



# FortiCentral v6.4.0 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
2020-07-23	V6.4.0 GA

# Introduction

This document provides a summary of enhancements, installation instructions, deployment scenarios and performance guidelines for FortiCentral v6.4.0 release build 0069. 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 “FortiRecorder Central” or “FortiCentral”.

**Note:** FortiRecorder Central has been renamed to FortiCentral with v1.7.0 GA release.

## Supported models

The following models are supported in FortiCentral v6.4.0:

- 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-VM (64bit) Network Video Recorder for
  - VMware vSphere Hypervisor ESX/ESXi v5.0 and higher
  - Microsoft Hyper-V 2008 R2 and 2012
  - Citrix XenServer v5.6sp2, 6.0
  - KVM (qemu 0.12.1)
  - AWS (EC2 PAYG)
- FortiCam-CD51 Network Camera - New
- FortiCam-CD55 Network Camera - New
- FortiCam-20A Network Camera
- FortiCam-MB40 Network Camera
- FortiCam-MB13 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 Camera
- FortiCam-FD20 Network Camera
- FortiCam-FD20B Network Camera
- FortiCam-FD40 Network Camera
- FortiCam-FD50 Network Camera

- FortiCam-FB50 Network Camera
- FortiCam-CB20 Network Camera
- FortiCam-CB50 Network Camera
- FortiCam-SD20 Network PTZ Camera
- FortiCam-SD20B Network PTZ Camera
- FortiCam-FE120 Network Panoramic Camera
- FortiAPCam-214B Network Camera and Access Point

## Summary of new features

The following is a list of enhancements in FortiCentral v6.4.0:

- Recorder Management
- 3D map with wall support and report generation
- Usability Improvements
- GUI enhancements
- System/FRC Enhancements
- FortiView improvements

## 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 v6.4.0 of FortiCentral with v6.0.4 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 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

# New Features

The following section highlights new features in the FortiCentral v6.4.0 release.

## Recorder Management

Customers with many sites consolidated under one FortiCentral installation will benefit from the new FortiRecorder Management capabilities. The FortiRecorder Management tab is available from the pane menu.

It displays a two column user interface that allows transfer of camera profiles, video profiles, schedules, camera firmware, and recorder firmware between local repositories and sets of recorders. The transfer is always from the left to the right column, so flipping the columns changes the upload/download direction.

Selecting a Recorder row will quickly display details like

- Model
- Firmware version
- Connection status including Buffering backlog if FRC-FRCC has a slow connection
- System info (Uptime, capacity, retention)
- Usage statistics (CPU, Memory, System load, sessions)
- Camera status in table format quickly identifying issues

The screenshot displays the FortiRecorder Management interface, which is divided into two main columns: Remote Recorders and Local Repository.

**Remote Recorders:** A list of recorders is shown with a filter box. The list includes recorders like 'stireuro', 'Sunnyvale', 'Sunnyvale demo', 'test GUI', 'UK Movies', 'UnionCity', 'Vancouver office', 'VM-local', 'WP-VM', 'YN', 'YVR II', and 'Zeller'. Each row has a status indicator (green, yellow, or red dot).

**Local Repository:** A tree view shows the local repository structure, including Backup, Camera Profiles (CB50), Video Profiles (average, fe), Schedules, and Firmwares (fcm-cb20-v1.0.0.0, fcm-cd51-v0.9.2.0, frc\_vm-64-v60-build0143-fortinet).

**Recorder Details (VM-local (192.168.1.99:8550)):**

Model	FRC-VMW
Version	6.4.0 b227
Connection	Authorized
Status	Authorized
Last Connection	Wed Jul/07/21 4:06:03 PM
Ping	45ms
Buffering	Buffering 0 items with a delay of 0s
System Info	
Up time	1 day(s) 9 hour(s) 17 minute(s)12 second(s)
System time	Wed Jul 07 17:16:52 PDT 2021
Retention	20 hours
Capacity	13 hours at 4.88 Mbit/s
Usage Statistics	

**Camera Profile Details (CB50):**

Video	
Recording Stream	high-resolution
Viewing Stream	--Use Recording Stream--
Recording	
Recording Type	motion
Store On	FortiRecorder
Edge Download	
Continuous	Automatic
Detection	None
Storage Options	
Continuous recordings:	Keep until overwritten
Detection recordings:	Keep until overwritten
Compression Options	

Selecting the ALL row at the top of the table gives a single pane overview of the status of all connected recorders and cameras. This can be a substantial time saver for monitoring and maintaining large camera installations.

All Recorders				
Good	Issue	Bad	Disabled	
● 9	● 0	● 21	● 16	
All Cameras				
Good	Issue	Bad	Disabled	
● 79	● 0	● 5	● 97	
Cameras By Recorder				
200Dg (11751676788855X)	● 11	● 0	● 0	● 67
200Dv (11751676788855X)	● 0	● 0	● 0	● 0
HQ (11751676788855X)	● 54	● 0	● 3	● 0
IB-VM (11751676788855X)	● 1	● 0	● 1	● 1

Opening a node in the recorder table drills down into video profiles, camera profiles and schedules stored on that recorder.

The recorder side resources can be compared to local repositories that hold sets of configurations like a master set and a backup or different settings for different customers managed by a MSP.

Integrated compare functionality shows profiles that are identical different or not present as well as red highlights for different lines in the Profile details

The screenshot displays the FortiRecorder Management interface. On the left, under 'Remote Recorders', a tree view shows a selected recorder with a green status indicator. The main area is split into two panels: 'Camera Profile: CB50\_Profile' (left) and 'Camera Profile: CB50' (right). The left panel shows 'Recording Type' as 'continuous,motion' and 'Edge Download' as 'None'. The right panel shows 'Recording Type' as 'motion' and 'Edge Download' as 'Automatic'. A red arrow points to the difference in recording type between the two profiles.

Transfer of profiles will replace and activate the profile if it is in use by a camera.

Camera firmware files can be mass distributed from the local repository to all recorders.

Recorder firmware can be updated via the management console as well.

### 3D map with wall support and report generation

FortiCentral offers 3D maps as an excellent way to keep overview of camera locations and quickly pull up video from any part of a site. Now this functionality has been even more enhanced:

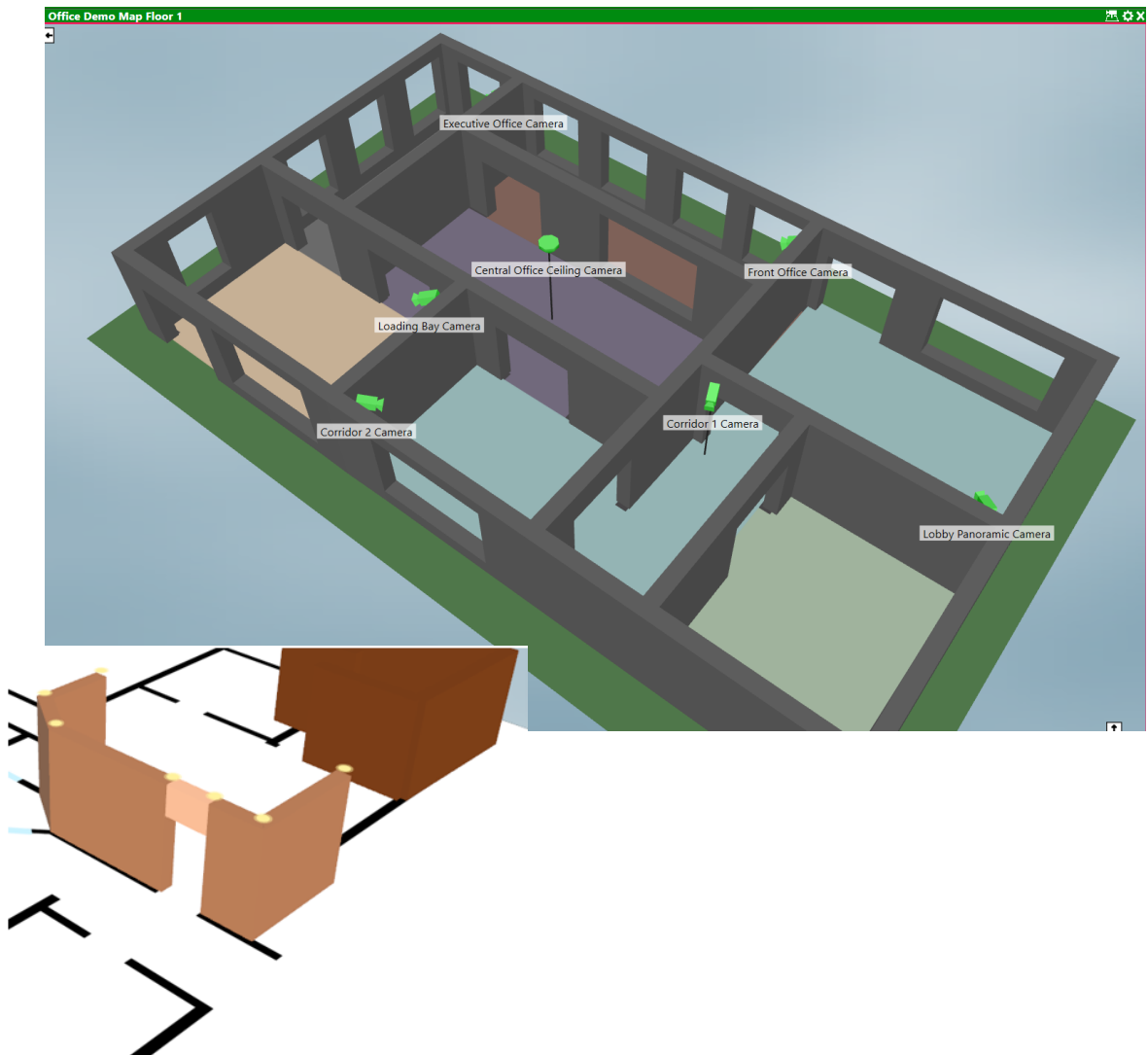
- Walls with door and window openings for realistic looking renderings
- Report generation for RFP, BOM or site planning purposes
- Streamlined GUI with a more self explaining work flow
- Google maps integration

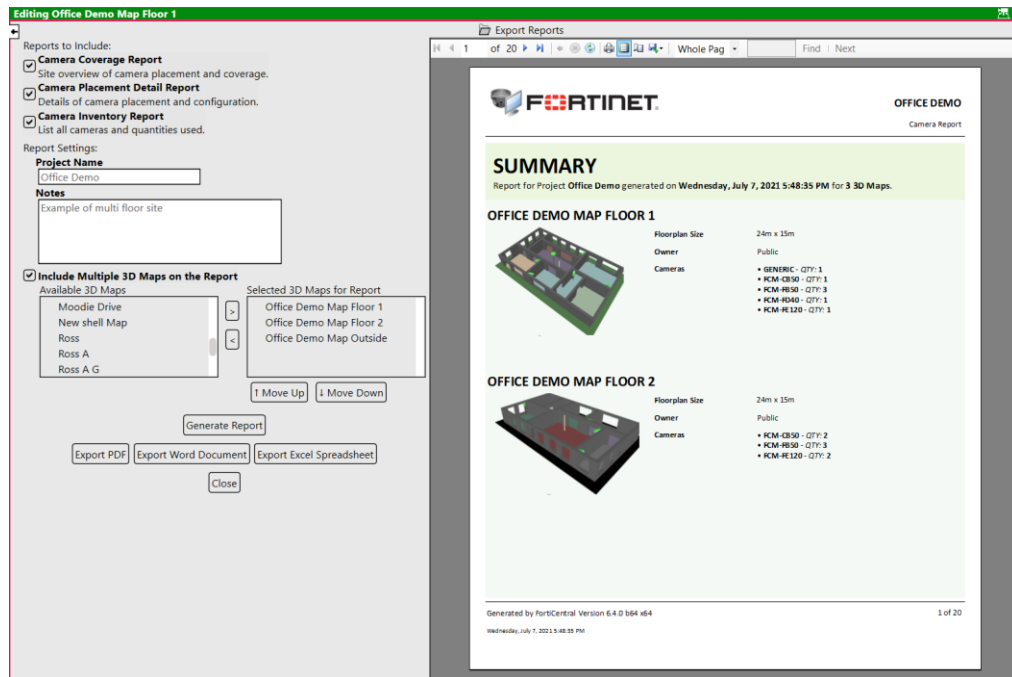
## Walls with door and window openings

Drawing a wall on a floorplan is now as easy as clicking a polygon. This feature supports wall openings like doors and windows as well. The walls are part of the 3D model and camera view cones are clipped for a realistic rendering of the real coverage of a camera.

## Report generation for RFP, BOM or site planning purposes

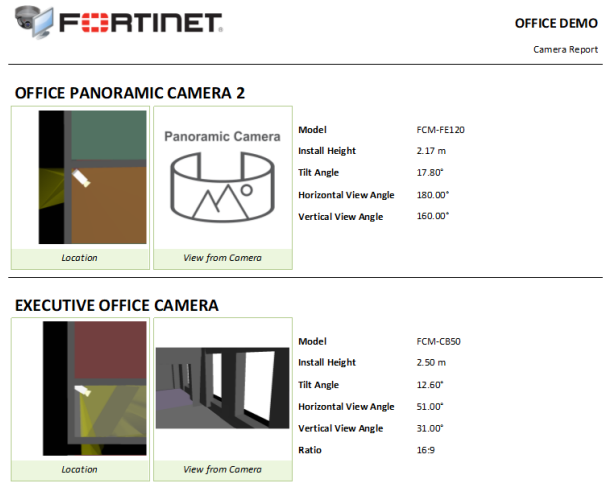
Building 3D maps for a site does not require any physical equipment to be installed. It can be used to realistically plan the camera locations for a project and answer RFP or BOM requests.





To support generating these documents an extensive report feature has been added to the 3D maps. Multiple Maps can be included and collated into one report to support multi-floor or multi-site projects. The customizable sections of the report include:

- Camera coverage: Site overview of all camera placements and coverage
- Camera placement detail: Birdseye view and in-camera view rendering, Model and positioning.
- Inventory: A list of all cameras with further details



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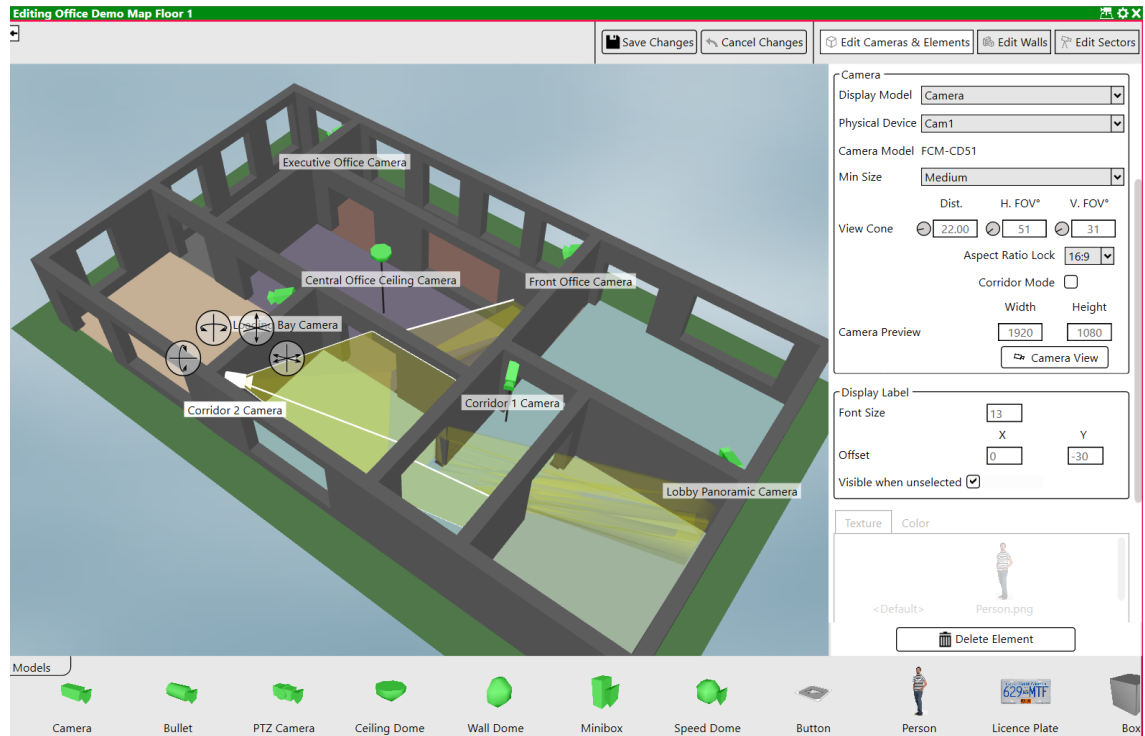
3D Map	Model	Name	Ratio / View Angles	Distance	Res.	Mode	Format
OFFICE DEMO MAP OUTSIDE	FCM-CB20	Parking Lot Camera 2	16:9 51°H 31°V	22.00M	2.0MP	PTZ	COMPACT BULLET
OFFICE DEMO MAP OUTSIDE	FCM-CB20	Parking Lot Camera 1	16:9 53°H 29°V	22.00M	2.0MP	PTZ	COMPACT BULLET

The report can be exported in Word, PDF and Excel format, which makes it easy to edit and integrate in other editing tools.

### Streamlined GUI with a more self explaining work flow

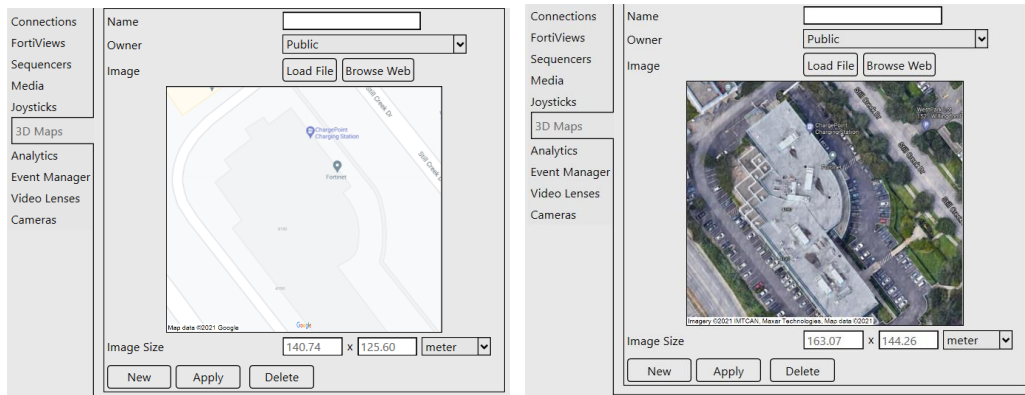
The 3D maps GUI has been reorganized to make it more intuitive to work with.

- Three main edit modes for placing cameras, editing walls and organizing sectors
- Direct drag and drop of cameras from the bottom ribbon
- Tooltips provide guidance
- Added support for panoramic and fisheye view cones

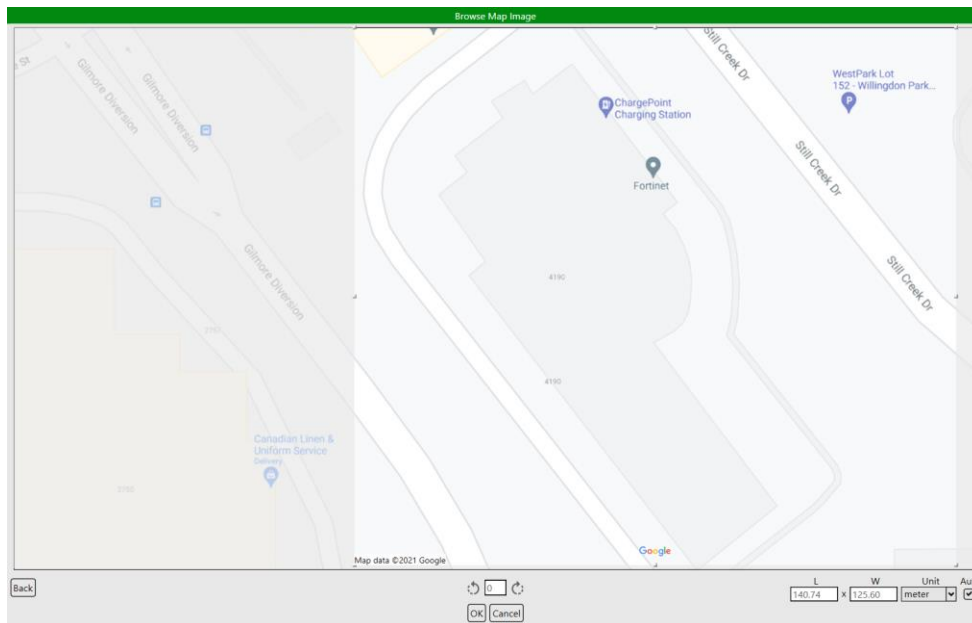


### Google maps integration

The base image for a 3D map can be a floorplan or architectural drawing. For outdoor sites this base image can now be obtained with Google maps.



'Browse Web' leads through an assistant that allows navigating to the location of the site, choosing layers like map or satellite, capturing, cropping, and rotating the view. The true geographical dimensions of the captured area are automatically estimated for a correct scaling of the 3D map.



For more details of the 3D map feature refer to the FortiCentral 3D map guide available on the Fortinet doc site soon.

## Usability Improvements

Feature Better speed controls for video playback

The standard On screen controls for video panes have been simplified showing only the most used buttons



- Detailed search mode

- Fast backward
- Pause/Play
- Fast forward
- Jump back
- Live video

Clicking the search button opens another control on top of the video pane with more tools to do search through and locate video frames.

- Jump back to previous event
- Multi speed control that allows easy slow motion
- Jump forward to next event
- Motion only mode



Feature Motion only playback

Motion only button selects mode that only finds motion segments for playback and fast forward/backward. Quick review of long time periods skipping over non motion area. Only available for FRC 6.4 and higher and select cameras that support zero penalty mode.

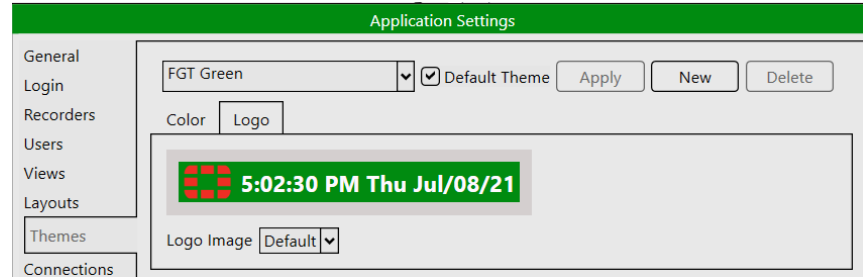
Feature Altered 5s jump back button to support zero penalty recording. First jump from live will be large enough to get to recorded data (30s). Next jumps are 5s.

Feature Changed log export to default single zip file instead of multiple log files

## GUI Enhancements

Fix Irregular cursor jumping and stickiness on timeline between live and playback

- Fix Color mismatch of sequencer control buttons
- Fix Size of name field in media chapter to fit long titles of exported video clips
- Feature Automatically save the current View every 24 hours instead of on exit
- Feature Timestamps in video pane playback now update per frame rather than per Iframe
- Feature Added ability to select a custom logo for the top left of the main window



## System/FRC Enhancements

- Fix Reduced Event request congestion for busy recorders
- Fix mDNS related crash for kiosk recorders
- Fix Crash if analytics app custom (non-standard) background image was deleted
- Fix FortiCentral Installation sometimes did not uninstall old Analytics
- Fix FRCC process stays active after being closed
- Fix Crash when clicking bell icon on alarm messages that where for non-existent cameras
- Fix Crash when changing views on minimized windows
- Fix Crash when using 0.0.0.0 or ::0 recorder IP address
- Fix Minimized freezing when testing login for LDAP
- Fix Delayed recorder reconnect attempt by 3s for each failure to connect. This gets reset if for example recorder password is changed.
- Feature Added Stress information from recorders to log file (#LGFL\_STAT).

## FortiView Improvements

- Feature Added check for incompatible FortiOS versions in FortiViews. FOS 7.x is not supported.

# Firmware Upgrade/Downgrade Information

## Upgrading from earlier versions

Upgrading FortiCentral to v6.4.0 from v6.0.x is fully supported.

**Note:** For upgrading from older versions first upgrade to v6.0.0.

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.SettingsV4.xml

The 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*.

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

### 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 ...

[More](#)

### Asset

Register/Renew  
Register HW/virtual appliance or software; Activate service contract or license on your registered product.

Manage Products  
Search, update or generate report for your registered products. Like product entitlement, description, location, entitlement and reseller etc.

### Assistance

Create a Ticket  
The recommended way to contact Fortinet support team for your registered product. Please provide detailed information in the ticket to ensure efficient support.

View Active Tickets  
Check latest active tickets for current user, update ticket information or change ticket status.

Contact Support  
Contact information of Fortinet worldwide support centers.

Manage Tickets  
Check ticket status, add comment, update contact or view history etc.

Technical Web Chat  
Provide quick answers on-line for general technical questions.

### Download

Service Updates

Firmware Images

Firmware Checksums

### Quick Links

- Forti-Companion
- Tickets Creation Guide
- Product Life Cycle
- CSS Reference Guide

