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Nx Witness Quick Start Guide



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Overview

This guide is split up into two parts:

- **Part 1** – Helps administrators get started with the initial setup and configuration of a Nx Witness system.
- **Part 2** – Introduces users to the most frequently used basic features in the Nx Witness.

The latest version of Nx Witness can be downloaded from my.networkoptix.com.

For additional help beyond this guide, you can visit Nx Support Portal or access the Nx Witness User Manual for detailed information about Nx Witness technology, features, system setup, and configuration.

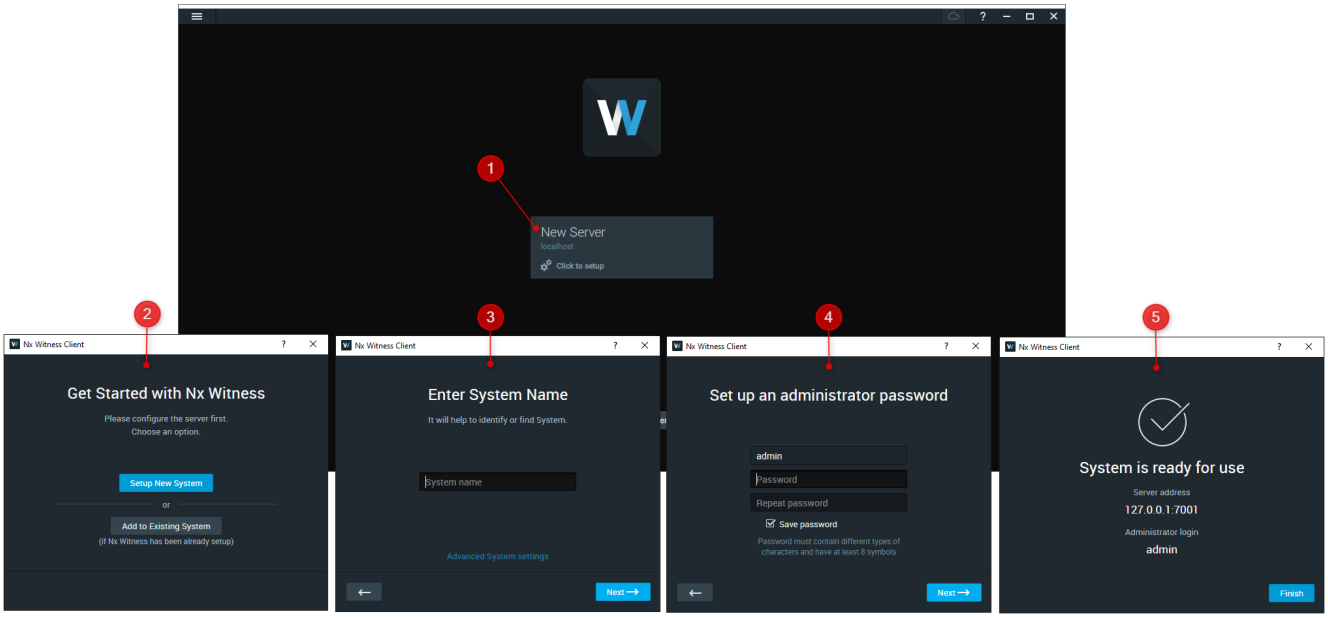
Please visit and engage in our support community to share your Nx Witness experience with other community members or our team.

Part 1 – Initial Setup

Begin the setup and configuration process after installing Nx Witness Server and Nx Witness Desktop:

1. Launch Nx Witness Desktop and click on the **New Server** tile to begin the Nx Witness Server setup process.
2. Click **Setup New System**.
3. Enter a name for your new Nx Witness system.
4. Enter a password for the Owner account.

   Important: This is the system's primary account and cannot easily be changed once set. The default username is "admin", and it is the only account with super administrator privileges.
5. View the server's information and click **Finish**.



System Settings and Security

The settings below affect your entire Nx Witness system. Assess each setting carefully before making any changes.

1. Open the *Main Menu* and click **System Administration**.
2. Toggle on/off the options under *System Settings* as needed:
   - *Enable cameras and servers autodiscovery and automated camera status check* – The system continuously discovers new cameras and Nx Witness servers on the network and sends frequent discovery requests to cameras for status updates. If disabled, cameras must be added manually, and cameras will appear as if they were offline due to the lack of status updates.

     Important: Multicasting must be enabled on your network for autodiscovery to work.
   - *Send anonymous usage and crash statistics to software developers* – Automatically sends anonymized data about the Nx Witness system (e.g. cameras, server hardware, software version, crashes, etc.) to help improve Nx Witness.
   - *Allow System to optimize camera settings* – Configures cameras to send two streams at the optimal resolution. Read Camera Optimization for more information.
   - *Custom language for mobile notifications* – If desired, select a different language to be used for mobile notifications.
3. Click on the **Security** tab and toggle on/off the options as needed.

Data Protection

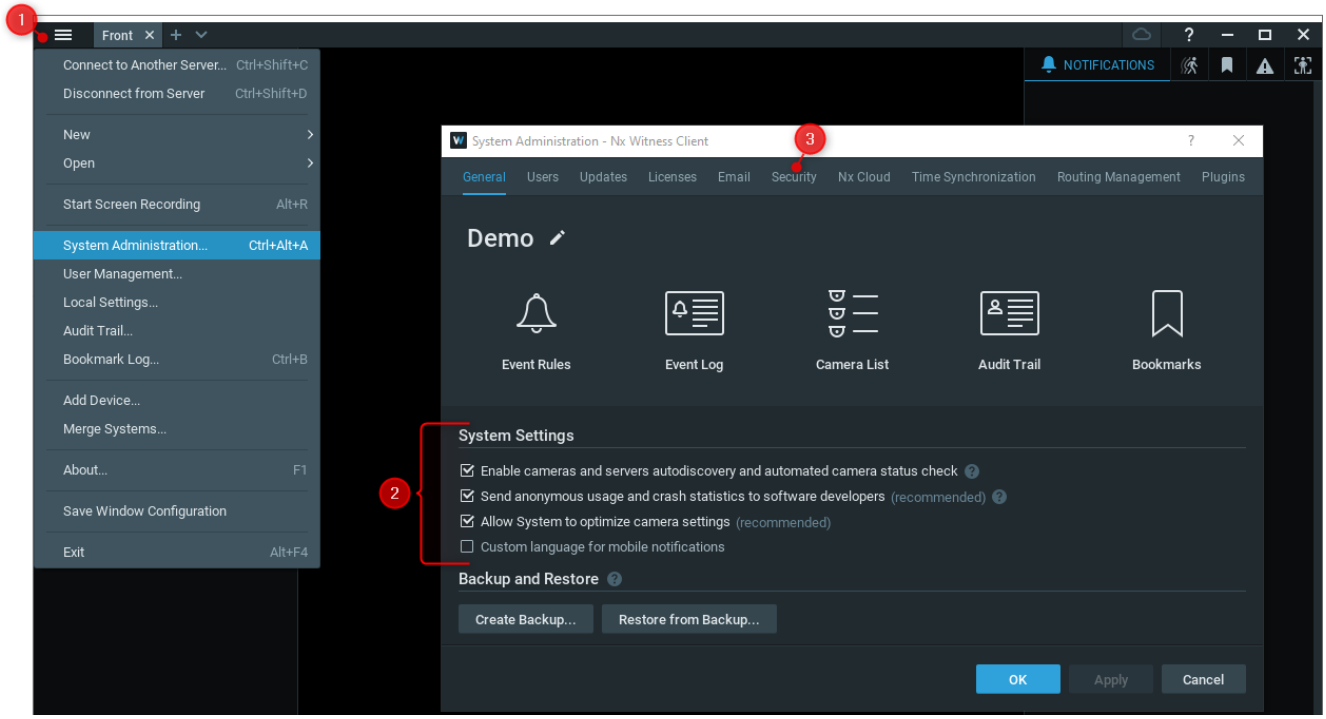
- *Use only HTTPS to connect to cameras* – Ensures that Nx Witness servers only connects to cameras using HTTPS, preventing management traffic between cameras and Nx Witness servers from being intercepted and analyzed.
- *Force servers to accept only encrypted connections* – Forces all servers in the Nx Witness system to accept only secure HTTPS connections. This prevents API requests, the server Web Admin interface, and other data (user accounts, device access credentials, etc.) from being intercepted and analyzed.
- *Encrypt video traffic to desktop and mobile clients* – Prevents your video streams (live and playback) from being intercepted and viewed.
- *Display watermark with username over video* – Watermarks will be displayed over live, archive, and exported videos for non-admin users only

User Activity

- *Enable audit trail* – Tracks and logs all user actions.
- *Limit session duration* – If enabled, users will be automatically logged out if their session exceeds the specified duration.
- *Display servers in tree for non-administrator users* – Allows regular users to see available Nx Witness servers in the Resource Tree.

Archive Encryption

Nx Witness stores the recorded footage in a file system. It can be accessed and viewed by someone who has physical/network access to a Storage drive. Once enabled, this setting encrypts archive data to prevent it from being viewed outside of the Nx Witness system (Desktop Client, Mobile Client, Web Admin, or Cloud Portal).



Activate a License

1. Open the *Main Menu* and click **System Administration**.
2. Go to the **Licenses** tab.
3. Enter the license key and click **Activate License**.

Note: Read Internet Activation of Licenses and Types of Nx Witness Licenses for more information.

Create a User / Share Access via Nx Cloud

User Management allows you to search for and modify users and create custom roles.

Create a Local User

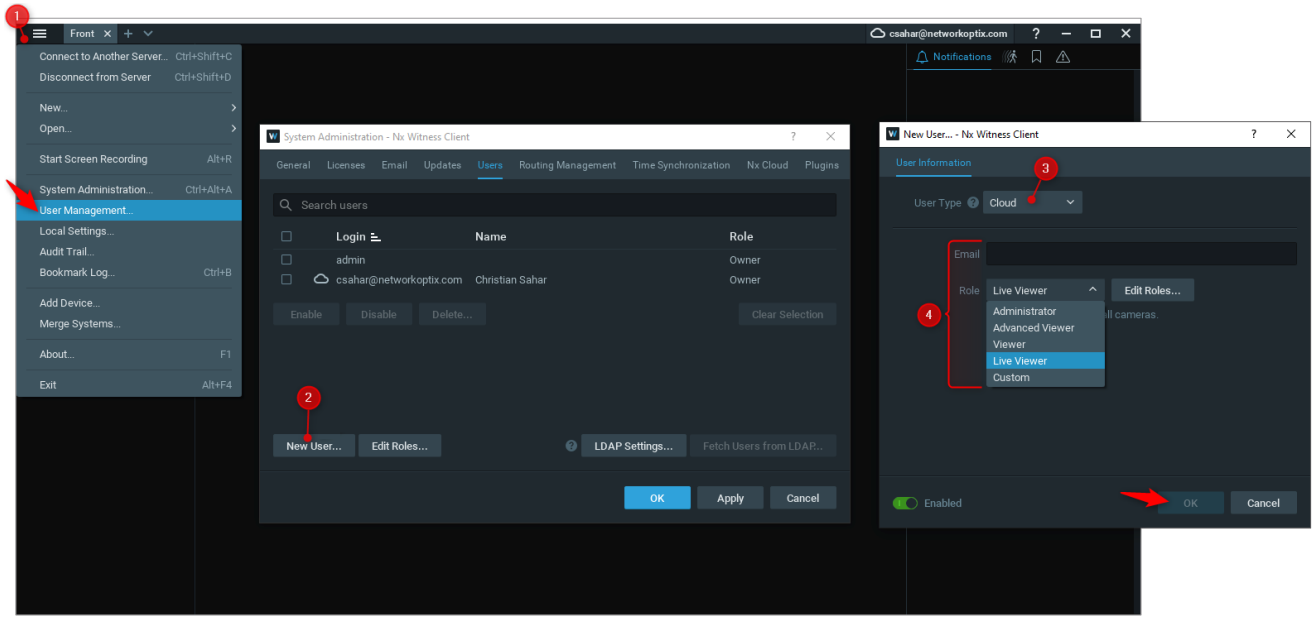
1. Open the *Main Menu* and click **User Management**.
2. Click **New User**.
3. Select the **Local** user type.
4. Enter credentials and select a role. Click **OK**.

Create a Cloud User / Share Access to a Nx Cloud System

Existing Nx Cloud users will receive an email stating that they now have access to your Nx Witness system, while new users will receive an email that prompts the user to create a Nx Cloud account to gain access to the shared system.

1. Open the *Main Menu* and click **User Management**.
2. Click **New User**.
3. Select the **Cloud** user type.
4. Enter an email address and select a role. Click **OK**.

Note: Nx Cloud users can access a shared system by logging into Nx Witness Desktop or the Nx Cloud portal 8.



Create Nx Cloud Account with 2FA / Log in to Nx Cloud System

Create a Nx Cloud Account

1. Open the Nx Cloud account registration webpage.
2. Enter your registration information and click **Create Account**.
3. An activation email will be sent to you. Open the email and click **Activate Account**.

Log in to the Nx Cloud Portal

The Nx Cloud portal homepage displays tiles, and each tile represents a cloud-connected system to which the user has access.

1. Open the Nx Cloud portal homepage and click **Log In**.
2. Enter your Nx Cloud account email and click **Next**.
3. Enter your Nx Cloud account password and click **Log In**.
4. Click on a tile to access the following webpages for the selected system:
    - *View* – Use the Resource Tree to view live and archive footage.
    - *Settings* – Manage users, system and security settings, activate licenses, enable recording, create a motion mask, etc.
    - *Information* – Use the Health Monitoring tool to check to see if the system is in good shape and displays information such as the performance of the system and if any errors have occurred.

Enable Two-Factor Authentication (2FA)

Prevents unauthorized access by requiring a verification code generated by a mobile authentication app when logging in to your Nx Cloud account.

1. Install Google Authenticator, Microsoft Authenticator, or Duo Mobile on your mobile phone.
2. Open Nx Cloud portal homepage and log in to your account.
3. Open the account settings dropdown by clicking on your email at the top right and click **Security**.
4. Enable **Two-factor authentication** by clicking on the switch.
5. Enter your Nx Cloud account password.
6. Open the mobile authentication app and scan the QR code.
7. Enter the TOTP verification code generated by the mobile authentication app.
8. Click **Verify** to complete the setup process.

Note: For additional security, enable *Ask for verification code on every login with Nx Cloud account,* or generate single-use backup codes to keep somewhere safe that can be used to log in if you lose access to the mobile authentication app.

Log in to Nx Cloud on Nx Witness Desktop

1. Click the Nx Cloud icon () on the Navigation Panel.
2. Enter your Nx Cloud account email and click **Next**.
3. Enter your Nx Cloud account password and click **Log in**.

Connect Nx Witness System to Nx Cloud

A Nx Witness system connected to Nx Cloud allows users to access all servers in the system without directly connecting to an individual server.

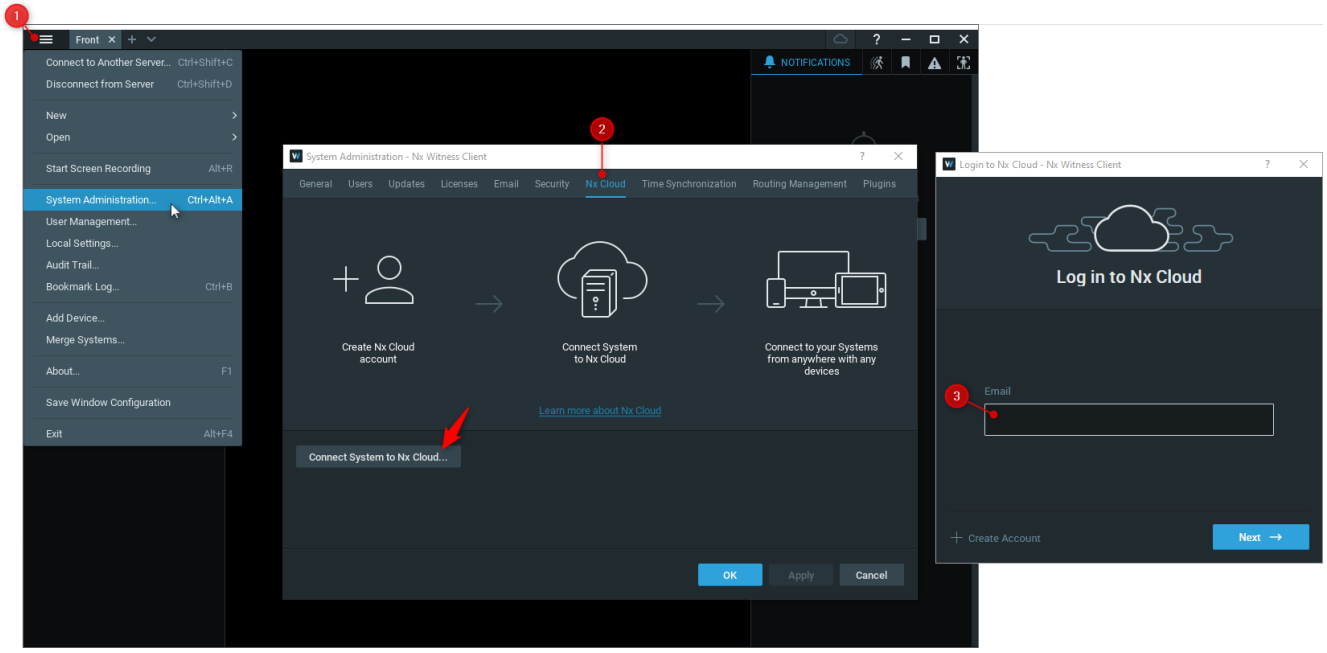
Additional benefits:

- Users logged in to their Nx Cloud account on Nx Witness Desktop can access any Nx Witness system on the account without entering credentials.
- Easily share access to Nx Cloud systems with new users, only requiring a user email for the invite.
- View and manage your Nx Witness system from the Nx Cloud portal.

To Connect a Nx Witness System to Nx Cloud

1. Open the *Main Menu* and click **System Administration**.
2. Go to the **Cloud** tab and click **Connect System to Cloud**.
3. Enter your Nx Cloud account email and click **Next**.
4. Enter your Nx Cloud account password and click **Log in**.

Important: If your firewall restricts most connections by default, be sure to allow the required FQDNs to prevent cloud-connectivity issues.

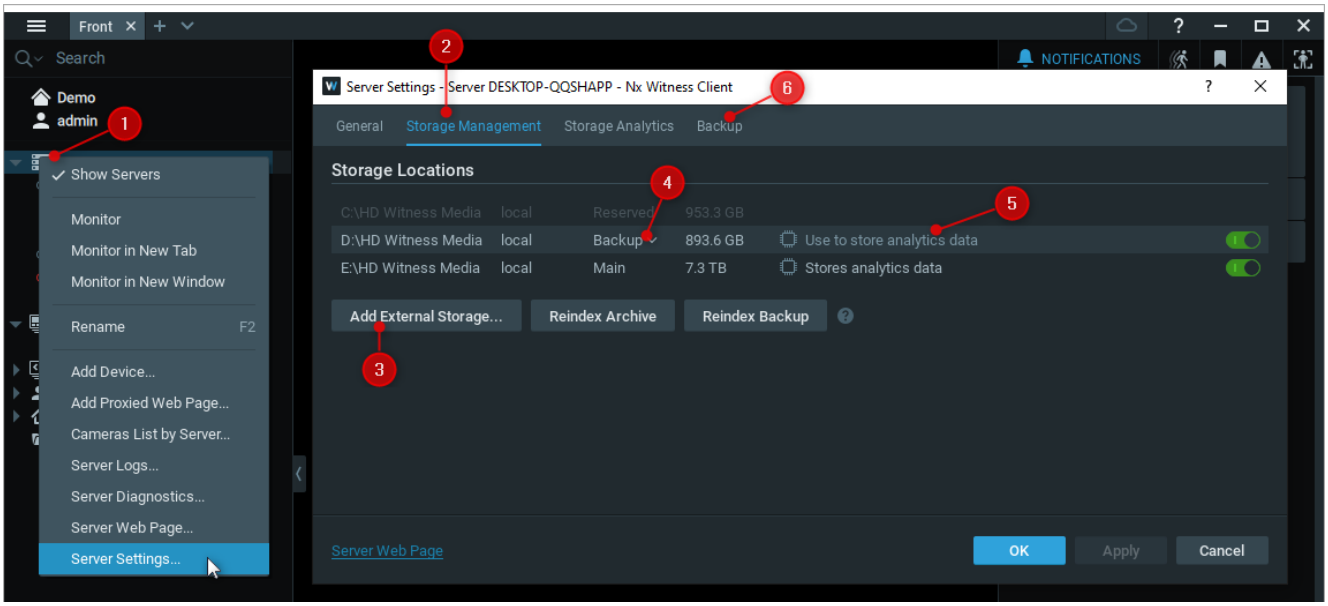


Configure the Storage Archive

Add Storage

All accessible local and network drives should automatically be detected. Network drives can be added manually if not detected automatically.

1. Right-click on the server and click **Server Settings**.
2. Go to the **Storage Management** tab.
3. Click **Add External Storage** and enter the drive's location and credentials. Click **OK**.



Main and Backup Storage

4. Choose which drive should be the **Main** drive and which drive(s) should be used as its **Backup**.
5. To store analytics data, hover over the desired drive and click Use to store analytics data.

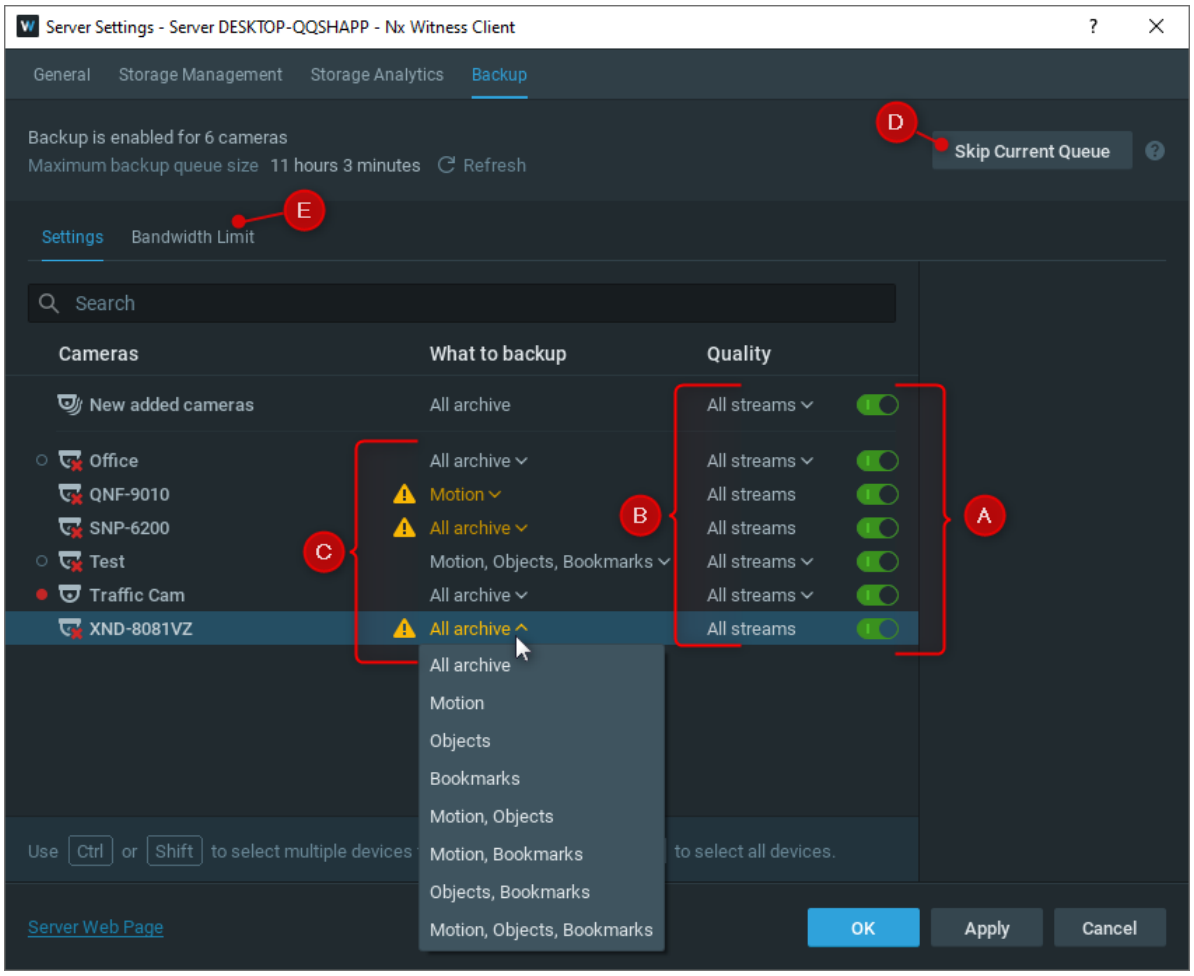
   Note: It is not recommended to store analytics data on the Main drive as analytics data cannot be moved and takes up large amounts of space. If you encounter a storage issue, read How to fix the Analytics Database Storage Issue.
6. Click on the **Backup** tab to access backup configuration settings.
   A. Select the cameras to backup by toggling the switch on the right side. Toggle the **New added devices** option to automatically begin backing up a device once it has been added to the Nx Witness system
   B. Use the **What to backup** menu to select what aspect of the camera's archive should be backed up:
      - *All archive*
      - *Motion*
      - *Objects*
      - *Bookmarks*
      - *Motion and Objects*
      - *Motion and Bookmarks*
      - *Objects and Bookmarks*
      - *Motion, Bookmarks, and Objects*

   C. Use the **Quality** menu to select which streams to backup:
      - *All streams*
      - *Low-res*

   D. If **Skip Current Queue** is clicked, the backup process will ignore existing footage and only backup recordings after that point.

E. Click **Bandwidth Limit** tab and select a bandwidth mode:

- *No Limit* – The entire archive will be backed up. Afterward, the server will continuously back up live streams.
- *Fixed* – The bandwidth remains a specified Mbit/s across all days and times.
- *Scheduled* – Backup is performed only during the selected days and hours. Fill in the cells of the schedule using the following options: *Unlimited*, *No backup*, and *Limited* to (limit to a certain Mbit/s, but remember that too tight a bandwidth constraint can cause the entire backup to fail). Note that the footage will be backed up since the last time backup was completed. If network bandwidth is insufficient, the backup may not be fully completed within the specified time frame. In this case the date and time of the footage that was backed up will be clearly indicated (Archive backup complete until...).



Add a Camera

Compatible devices will usually be detected automatically since autodiscovery is enabled by default, although sometimes devices will need to be searched for and added manually.

1. Right-click on the server and click **Add Device**.
2. In the **Known Address** tab, enter the camera location to search for the camera on the network. If needed, enter the port or authorization credentials and click **Scan**.
3. In the **Subnet Scan** tab, enter the subnet to search for the camera on the network. If needed, enter the port or authorization credentials and click **Scan**.

Authorization Credentials

Some cameras require authorization credentials before being able to access their stream. These cameras have a lock icon next to them in the Resource Tree.

1. Right-click on a camera and click **Camera Settings**.
2. In the General tab, click **Edit Credentials**.
3. Enter the login and password. Click **OK**.

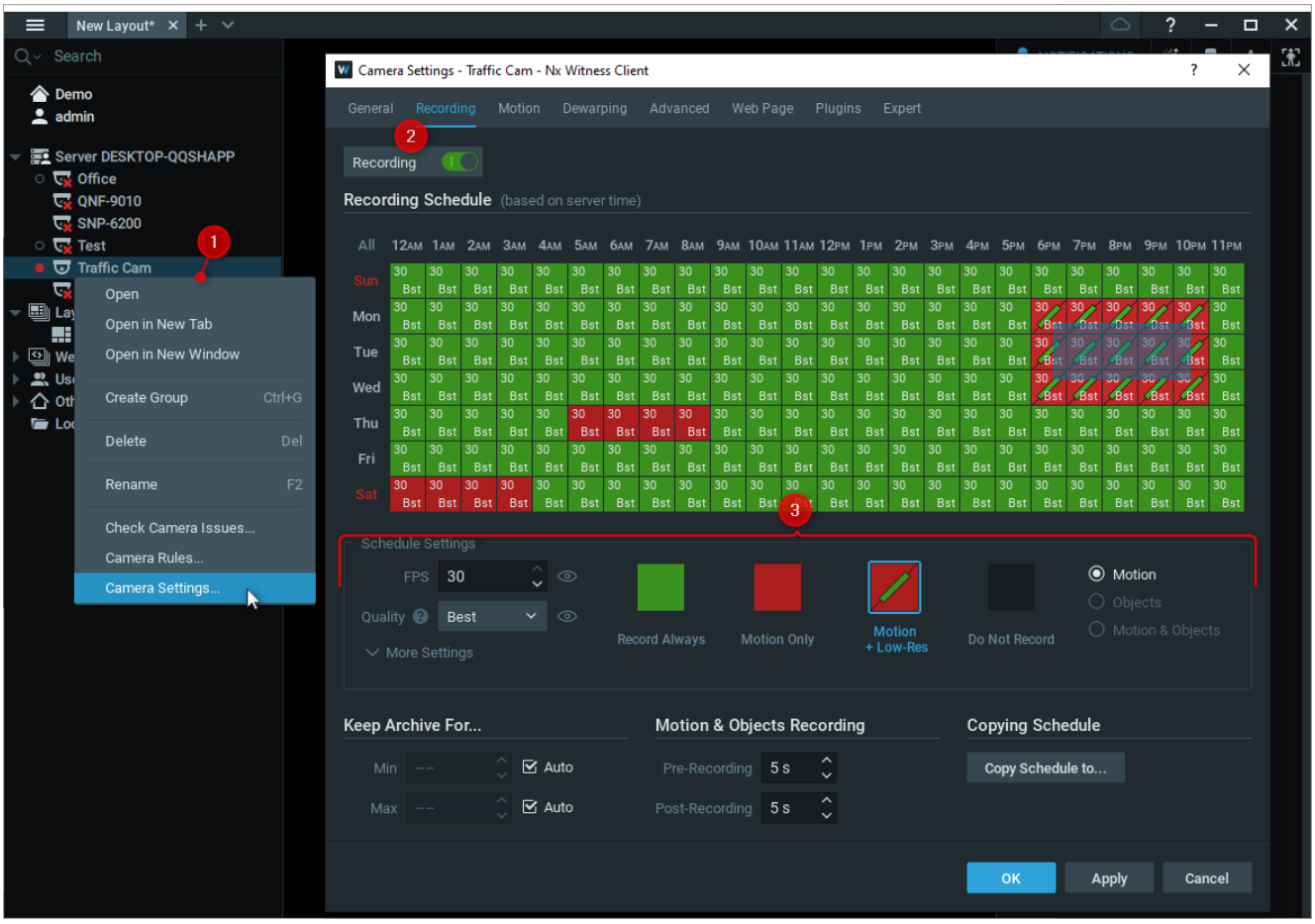
Enable Recording on a Camera

1. Right-click on a camera and click **Camera Settings**.
2. Go to the **Recording** tab and enable the **Recording** option.
3. Select the recording schedule settings: dates/times, recording mode and type, FPS, and Quality. Click **OK**.

There are three recording types to choose from: Motion, Objects, or Motion & Objects. This will selection will change the type of Recording Modes to choose from.

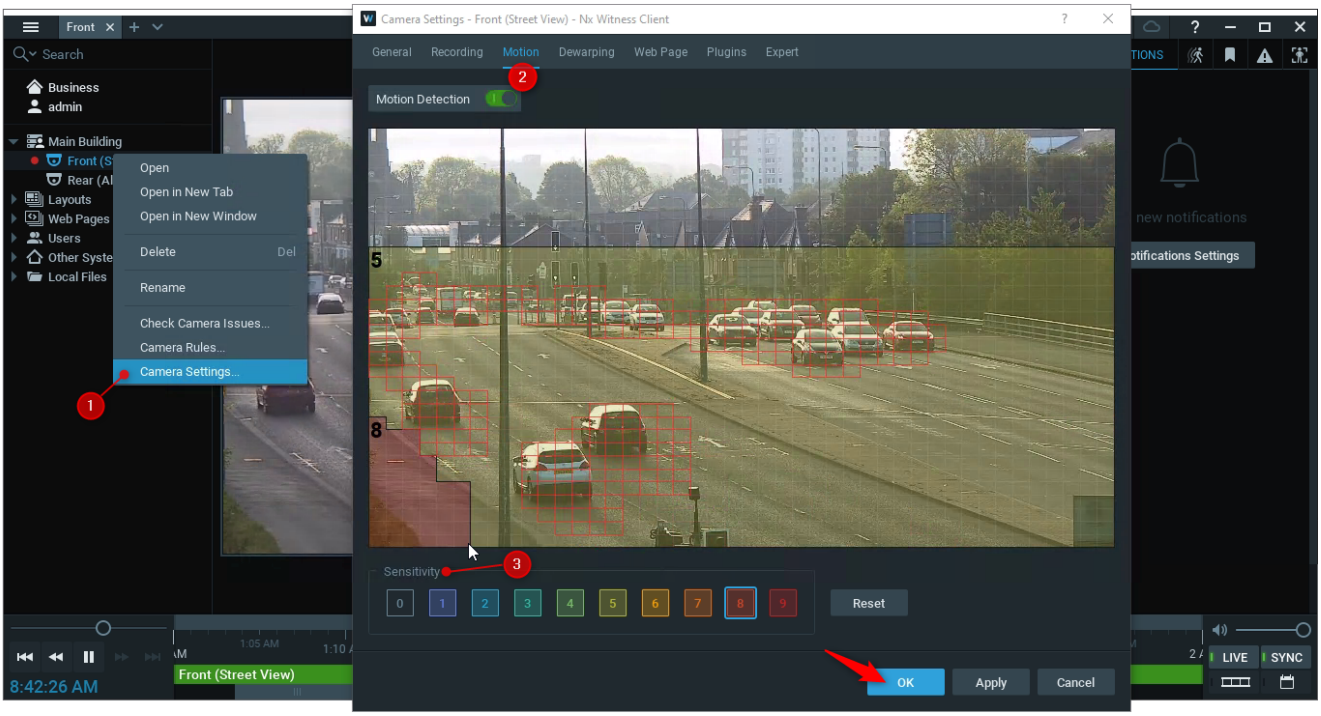
Recording Modes

- *Record always* – Records the stream all the time.
- *Motion Only / Objects Only / Motion & Objects Only* – Records the stream only when motion, objects, or both are detected.
- *Motion + Lo-Res / Objects + Lo-Res / Motion & Objects + Lo-Res* – Records the stream in low resolution all the time and high resolution only when motion, objects, or both are detected.
- *Do Not Record*

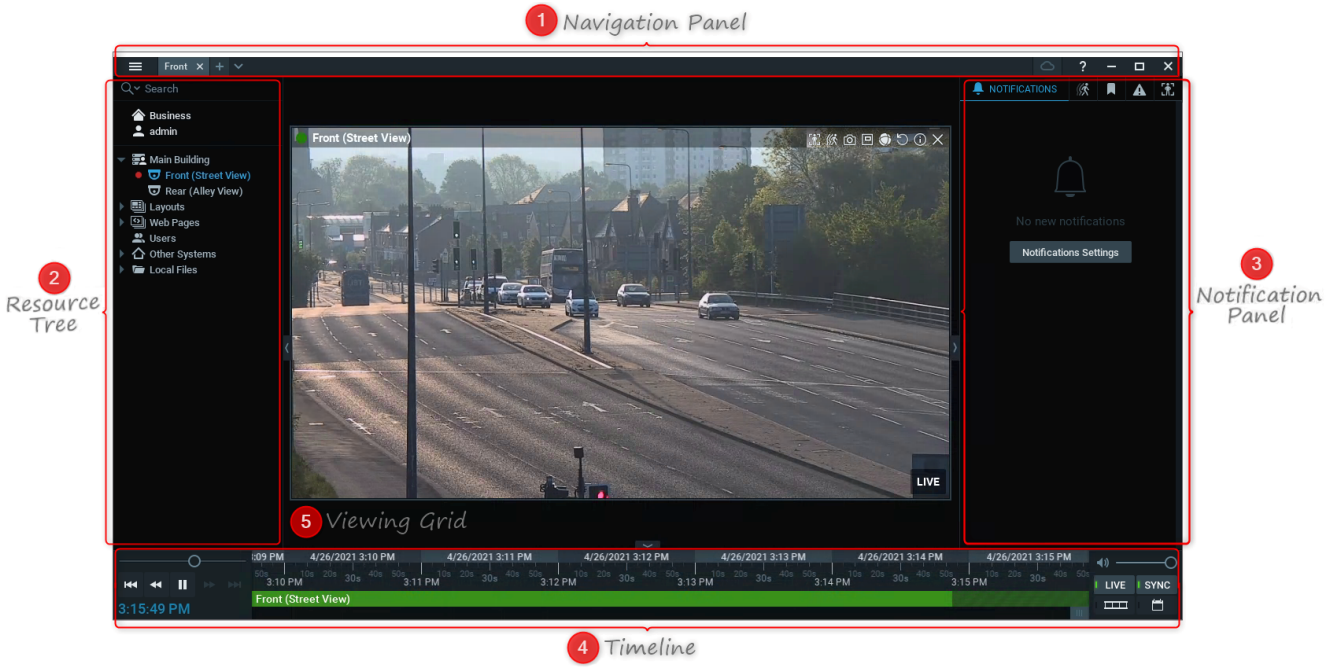


Enable Motion Detection and Create a Motion Mask

1. Right-click on a camera and click **Camera Settings**.
2. Go to the **Recording** tab and enable the **Motion Detection** option.
3. Select a sensitivity level and click and drag on the video preview to create a motion mask over the desired area. Click **OK**.



Part 2 – Using Basic Features



1. Navigation Panel – Access the *Main Menu*, create and organize layouts, log in to Nx Cloud, and use the context-sensitive user manual.
2. Resource Tree – Organize all servers, cameras, layouts, webpages, and other resources. Use *Keyword Search* to find resources quickly. Right-click on a resource and choose *Rename* to change its name.
3. Notification Panel – Access the following tabs:
   - *Notifications* – Displays important information about the system's state and triggered event rules.
   - *Motion* – Displays detected motion events from cameras with recording enabled.
   - *Bookmarks* – Displays bookmarks that were manually created or triggered by an event rule.
   - *Events* – Displays triggered event rules.
   - *Objects* – Displays detected objects from plugin or camera analytics. Only visible when certain analytics are detected.
4. Timeline – Playback controls are to the left (Play/Pause, Last/Next Frame, Last/Next Video Segment), and stream toggles are to the right (Live, Sync, Thumbnail, and Calendar). Recorded video appears as a solid green bar. If the *Motion* tab is open, motion recordings appear as red segments. If the Bookmarks tab is open, bookmarks appear as blue segments.
5. Viewing Grid – Displays up to 64 items (e.g. cameras, webpages, etc.). Items are easily adjustable (drag-and-drop to move) and can change dynamically in size depending on the number of items on the Viewing Grid.

Create a Layout

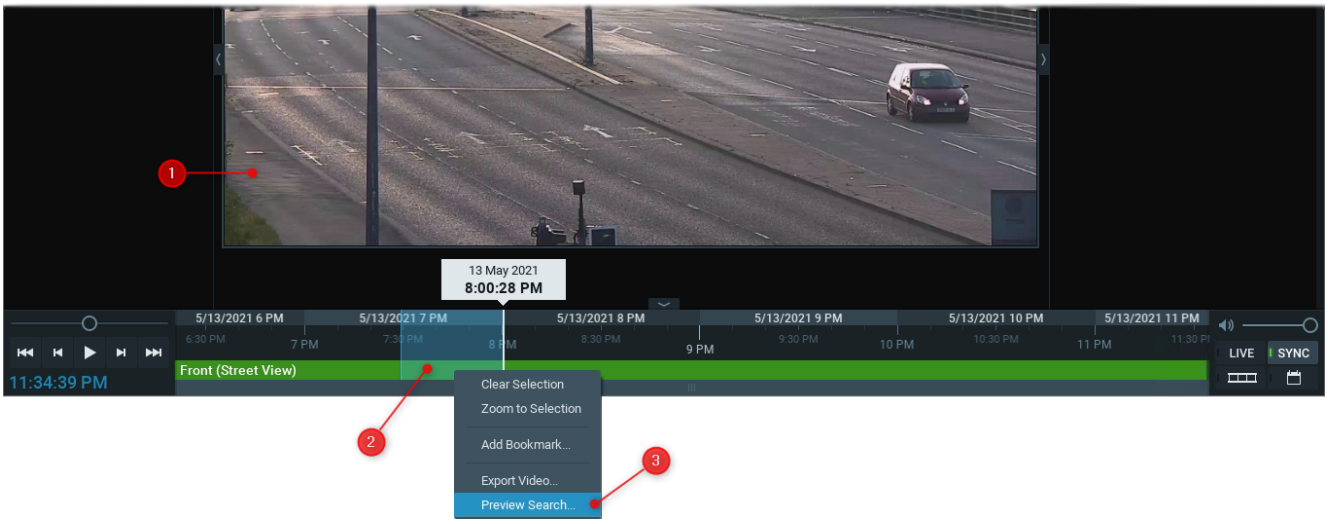
1. Click on the plus (+) icon on the Navigation Panel to create a new tab.
2. Drag and drop items onto the Viewing Grid and configure them to your needs.
3. Right-click on the newly created tab and click **Save Layout**.

Searching Through the Video Archive

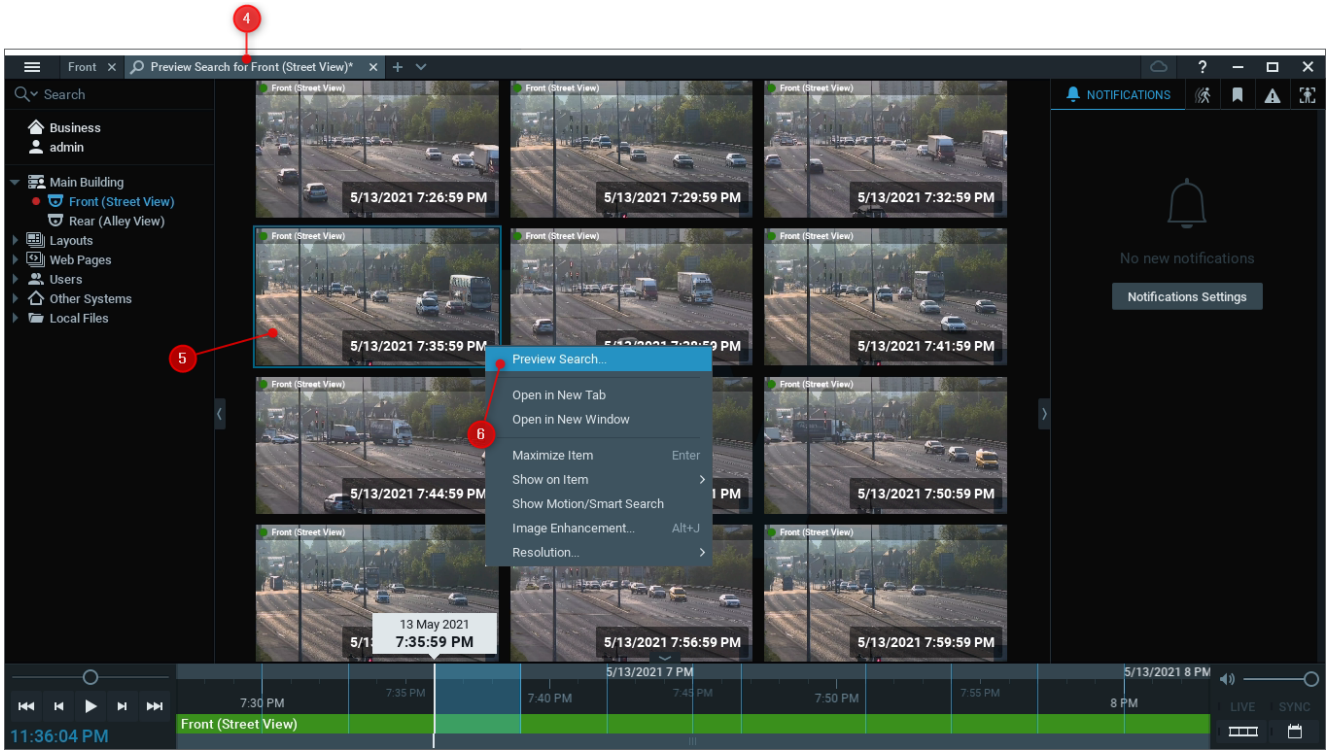
Drag the position slider on the Timeline to select a segment of time. The position slider shows the time currently being displayed on the selected camera or all cameras on the Viewing Grid if the SYNC button is active. Zoom in or out of the Timeline to show smaller or larger time intervals using the mouse scroll wheel or the +/- buttons on the upper left portion of the Timeline.

Preview Search

1. Select a camera on the Viewing Grid.
2. Click and drag the position slider on the Timeline to highlight the desired segment of recorded video.
3. Right-click the highlighted segment and click **Preview Search.**



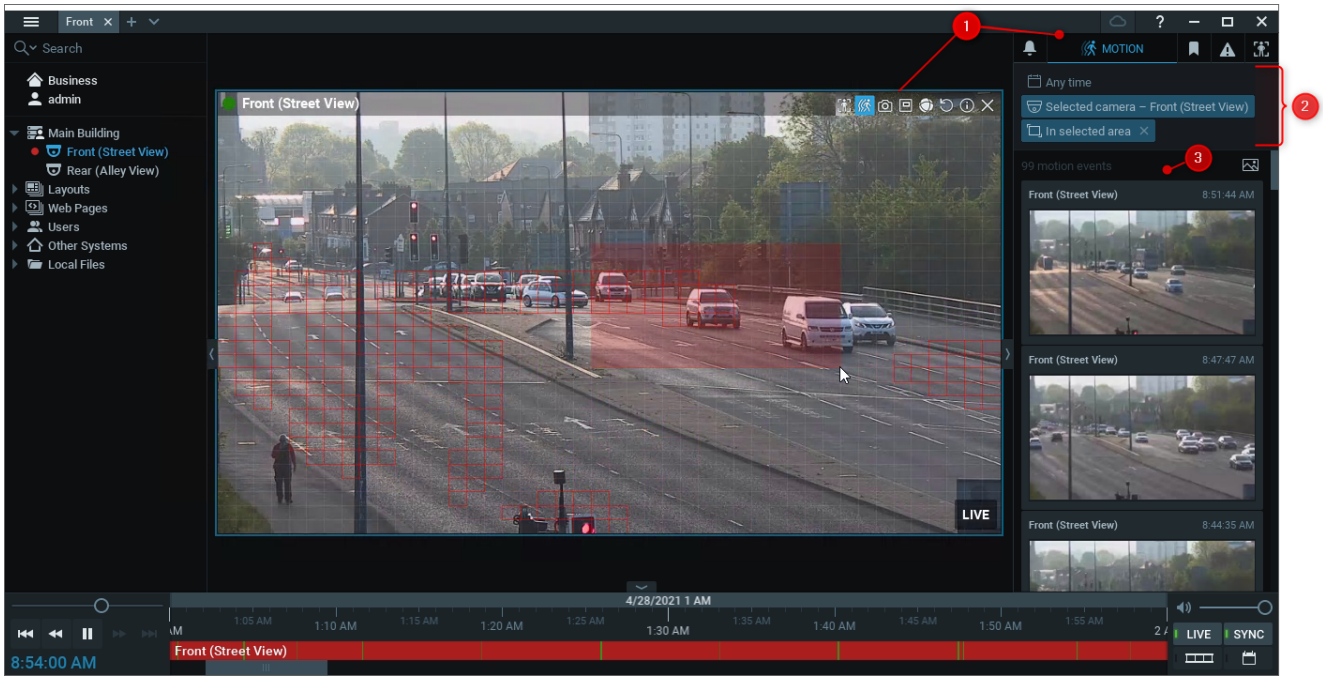
4. Your selected time segment will automatically be divided into several equal time segments. A new Layout will be created, and these smaller time segments will be displayed with thumbnails for each time segment.
5. Click on a Preview Search Thumbnail to see the corresponding archive time segment highlighted in the Timeline.
6. Preview Search thumbnails can be divided into smaller time segments by right-clicking on the desired thumbnail and choosing **Preview Search**. The smallest time segment that Preview Search will process thumbnails for is 10 seconds.



Smart Motion Search

To search for motion events in the archive:

1. Go to the **Notification Panel** and click the **Motion** tab, or hover over a camera on the Viewing Grid and click the **Smart Motion Search** icon.
2. Apply the following filters:
   - *Area* (required) – Click and drag over the camera to define the Smart Motion Search area. This limits the results to motion events that occurred within a specified zone of the camera's stream.
   - *Camera* (required) – Limits the results to motion events from the selected camera.
   - *Time* (optional) – Limits the results to motion events that occurred within the selected time interval: **Last day**, **Last 7 days**, **Last 30 days**, and **Any time**.
3. View the search results in the Notification Panel.

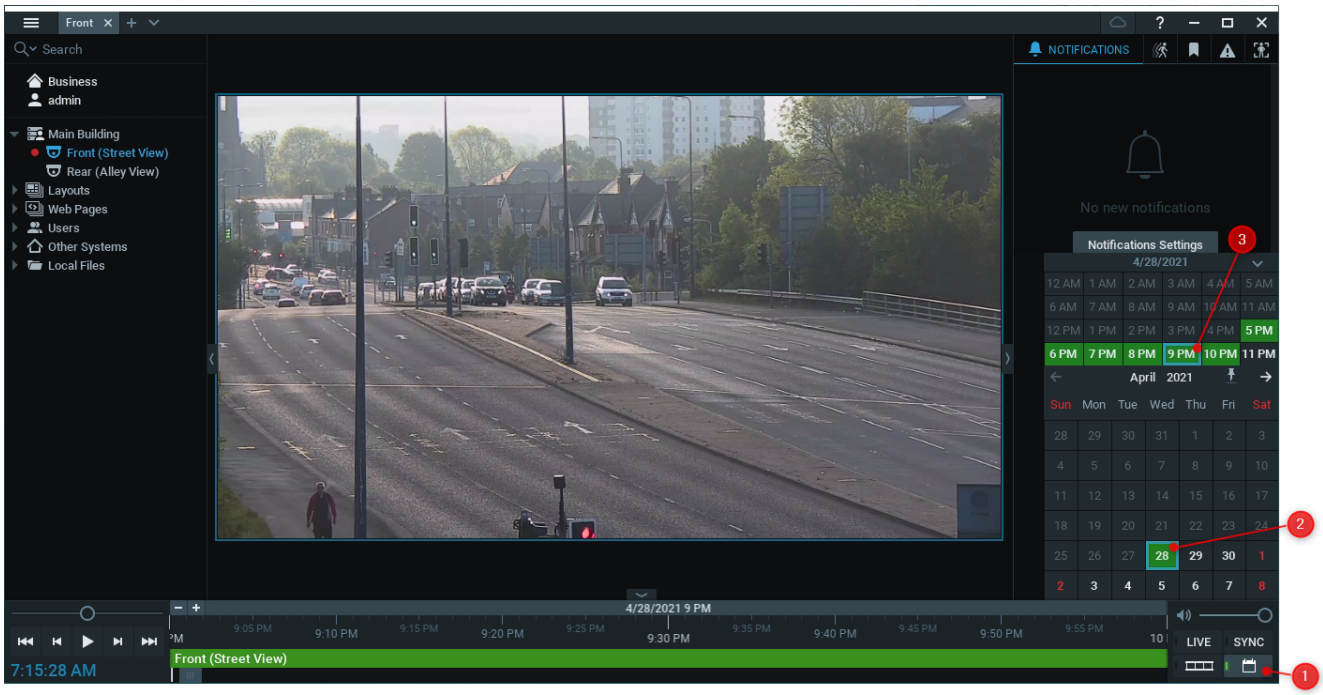


Calendar Search

Search for and view archive video by filtering via a camera's archive recording date/time:

1. Click on the *Calendar* icon to the right of the Timeline.
2. Select one or more dates to view recordings from that day.
3. Select one or more times to view recordings from that hour.

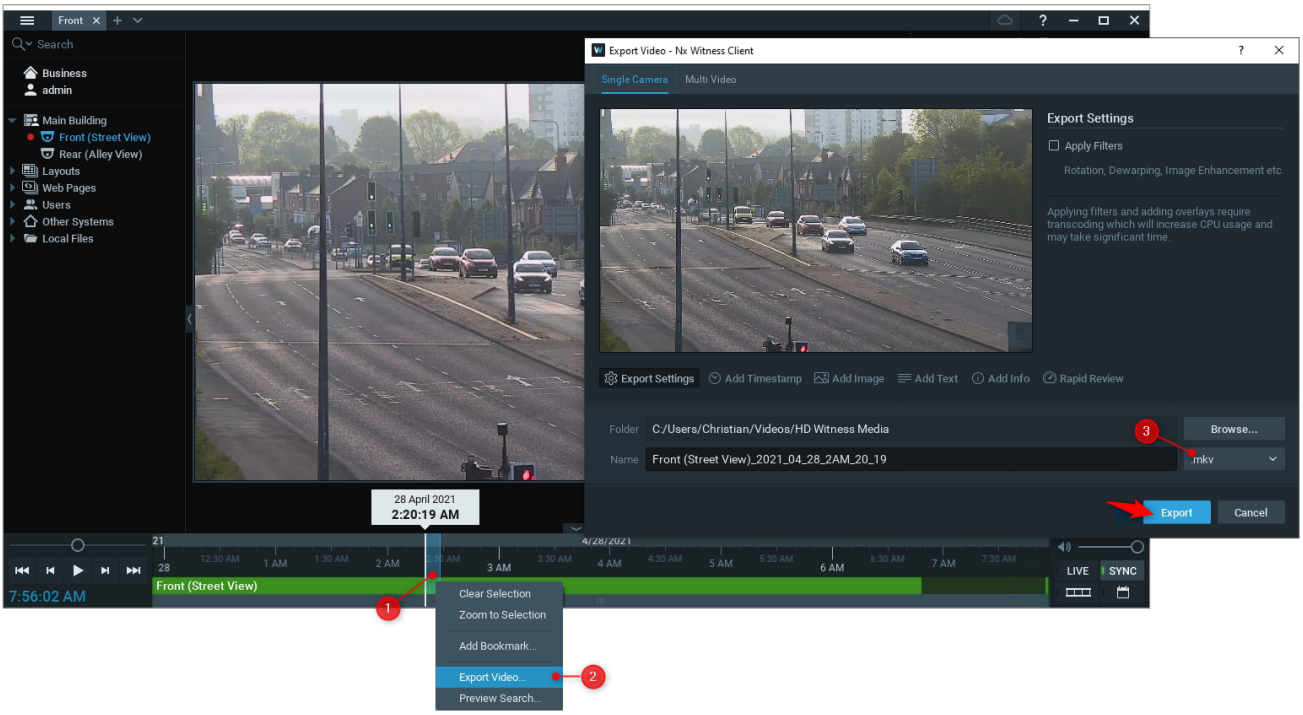
Note: Hold the CTRL key while selecting dates/times to choose more than one.



Export Recorded Video

1. Select a camera on the Viewing Grid.
2. Click and drag the position slider on the Timeline to highlight the desired segment of recorded video.
3. Right-click the highlighted segment and click **Export Video**.
4. Select the file type and export location. Click **Export**.

Note: Read Exporting Video for more information.





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