

CMS 4 PROFESSIONAL

Installation and operation manual
since software version 3.4.5.43

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1 INTRODUCTION

We present to you the next version of CMS 4 PROFESSIONAL system with many new functions and modules. Many of these changes are the effect of our cooperation with you and our partners. Part of them are our ideas which extend capabilities of digital video recording systems. Please pay your attention to the possibilities that CMS 4 PROFESSIONAL (CMS 4 in short) brings to life and check how much we change the system, which points to a whole new direction of our evolution as an NVR supplier. This manual has been divided into 4 main topics: [**software installation**] [**basic cms software operations**] [**cms software configuration**] and [**remote server configuration via CMS**] . Below You will find manual unchanging color markings explanation:

RED COLOUR - Important note / information. Please read carefully.
BLUE COLOUR - Link to website or specific part of manual.

1.1 ABOUT SOFTWARE

The latest version of CMS 4 (Central Monitoring Station) is designed to be compatible with all Video Management Systems design by Alnet Systems - NetStation NetHybrid and NetHybrid HD.

New CMS 4 software was designed completely from scratch based on nearly 15 years of experience and more than 100,000 installations worldwide. User-Friendly design, layouts, advanced scheduler and script editor make the CMS 4 look the way you want, and work the way you need.

CMS 4 is a combination of ease of use with virtually unlimited configuration possibilities. Flexible design provides freedom for easy adjustment of the configuration for both small and large installations with thousands of cameras deployed throughout multiple locations. Expanded Scheduler and script editor allow very advanced alarm and tasks settings and action which helps facilitate extensive surveillance of CCTV installations.

Software also allows for nearly unlimited number of servers accessed at one time with display of 144 cameras in one layout on each supported monitor. Thanks to that and nearly free layout manipulation options for each monitor independently, users can create very sophisticated yet still easy to operate monitor walls

Please keep in mind that this manual was written when a specific software version was released. Some options places or availability may vary depending on Your current software version installed.

1.2 REQUIREMENTS

Below You can find minimum and recommended requirements for CMS 4 software.

CMS 4		
SYSTEM REQUIREMENTS	MINIMUM	RECOMMENDED
Operating System	Windows 8.1 64-bit,	Windows 10 64 bit
Motherboard	Intel chipset based (ASUS,Gigabyte, Intel)	
Processor	5th generation Intel Core CPU	8th generation Intel Core CPU or higher, Intel Xeon Gen 2 or higher
MEMORY	8 GB	16 GB or higher
VIDEO CARD	Nvidia Quadro p620 / Nvidia GT 710 or higher	

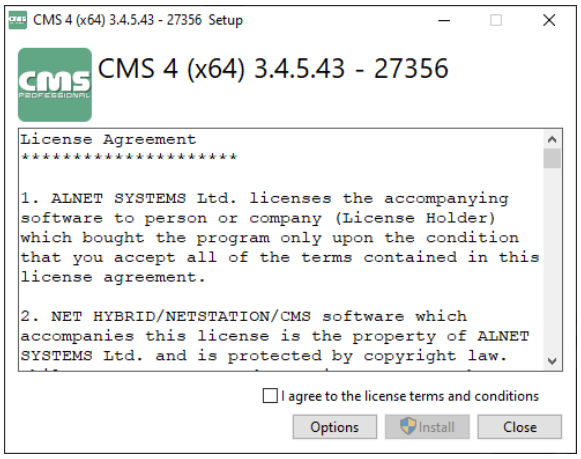
Note: We recommend using Nvidia graphic cards due to fisheye cameras dewarping function. Available monitor count depends on the graphic card model and drivers support.

2 SOFTWARE INSTALLATION AND FIRST STARTUP

Please close / disable all antivirus software and close all other software before proceeding. All installation files can be found on our webpage **WWW.ALNETSYSTEMS.COM** in the DOWNLOAD section.

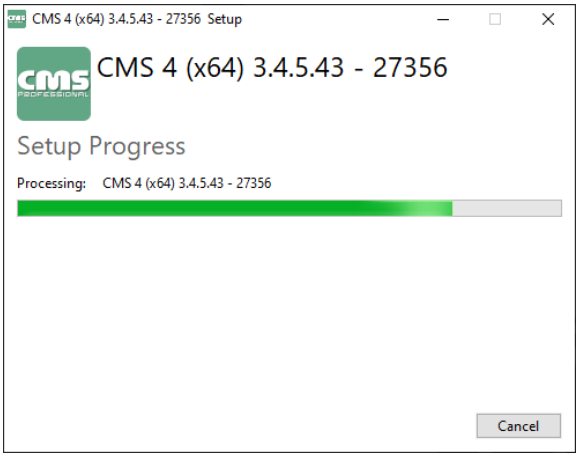
2.1 INSTALLATION PROCESS

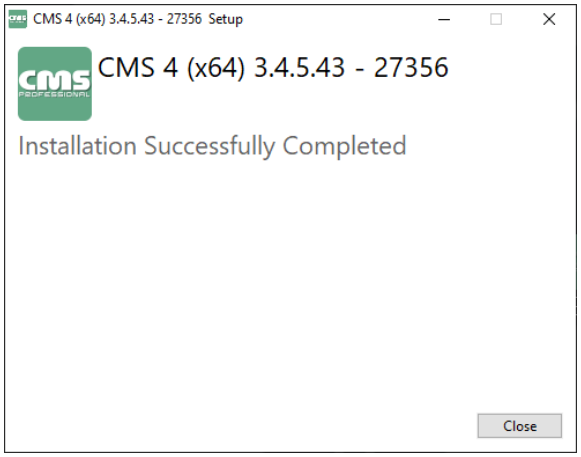
Installation process is easy and requires only a few simple steps:



STEP 1 - After starting the installer please read the License Agreement and select the checkbox in order to be able to proceed with the installation. Click Install when ready.

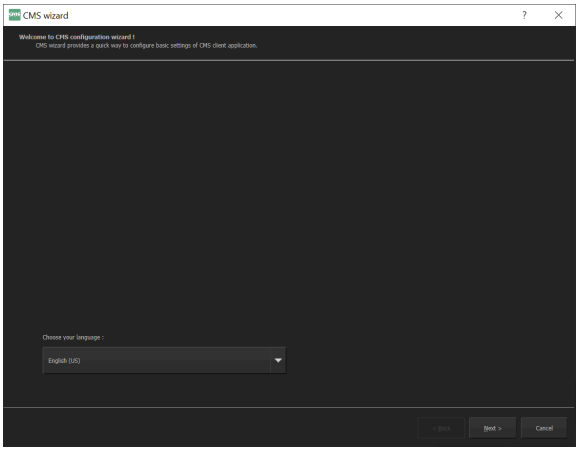
STEP 2 - Please wait until the installer finishes the initial software setup.

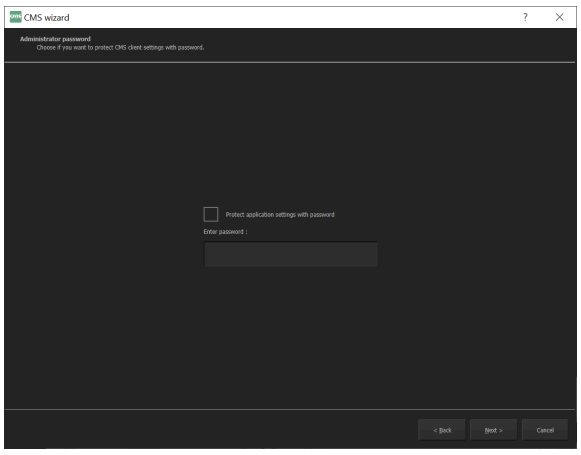




STEP 3 - When the process finishes, You will receive the confirmation information and the installer will immediately initiate the CMS4 wizard. Click close to end the installer (it will not close the already opened wizard window)

STEP 4 - In the first step of wizard please choose the language You want to use in CMS 4 software (can be changed later on in software settings)

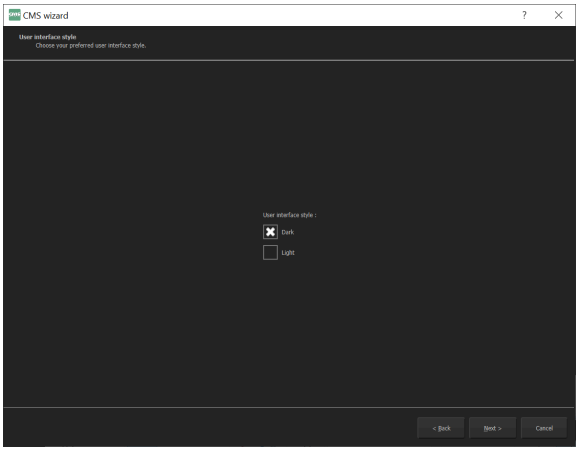


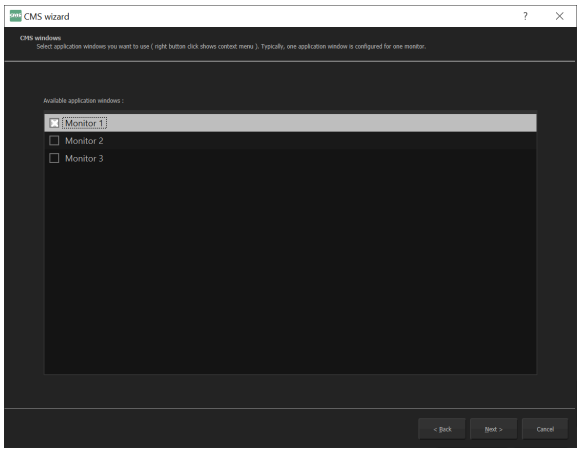


STEP 5 - You can specify the administrator password (not required). If it is provided, You will need to use it each time You enter the Administrator mode in CMS 4 software.

NOTE: Please keep your password stored safe. It cannot be retrieved and the only way to delete it is to remove the whole CMS configuration folder including profile list.

STEP 6 - Here You can choose the dark or light theme for CMS 4 (default is dark)

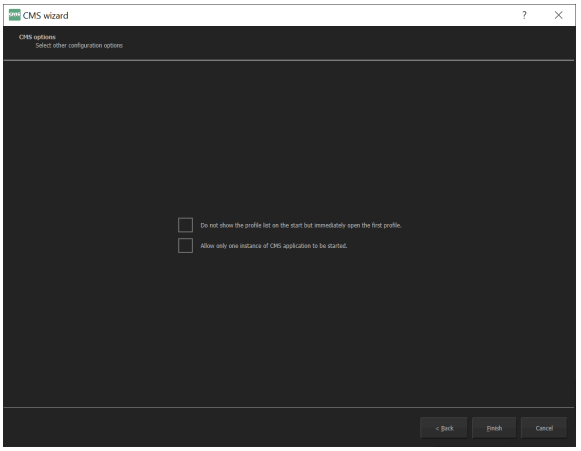




STEP 7 - Next is monitor setup. Here You can specify on how many (and which) monitors will CMS 4 be displayed.

Note: Clicking monitor name will display a small on-screen window on it. This allows you to identify where the monitor is located.

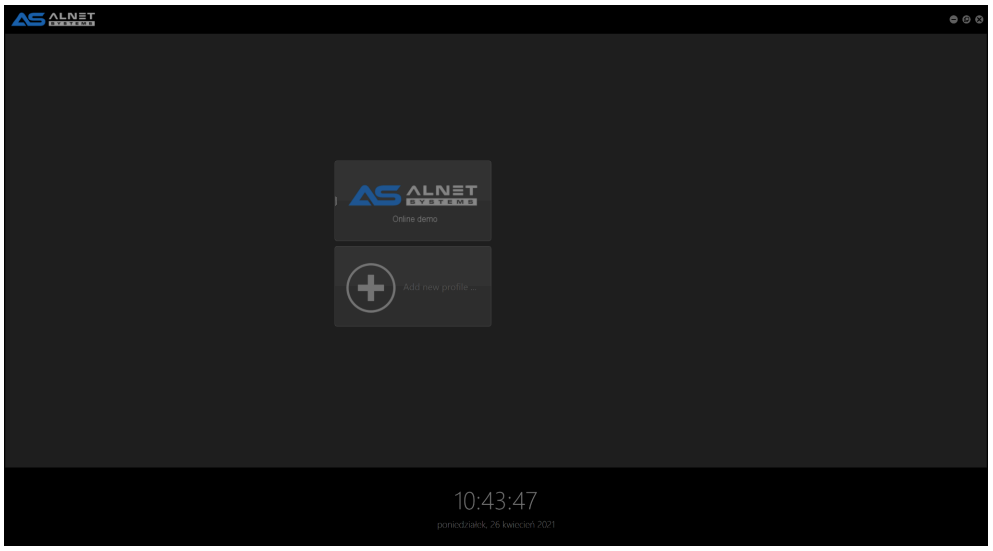
STEP 8 - Final step in wizard. You can choose not to show the profile list and start directly with the first profile after launch of CMS 4. Also there is a block option which prevents the possibility to start more than one windows process of CMS 4 client software.



Note: Wizard can be launched again any time by using “CMS 4 wizard” from START menu or by creating a shortcut on desktop to file CMS.exe and adding a parameter “-wizard” at the end of the “Target” line.
Example of line: "C:\Program Files\ALNET SYSTEMS\CMS 4\CMS.exe" -wizard

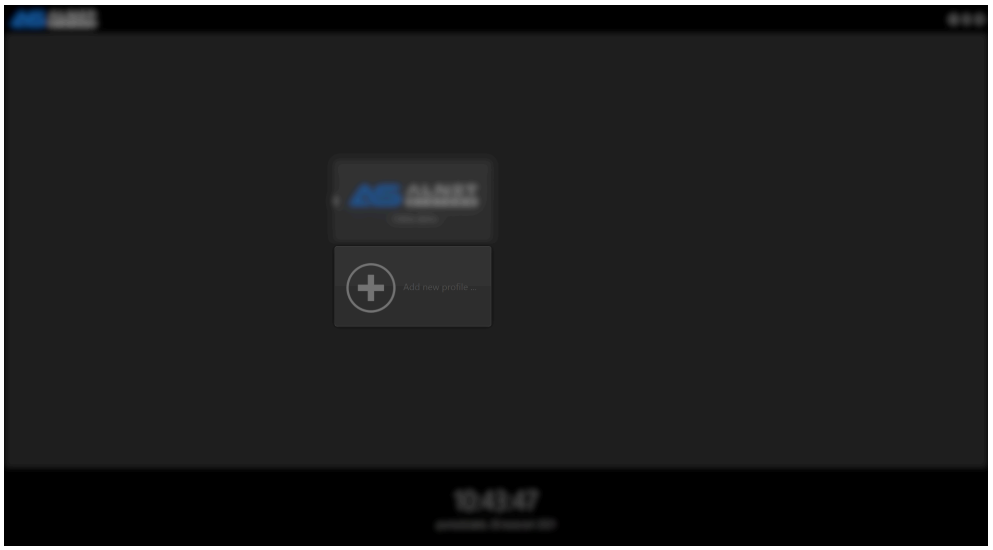
3 CMS - SOFTWARE BASICS

3.1 PROFILES LIST

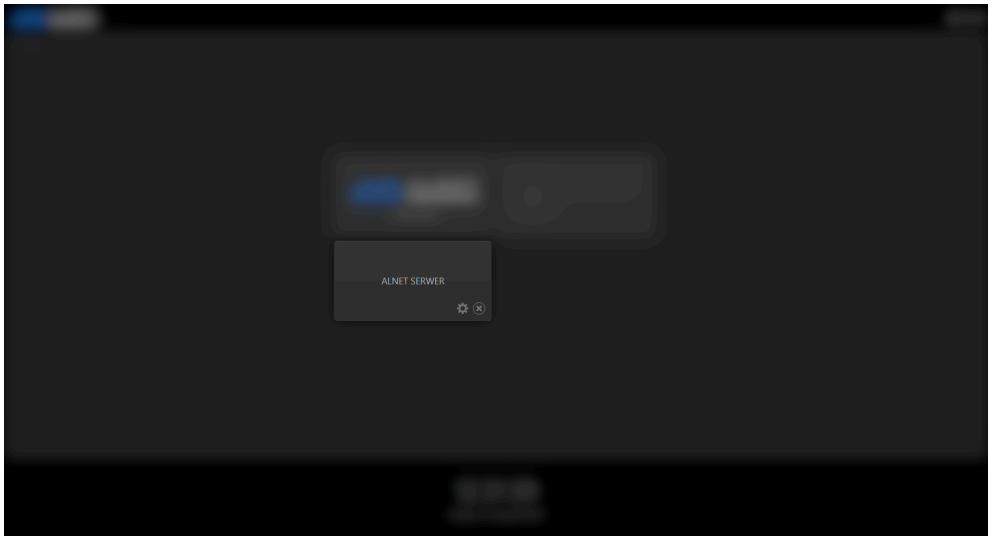


Profile list is the server address group book. Each Windows user has its own profile list stored in C:\Users\<current user>\CMS\ directory. Every profile has its own configuration in terms of layouts, connected servers etc. Profile list can be easily moved to another client station by simply copying the CMS folder to another windows user on the same or different machine with saem CMS 4 software version.

In order to create a new profile You start by clicking “Add new profile …” button.



You can EDIT or DELETE the existing profile by moving the mouse on it and clicking the chosen button.

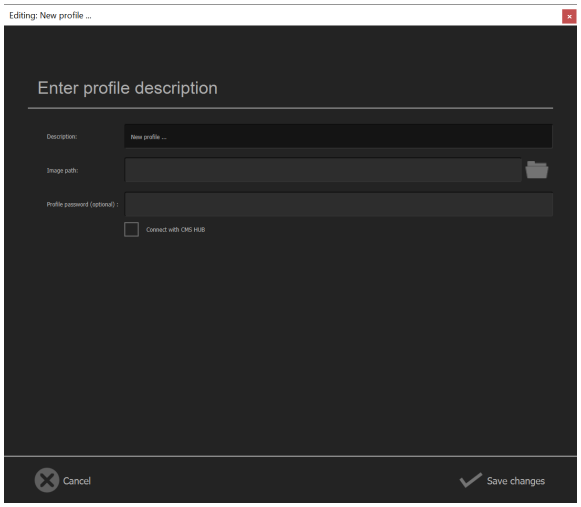


Note: Deleting the profile is irreversible. Make sure You have a backup of the CMS folder before doing so.

Note 2: If You delete the CMS folder from the C:\Users\<current user>\ and start the CMS 4 application, You will get the default settings just like You would start the software for the first time.

3.1.1 CREATING BASIC PROFILE

When adding a new profile the window will pop-up which requires some basic information.



DESCRIPTION - This is the profile name which will be shown in main window after startup

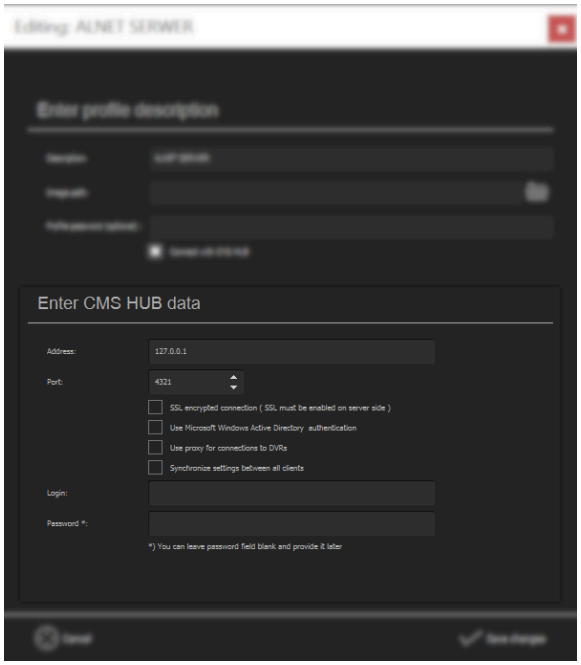
IMAGE PATH - Graphics file with company logo or other visual representation for distinguishing of profiles.

PROFILE PASSWORD - Optional password that will be required to input in order to modify or connect with the selected profile. Leaving this field blank will result in direct access to the profile after clicking.

In order to create a basic profile just type the name of the profile in the description and click “save changes”. This will close the profile creator and start it immediately.

3.1.2 CONNECTING WITH CMS HUB

If Your project includes CMS HUB software, You need to include additional configuration options before You can start.



REQUIRED FIELDS

ADDRESS - IP address or Domain name of CMS HUB server

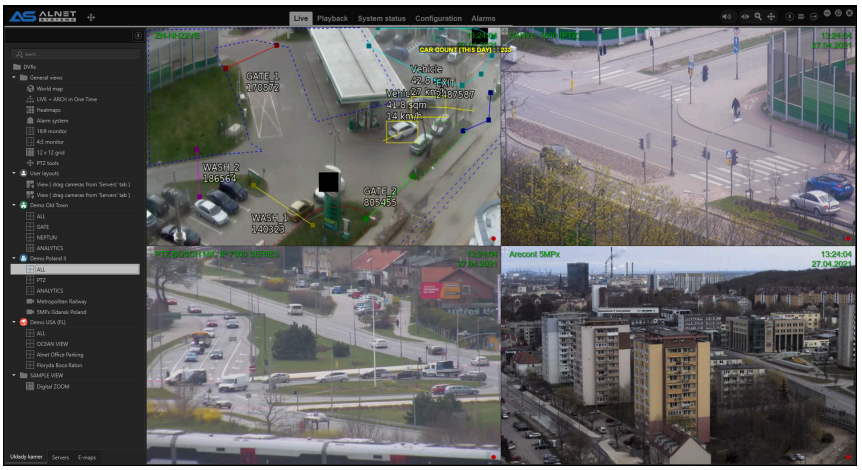
PORT - communication port of CSM HUB

OPTIONAL FIELDS

LOGIN - CMS HUB user login
PASSWORD - CMS HUB user password

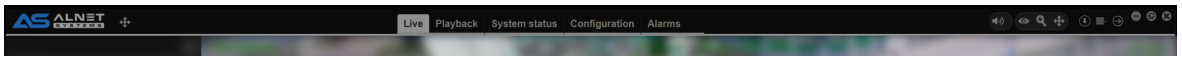
NOTE: Additional connection settings like SSL encryption or Active Directory support must be checked according to the current on-site settings.

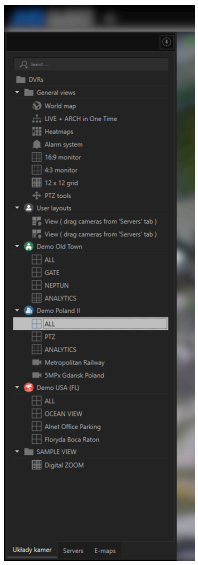
3.2 SOFTWARE GUI DESCRIPTION



Main window of CMS 4 software can be divided into 3 segments, TOP BAR, LAYOUT VIEW and SIDE PANELS.

TOP BAR





SIDE PANEL



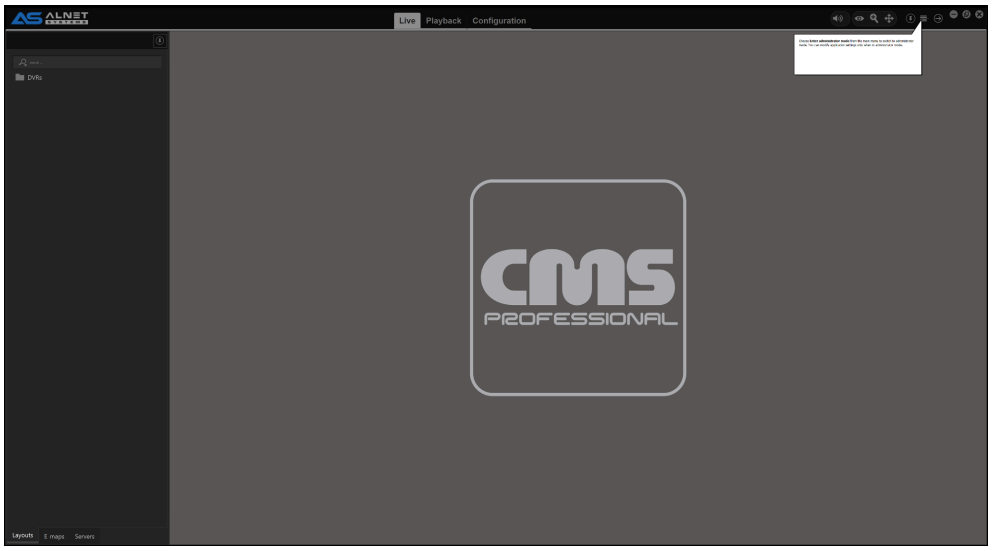
LAYOUT VIEW

Each of the segments allows for different tasks and can be additionally modified with the configuration tools.

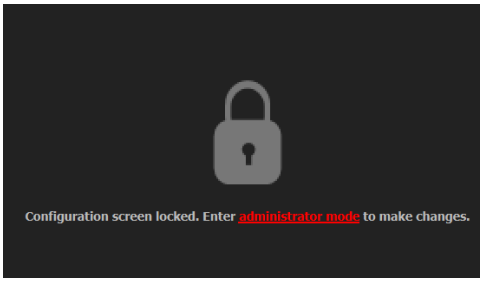
Note: Most of the elements on the GUI can be moved / added or deleted but requires to be in **administrator mode** in CMS 4 application.

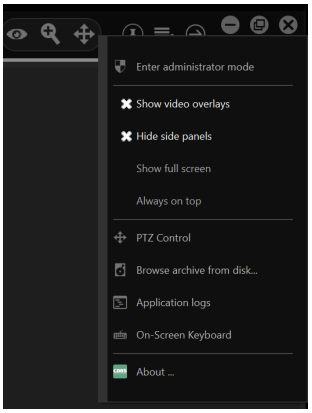
3.3 ADDING FIRST SERVER

At this point You should see something similar to the screenshot below. Empty layout sections with default GUI configuration. You should also see some first time tooltips showing which helps to guide You through the first steps.



To actually get video streams from the NetStation software on the CMS 4 You need to add the server to the DVR list.



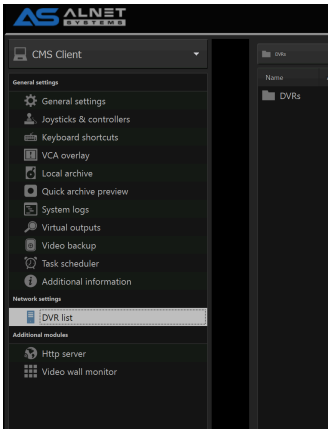


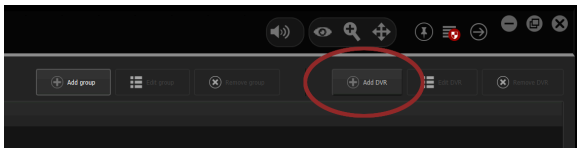
STEP 1 - Go to “Configuration” and enter administrator mode.

It can done either by going to “Configuration” tab and clicking red text/button or by going to MENU and clicking “Enter administrator mode”

STEP 2 - Then from the left sidebar select “DVR list”

NOTE: Other CMS settings visible in this menu are described in **CMS CLIENT CONFIGURATION**.

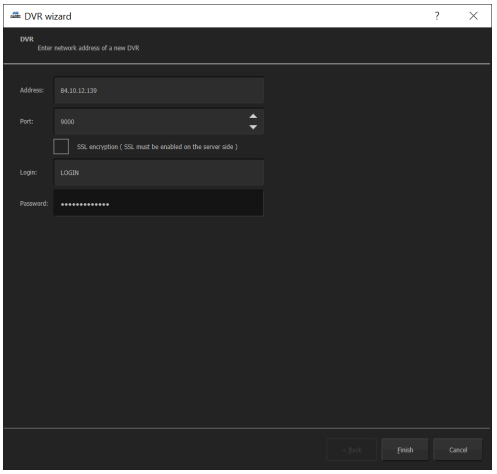




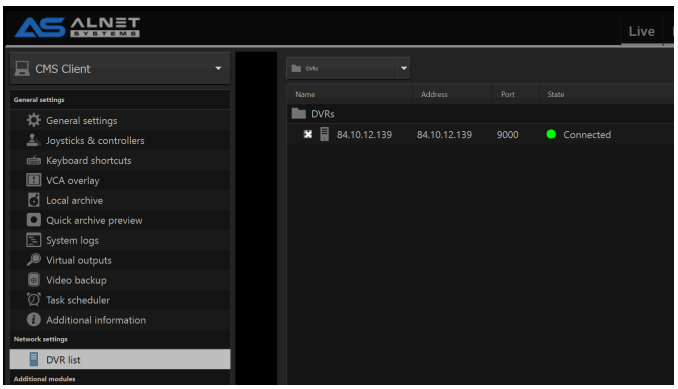
STEP 3 - In the main window click “Add DVR”.

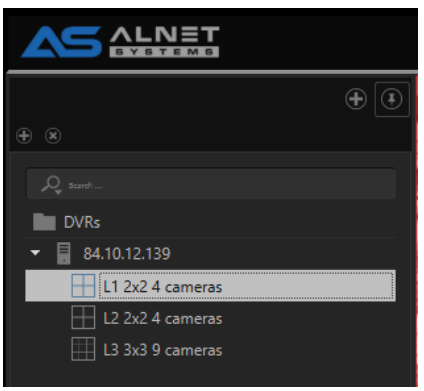
You can also create an additional DVR group which will also automatically be shown in all **layout view tabs**.

STEP 4 - Type the IP address or domain under which You have the NetStation server software running. Also make sure to type the correct communication port, login and password.



After successful connection with the server You should see the green icon with status “Connected”. If adres, port login or password are provided, You will get a red icon with additional information. Also software will automatically create predefined camera layouts.



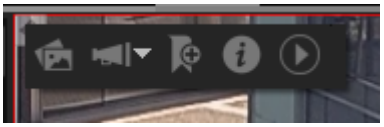


3.4 BASIC OPERATIONS

In this chapter You can find a basic description of CMS 4 software main sections as well as basic operations You can do with them. Information provided here is for first time users but can also be used as an “basic operation manual” for clients station as a tutorial / operation guide for onsite staff members.

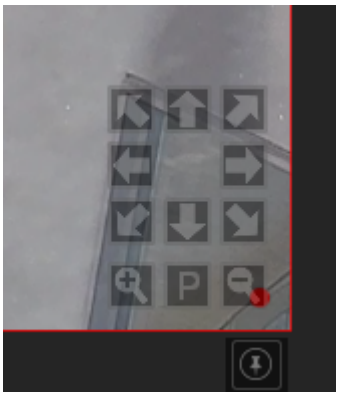
3.4.1 ON CAMERA STREAM GUI TOOLS

On camera video in the corners there are hidden GUI TOOLS BUTTONS (some options are visible only, if functions are configured or available for a specific camera).

 Top left corner of the screen options starting from left side:

- Make snapshot button
- Two way audio start button (if clicked on the arrow it can also play selected sound file from preconfigured dropdown list, audio backchannel must be configured on server. Check **4.1 CMS CLIENT CONFIGURATION** on how to go to remote server configuration)
- Add bookmark button
- Information window of camera
- Quick archive playback button (see **4.1.1.6 QUICK ARCHIVE PREVIEW** for details)

 Top right corner of the screen is a layout jumper (You can go to a previous layout, similar to previous page and next page function in webbrowser).

 Bottom right corner is the PTZ steering panel. It will only show when CMS 4 is in PTZ mode. All other modes will not show this and nothing will happen. Check the “Operation mode” switcher from **3.4.2.1 TOP BAR** section on what each mode does.

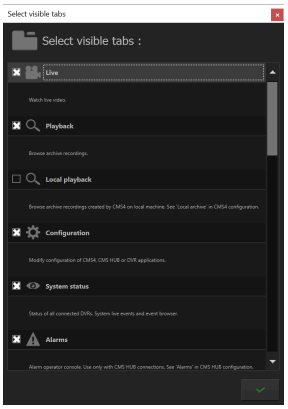
3.4.2 TOP BAR TABS AND SIDE PANELS

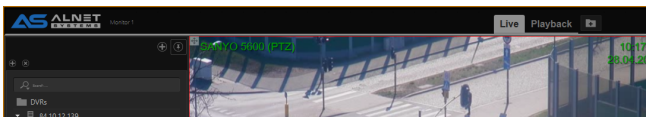
As You already know from the 3.2 section of the manual, the main window of CMS 4 software can be divided into 3 segments, **TOP BAR**, **LAYOUT VIEW** and **SIDE PANELS**. Top bar and side panels are functions / tool containers and can also include additional operational buttons such as alarm output switch for easy and fast operations.

3.4.2.1 TOP BAR

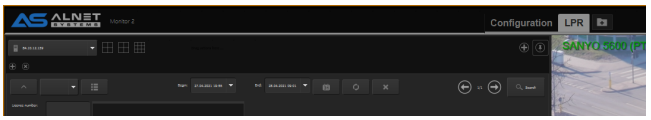
Top bar is a place where You can show or hide CMS 4 function tabs, each with its own predefined sidebar layouts for easier access. In order to show or hide function tabs You need to be in **administrator mode** and simply click the “add”  button. Next in the list You can select / deselect the chosen functions. Position of each tab can be changed by simply clicking and holding the left mouse button and moving the function to the chosen place in line.

Top bars are treated for each monitor individually. It means that each monitor can have a different set of visible tabs. This makes it possible to easily divide the monitors according to their purpose.





MONITOR 1 -LIVE AND PLAYBACK



MONITOR 2 - LPR PREVIEW AND CONFIGURATION

Note: Some functions require connection with CMS HUB for proper operation and might not work regardless of availability (for ex. System Status will not show any results without CMS HUB connection). Please check the detailed TOP BAR TABS description of chosen function for requirements.

Also on the top bar there is “Operation mode” switcher . Starting from the left are “VIEW mode”, “ZOOM mode”, “PTZ mode” and “PLAYBACK mode”.

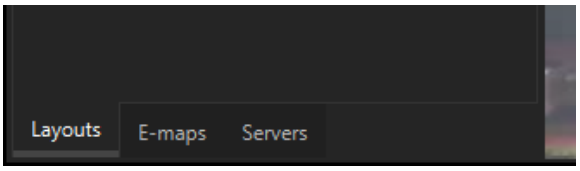
- **VIEW mode** allows for camera manipulation and moving over the layout grid
- **ZOOM mode** allows steering of digital zoom of the camera (mouse roll movement supported)
- **PTZ mode** allows for PTZ steering on camera image with special GUI

- **PLAYBACK mode** for operating archive playback with shortcuts and joystick (no mouse options available)

Each of the options support separate shortcuts list and joystick. If You want to set the shortcuts please check **KEYBOARD SHORTCUTS** of this manual.

3.4.2.2 SIDE PANELS

Side panels provide additional workspace for modules and / or other user interface elements which can be dragged from TOOLBOX or be added as the new tab in the sidebar. By default You have one sidebar pinned on the left side of the screen with 3 most commonly used tabs. Also the server tab is used by users without administrator rights in CMS 4 to change cameras on the user layout (see **3.4.3 CAMERA LAYOUTS** for more info)



Layouts - Set of predefined or created layouts and groups organized by user for easy switching between camera groups

E-maps - Access to the e-map module (same function available from the top bar tab list)

Servers - Easy access to the allowed cameras, IO's and any other additional modules components (available elements depending on user rights)

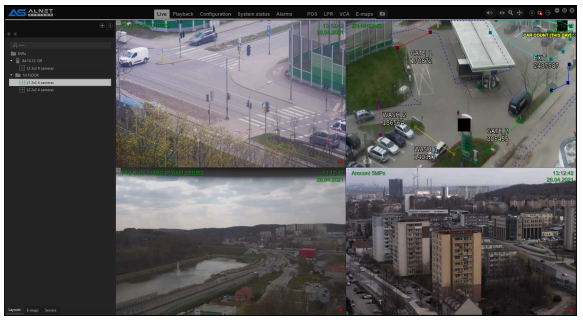
Additionally there are also right and down sidebars with autohiding turned on. In order to see them simply move the mouse cursor to the right side or bottom of the screen. You can also pin the sidebars to stay visible at all times.



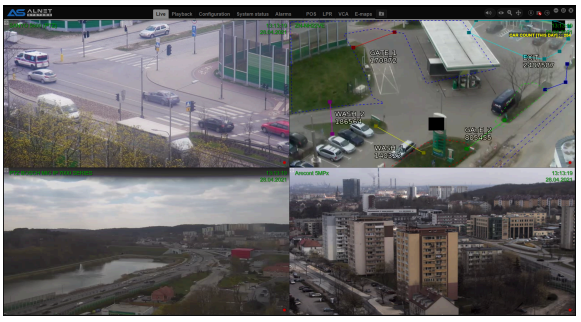
There are 4 buttons available on each sidebar. With them You can easily create complex sidebars with almost endless possibilities. Below are examples of how they work.

1 - sidebar PIN button

BEFORE

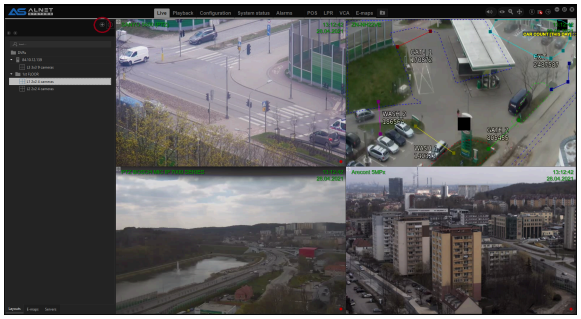


AFTER

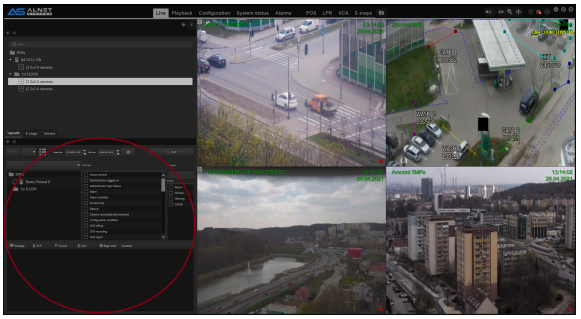


2 - This button adds new tool on same sidebar below the currently displayed

BEFORE

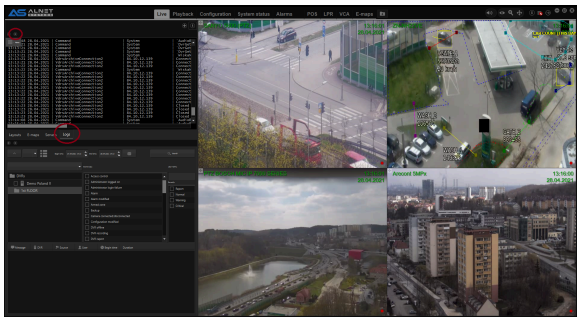


AFTER

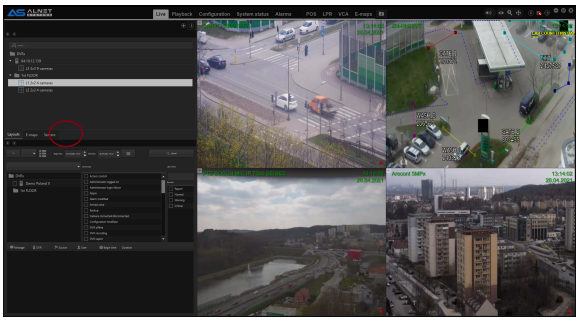


3 - this deletes the tab visible just below the button (in the preview to the right only the upper visible tab from the sidebar will be deleted)

BEFORE

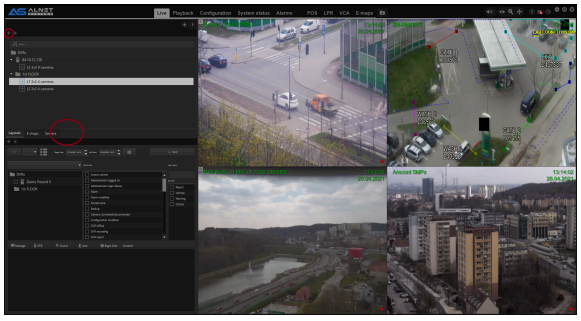


AFTER

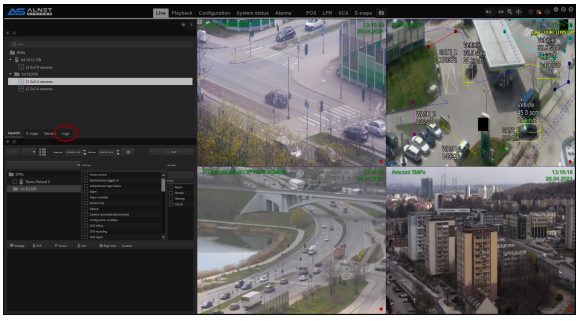


4 - this adds the new tool tab to the same tab group

BEFORE

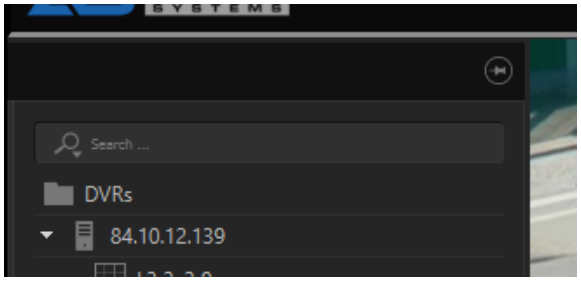


AFTER

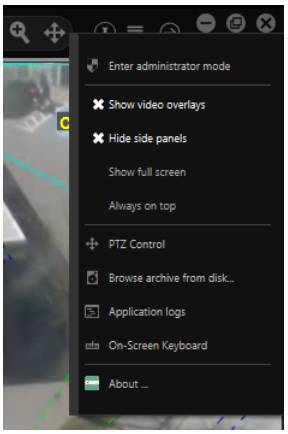


Each sidebar can be expanded to fit all necessary windows or to create a more readable layout.

As far as sidebars are useful, sometimes You would just like to hide them in order to get a better camera preview on more sophisticated layouts or they are just not needed for ex. on overview monitors. The easiest way is to unpin the chosen sidebar. This will automatically hide the side panel. In order to show it back You need to move the mouse pointer to the side of the CMS 4 window.



pinning button



Hide side panels option

With multi monitors placed horizontally, moving the mouse to the side of it might be a bit tricky. That is why there is also a “hide side panels” option in the CMS 4 menu. If it’s disabled, it will show an additional “expand” bar for each sidebar that has any function in it (if the sidebar is not configured in any way, the “expand” option will not show).



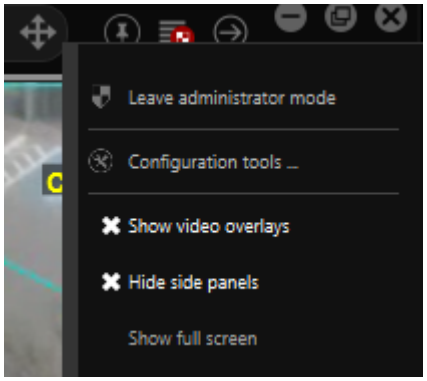
bottom expandable bar

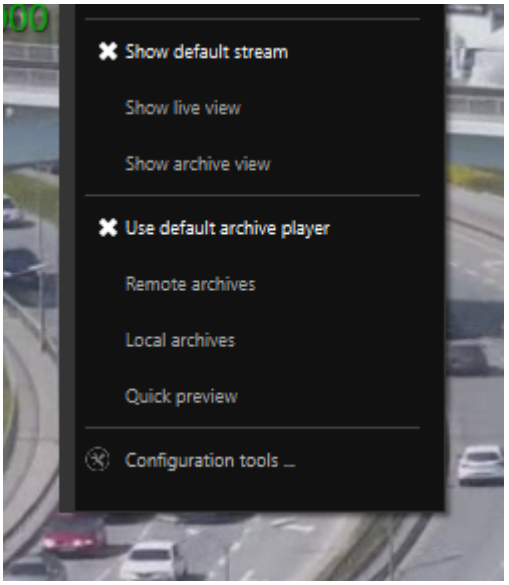
Note: When administrator mode is active, all sidebars can be expanded regardless they're configuration.

Note 2: When the sidebar is pinned, layout will automatically change its width and height to prevent sidebar overlapping the video image.

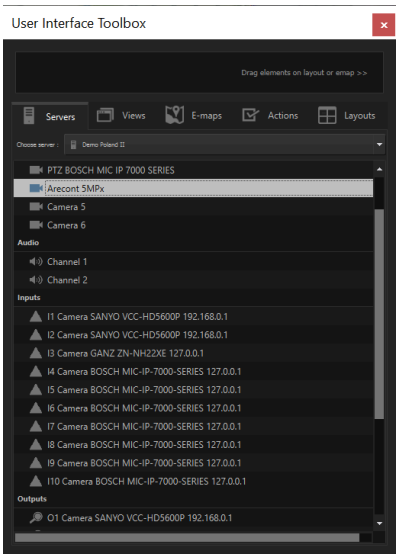
3.4.3 CONFIGURATION TOOLS (TOOLBOX)

Configuration toolbox is a handy tool that allows for easy layout and option manipulation on the CMS 4 GUI. The operator needs to use it in order to place cameras on the layout or to drop additional buttons and function windows either in the layout window or on the GUI net (for ex. on the top bar). There are two places where You can access the toolbox: one is under the menu button in the top right corner of CMS 4 window and the other is under the context menu after right-clicking with the mouse button on the layout window.



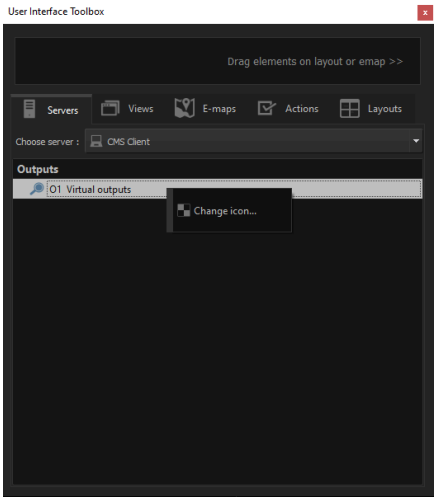


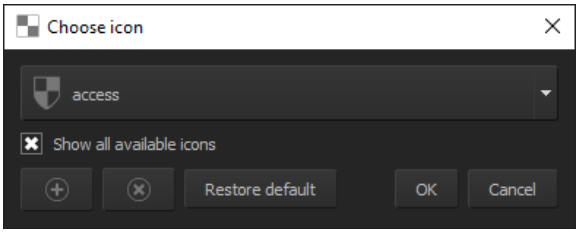
Beside setting cameras on the layout, the toolbox also allows for placing other icons like INPUT's (which show their current state), switchable OUTPUTs, PTZ actions, e-maps and much more. All elements from the toolbox can also be placed on the sidebar (it requires "toolbar" to be setted up on the sidebar



Note: In order to enable droppable net on the sidebar You need to set the "toolbar" option on it first with the "add" button.

Another feature of the configuration tools is icon change. In order to do so You need to right click on the modified element and click the “Change icon” option.





There are lots of already available icons to choose from (most commonly used isons are available as a short list by default, but You can select “Show all available icons” to preview the full list).

With the PLUS button You can add Your own icon (max. size is 128x128 px and PNG format), or You can create an “icons” folder in the main installation folder of CMS 4 and copy a while icon set there (requires restart of CMS 4 application).

Note: If You have two icons and You want them to represent On / Off of same action then You need to name them as **“on_<name1>”** and **“off_<name1>”** where **<name1>** is identical in both names.

Example of how to name two icons which will work as ON / OFF state for same element:



on_my_rec_button.png



off_my_rec_button.png

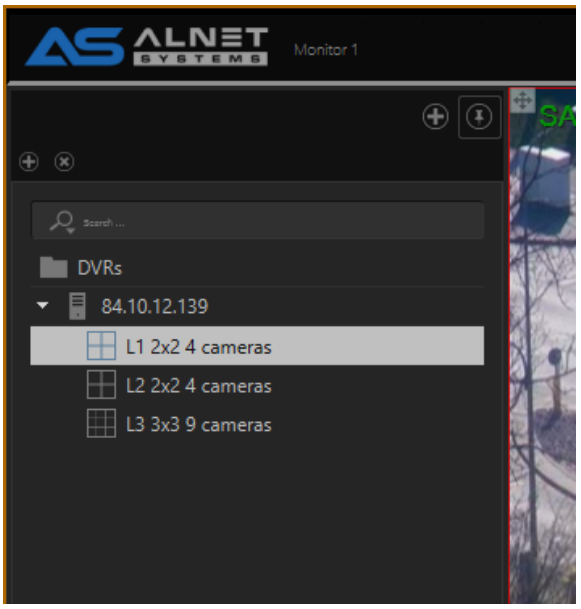
3.4.4 CAMERA LAYOUTS

After adding DVR's the software will autoamticaly create sets of predefined layouts based on the maximum camera count of the added server before adding it in the CMS 4. Since version 3.4.x.36 there are two types of layouts available, global layouts and user layouts:

1. Global layouts can be created and modified ONLY if the user is in administrator mode. Also these layouts can be synchronized with CMS HUB which comes in handy if administrators want to set the same layout tree for all CMS 4 clients connected to the site.

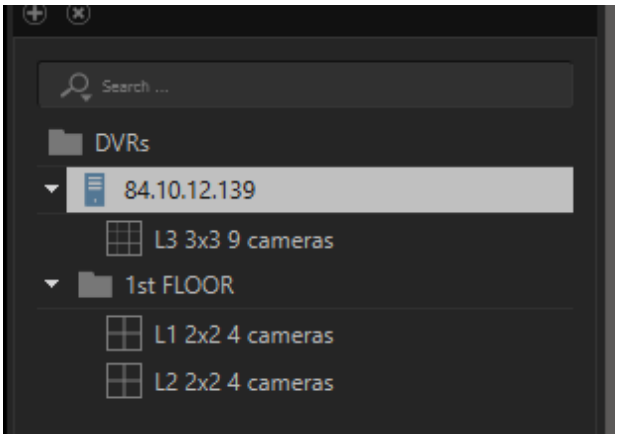
2. User layouts can be created by the administrator, but does not require administrator mode for modification, it means that any operator can change such camera layout. Those layouts do not synchronize with CMS HUB. Due to the fact that only administrators can access the toolbox, the default CMS4 sidebar has been modified (see **3.4.1.2 SIDE PANELS** for more info)

In this example, if we add a server with 6 cameras to the CMS 4, the software will generate two 4-camera layouts and a 9 camera layout to fit all of them in one window.

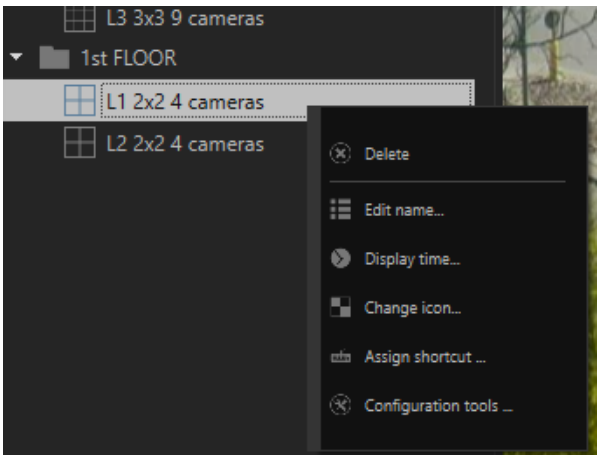


On the layout tree You see groups, servers and layouts. "DVRs" group is the default one and cannot be changed or moved on the tree. You can create subgroups to this or add Your servers directly to the main group. There is no limit for groups and servers in CMS 4, therefore You can create a very complex tree depending on the site You are working in. Also, groups do not have to contain ANY server in them at all, however You cannot add groups to the server tree (in short, groups can contain servers, servers cannot contain groups.)

In the below example You can see that we modified our default layout tree and divided it into the main floor and 1st floor.



Another feature You do on the layout tree is auto change of the layouts in the selected tree. You can set the layout display time by right-clicking it and selecting “display time”



Default value is set to 5 seconds. In order to start the automatic (dynamic) layouts display simply select the “group” You want to preview.

A good practice is to keep the layout names most accurate as possible. At the beginning the tree will be rather simple and not too complicated. However the longer You work with it, the more sophisticated it is starting to be. Proper naming and labeling the layouts and groups allow for faster operations and, thanks to the search bar You can quickly jump between them by typing the whole or only part of the name.

Note: If You add cameras to the server, they will not show by default in CMS4. You need to add them manually to the selected layout.

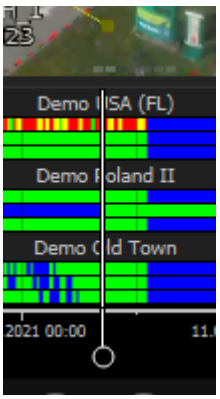
Note 2: Only one group of layouts can be dynamically displayed at a time.

3.4.5 ARCHIVE PLAYBACK

Archive playback is based on the same layout tree as live view. Also those layouts are synchronized, which means that if we are on the specific layout in live view, and jump to archive playback, we will get exactly the same layout and camera setup. You can say that archive playback is the live preview but with a time bar at the bottom.



Timebar can be moved by right-clicking it and holding the mouse button. After that just swipe left or right in order to move on the timeline.



Also You can see different colours on the camera timebar. Each of them have their own meaning:

blue - no recordings

green - recordings OK

red - camera not connected or connection error

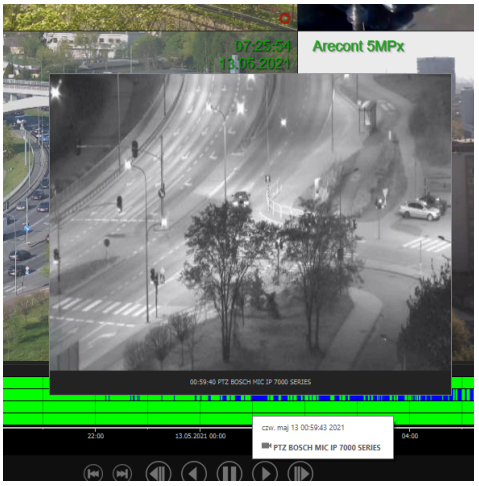
yellow - camera connected but no stream available

gold - recordings downloaded from camera SD card.

Last but not least is the hover mode. You can hover the mouse over the timebar and after a few seconds You will see a small window with FRAME of the VIDEO You are currently pointing at.

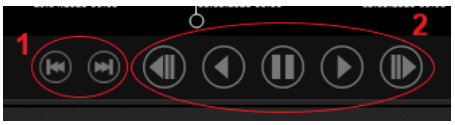
When You move the mouse cursor left or right the window will also change the frame You are pointing on.

This allows for ultra fast preview of the time bar and speeds up searching of the event that is important to You.



Below the time bar You can find two sets of buttons:

1. Playback manipulation buttons



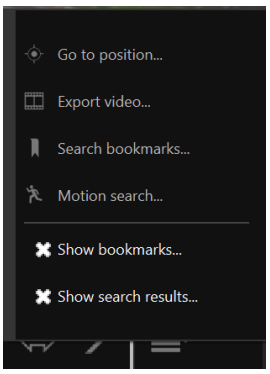
1. step forward / backward (3 frames jump)
2. forward / backward play and fast play buttons

2. time bar manipulation buttons and additional playback menu options



1. playback speed
2. select whole current day and calendar
3. timebar movement buttons and expand time button (also includes hover note with mouse control binding information)
4. additional payback functions menu

3. additional playback menu



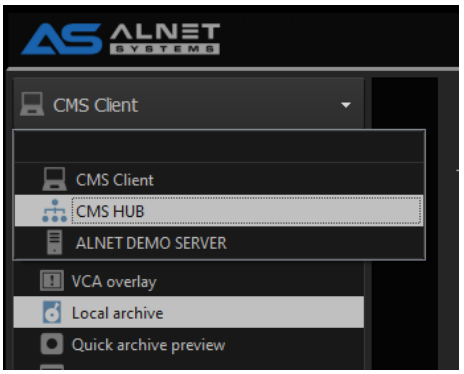
- Go to position… - select date and time where You want to set the timebar main marker
- Export video… - export video to mp4 with audio
- Search bookmarks… - search all or private bookmarks (can be filtered for specific cameras)
- Motion detection… - search for motion frames on specific camera (works with motion metadata search if function enabled in camera settings from the server side increasing search speed. Higher requirements for CPU)
- Show bookmarks… - show bookmarks on timebar
- Show search results… - show red markers for searched results

That covers the basic operation guide. More advanced features and in depth descriptions can be found in the full CMS4 manual.

4 CMS - SOFTWARE CONFIGURATION MANAGEMENT

4.1 CMS CLIENT CONFIGURATION

CMS 4 configuration change can be done via CONFIGURATION tab. By default when a user clicks the CONFIGURATION tab, CMS Client configuration is available. In the top of the left bar there is a dropdown list, where You can change what currently connected device You want to to configure. At this moment You can do a full CMS HUB and almost full NetStation configuration remotely.



Server name in the dropdown list is synchronized with the server name provided in the Network Configuration on the SERVER side (please check NetStation manual section 3.3.3.1 BASIC and go to Network server 1 description for additional info).

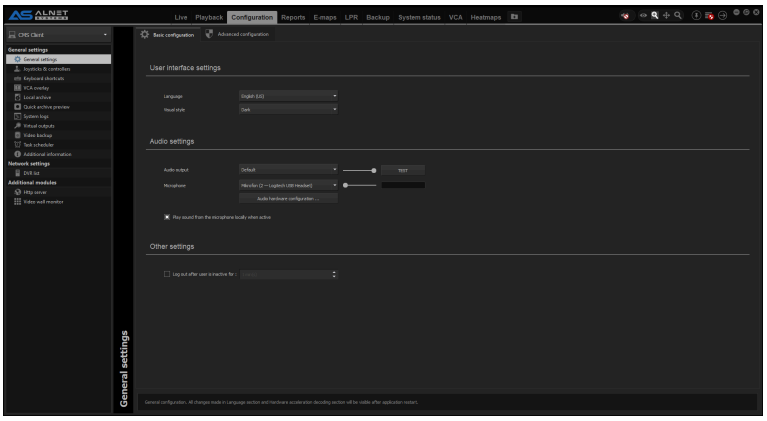
There are three main categories on the left panel for CMS configuration: **General settings**, **Network settings** and **Additional modules**. There is also a fourth category **Outputs** that will show only if You add **Virtual outputs**. It will not be visible at all otherwise.

4.1.1 GENERAL SETTINGS

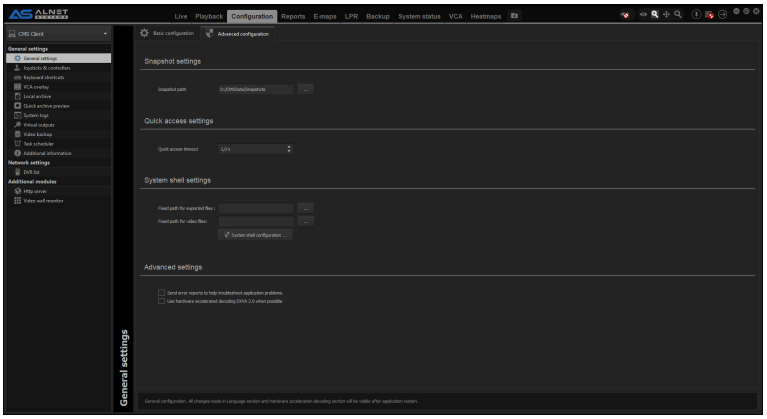
4.1.1.1 GENERAL SETTINGS

There are two tabs in general settings: Basic configuration and Advanced configuration.

Basic configuration allows you to change user interface language, visual style of application, microphone and audio settings and also have user inactivity enabler.

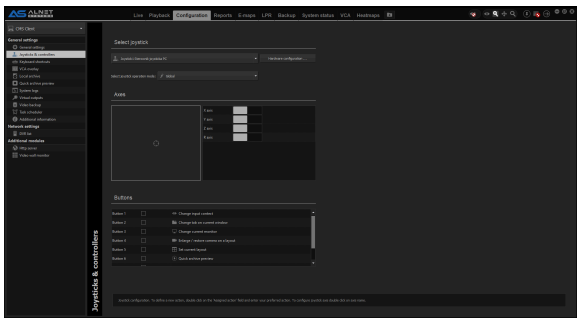


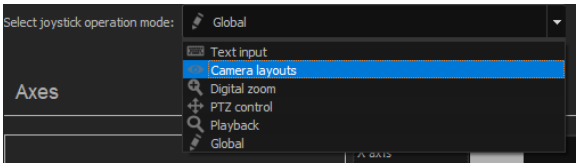
Advanced configuration allows for snapshot settings, system shell startup and additional display modes like hardware acceleration.



4.1.1.2 JOYSTICKS & CONTROLLERS

Here You can configure how Your connected joystick will operate, invert axis if required and assign button functions. In the dropdown menu You can change each operation mode and configure different button configurations individually.



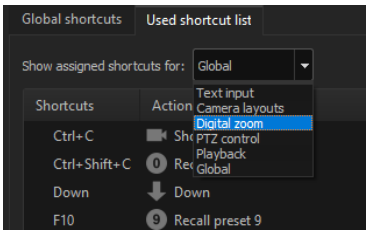


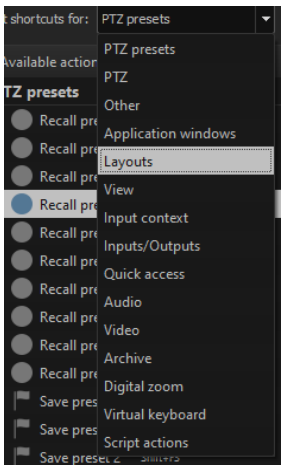
Note: Global operation mode is the least priority mode, so if You have configured anything in the specific mode that will collide with Global mode, the Global mode action will be skipped.

4.1.1.3 KEYBOARD SHORTCUTS

Keyboard shortcuts allow you to use functions just by using keyboard shortcuts of Your choosing. it supports multi key input so You can have for ex. “Ctrl + C” or “Ctrl+Shift+Alt+C” as a shortcut.

You can check currently used shortcuts and assigned actions in the “Used shortcut list” tab.

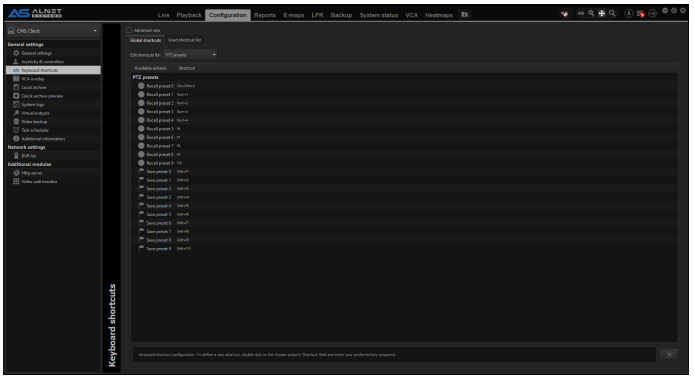




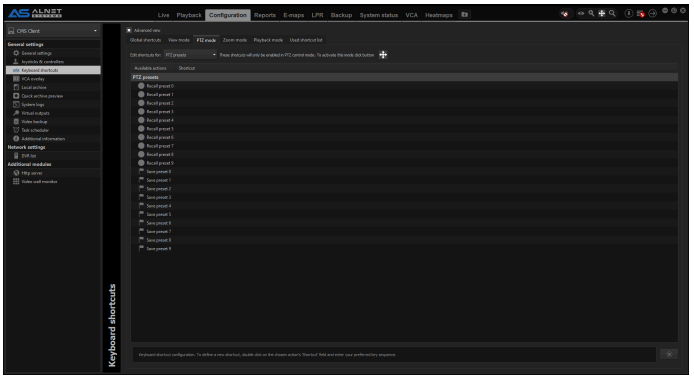
You can configure shortcuts for a wide variety of functions and operations available in CMS 4 software. You can change the active monitor, hide sidenales with a button, change layouts and tabs, show specific camera with a quick camera change (“Show camera” shortcut in “Quick access” shortcut list is a very effective tool).

There are two modes for shortcuts configuration:

1. Default configuration, where You Can set Global shortcuts which work in all CMS 4 operation modes (for information on operation mods please check **TOP BAR** section of the manual).

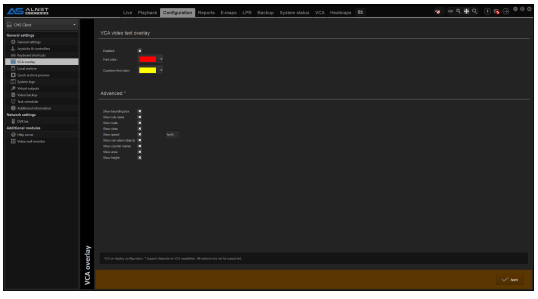


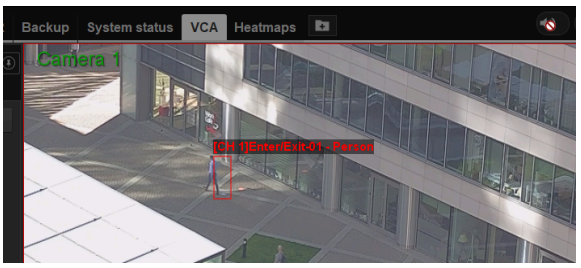
2. Advanced configuration, where You can set Global shortcuts and each operation mode shortcuts individually (each mode shortcuts have priority over Global shortcuts if set).



4.1.1.4 VCA OVERLAY

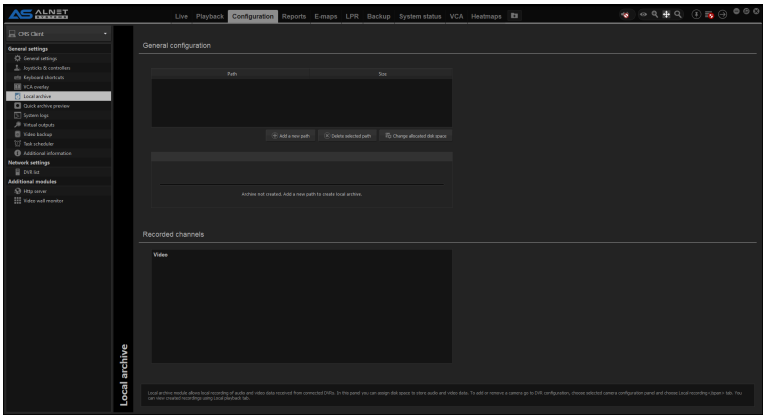
Here You can define the colours of VCA text overlays displayed on video, also You can select which VCA overlay info are supposed to be shown on camera stream like bounding boxes or rules name.





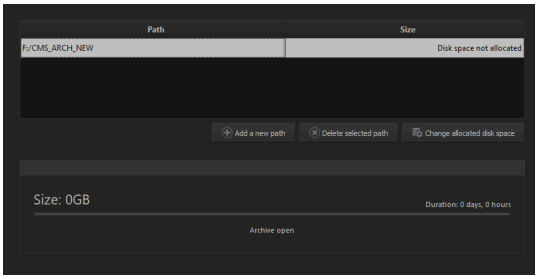
4.1.1.5 LOCAL ARCHIVE

Local archive allows for recording of specific cameras currently connected to CMS 4 regardless of the server settings. In order to do so, the user have to specify the path to folder which he wants to use as archive storage, specify the size of the requested archive and select the cameras which he want to record.

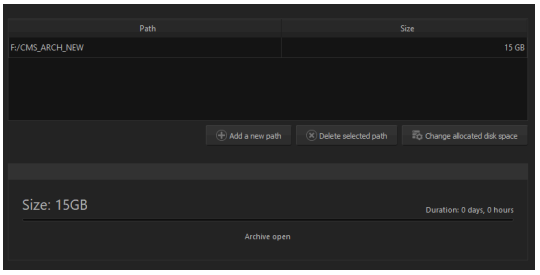


1. ADDING LOCAL ARCHIVE STORAGE PATH

First we start with adding a new path in the configuration menu by clicking the “Add a new path” button, then select the destination folder. Wait a moment while software prepares a new folder for archives.



After that is doen the last thing that needs to be done is to specify how much space do we want to give for archives. When the specific folder is selected click “Change allocated disk space” button and type the preferred size of archive space. After clicking OK the system will reserver the imputed size.

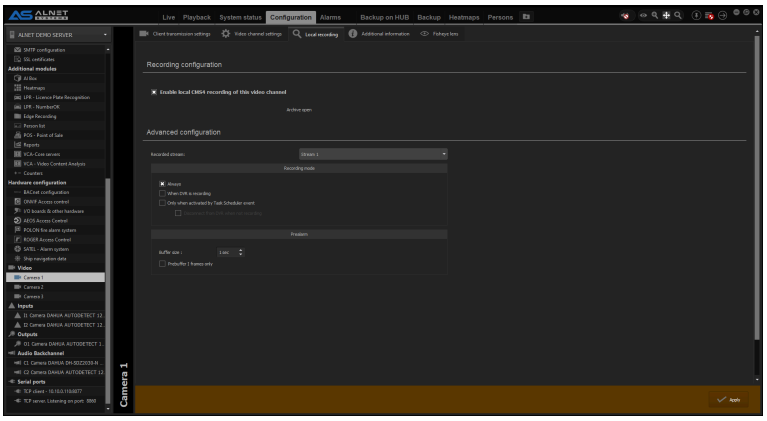


Done, the archive space is created and we can now add cameras we want to record.

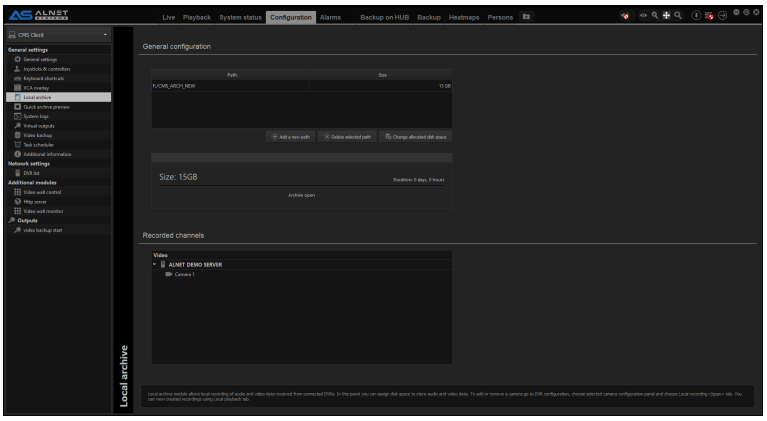
2. ADDING CAMERAS TO LOCAL ARCHIVE RECORD LIST

After creating storage space for the local archive it is required to add/select cameras that the user wants to record. To do so, You need to change from CMS Client configuration to specific server configuration from which we want to record cameras locally.

When You select the server, scroll the left bar down to the Video section and select the camera, then go to the **Local recording** tab of the camera settings and check the **“Enable local CMS4 recording of this video channel”.** Configure additional options as required and click **Apply** at the bottom right corner.



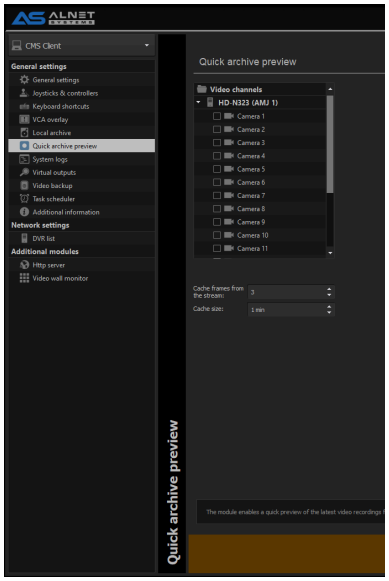
From now on, when You start this Profile, and server connection is possible, the CMS 4 will record the camera stream. The camera will be also shown in the Recorded channels list in the main Local Archive screen.



You can add multiple cameras from multiple servers. Keep in mind that if the server connection is not available, the camera stream will not be recorded. Also recording on the user without rights to the specific camera will not be possible as well.

4.1.1.6 QUICK ARCHIVE PREVIEW

Quick archive preview allows for one click fast preview of the selected time frame (based on the software setup.

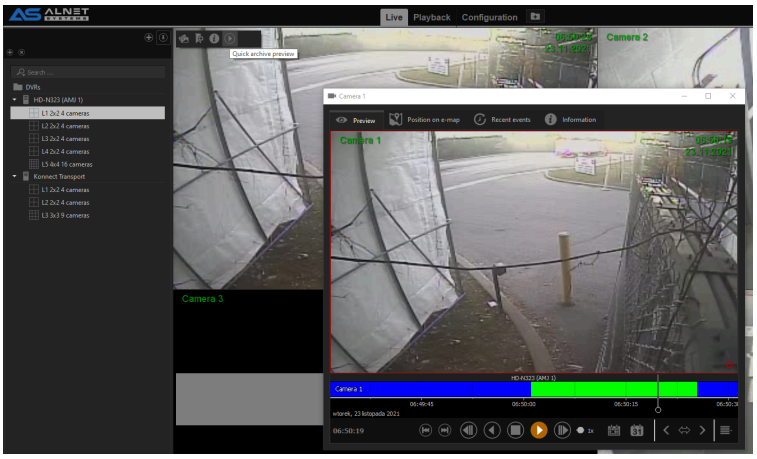


First You need to select which cameras You want to add to a quick preview. This is due to the fact that each camera buffer uses clients PC RAM to store the video. Enabling a large amount of cameras for QUICK PREVIEW is not recommended.

Cache frames from the stream - Here You sleect which stream will be buffered. 1 - mainstream, 2 - secondary stream and 3 - third stream. Main stream and secondary streams are from the camera. Third stream is configured on the server side in CAMERA SETTINGS -> SERVER.

Cache size - this is the time interval You want to store for archive preview.

Quick archive preview can be accessed from the on-camera GUI interface in the top left corner as shown on the screen below.



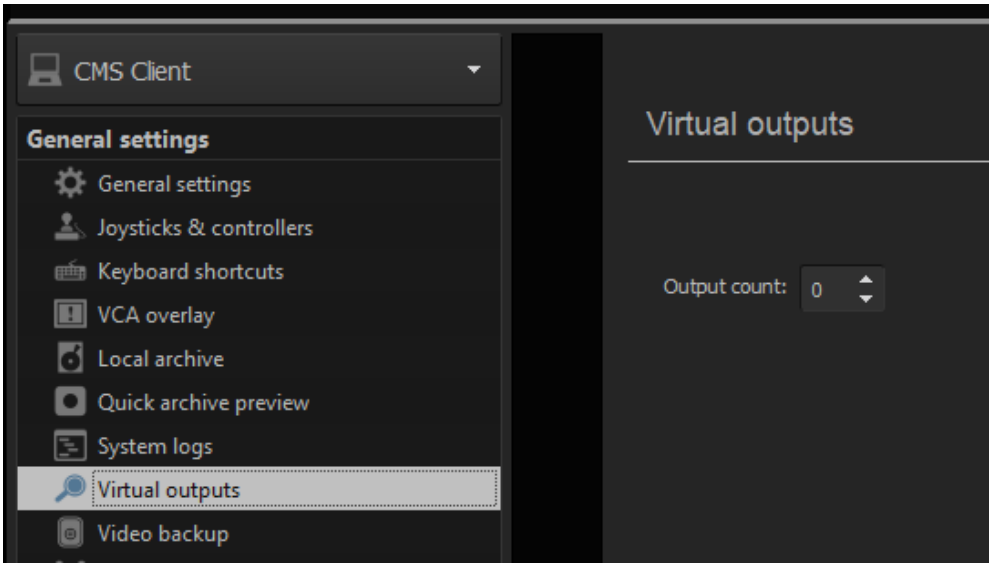
4.1.1.7 SYSTEM LOGS



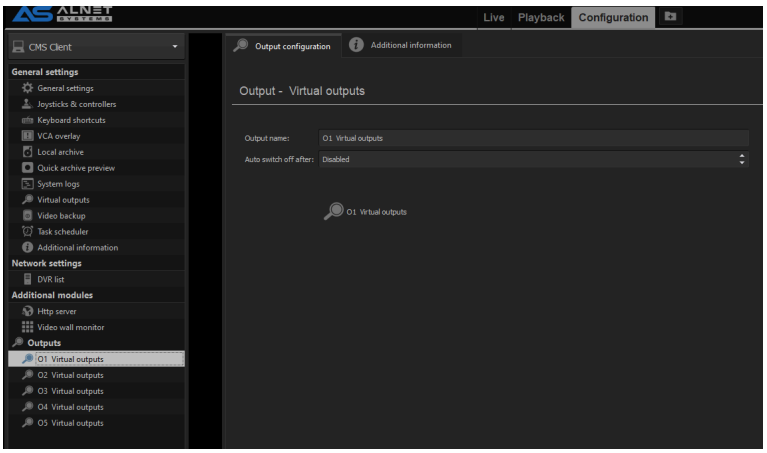
System logs show current internal events and processes that are happening in the CMS 4 software. These are mainly used for troubleshooting.

4.1.1.8 VIRTUAL OUTPUTS

Virtual outputs can be used for multiple purposes. The most ofet they are used as remote “clickable” icons to perform additional task configured in Task Scheduler.



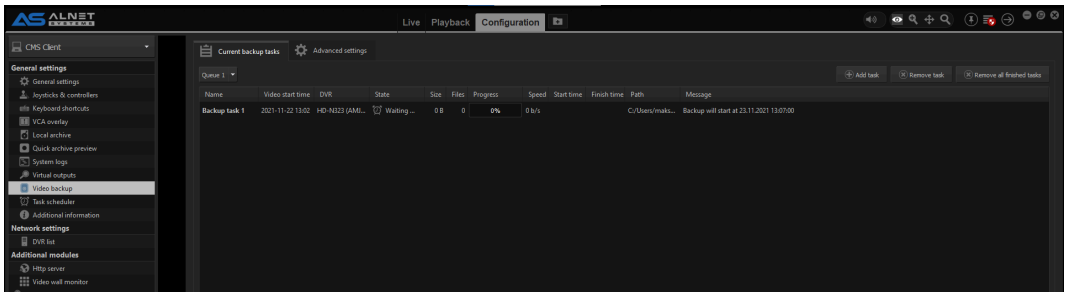
To add virtual outputs just type the amount how many You want to add. The list will be displayed at the bottom of the CONFIGURATION window. The configuration of the virtual output is the same as for “regular” output



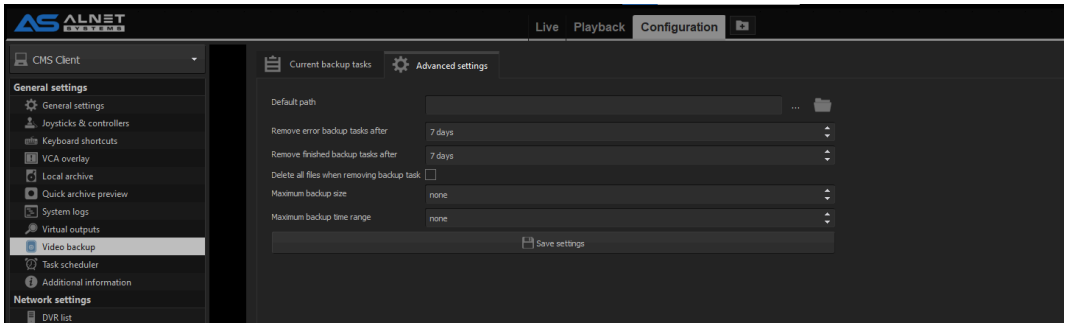
Naming virtual output will allow for easier recognition of what it is supposed to do. There is no limit to the amount of virtual outputs.

Note: Each software (NetStation, CMS 4 and CMS HUB) have their own set of virtual outputs which can be configured separately.

4.1.1.9 VIDEO BACKUP

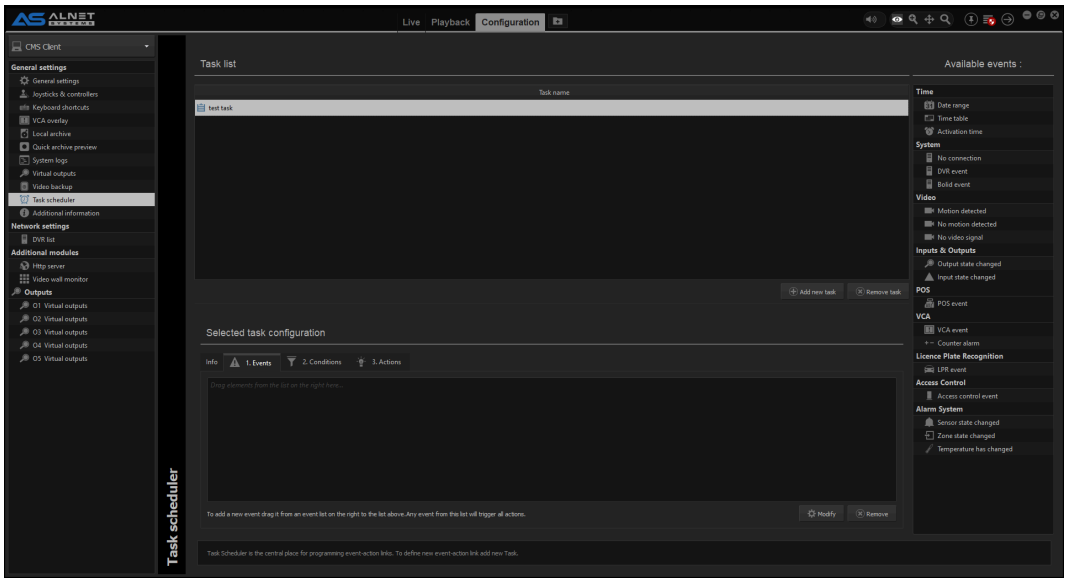


Video backup allows remote archive duplication on the client (or network HDD if connected to the CMS 4 PC). You can create various backup types (daily, fragment, older than, etc.) and add them to the queue. All backup jobs are stored in the queue information so You can have a previou of the jobs that are pending or already done.



Advanced settings is the place where additional configuration is possible to automate the backup removal of unwanted files. Also here You can specify default backup path.

4.1.1.10 TASK SCHEDULER

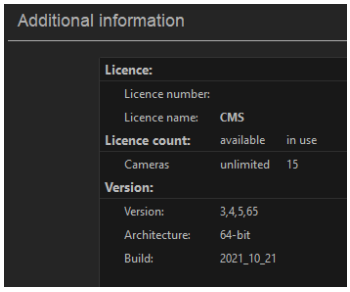


Task scheduler is the place where You can automate actions for specific events. Each software has their own Task Scheduler with DIFFERENT options available (some are reserved only for client, other for server software).

Events, Conditions and Actions are the main three parts of the scheduler. For each event the action (or multiple actions) will be done. You can also set additional conditions in order for action to take place.

Note: Cannot find specific event on the list? Try using “DVR event”. There are more than 40 additional events there.

4.1.1.11 ADDITIONAL INFORMATION

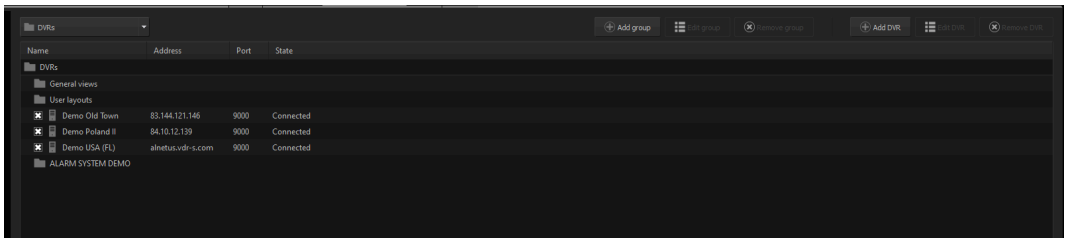


You can find additional info on the CMS 4 You are currently using here like amount of cameras You are currently connected to, version number and build date.

4.1.2 NETWORK SETTINGS

This is the section for all network settings related to CMS 4 software. At this time only the DVR List is configurable.

4.1.2.1 DVR LIST

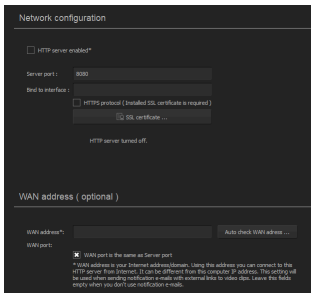


The DVR List allows adding groups and connections to specific servers. Detailed description on how to add server/group is available in **3.3 ADDING FIRST SERVER**. There is no software limit on the amount of GROUPS and SERVERS You can connect to.

4.1.3 ADDITIONAL MODULES

Here is the list of all additional modules CMS 4 can use. At this time You can find Video Wall settings and also HTTPS server for API and 3rd party software integration purposes.

4.1.3.1 HTTP SERVER



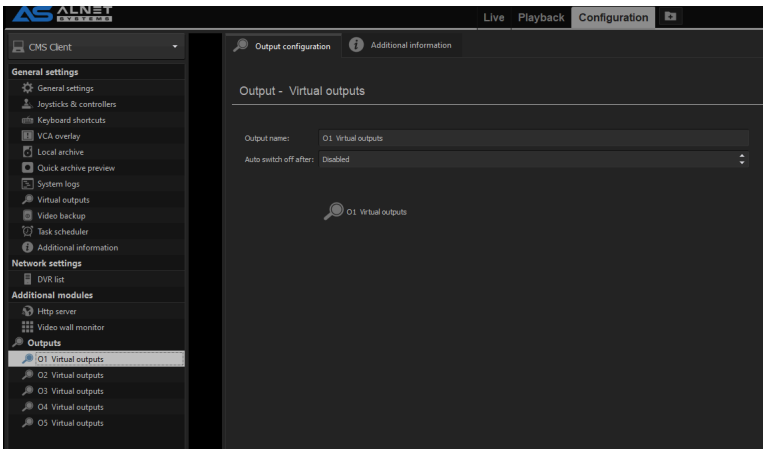
HTTP server allows for using API commands for remote control of CMS 4 application. This function is used in all 3rd party applications if required.

4.1.3.2 VIDEO WALL MONITOR

Video Wall Monitor is a function used by CMS HUB to utilise the CMS 4 clients and allows them to use them as one big video wall. HEre You can enable or disable this specific CMS 4 application to/from being used as a monitor wall. In most cases a double GPU in a client PC is more than enough to create a 8 monitor system without needing to use this feature.

4.1.4 Outputs

This is the place where You can configure all Virtual Outputs that have been added to the CMS 4 software.



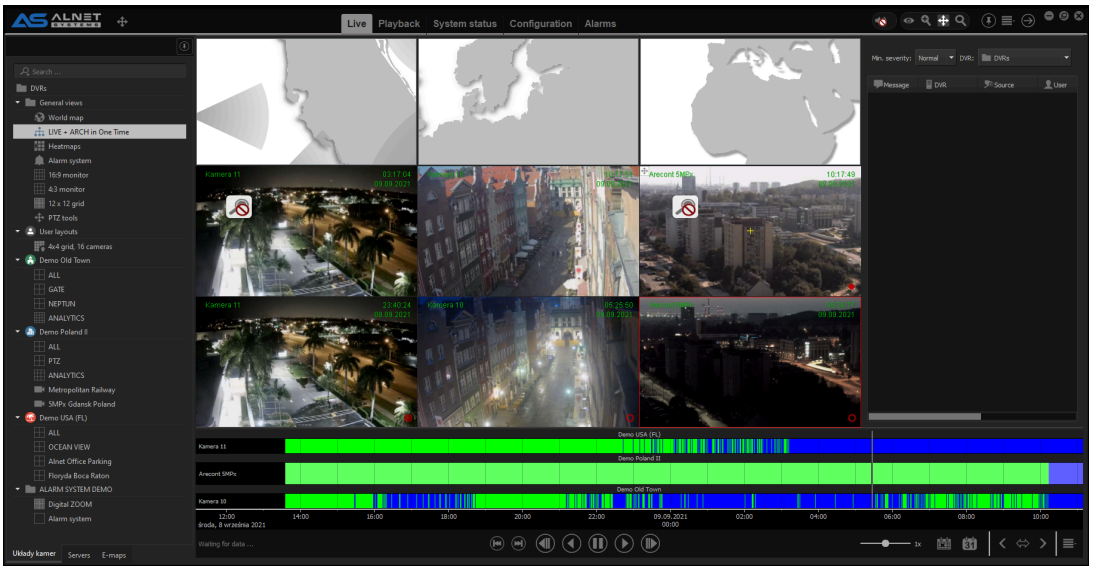
Virtual outputs can be used in Task Scheduler to perform specific actions or as a preventer (when used as Condition) to allow specific actions to happen ONLY if the Virtual Output is switched.

Virtual Outputs can be also used cross software which means You can use Virtual outputs from CMS 4 in connected servers and vice versa.

4.2 TOP BAR TABS

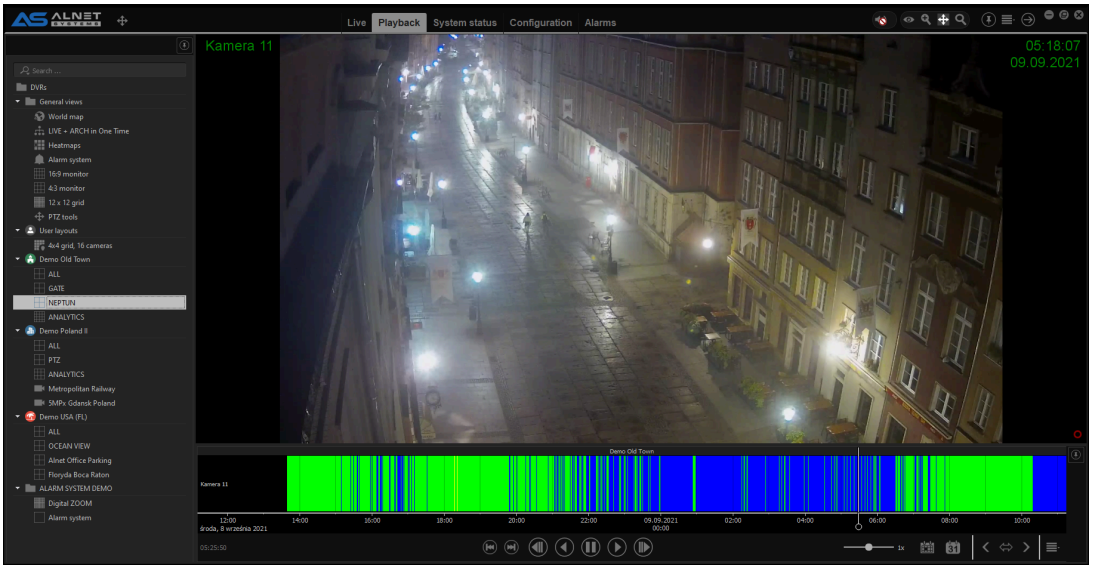
4.2.1 LIVE

Live camera streams feed with support of PTZ steering and live audio for currently active cameras (if supported). Can be used to create multitask screens with live streams, archive playback and other functions in one screen.



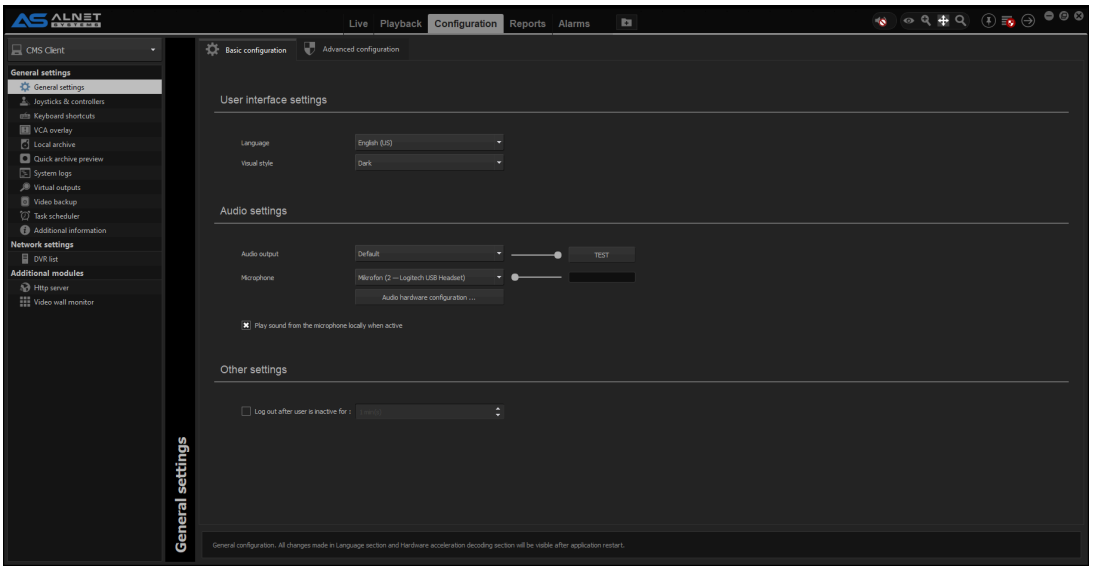
4.2.2 PLAYBACK

Archive playback screen.



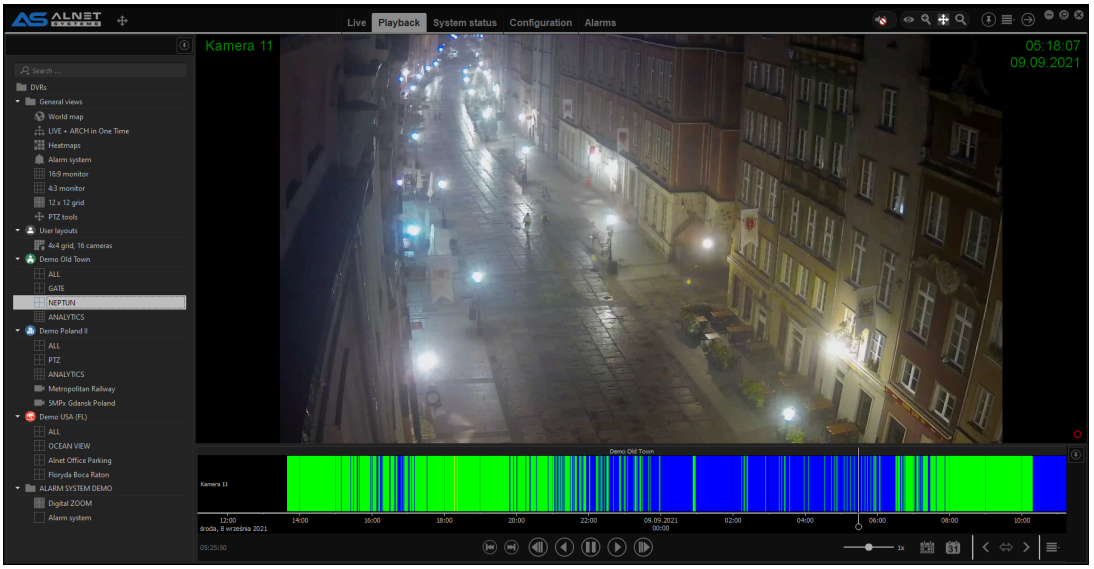
4.2.3 CONFIGURATION

Place where users can configure CMS 4, CMS HUB or NetStation software that is currently connected to CMS 4. The detailed description of how to configure CSM 4 software can be found in section **CMS CLIENT CONFIGURATION**



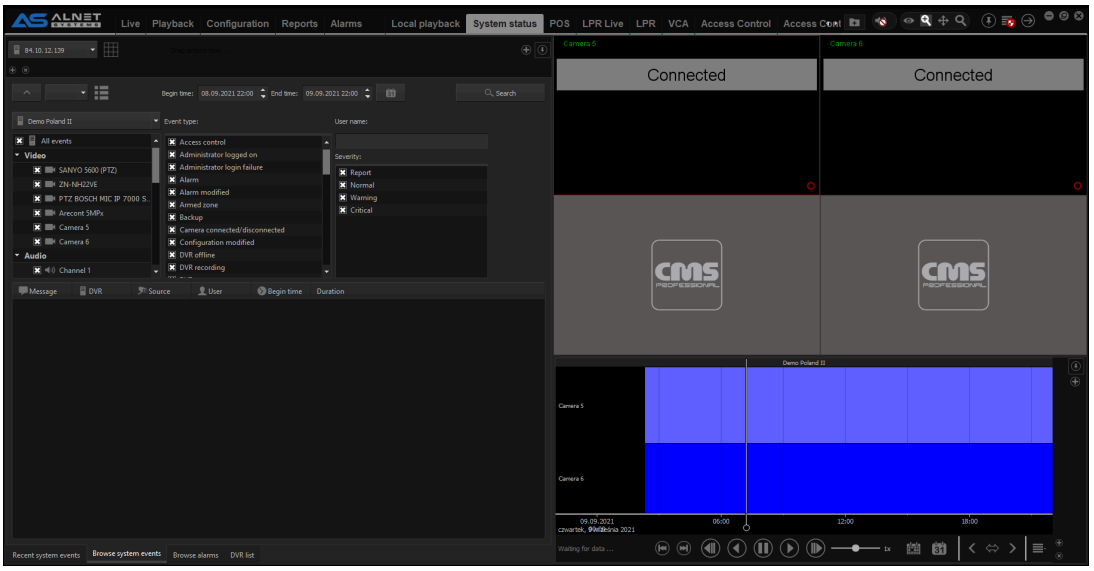
4.2.4 LOCAL PLAYBACK

Similar to Playback function, but this player allows only to see the archive recorded by the CMS 4 **LOCAL ARCHIVE** function.



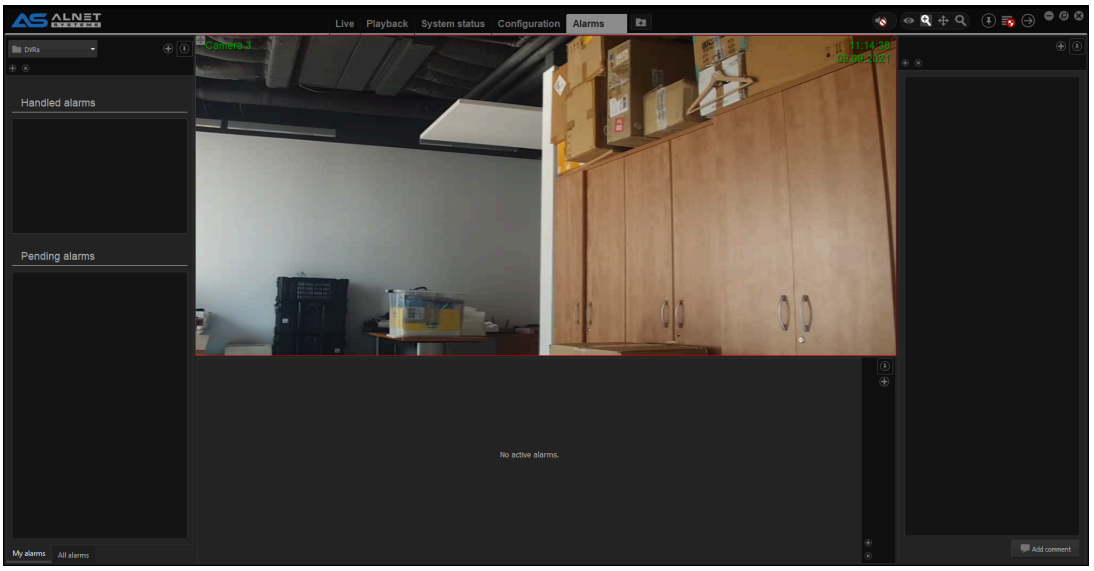
4.2.5 SYSTEM STATUS

In this tab You can browse system events from the servers You are currently connected to, also there is a list of recent system events, alarm browsers and DVR LIST. You can search events based on numerous event types available in the event list. System Status tab is working ONLY if You connect via CMS HUB. Otherwise please use event browser from configuration tab and select server You wish to see events.



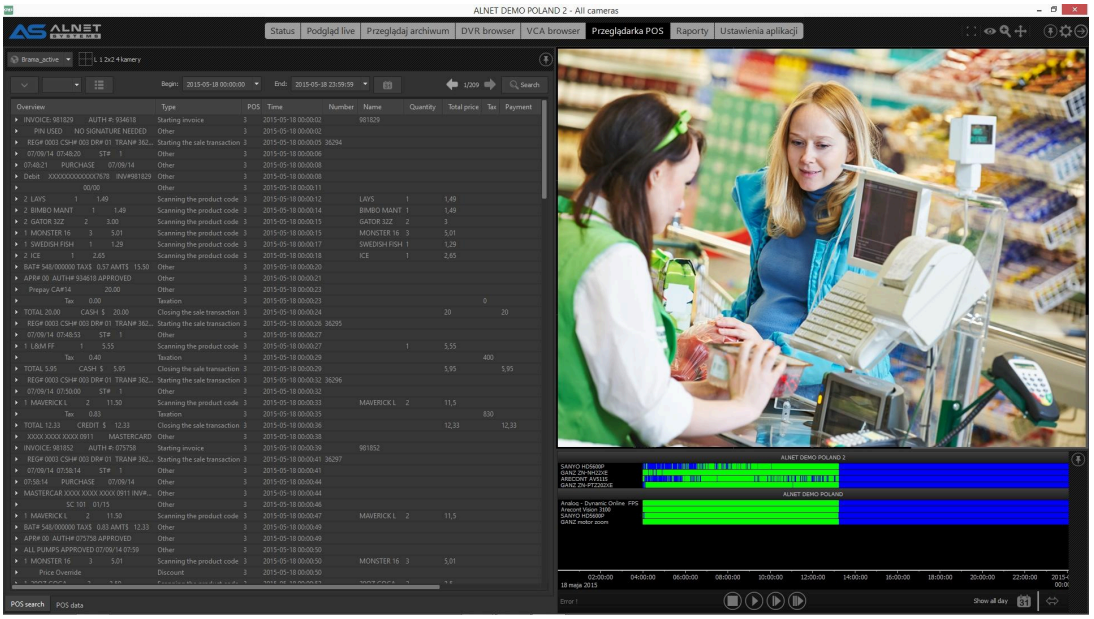
4.2.6 ALARMS

Similar to System Status, ALARMS tab requires CMS HUB to function. This TAB allows for alarm handling, two-way audio support and event



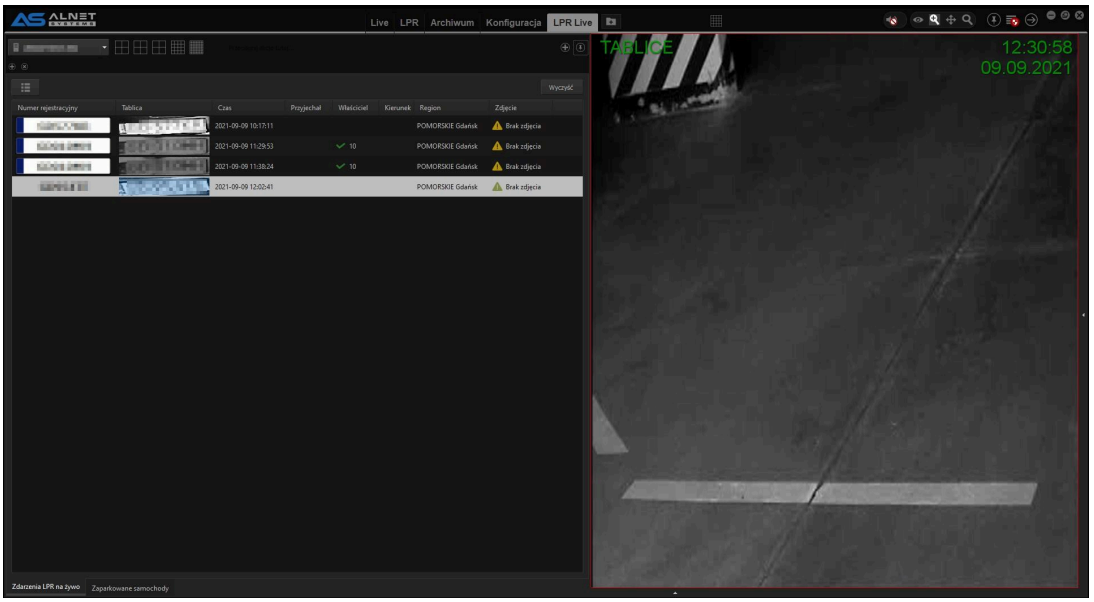
4.2.7 POS

POS module allows for preview of all registered transactions. It also allows for fast travel to the part of the archive we want to double check. All transactions are stored in DB.



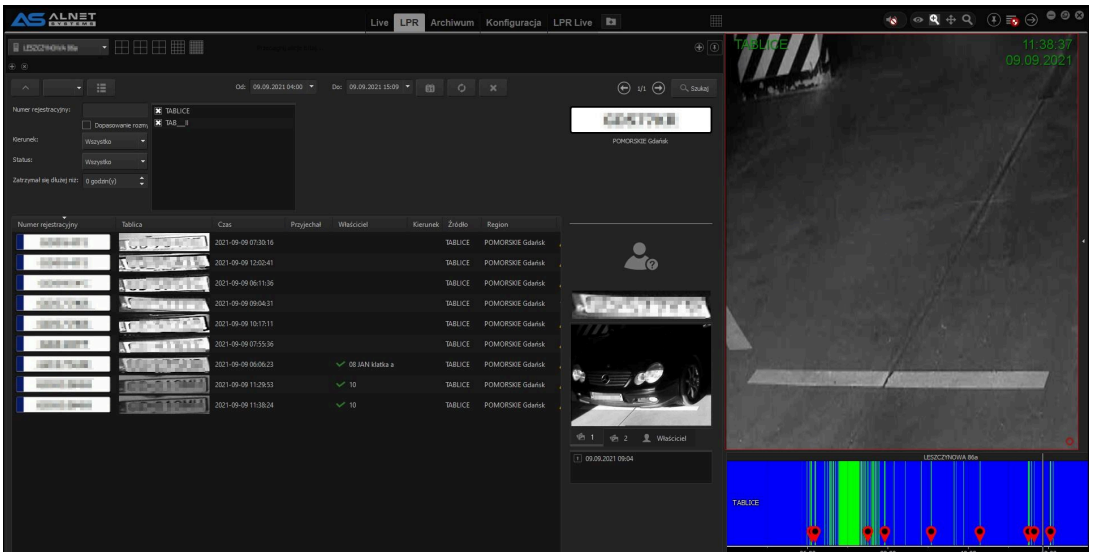
4.2.8 LPR LIVE

LPR Live tab allows for real time preview of the plate recognition. This window is refreshed automatically and provides overview of currently read plates.



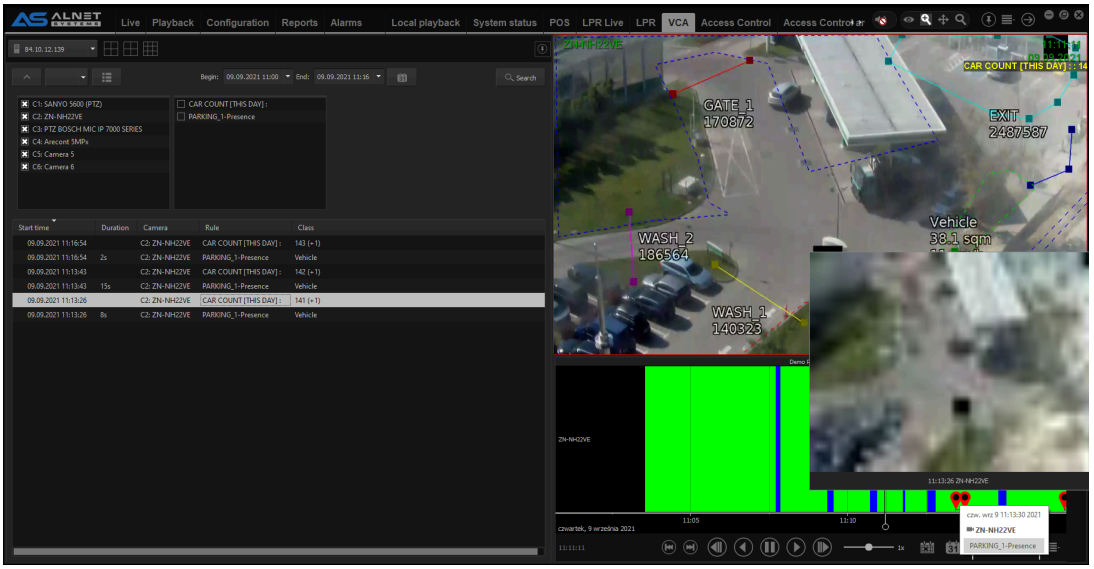
4.2.9 LPR

This tab allows search and preview of all LPR detected plates that are stored in the database. You can additionally search by part of the plate number, direction (if specified in LPR configuration) and/or person status (if specified in **PERSONS** list)



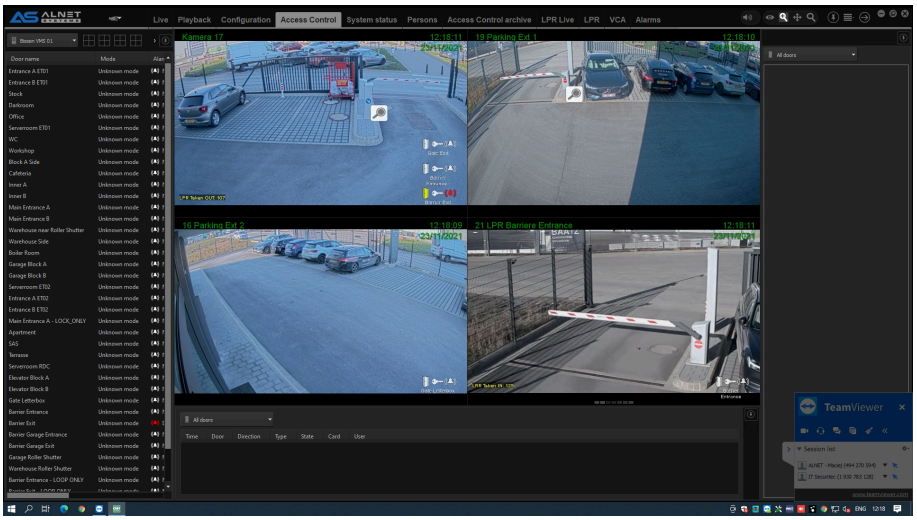
4.2.10 VCA

Browser for any VCA related events are available here. You can search for a specific events based on the selection of cameras and/or VCA events that occured on currently connected servers



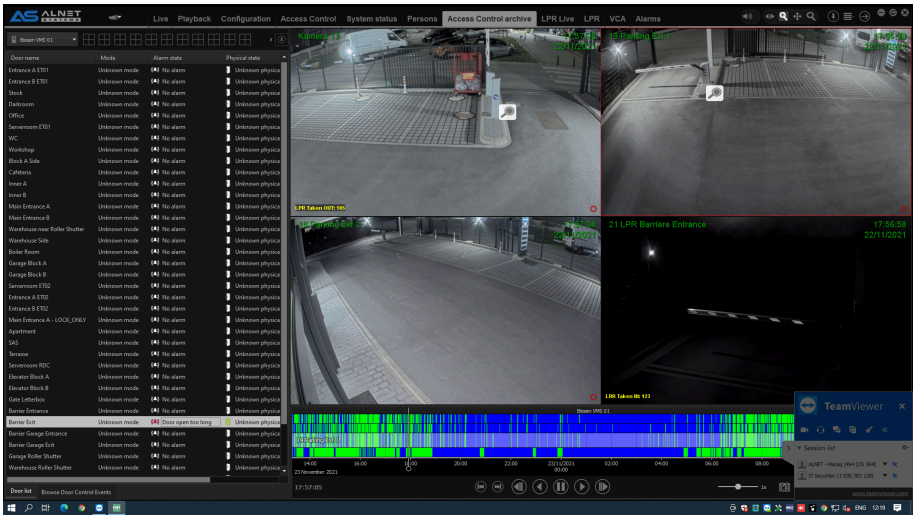
4.2.11 ACCESS CONTROL

Access Control module allows for live monitoring of the controlled doors/gates and preview of the persons currently trying to obtain access (live id card and person information feedback)



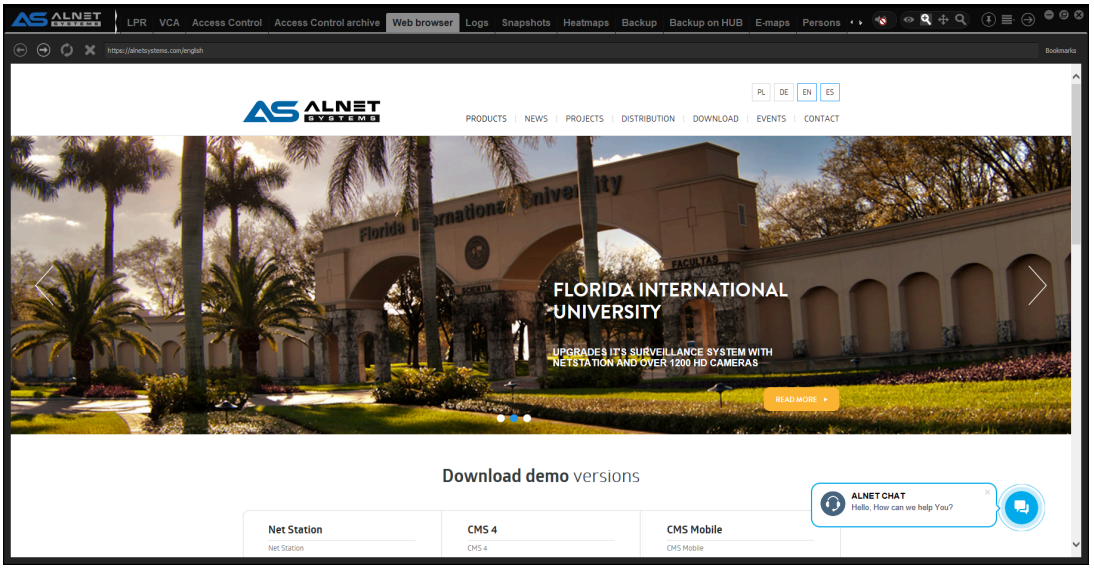
4.2.12 ACCESS CONTROL ARCHIVE

Similar to Access Control, but here You can instantly playback the access control events, export sequence to MP4 format or perform video backa for future reference.



4.2.13 WEB BROWSER

As the name suggests, this is an integrated web browser. It uses Internet Explorer that is built in the client's operating system.



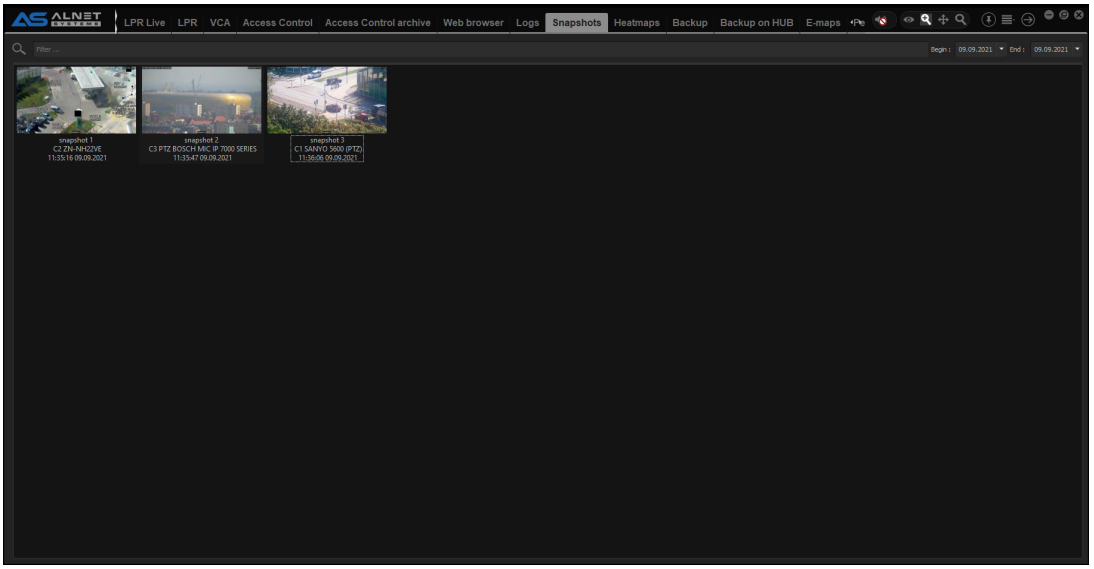
4.2.14 LOGS

Here You can see the live logs from CSM 4 application. This info might be required by ALNET technical staff if a problem occurs on users site.



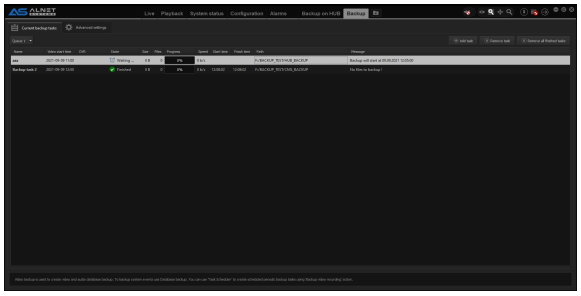
4.2.15 SNAPSHOTS

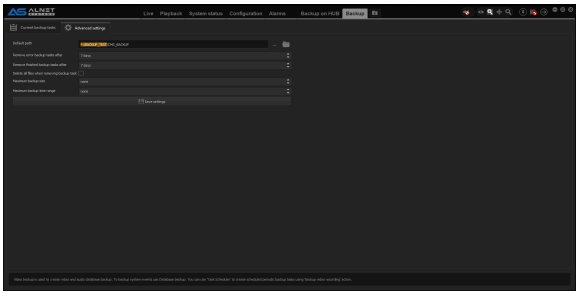
CMS 4 quick snapshot browser. It also shows additional info on selected snapshot like time of creation of snapshot, time from archive, DVR name, path of snapshot, etc.



4.2.16 BACKUP

Backup tab shows all BACKUPS that are done on CMS 4 side. You can also start backup manually from this tab.

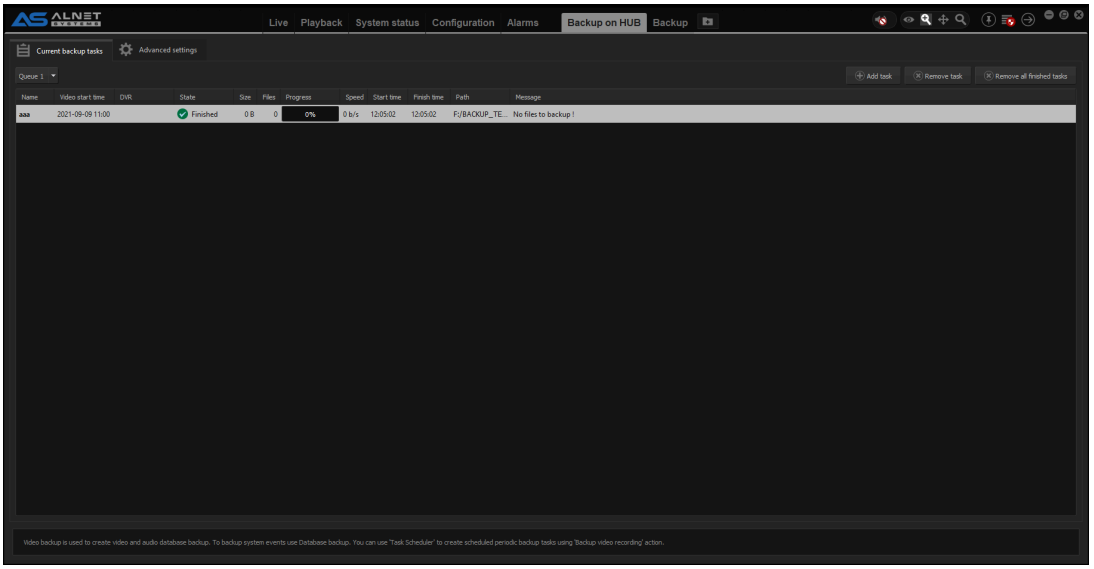




NOTE: You can see backups from all connected devices if first PATH of folder is the same for all devices (see screenshot where You can see the first folder which is same for all devices)

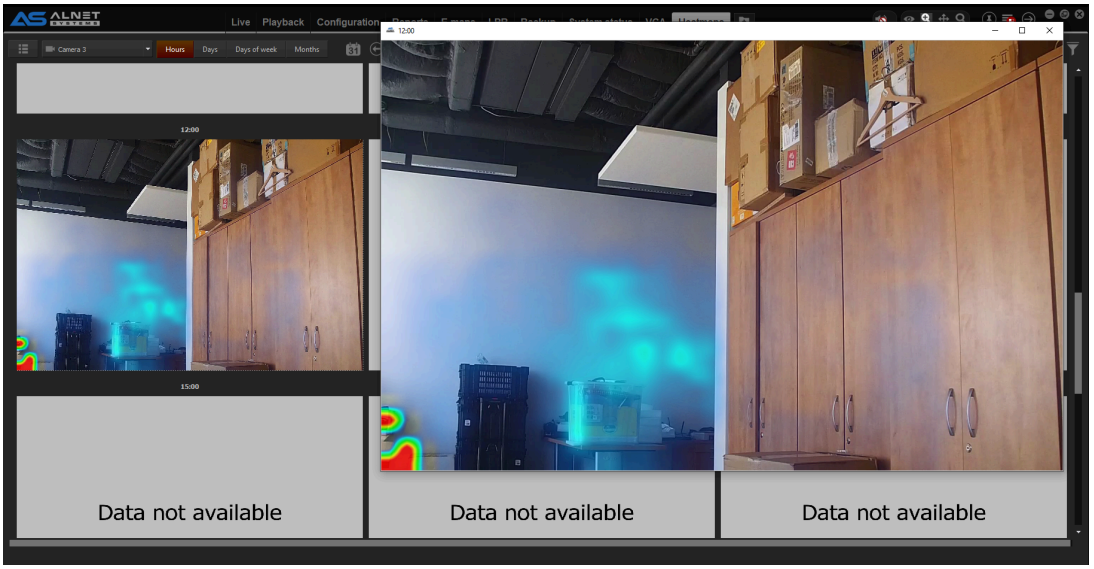
4.2.17 BACKUP ON HUB

This tab shows BACKUP queue status for CMS HUB scheduler ONLY. You can also start backup manually from this tab.



4.2.18 HEATMAPS

Heatmap function allows the user to use camera motion to detect the regions with the most movement. The data are analyzed and presented each hour after it ends. This function needs to be enabled on server in CONFIGURATION -> CAMERAS -> MOTION tab.



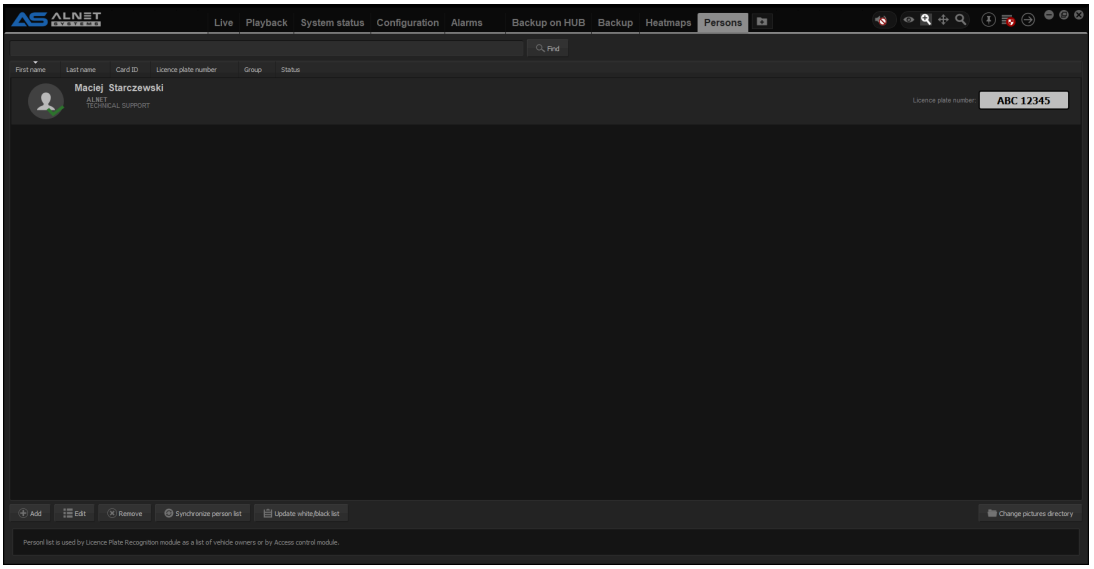
4.2.19 E-MAPS

E-map browser and configurator. Allows for map creation, object placement as well as quick camera preview and camera event browser from context menu.



4.2.20 PERSONS

Person list is a place where You can store data of personel with ID tags or LPR authorisation requirements. If You have CMS HUB enabled the person list is stored there, not on the server side.



4.2.21 REPORT

Report tab allows the generation of different reports in PDF, CSV or XML based on specific events like POS transactions, VCA events or LPR counters.

