in Google maps toggle sidebar which doesn't collapse

GUI enhancements

- Added Context sensitive help buttons
- Fixed dragging recorder panes (can now drag scroll bars properly)

System/FRC Enhancements

- Improved face detection analytics and reduced size of face required
- Upgraded FFMPEG to v5

FortiView improvements

- FortiViews support for FOS 7.2

Bugfixes

- Fix FFMPEG crash sometimes caused by some FCM-FE120 cameras in 12MP
- Fix Timeline requesting events that where not valid or useful
- Fix Memory leak in media video playback
- Fix Incident report crash
- Fix Algorithm Installer
 - Unexpected empty registry keys when scanning registry caused error
 - Check for space
- Fix Analytics stopped on a video pane when recorder settings or FortiView settings were changed.

Firmware Upgrade/Downgrade Information

Upgrading from earlier versions

Upgrading FortiCentral to v7.2.0 from v6.4.x is fully supported.

Note: For upgrading from older versions first upgrade to v6.4.1.

Fortinet always recommends backing up the configuration before performing an upgrade. The configuration file is located at `c:\ProgramData\Fortinet\FortiRecorderCentral\` and renamed upon upgrade to a new version e.g. `FortiRecorderCentral.exe.SettingsV13.xml`

The complete configuration can be exported from the Settings menu.

Downgrading to earlier versions

Fortinet does generally not recommend downgrading because there may be a loss of configuration information.

Note: Downgrading to an earlier version may revert to the configuration that was left when the upgrade occurred. So all changes to the configuration since then are lost.

Performance Guidelines

Video playback is very CPU intensive. If you are experiencing choppy video playback and cameras “freezing” during playback, you may have a client performance problem. Use the diagnostic tools available in FortiCentral to narrow down the problem.

In the toolbar area are performance meter symbols that show

- **Network bandwidth of incoming data and frame skip rate**
If a recorder cannot send out video streams fast enough it will start skipping frames. If this occurs the bar turns yellow and then red. It is an indication that the network bandwidth is too low to support the number of video streams that are currently displayed.
- **Memory usage**
Shows how much memory the application is using. The total amount of available memory is indicated as well in the tooltip.
- **Rendering performance**
Indicates how many MPixels are decoded per second. A 1MP image at 30fps requires 30MPixel/s for example. If more video is displayed in FortiCentral the performance limit of the PC will eventually be reached. At this point the video decoder has to drop frames to keep up with the incoming video stream. This drop rate is displayed at the tooltip and if it occurs the bar turns yellow and red in more severe situations. This indicates that the CPU/graphics performance of the PC where FortiCentral is running has reached its limit.

The performance bottleneck in a FortiCamera deployment will likely be the client, which must decode and render the video streams from the NVR. Displaying multiple video streams on the client is very CPU intensive.

Camera profiles

If you need to display 8 or more camera live views, you may need to configure the camera stream so that viewing is done at a lower frame rate or resolution, depending on how powerful the client PC is.

To optimize client performance, use the video and camera profiles to define and assign a video stream for each camera. To increase the number of live and playback views the client computer can display, or to reduce the CPU requirement for a given number of live views, reduce the resolution, quality and/or frames per second of the related video streams.

10 FPS is a good general setting for live views. 10 FPS provides a reasonable frame rate for the live views, but significantly reduces the load on the client (compared to 30 FPS).

FortiCentral v1.3 and higher can use either of the live or recording streams configured in the recorder for display. Playback always accesses the recording stream.

Image Checksums

To verify the integrity of the firmware file, use a checksum tool and compute the firmware file's MD5 checksum. Compare it with the checksum indicated by Fortinet. If the checksums match, the file is intact.

MD5 checksums for Fortinet software and firmware releases are available from [Fortinet Customer Service & Support](#). After logging in to the web site, near the bottom of the page, click the *Firmware Checksums* button. (The button appears only if one or more of your devices have a current support contract.) In the *File Name* field, enter the firmware image file name including its extension, then click *Get Checksum Code*.

Home

Welcome

Please be aware that all dates and times shown on this web site are Pacific Standard Time or Pacific Daylight Time.

About To Expire

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Customer Support Bulletin

1. **IPS Engine update** Updates to the IPS engine that runs on the FortiGate platforms periodically are made available on the FortiGuard distribution network that permit devices with...
2. **FortiGuard updates to FortiOS 2.8 to finish The AntiVirus (AVE) and IPS (IPSE) engines** associated with FortiOS 2.8 software reached end of life in February 2013. As of February...
3. **FortiGate System Freeze with FortiOS 5.0.5** Certain models of FortiGates as listed below, may experience a hang or system freeze condition when a very heavy load of HTTP ...

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