commX Discover

By COMMIT

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commX Discover

We Unified all your streaming into **One Web Page**

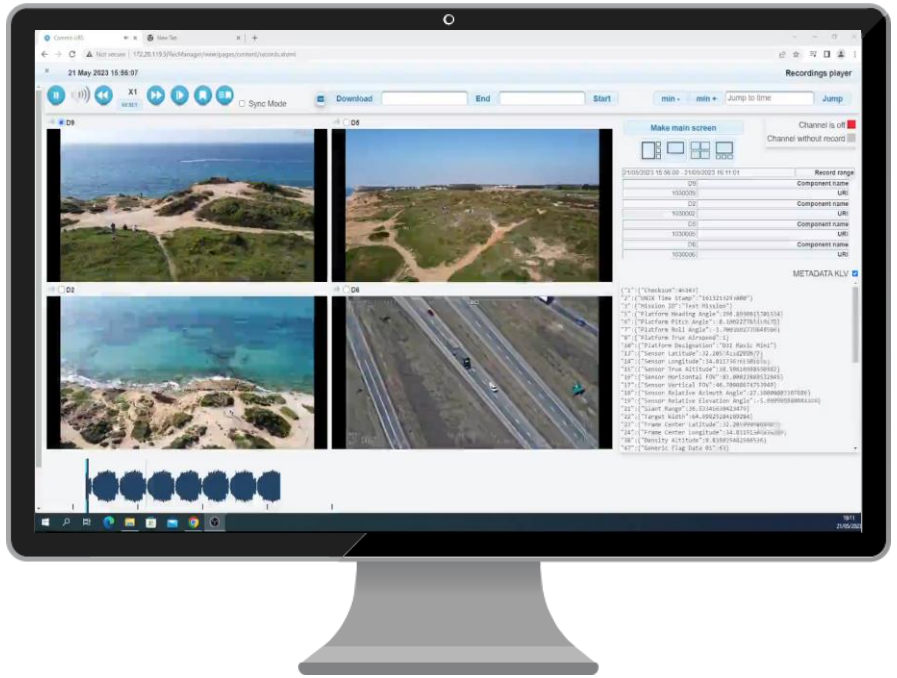
CommX Discover

Investigate & Screen Matrix

Multimedia Streaming & VOD

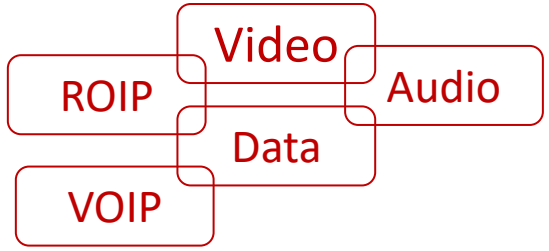
Web-Base Interoperability H.265

STANAG 4609 / KLV



More About CommX

- The system, which is container-based, can record multiple types of media, including:



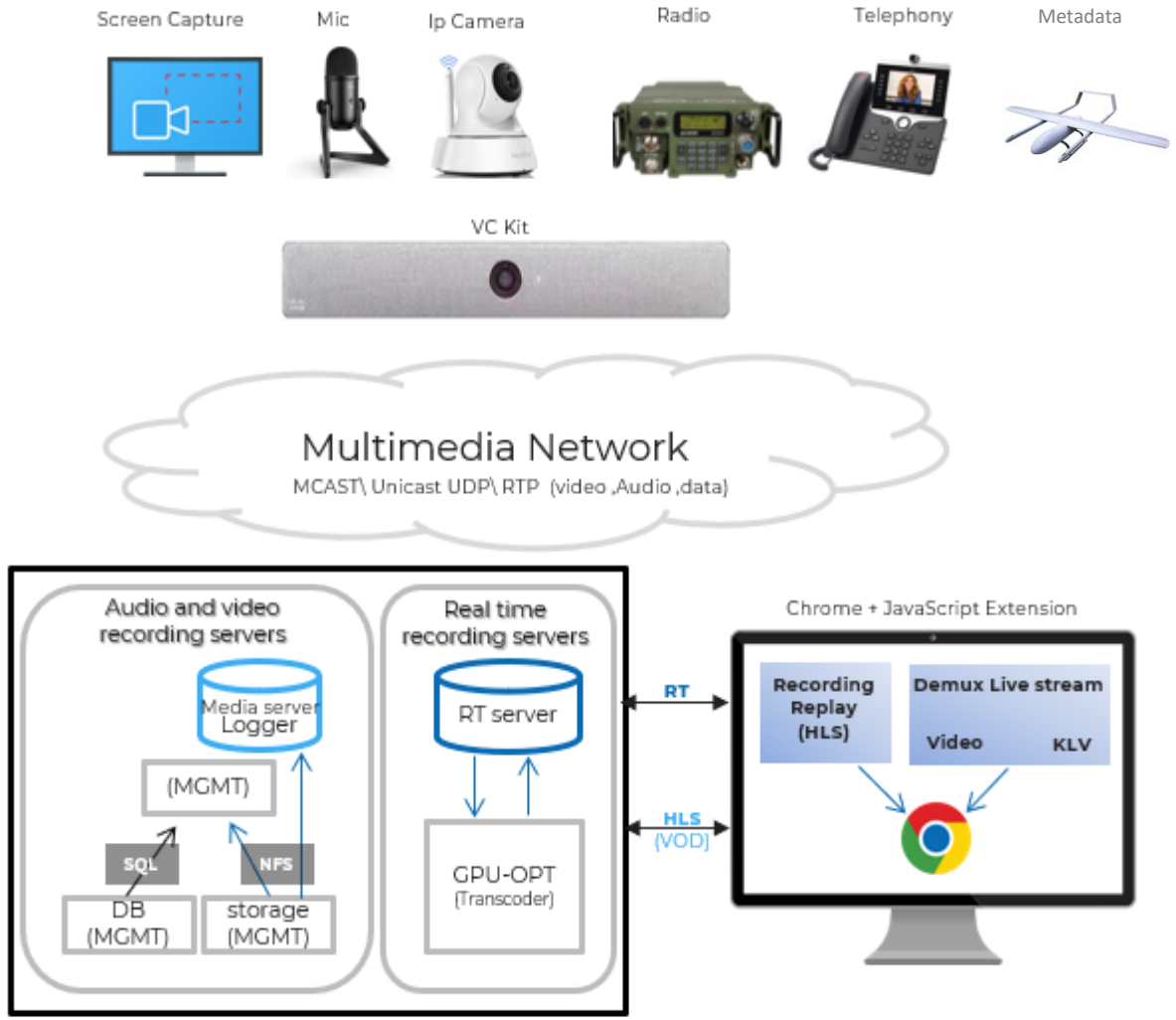
- With a web browser, the user can:
  - Investigate historical recordings
  - Watch real-time streams
  - Manage the system
  - Monitor the system

- The system has a REST API interface

- View all streams in real-time

A little bit more about CommX Architecture…

- Receiving information from various sources
- Unicast and multicast support
- Redundancy of streams recording (with multi streams)
- Long-term storage



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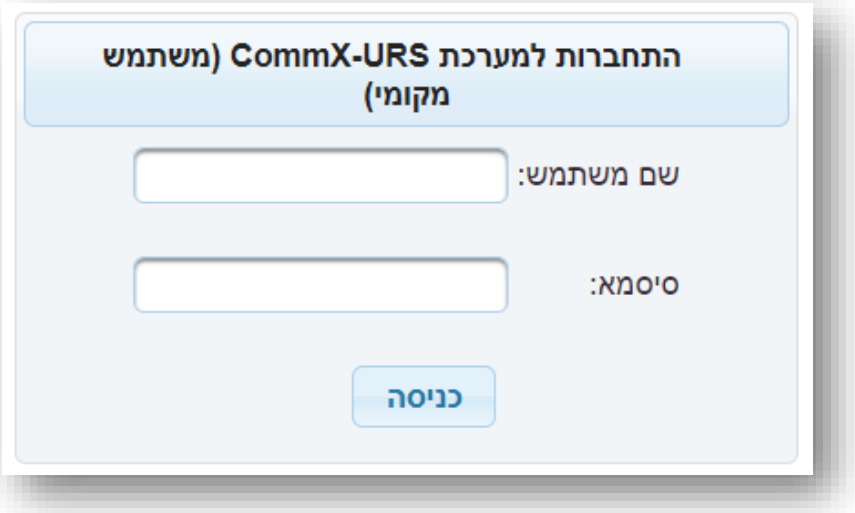
Meet the System

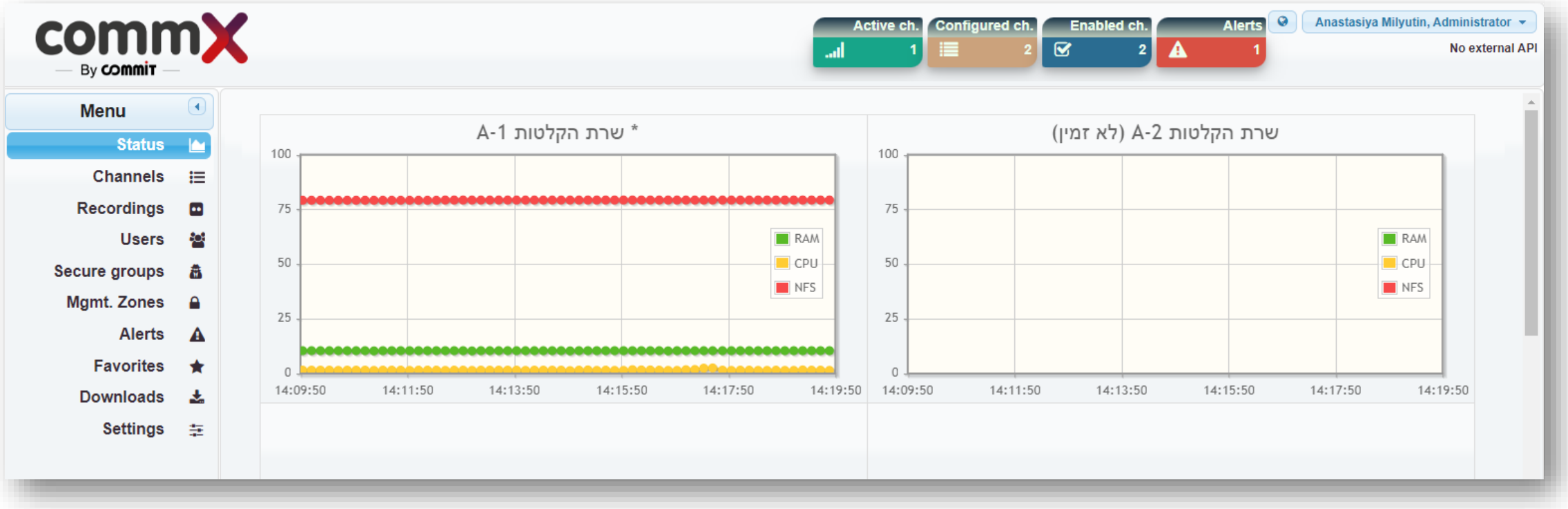
Log in to the system

- The recording system works through a WEB interface
- The interface can be accessed from the CHROME browser by entering the IP address of the server
- On the Identification screen, it is required to enter a username and password



Main Screen

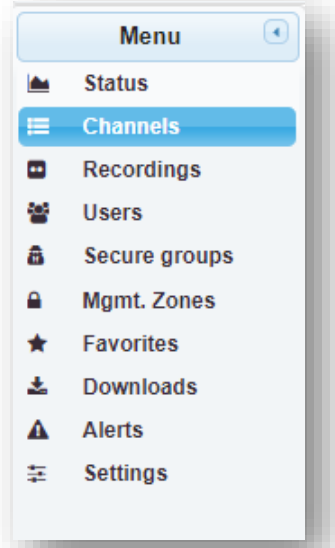
- The user's main menu and options will be adjusted according to their access level (The Access level)

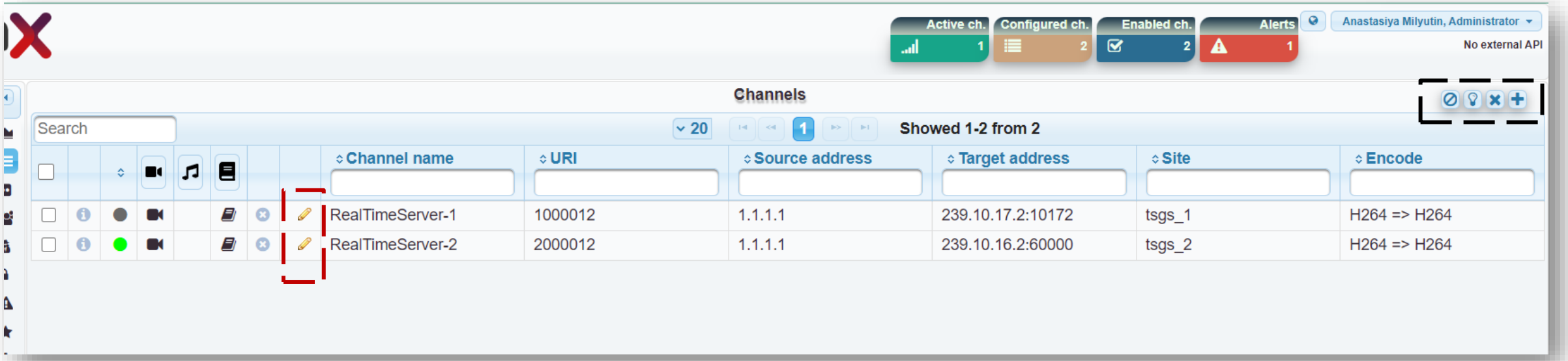


Channels

- The "channels" tab contains all the recording channels defined in the system.

  Here you can: Add \ Delete \ Edit all types of channels.





Channels – Adding a Channel

- Click ➕ to add a new channel

  A new settings window will appear.

  Here you can define which type of channel you want, including

Video **Audio** **Metadata**

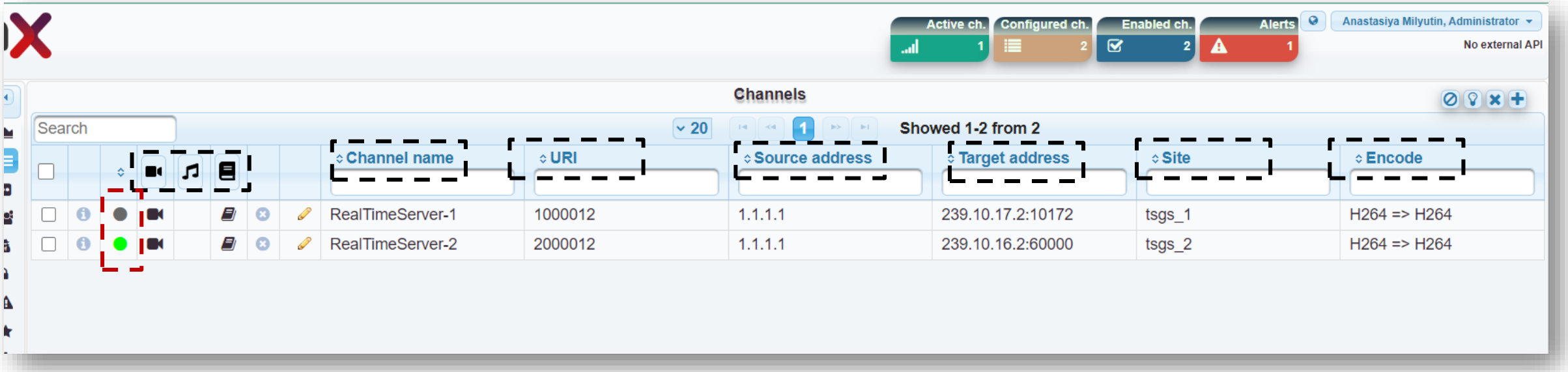
Depending on the channel that was chosen, you will be able to configure different settings.

Channels - Table

You can sort according to characteristics such as:

- Type of channel – Video\Audio\Data
- Status of the channel – On\Off
- Channel name
- Source address

  And more…



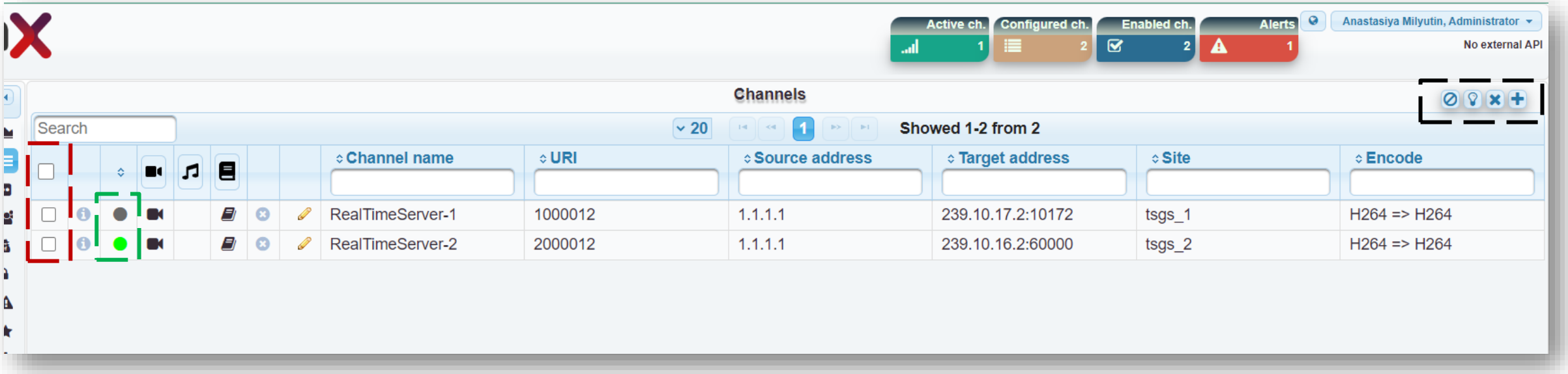
Channels - Activate

To turn channels on and off:

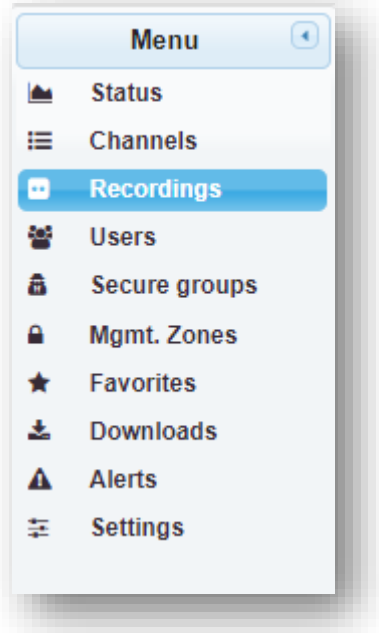
Press the white box ☐ of the relevant recorded channel, then press the 

You will see that the status color of the recording has changed

A green status indicator means that the channel is on and ready to record



Recording



The recording tab is where you can find all the recordings sorted by categories.

To watch and manage recordings:

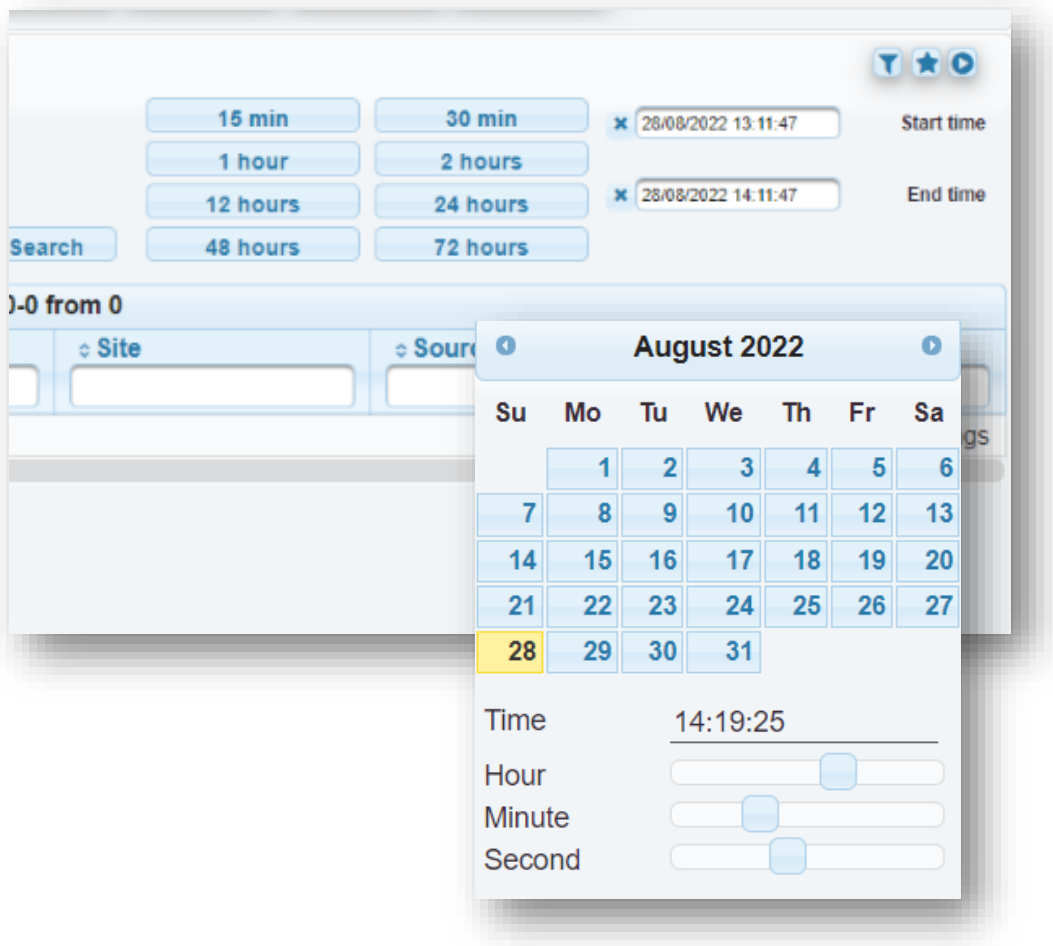
1. Set a range of time (limited to 3 days or less)
2. Sort by the category you need
3. Choose 1 to 4 recordings to watch and manage

You can save the recording to bookmark by clicking

Recording – Set The Time

There are two ways to choose time ranges -

- Using the buttons that give time ranges from the current hour
- Manual selection

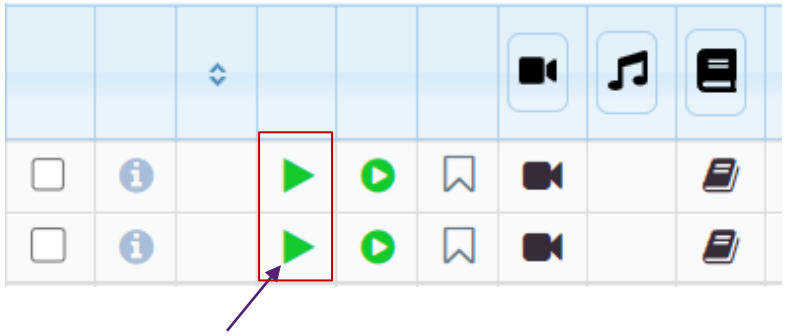


Recording – Play the Record as LIVE

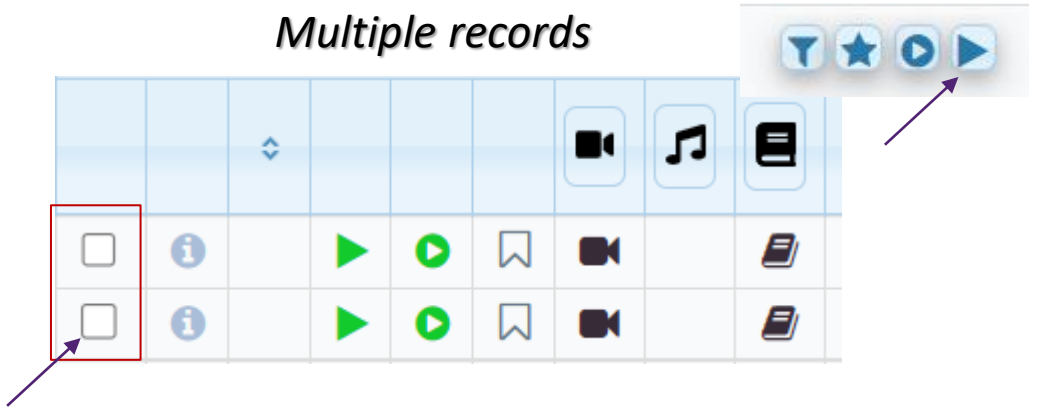
There are two ways to play records

- Click the ▶ next to the desired record to play one at a time
- Select the checkbox ☐ next to all the records you want to play and click the ▶ to play multiple records

One record



Multiple records

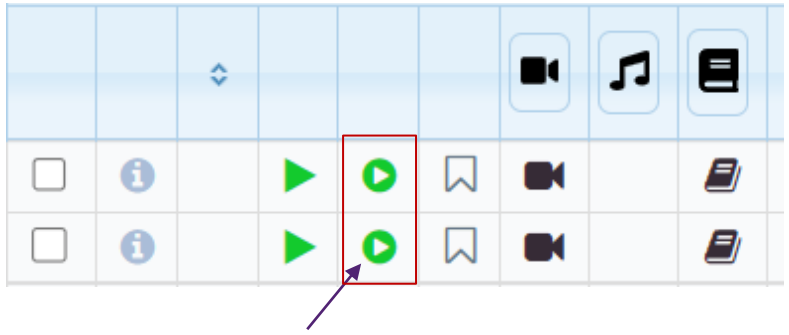


Recording – Play the Record as VOD

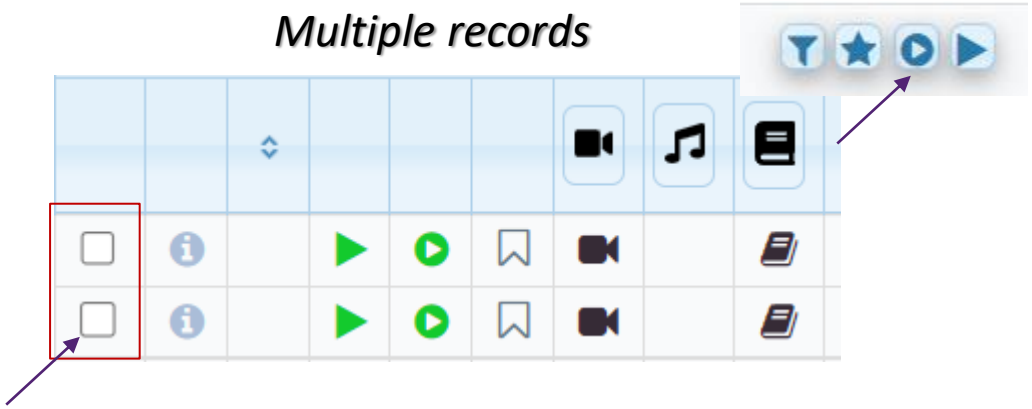
There are two ways to play records

- Click the ▶ next to the desired record to play one at a time
- Select the checkbox ☐ next to all the records you want to play and click the ▶ to play multiple records

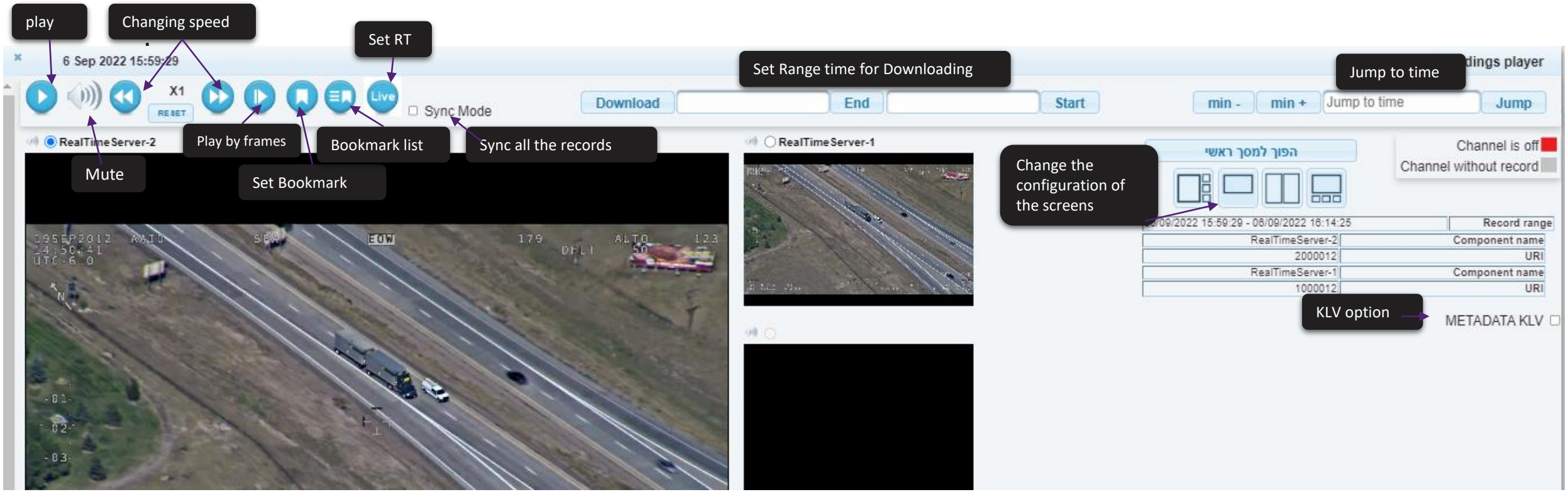
One record



Multiple records



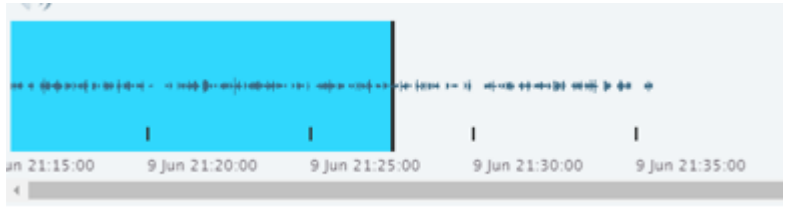
Recording – The Player Menu



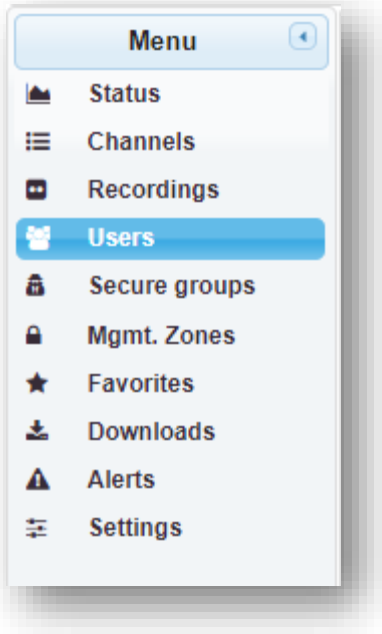
Recording – The Player Menu

Record without audio

Record with audio



User



- Add new users to access the system by clicking on
- Delete a user by clicking . To delete multiple users, select the users and click
- Edit a user by clicking on

Users

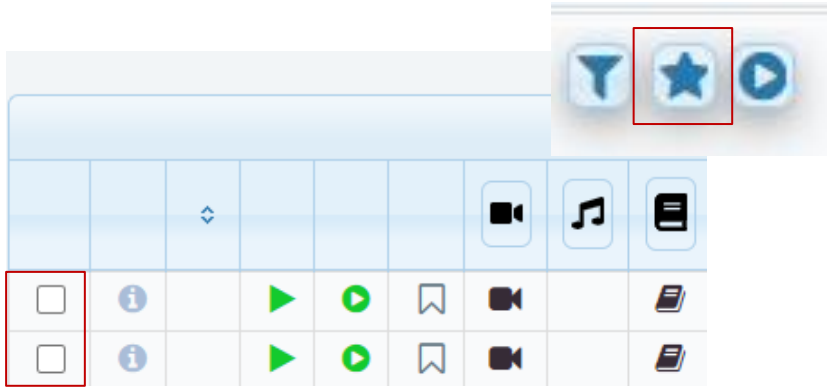
Search | 20 | 1 | Showed 1-2 from 2

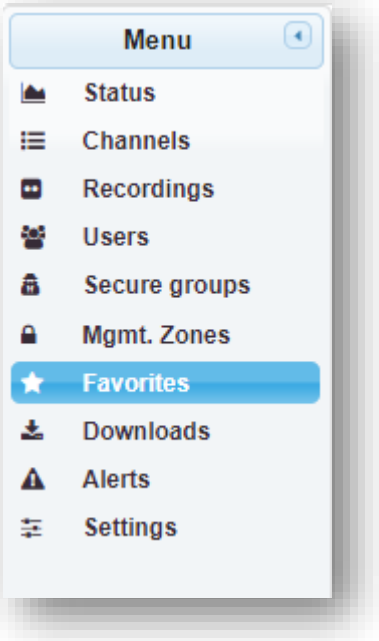
Username	First Name	Surname	Rights	Access zone	Source
David	David	Brooks	MANAGER		DB
nastya	Anastasiya	Milyutin	ADMINISTRATOR		DB

You can give permissions to the user by utilizing this **access level table**

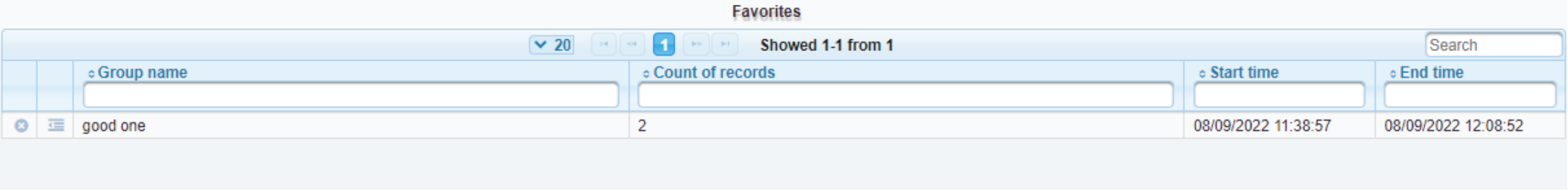
Favorites

Select the recordings that you want to save as a Favorite and press the star icon 





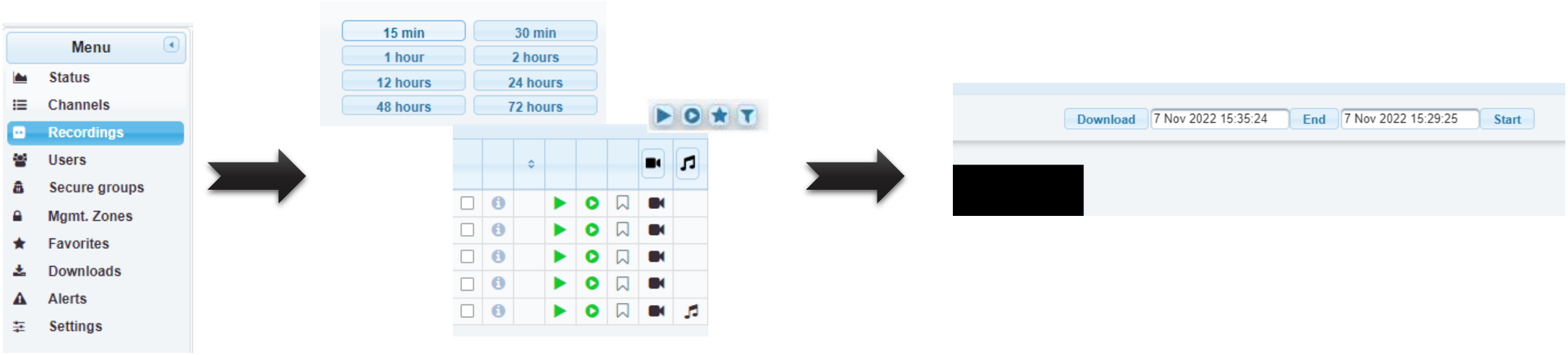
To view the list of all favorites, go to the “Favorites” tab



Downloads

To download a recording and save it on your computer:

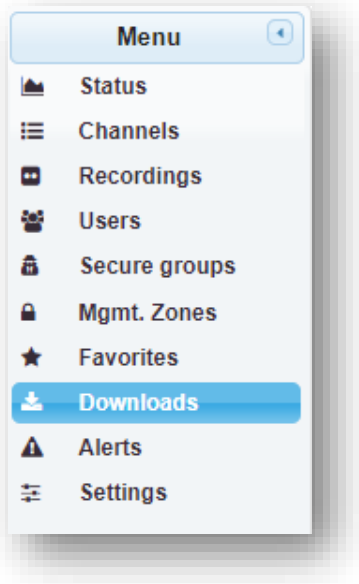
1. Select the relevant video at the “Recoding” tab > select a time range > click Download

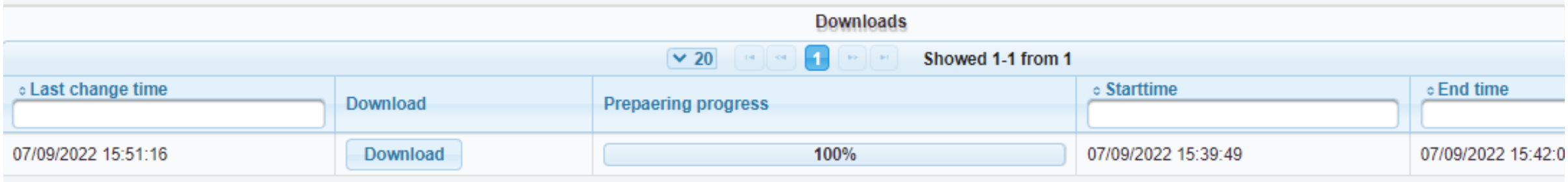


Downloads

2. Go to the Download tab

Selected at the Recording tab > Click on Download again, and the recording will start downloading to your computer (just like any download in the Chrome browser).

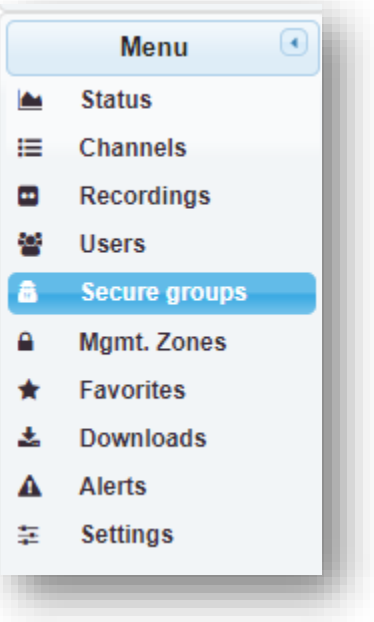


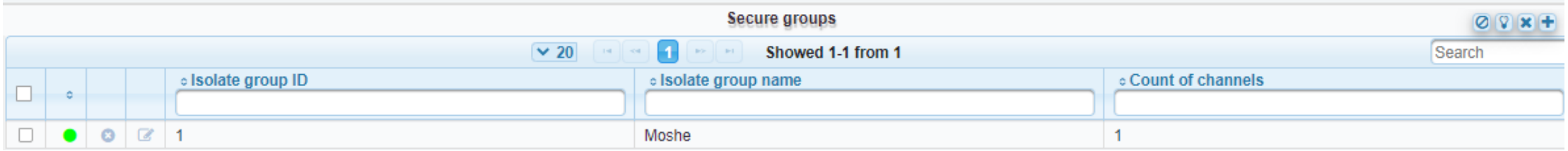


Secure Groups

To secure an entire channel, whether permanently or only for a certain time period, you can put it into "Secure groups”.

The channel will only be available to users with appropriate access privileges

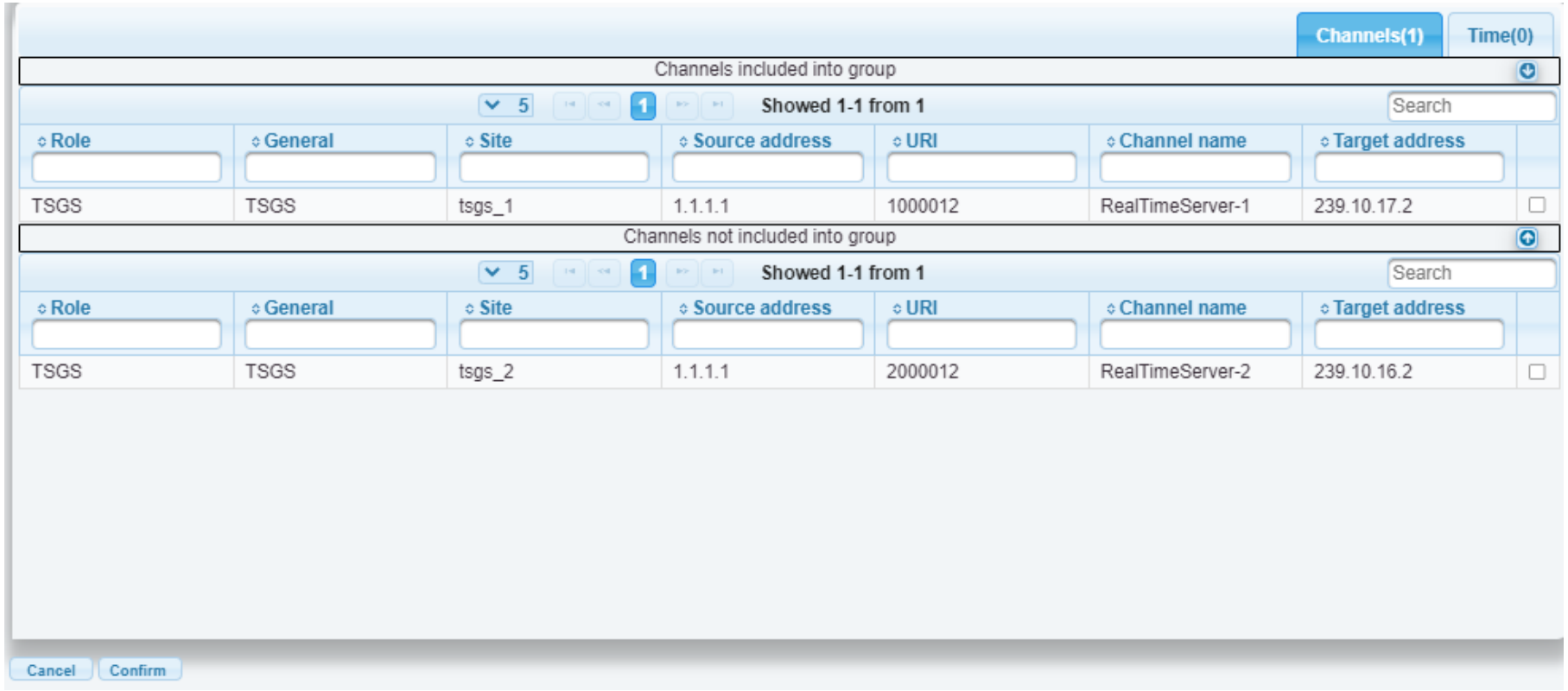




To add a secure group, press + and a window with settings will appear.

Secure Groups

- To add a channel to the list, choose any channel from the table below and press
- To remove a channel from the group, choose the channel and press

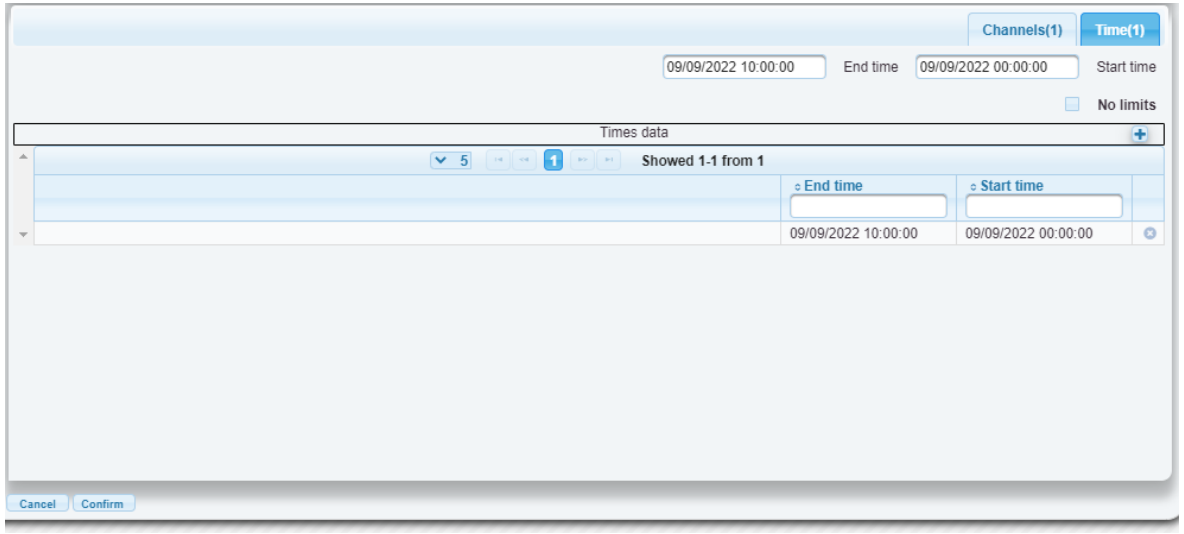


Secure Groups

To add a time range for a Secure Group:

1. Press the “Time” tab
2. Enter a start and finish time
3. Press 

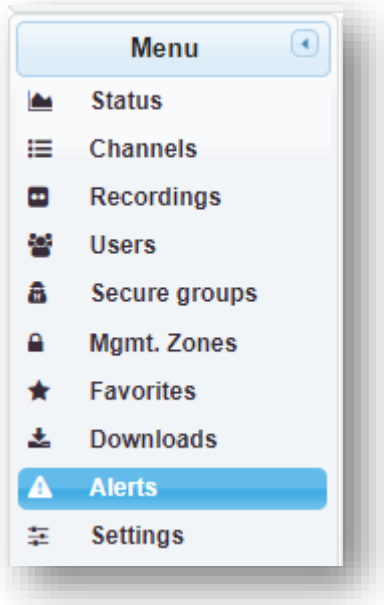
You can choose unlimited time by clicking the “No limits” checkbox

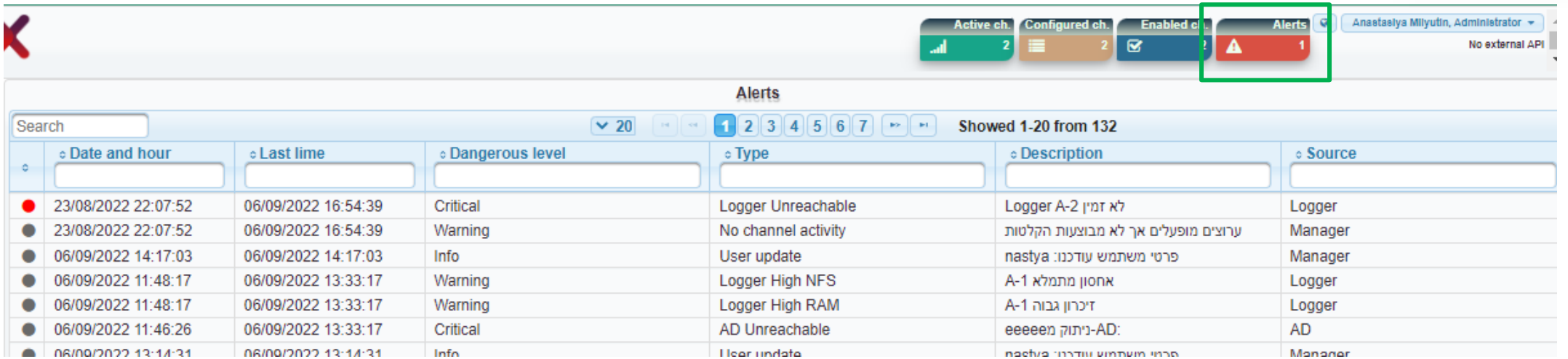


Alerts

- All system actions and alerts will appear in a table according to the log level

  Critical alerts will appear in red status





Access Level

	Operator	Manager	Admin	Kabat
Status	Read Only	Read Only	Read Only	Read Only
Channel	Read Only	Read Only	Read Only	Read Only
Recording	Read Only	Read Only	Read Only	Read Only
Users	Not Available	Read\Write	Read\Write	Read Only
Alerts	Read Only	Read Only	Read Only	Read Only
Settings	Not Available	Not Available	Read Only	Not Available

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Docker Version Installation

Always use a reference

- We will define the connectors according to the type of application that needs to be run on it. We can see all the applications according to the main architecture of the system
- Docker must be configured according to the desired systems
- In order to get a reference, copy from an existing virtual system that contains the system you want to upload
- If you cannot copy from an existing virtual system, all the files are in the appendices below. Please note that the files need to be mapped according to the environment you created and the relevant IP addresses

To copy files between virtual systems, use the command

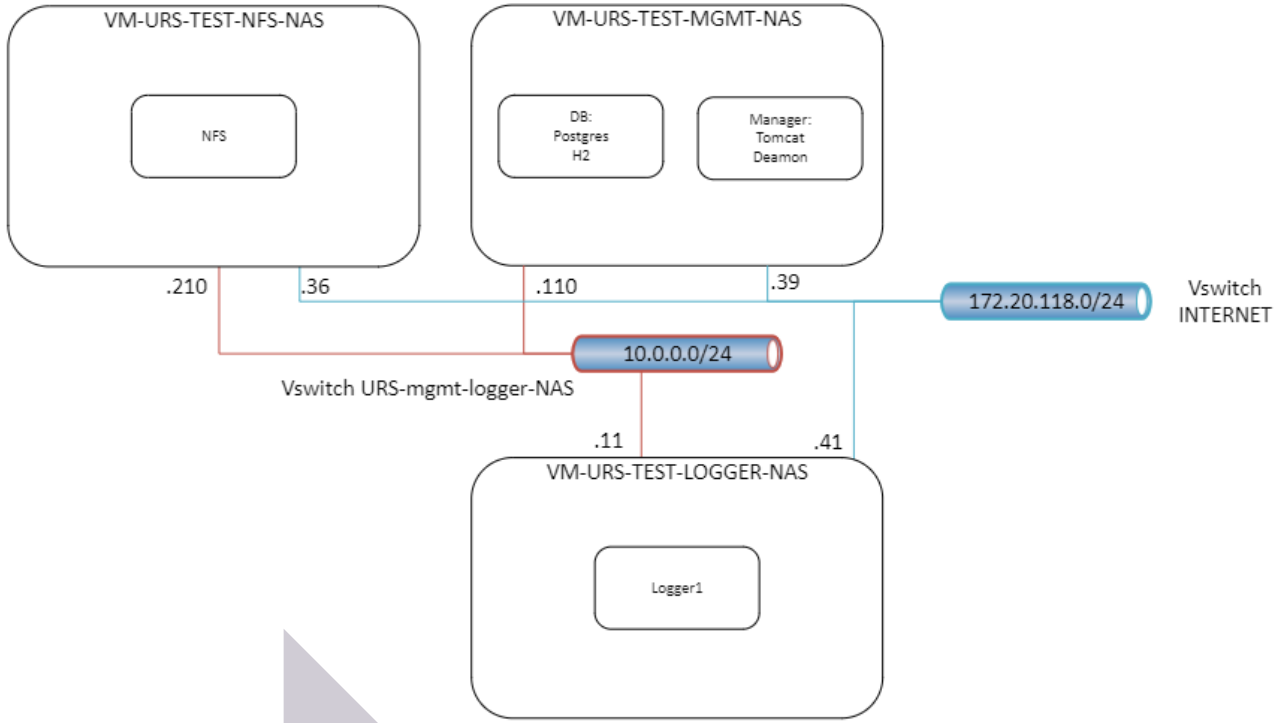
rsync -av user@__ip addr__: /home/user/docker/docker-compose.yml . (the . Is important)

Small Architecture

For example

- VM-URS-NFS -The storage of the Recording
- VM-URS-TEST-MGMT – The recording manager
- VM-URS-TEST-LOGGER- The recorder

The recording is a combination of NFS & MGMT



The MGMT updates the Logger on the existing channels, and everything related to labeling the information

The Logger records and produces the information according to what he learned from the MGM

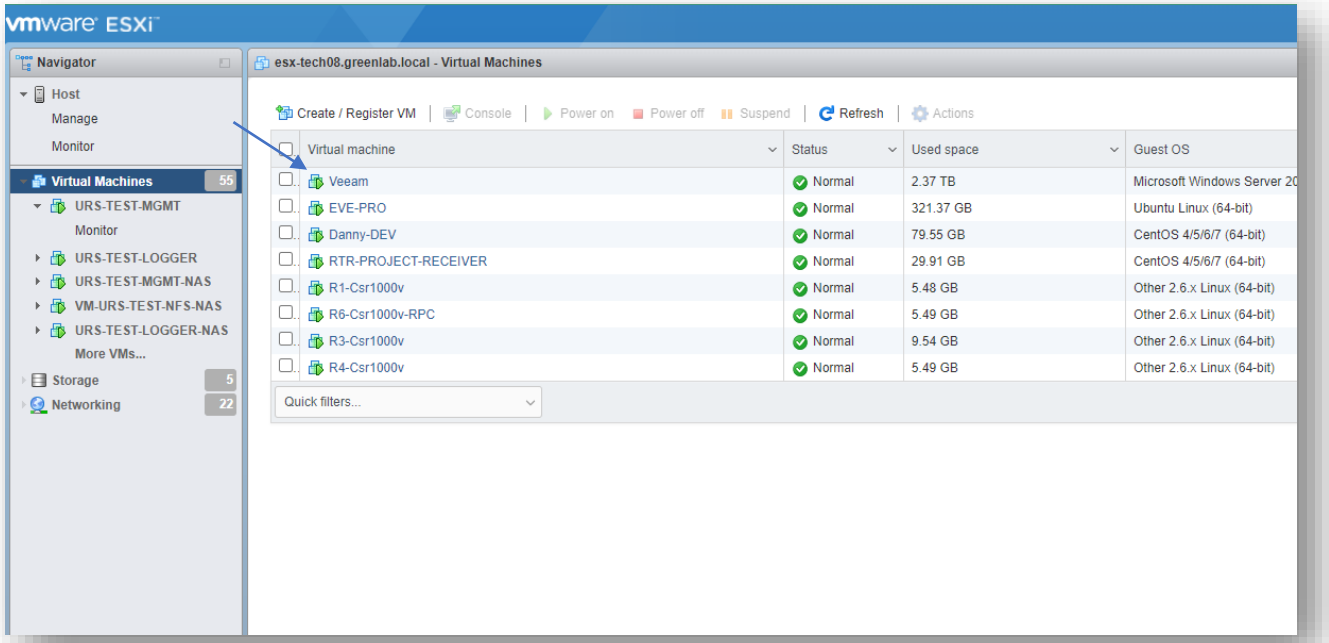
The information that arrives goes to NFS to store the recording

Virtual Machines

According to the architecture - 3 VMs should be installed.

The amount of VM depends on the number of Loggers we want to upload

The environments based on Ubuntu-Linux operating systems



Preparation for Docker Environments

These are the commands to be copied and run one by one -

- sudo apt-get install -y apt-transport-https ca-certificates curl software-properties-common
- curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo apt-key add
- sudo add-apt-repository "deb [arch=amd64] https://download.docker.com/linux/ubuntu $(lsb_release -cs) stable"
- sudo apt update
- sudo apt-get -y install docker-ce
- sudo curl -L "https://github.com/docker/compose/releases/download/1.29.2/docker-compose-$(uname -s)-$(uname -m)" -o /usr/local/bin/docker-compose
- sudo chmod +x /usr/local/bin/docker-compose ; mkdir docker ; cd docker/

Preparation for Docker Environments

The file must be edited so that it can work with the REGISTRY

nano /etc/docker/daemon.json

Change the file with your server IP.

```
{
"insecure-registries" : ["172.20.118.250:5000"]
}
```

For Stand-alone systems

The list of the latest contents that the disk should contain

Linux Packages:

- apt-transport-https
- ca-certificates
- curl
- software-properties-common
- gpg
- docker-ce
- docker-compose
- ssh
- net-tools
- Vim (optional)

CommX Packages:

- daemon
- postgres
- h2
- NFS
- Logger
- Tomcat

For Stand-Alone Systems

A command to copy the packages that are on the disk

- sudo dpkg- i *package-name*.deb

There is no need to configure Registry because there is no connection to an external network, but we would like to change the Docker configuration (docker-compose.yml) and the environment file ((.env)

For Example:

- Image of H2 with Registry be like –

image: "172.20.118.250:5000/h2:latest"

- Image of H2 without Registry be like-

image: "h2 "

Run the Dockers

- sudo docker-compose up -d
- sudo docker ps - To show all the running dockers

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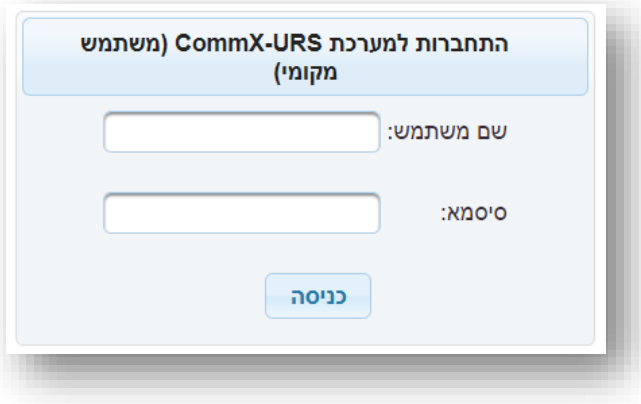
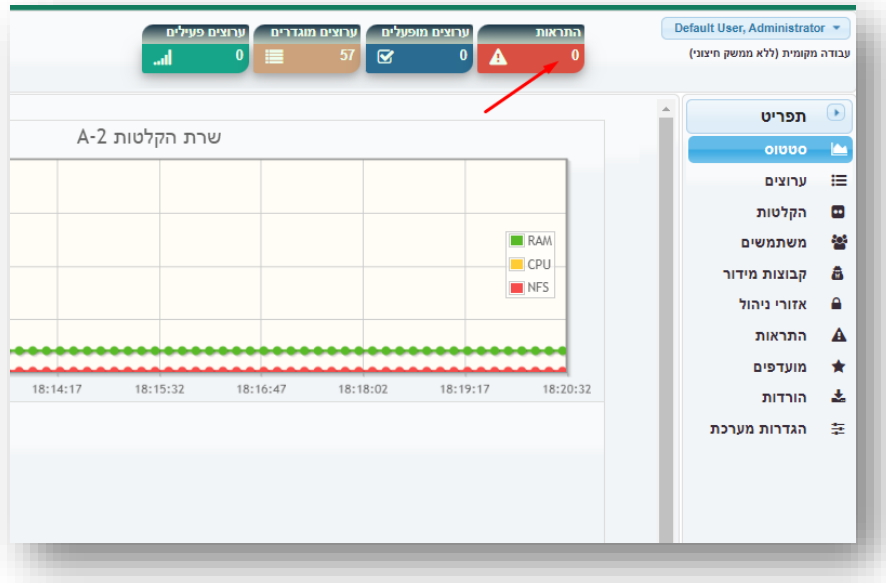
Checking The System

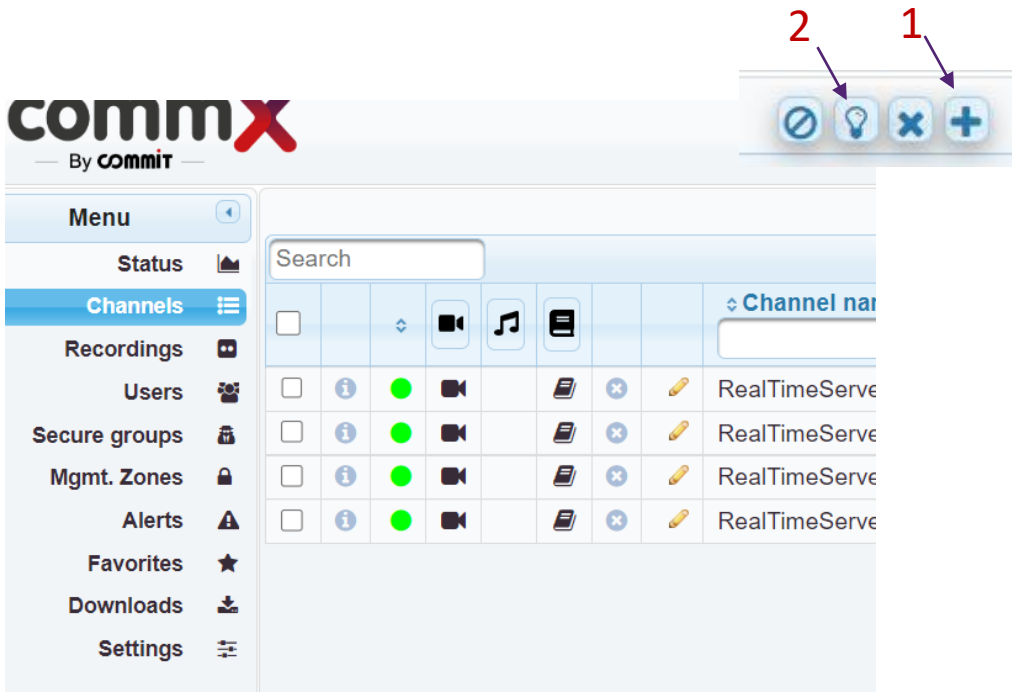
Check the Web

Go to web by using the MNGM IP



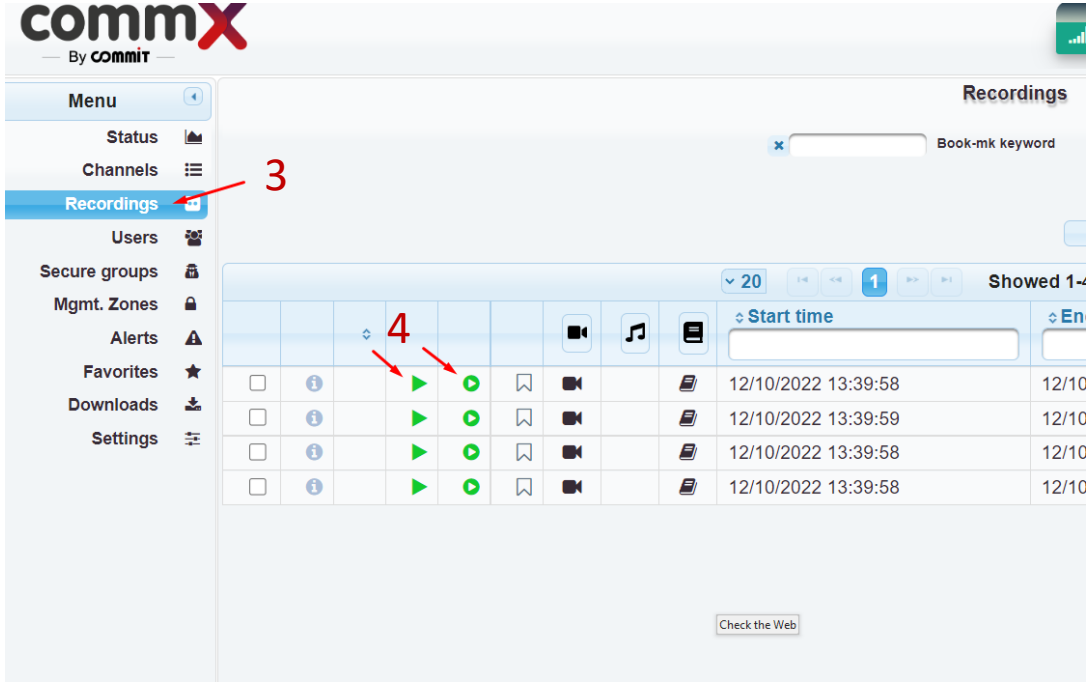
1. Log in to the system
2. We will check if there are any alerts on the system
3. Try to add a channel
4. Start streaming on this channel
5. Check the recording





1. Try to add a channel
2. Open the channel and start to stream on this channel

3+4. Check the recording after a few seconds



Troubleshooting

Troubleshooting

In the Alerts menu we can see current alerts (active in red)

No Web UI

Can not login

Logger unreachable

No live mode working

Check advance logs

DB unreachable

No channel activity

Click on your relevant trouble

THANK YOU!

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https://www.comm-it.com/

No Web UI

1. Check your network connection
2. Verify IP on the web (https://172.20.118.22/RecManager)
3. FW – (IT)
4. Check tomcat service is running (via Docker) Next page
5. Nginx configuration (service/docker is up and running) Next page

BACK

No Web UI - Advance check

1. Check tomcat service is running (via Docker)
2. Nginx configuration (service/docker is up and running)

ssh to the MNG (IP of the website)
Put the Commands :

Cd /home/demo/docker
Sudo su -> put your admin username and password
Docker-compose ps – all needs to be UP
If not -
Docker-compose up –d <service_name>

```
root@Demo-Server:/home/demo/docker# docker-compose ps
       Name                     Command               State
------------------------------------------------------------
daemon_COMPOSE       /bin/sh -c bash /usr/local ...   Up
h2_COMPOSE           /bin/sh -c /ko/h2/bin/h2.sh      Up
nfs_COMPOSE          /usr/bin/nfsd.sh                 Up
nginx_COMPOSE        /docker-entrypoint.sh ngin ...   Up
postgres_COMPOSE     docker-entrypoint.sh postgres    Up
quic_COMPOSE         /bin/sh -c /usr/local/bin/ ...   Up
streamer_COMPOSE     bash -x /usr/local/bin/run ...   Up
tomcat_COMPOSE       /bin/sh -c bash /usr/local ...   Up
urs_api_COMPOSE      /bin/sh -c bash /usr/local ...   Up
urs_logger_COMPOSE   /bin/sh -c bash /usr/local ...   Up
```

service_name

BACK

Can not login

1. Check that the username and password are configured in the system (Users menu) – reset the password if needed.

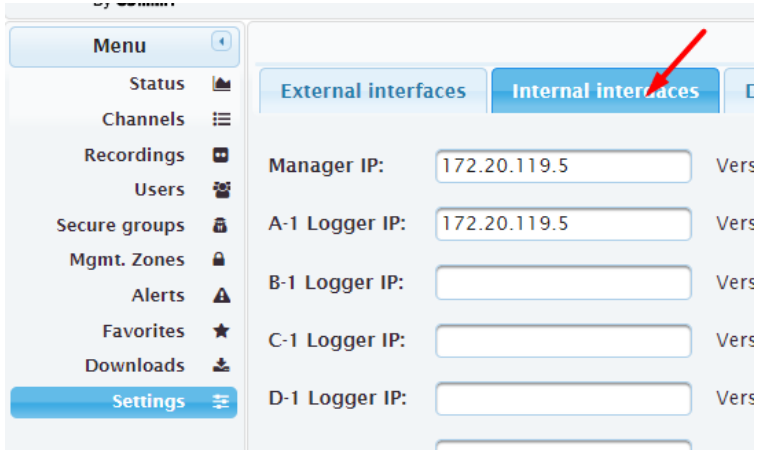
2. Check if AD (LDAP) used – check the ActiveDirectory configuration and ensure the user is in the relevant groups based on its permissions

BACK

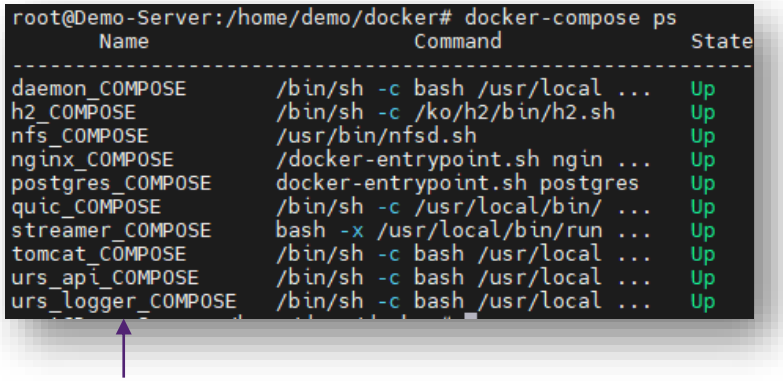
Logger unreachable

If you saw "Logger unreachable" in the Alerts table, this is what you should do:

1. Check ip connectivity
2. Check LOGGER_IP configurations in the ENVIROMENT VARIABLES (you can see it as well in the Settings/Internal interfaces tab)
3. Check the logger docker/server if it is running ok – restart it if needed



Cd /home/demo/docker
Docker-compose ps –> all needs to be UP
If not -
Docker-compose up –d <service_name>

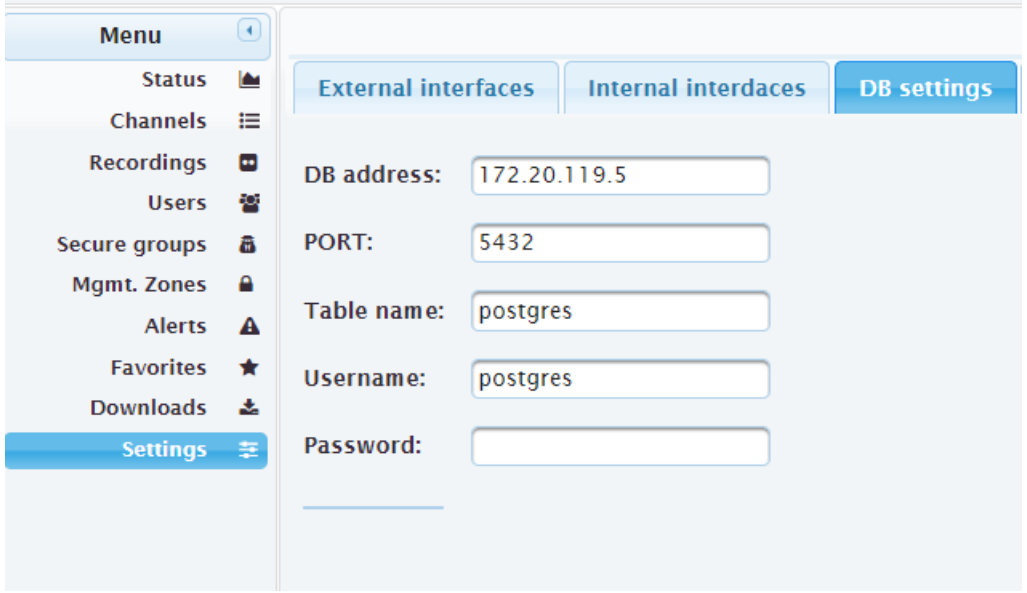


service_name

BACK

DB unreachable

1. Check IP connectivity
2. Check DB_IP/DB_PASSWORD configurations in the ENVIRONMENT VARIABLES (you can see it as well in the Settings/DB tab)
3. Check the db/Postgres docker/server if it is running ok – restart it if needed



BACK

No channel activity

Alert – when the channels are active and should be recorded

Check the logger connectivity (Multicast /FW /Infrastructure)

BACK

No Live mode working

Check that HTTPS is used for connecting the system

https://172.20.118.XX/RecManager

BACK

Advance Logs

For more advanced logs, connect via SSH to the Manager (the same IP you utilized to connect to the web)
We recommend doing that with MobaXterm.

Logs of the dockers can be viewed –

- Cd /home/demo/docker
- docker-compose logs <service_name>
- docker-compose logs -f --tail=100 **tomcat (example of last 100 tomcat logs)**

The logs can be enabled in the DEBUG level using the ENVIROMENT VARIABLE in the : **.env** file
nano /home/_username_/docker/.env

LOG_LEVEL – can have DEBUG,WARNING,INFO (in the future can be done via GUI)
GUI related functionality is in the **tomcat (Manager)**
Initial sync is in the **daemon**

BACK