LUXRIOT EVO Administration Guide

June 16, 2016 © A&H Software House, Inc.

Table of Contents

Software Purpose and Use Cases	3
Hardware Requirements	4
<u>Prerequisites</u>	5
<u>Getting Started</u>	6
License Activation	7
Online Activation	8-9
Offline Activation	10-14
Evaluation License	15
<u>Free License</u>	16-17
Activation Management	18-22
Installation	23-28
Initialisation	29
Software Update and Uninstall	30-33
<u>Setup Wizard</u>	34-40
Migration From Previous Product Versions	41-44
<u>Start & Stop Server Service</u>	45
Interface Overview: Management Application	46-49
About Product	50
Conventions and Keyboard Shortcuts	51-52
Server Settings	53-54
Storage	55-59
Watchdog	60-63
Overview of Devices and Channels	64
Add Devices Using Autodiscovery	65-71
Add Devices Manually	72-80
Manage Devices and Device Groups	81-83
Configure Channels	84-87
Channel Settings	88-94
Configure Recording Profiles	95-100
Assign Recording Profiles	101-103

Add Users and User Groups	104-109
Permissions and Membership	110-111
Streaming Server Configuration	112
Streaming Server User Interface	113-117
Mobile Application for Streaming Server	118-121
Event & Action Overview	122
Rules	123
Add Rules	124-128
<u>Default Events</u>	129
Add Events	130-132
Defaults Actions	133
Add Actions	134-142
<u>Manage Mail Servers</u>	143-144
<u>Create Schedules</u>	145-146
Understanding Conditions	147-148
<u>Delay Timers</u>	149-150
Layout Templates	151-152
<u>Maps</u>	153-157
<u>Dewarp For Fisheye Cameras</u>	158-159
Audio	160-161
Health Monitoring	162-163
Audit	164-169
Problem Report Wizard	170-174

Software Purpose and Use Cases

Luxriot software products can be used for any type of surveillance system installation: they offer a wide and flexible choice of components and license types to suit anyone from home users to corporate customers. Different product editions can be selected depending on the application area and available resources.

Luxriot EVO

Luxriot EVO is a free version of the new-generation Luxriot VMS software. Delivering an outstanding quality performance, this video management system supports over 3500 cameras from major producers and is ideal for use at homes or small offices with surveillance networks of nine cameras or fewer. The meticulously designed interface will allow any user to quickly understand the whole process of configuration and start using the software.

Luxriot EVO is a free product, and so it not covered by Luxriot technical support services and has a much shorter list of components. Should you need a more comprehensive functional or enterprise-level video management system solutions with complete surveillance ecosystem, we suggest using the more advanced versions of the software – Luxriot EVO S and Luxriot EVO Global.

Luxriot EVO S

Luxriot EVO S is a new-generation piece of VMS software from Luxriot, which offers a fast and scalable stand-alone multiple-server solution that truly answers your company's security needs. It has been proven to be high-quality and reliable and has now been upgraded to a 64-bit version, adding an even more intuitive user interface and better functionality, as well as a long list of add-ons.

Cross-functional and modern, Luxriot EVO S supports over 3500 cameras and other network devices from major producers. The software is designed for surveillance systems with 96 or fewer cameras and also allows hybrid solutions. Looking for a complete enterprise-level solution? We suggest that you refer to the Luxriot EVO Global version of the software.

Luxriot EVO Global

Luxriot EVO Global is a complete surveillance ecosystem solution for enterprises of any size, including those distributed across multiple sites. The software was designed with the core of Luxriot VMS, whose quality has been proven worldwide over the last decade. The new version of the software, Luxriot EVO Global, not only offers 64-bit speed and all the necessary tools for setting up an absolute situational alertness system aimed at responding quickly to events, as well as introducing a central server governance hierarchy of all the components.

This is one of the most comprehensive enterprise-level VMS solutions on the market, featuring interactive maps linked to alarms; an advanced event and action manager; analytics tools; video wall support and other impressive components you will definitely appreciate. To ensure the safety of your data, the software also offers archive replication, advanced system health monitoring and failover clustering mechanism, all of which reduce the disruption of your video surveillance recordings to zero. All this, as well as the various possibilities for customisation and Luxriot flawless technical support, makes Luxriot EVO Global a video surveillance solution you can count on.

Hardware Requirements

The table below details the minimum recommended hardware sets for Luxriot software. Please note that these specific processor models are given only as examples and are not compulsory: you can use different CPU provided that it has the same number of threads and its performance is analogous.

Calculations are given for two major configuration examples: all streams in D1 or FullHD resolution; of course, intermediate and mixed cases may also exist. Please contact Luxriot representatives if you require help with choosing hardware.

		HARDWARE	RECOMMENDAT	ION TABLE	
Installation specifications		Recommended hardware per usage scenario.			
Video Stream	Number of cameras	Motion Detector	Server only	Monitor*** only	Server + Monitor***
D1 30fps	Up to 9	None or camera- side*	CPU: Intel G1840; RAM	CPU: Intel G4500; R a.m. 4GB	CPU: Intel i3-6300; RAM 8GB
		Software HP**	4GB		
		Software HA**	CPU: Intel		CPU: Intel i5-6600;
	Up to 16	None or camera- side*	G4500; RAM 4GB	CPU: Intel i3-6300; RAM 4GB	RAM 8GB
		Software HP**			
		Software HA**	CPU: Intel i3- 6300; RAM 8GB		
FullHD 30fps	Up to 9	None or camera- side*	CPU: Intel G1840; RAM 4GB	CPU: Intel i5-6600; RAM 8GB	
		Software HP**	CPU: Intel G4500; RAM 4GB		
		Software HA**	CPU: Intel i5- 6600; RAM 8GB		CPU: Intel i7-6700; RAM 8GB
	Up to 16	None or camera- side*	CPU: Intel G4500; RAM 4GB	CPU: Intel i7-6700; RAM 8GB	
		Software HP**	CPU: Intel i3- 6300; RAM 8GB]	CPU: Intel i7-6700; RAM 16GB
		Software HA**	CPU: Intel i7- 6700; RAM 8GB		CPU: Intel i7- 5930K; RAM 16GB

Notes:

- DDR4 RAM is strongly recommended
- *Please refer to the list of Luxriot supported cameras for camera-side motion detector support
- **High Performance/High Accuracy mode
- ***System must provide:
 - DirectX 10 support
 - Graphics card with at least 256MB memory
 - Latest graphics driver version

Prerequisites

There are a number of requirements for the Luxriot EVO host system:

- Microsoft Windows operating system (7 SP1, 8, 8.1, 10, Server 2008 R2, Server 2012 R2)
- both .NET Framework 3.5 SP1 and 4.5 installed
- defragmentation should be turned OFF for storage locations
- ports for remote connections should be enabled through the firewalls (default ports are 60554 for Luxriot Monitor and 8080 for streaming server)
- installation and recording directories should be added to antivirus exception list so that they are not scanned or interfered with in any other manner
- for software analytics requirements, see the corresponding section of the VCA manual
- for Luxriot Monitor application, DirectX 10+ is required along with the latest stable graphics card drivers

Virtualised environment is not supported for software modules that require license activation. However, virtual machines can be used as host systems for recording servers.

Antivirus scanning being enabled for Luxriot EVO files may result in dramatically decreased write speed, recording disturbances and, occasionally, database corruption.

▲ Luxriot is not responsible for software failures and/or footage loss caused by underlying OS and/or hardware issues. It is the responsibility of the systems administrator to configure the server and provide maintenance, unless otherwise agreed (e.g., if server hardware has been shipped by Luxriot).

Getting Started

Before starting the installation, make sure that:

- you have downloaded the correct software package
- you have acquired the corresponding valid license key
- the host operating system is stable (functioning correctly) and has all the updates and drivers installed
- server hardware matches the project requirements, taking into account all used features and planned postdeployment modifications
- host system retains all the features and configuration required for software operation

If you are not sure about what server hardware to choose, do not hesitate to use Luxriot provided hardware calculators and/or contact Luxriot representative for an accurate estimation.

We advise installing and activating the software on the ultimate server assembly, as extensive subsequent hardware changes are likely to cause software license activation failure. If this happens, undo these changes, if possible, or contact product support to find a solution.

Luxriot EVO is installed as a Windows service so please make sure that the Windows user you are logged in as has sufficient privileges; otherwise, software may not be installed correctly. Note that there is no option to install and run the software in application mode.

The following topics will guide you through the installation process, as well as providing details on product configuration. If you are using a Luxriot product for the first time, we strongly advise you to carefully read and follow the instructions in this manual.

▲ Luxriot is not responsible for software failures and/or footage loss caused by underlying OS and/or hardware issues. It is the responsibility of the systems administrator to configure the server and provide maintenance, unless otherwise agreed (e.g., if server hardware has been shipped by Luxriot).

License Activation

Once you have installed the software and entered the basic server settings, the activation wizard will appear. In order to use the product, a valid license is required - whether this is a free or a purchased one. Any type of license can be activated using this wizard; note that **license activation choice will differ** depending on the installation package you have selected.

It is advisable to run hardware stability tests and finalize server hardware configuration before the license activation, as subsequent hardware changes may cause activation related issues.

Subtopics here describe every type of license activation in details.

Online Activation

If your server has Internet connection available, you can choose online activation mode. The software will automatically connect to the activation server and register your pre-purchased license.

VMS activation	-	×
Step 1. Activation type selection		
Activation types		
Activate existing license key You should have valid licence key from your service provider		
O Offline activation via license file You should have valid license file provided by VMS Support		
Request Evaluation license key Generate Evaluation licence key via VMS web interface		
ОК	Exit	

Activation Type Selection

Enter your product license key and hit *Activate*. If your key is incorrect, the wizard will notify you with a red *X* sign next to the key field: if this happens, double-check the key you have typed, looking out for mistyped characters and superfluous spaces at the start or end.

VMS activation	-		×
Step 2. Activate ex	xisting license key		
	License key		
Enter licence key	InCoBrEcTkEv123		
cincer incernee key			
	You can find licence key in the mail from VMS sales or ask your surveilance service provider.		
			_
	Activate Cance	el	

Enter License Key

When you have entered a valid license key, the wizard will activate your software. If you have decided to go with a different activation option, click *Cancel* to return to the activation type selection step.

Offline Activation

If there is no Internet connection for security reasons and/or server disposition particularities, choose the *Offline Activation* type.

VMS activation	-	×
Step 1. Activation type selection		
Activation types		
Activate evicting license key		
You should have valid licence key from your service provider		
Offline activation via license file		
Provided by VMS Support		
Generate Evaluation licence key via VMS web interface		
ОК	Exit	
- OK		

Activation Type Selection

This mode consists of three steps:

- generate the activation file on the target server
- go to the online activation system at http://www.luxriot.com/purchase/software-activation/ and fill in the form
- apply provided license file to your system

VMS activation	×
Step 2. Activate exist	ting license
	License file
System activaton file	Generate Fill activation form online
	, upload generated file and get signed license file.
Specify license file	Browse Locate signed license file to finish activation
	Activate Cancel

Offline Activation Steps

Click *Generate* to create the activation file; choose a location and save it. The default file name is *system.bin* and we do not recommend changing it.

VMS activation					-	• ×
2	Save As				×	
🔄 🄄 👻 🕆 📜 > This PC > Desktop	~	Ċ	Search Desktop		P	-
Organise 👻 New folder				* #8	•	
 ☆ Favourites ■ Desktop ▶ Downloads ⊙ MySyncFolder ™ Recent places 	No items i	match	n your search.			
File name: system.bin					v	
Save as type: Binary data file (*.bin)					¥	
Hide Folders			Save	Cance	:	-
			Activate		Cancel	

Save Activation File

Next, copy this binary file to any other computer that has Internet access, then go to the online form available at http://www.luxriot.com/purchase/software-activation/, fill in the required fields and upload the file. The activation system will process your file and allow you to download a license file. This license file will be unique and will only be valid on the same machine from which the original *system.bin* file comes.

You can close the activation wizard after creating the activation file and reopen it later to apply the license file. Click *Browse* to locate it and open the *license.dat* file provided by the activation system.

VMS activation				- 🗆 X
	0	pen		×
🔄 🏵 🕆 🚺 🕨 T	his PC → Desktop	~ C	Search Desktop	Ą
Organise 👻 New fold	er		88 -	
 ★ Favourites ■ Desktop Downloads MySyncFolder Secent places 		No items match	n your search.	
File r	ame: license.dat	v	License data file (*.dat) Open	Cancel
			Activate	Cancel

Browse for License File

The validated license.dat file will be loaded, allowing you to finish the registration process.

VMS activation	×
Step 2. Activate exist	ing license
	License file
System activaton file	Generate
	Fill activation form online , upload generated file and get signed license file.
Specify license file	Browse license.dat
	Locate signed license file to finish activation
	Activate Cancel

Load the License File

Click *Activate* to apply the license file. If the license is valid, you will see an activation success confirmation with the following details:

- product type
- license key
- license key expiration date, if applicable
- support subscription expiration date
- allowed channel amount

The license information will be stored on your server. However, you may wish to save a snapshot of this screen for your future reference, so that this information will be accessible in case of server OS or hardware failure.

Finally, click *Done* to exit the activation wizard or click *Start Quick Setup Wizard* to proceed with server configuration.

Evaluation License

If you wish to evaluate the product or need to assess server performance over a specific period of time, request an evaluation license key from Luxriot. After you have done so, activate your trial key using usual online or offline activation algorithm.

VMS activation – 🗆 🗙
Step 2. Request Evaluation license key
Request Evaluation license key online
Please visit VMS online web interface <u>http://www.VMS.com</u> , fill up form and get Evaluation license key. Then use activation with license key.
Back to activation type selection
Exit

Get Evaluation License Key

Free License

When you have installed and initialised the Luxriot EVO software, you will be given the chance to request a free license in order to activate the software and continue using it.

The conditions of a free license are as follows:

- a maximum of 9 channels
- maximal allowed resolution is FullHD
- a maximum of 1 (one) connected Luxriot Monitor at a time
- Luxriot Monitor can connect to maximum 1 (one) server with free license
- no guaranteed technical support
- no extra features (advanced Events & Actions, software VCA, video wall, maps etc.)
- no support for Active Directory
- free software updates

Unavailable features and options will be greyed out in Luxriot Console interface.

P Internet connection is required for the license request.

Step 1. Select activation type

Activation types:

Request free Full HD licence key

Fill out request form and get free Full HD licence limited to 16 cameras

OK Exit

Request free license

Click *OK* to proceed with the request form. Fill in all the fields and click *Activate*.

Step 2. Request free	e Full HD license key
	Please fill up and submit request form
C. C	Laboration of the second se
First name	John
Last name	Doe
Email address	johndoe@email.com
Phone	
_	
Country	United States V City
Field of application	Corporate Company name
	Subscribe to Cortrol CMS newsletter

Free license request form

The wizard will automatically connect to Luxriot activation server and retrieve the license details. If the request fails, check your Internet connection and try again.

Activate

Cancel

Step 4. Success! Your licence has been activated.

License details: Key: bdbf67d2-bc67-4fc4-b3ea-177bfafa71c6 Expiry date: never	
Channels supported: up to 16	

Congratulations! You are now ready to use Luxriot EVO. Click *Start Quick Setup Wizard* button below to continue with server configuration.

Activation Management

When a server already has a license key installed, you can retrieve that information in two ways:

- right-click server icon in the system tray and select *About*. The dialog box will contain basic information about the product version and license type
- run the Product Activation Wizard from the Start menu

To start the wizard, go to *Start -> All Apps -> Luxriot -> Activation Wizard* (in Windows 7 and older versions, use *Start -> All Programs -> software installation folder -> Tools -> Activation Wizard*); alternatively, use Search to locate the Activation Wizard in the programs menu.

Step 1. Manage license

License details: Key:			
Subscription valid until: 1/25/2018 Channels supported: up to 100			
		1	
O Upgrade current license			
Upgrade product using same license key			
O Upgrade current license via licens	e file		
Upgrade product using activation file			
Remove license			
I			

Choose an option in order to proceed

The wizard will display a summary about the currently installed license key and show the available management options.

OK

Cancel

Online license upgrade

License upgrade is available for the license keys purchased earlier. Note that all the software processes (both applications and services) must be stopped in order for the license to be applied correctly.

For upgrade acquisition details and assistance, please contact sales@luxriot.com.

VMS manage license		-		x
Step 2. Upgrade current license				
A Services termination alert	- 🗆	×		
Terminate services to proceed?				
To process your request system needs to terminate services				
VMS Server				
VMS Server Watchdog				
Yes	No			
		Cance	1	

All software processes must be stopped in order to apply license related changes

VMS manage license	-		x
Step 2. Upgrade current license			
Contact VMS sales and buy subscription			
Please visit VMS online web interface <u>http://www.VMS.com</u> , select upgrade options and buy subscrip For assistance contact sales@VMS.com.	otion.		
If you have laready bought an upgrade, please activate it using your license key.			
Upgrade existing license key			
	Cance	2	

License upgrade option

After acquiring the upgrade from Luxriot, click *Upgrade Existing License Key* to enter it. Your license information will be synchronised with the activation server and you will be presented a license summary. Click *Cancel* to return to the beginning of the wizard.

Offline license upgrade

Offline license upgrade essentially the same as the offline license activation process: the same steps should be taken to retrieve the new license file.

- generate activation file on the target server
- go to the online activation system at http://www.luxriot.com/purchase/software-activation/ and fill in the form
- apply provided license file to your system

Click Cancel to return to the beginning of the wizard.

Remove license

Select Remove License if you wish to completely delete all the license information from the server.

VMS manage license	-	□ ×	
Step 2. Deactivate current license			
Deactivate current license			
Deactivate existing license			
Deactivate existing license			
			_
	Cance	2	

Deactivate license

Click *Deactivate Existing License* to confirm deletion of the currently installed license. Note that you will be unable to log into Luxriot Console to access your current server configuration without a valid license of the same type; Luxriot Monitor applications will also not connect to such a server. In order to use the server again, you will have to enter the license again - either the same or a new one.

▲ Warning		_ ×
	Warning	
	Invalid license	
		f
		OK

An attempt to log into Luxriot Console failed because the license is missing

Alternatively, press *Cancel* to return to the wizard start page. If you are not sure about the deactivation, consult Luxriot technical support.

VMS manage license	-	x
Step 4. Success! Your license is deactivated!		
License has been deactivated!		
Your license has been deactivated and removed. You can import new license now.		
Manage license		
		_
	Exit	

License successfully deactivated

After license deactivation, you will be offered the chance to go back to license management in order to enter a new software license.

Installation

Start the installation process by double-clicking on the Luxriot EVO S executable package file. The setup wizard will guide you through the installation process, providing available installation-time options depending on the chosen software package. Note that, depending on your Windows UAC configuration, you may have to confirm and/or provide administrative credentials.

We strongly advise that you stop all running third-party applications, as well as stopping antivirus scanning and Windows (and any other) updates during this phase, as these may interfere with the process and result in corrupt installation, which may cause unexpected behaviour and hard-to-track issues during further software operation.

The installation wizard displays an overview of the process; also, you are able to select the installation language here. You will be prompted to select the Luxriot EVO S interface language later.

🛃 VMS Server Se	etup Wizard	-		×
Welcome to	o VMS Server Setup Wizard.			
	VMS Server Setup Wizard This wizard will guide you through installing VMS Server 1.0.0.0 on your computer. It is recommended that you close all other applications before continuing.			
	Step 1 - Licence agreement You must agree to the terms of Licence agreement in order to continue			
	Step 2 - Destination location Select and confirm the folder where you want the VMS Server software to be installed			
	Select the components for installation			
	Select the language to use during the installation process English			
	Next	Ca	ncel]

Luxriot EVO S Setup Wizard

Step 1

Carefully read the Luxriot license agreement: you must agree to all parts of the given document in order to proceed. If you agree, select *I agree*... in order to continue; otherwise, terminate software installation. If you have any questions regarding the contents of the present license agreement, please contact sales@luxriot.com.

VMS Server Setup Wizard	- 0	-	×
Step 1 of 3 - Licence agreement			
WMS Server Licence Agreement Please read the following Licence agreement. You must accept the terms of this agreement before you can continue with the installation. misconfiguration, naroware tailure, naroware connict, software connict, user data misconfiguration, and/or data loss. You expressly assume the entire risk and cost associated with the Software, including risk resulting from Maintenance services (whether performed in whole, in part, or not at all), or from any virus, downloaded material, harmful component, or through any Internet use of the Software or any site or server through which the Software is available. You are solely responsible for any damage that results from or is associated with use of the Software. The Disclaiming Parties shall not be liable in any manner whatsoever for the results obtained through use of the Software. Persons using the Software including determination of the v			
Previous Next	Can	ncel]

License Agreement

Step 2

Select the destination folder you want the software to be installed in. By default, Luxriot EVO S is installed in:

32-bit: C:\Program Files (x86)\Luxriot\Luxriot EVO S

64-bit: C:\Program Files\Luxriot\Luxriot EVO S

If you are re-installing Luxriot EVO S and previously selected a non-default location, make sure to select the same destination directory, or, alternatively, completely uninstall previous Luxriot EVO S version. If unsure about this, ask for Luxriot technical support team assistance.

The setup wizards estimates how much disk space will be required. Make sure you have enough free space on the target disk. Note that low system disk space will dramatically decrease system performance and affect overall system stability.

UMS Server Se	etup Wizard	-		×
Step 2 of 3	- Destination location			
Select and confirm the folder where you want the VMS Server software to be installed Where do you want VMS Server to be installed?				
	C:\Program Files (x86)\VMS\VMS Server Browse Browse			
	Installation requires at least 423.33 MB of disk space.			
	Previous Next	Ca	incel	

Installation Directory

Step 3

Some components are optional and so you can choose not to install them. The main Luxriot EVO S parts are obligatory and cannot be deselected (by default, these options are selected and greyed out).

If not chosen at this stage, Luxriot Monitor can be installed separately later.

🛃 VMS Server S	etup Wizard –	×
Step 3 of 3	- Select components	
	Specify which components to install	
	Configure the components of the installation package:	
	✓ VMS Server Service (390.90 MB)	
	VMS Server Management Application (3.82 MB)	
	✓ VMS Server Client Application (1.39 MB)	
	Select the language to use in the user interface English	
	At least 424.72 MB of free space is required.	
	Previous Next Car	ncel

Select Software Components

If you are ready to proceed, click *Next* to begin the installation. Depending on selected components and host system condition, the process may take some time to complete, so please be patient.

🛃 VMS Server Setup Wizard		x
Installing		
Installation in progress Please wait while Setup installs VMS Server on your computer		
Installing		
49 %		
	Cancel	

Installation Progress

Upon completion, the setup wizard will show you an installation summary. If all the steps have been fulfilled successfully, simply click *Finish* to close the wizard.



Installation Complete

Initialisation

After completing the installation wizard, you will be offered to enter server setup. The settings selected during server setup can be changed later at any time.

Server setup wizare	t	-		×			
Step 1. Server setup							
+ 1	A						
	Server setup						
Server name	My Server						
	Server name						
Server port	60554]					
	TCP listener port						
	OK	C	J	_			
	OK I	Cance	21				

Choose Server Title and TCP port

Setting	Description	Default Value
Server name	User defined server title	<i>Server</i> <i>Title</i> or last used title
Server port	TCP port for incoming remote Client connections	60554

Step 3. Suc	cess! Th	e server	has been	set up.		
Server	setup com	pleted!				
The second						
The serve	r configuratio	on has been t	poateo.			
					0	
					O	K

Setup Completed

r

Software Update and Uninstall

This topic provides guidelines on installation management use cases.

Update Software

A Before upgrading, make sure you hav configuration sets are incompatible. I not execute with "another version det	e obtained the correct software package: 32 f you try upgrading to a different bit versio ected" warning.	2-bit and 64-bit version on, the installation wizard will
🛃 Setup Wizard		_ _ ×
Step 2 of 4. Existing data found		
license detected		
Info on license file found: Channels: 100 Expiry date: never End of support date: never		
Select an action Use existing license Use existing license.		
O Ignore existing license Wizard will backup existing licen	se and continue with blank license.	
Choose license professors for the up	P	Previous Next Cancel

Choose license preference for the upgrade

If you launch a newer version installation package of the same kind as the already installed Luxriot EVO edition, you will be given the option to upgrade the product. Press *Next* and complete the wizard, which is very much alike the installation wizard. At each step, read all the information displayed and press *Next* until finished.

里 Setup Wizard				×
Step 2 of 4	. Existing data found			
	configuration found			
	Compatible server's database detected. Valid to upgrade.			
	Select an action			
	Use existing configuration			
	Use existing configuration. The configuration will be upgraded automatically if required.			
	○ Ignore existing configuration			
	wizard win backup existing configuration, new empty configuration win be created.			
	Previous		Cance	ļ
Use existing dat	tabase configuration			
A Before star Luxriot EV includes ar application	rting the upgrade procedure, ensure that all Luxriot EVO processes have been terminat /O files are not in use: this is necessary in order to upgrade all files to the newer version ny Luxriot EVO processes or related applications that are running, and also any third-p ns that have access to Luxriot EVO files, e.g., antivirus scanners, third-party integration	ted ar ns. Th party ns, et	nd tha nis c.	t

Luxriot EVO processes can be found via Task Manager: these start with VMS, e.g., VMSServer.exe.

Uninstall/Change Software

Software can be uninstalled in two ways:

- 1. From Windows Control Panel
- 2. By launching the same package that was used for installation

In either case, you have a choice between changing and uninstalling the product.

▲	Before making any changes to the installation, make sure to close and stop all software services and applications. If processes are not stopped, some of the software components may not be removed or replaced during the installation process.
	there are no processes starting with 'VMS'. If there are any, stop them manually and then proceed with the installation changes.
	VMS Central Server Setup Wizard
	You can change or uninstall a program from your computer if you no longer use it or if you want to free up space on your hard disk.
	Change
	OUninstall
	Previous Next Cancel

Change or uninstall the product

Select *Change* if you wish to re-install or add software components. The process will be similar to the initial installation.

Select *Uninstall* to remove all software components. You will be asked if you wish to keep the configuration and the current license; the following common use cases apply:

- keep the license and remove the configuration if you wish to re-configure everything from scratch after reinstallation (e.g., in event of a corrupt database or having to move the server to a different system);
- keep both if you are going to clean install the software;
- remove both if you do not intend to use the software on this machine anymore.

Press *Next* to proceed with the uninstallation process. Note that you may have to confirm these changes if UAC has been turned ON.

La VMS Central Server Setup Wizard	-		x
Uninstalling			
Uninstallation in progress			
Please wait while Setup uninstalls VMS Central Server from your computer			
Uninstalling <mark></mark>			
0 %			
	С	ancel	

Uninstall

When the wizard finishes removing software components, hit Finish to exit.

Clean Install

Sometimes it is necessary to install software anew, i.e., to change software bit version, and also in event of major <u>software-related troubles</u>.



Although software upgrade is not possible with different bit versions, you can migrate your installation to a different bit version by performing a clean install.

To perform a clean installation, it is crucial to make sure that no Luxriot software processes are running, whether explicitly or in the background. Follow these steps:

- 1. Stop all Luxriot software services and/or applications;
- 2. Open Windows Task Manager, click '*Show processes from all users*' and check that there are no processes starting with 'VMS..'; if there are any, stop them;
- 3. Uninstall software as described above, keeping your license and configuration;
- 4. Install [new] software version, carefully following all steps and recommendations;
- 5. Start software and check if the desired change has been carried out.

Setup Wizard

The Luxriot Console Setup Wizard is automatically started after product installation and activation is complete. You can skip the wizard at this point and launch it later anytime from the Luxriot Console upper-right-hand corner menu:



Run Setup Wizard from Luxriot Console

Setup Wizard will show you the process summary and guide you through the steps to configure the installation. To proceed with each next step, simply click the button below the step list; to exit the wizard prematurely, press either *Exit* or *Launch Luxriot Monitor* button in the bottom-left-hand corner.

Setup wizard for Luxriot EVO and Luxriot EVO S consists of just one step that covers devices and channels. Make sure you connect all devices (IP cameras and/or other video sources) before launching the wizard: it will automatically scan the network for available video sources.

Press the Launch Step 1 button to begin.

III VMS Console Setup Wizard	-		×
Welcome to Setup Wizard.			
VMS Console Setup Wizard Setup Wizard helps you to easily configure VMS Console. Just follow the wizard's step-by-step process.			
Step 1. Devices and channels Search for devices, apply recording settings to channels and set up security groups			
Please attach and activate all IP cameras and press below button. Launch Step 1. Devices and channels			
Launch VMS Client	Ex	it	

Setup Wizard

Scan Parameters

First, select scan mode; the following options are available:

- scan IP address range: specify a continuous LAN segment to be scanned
- scan network adapter address range: select one or more network interfaces to be fully scanned
- scan attached devices: the local hardware system will be scanned for capture boards and Direct Show video sources

If you have chosen to search for IP video sources, you should review additional connection settings and change or update them, if required:

- ports: HTTP ports, comma separated
- user credentials: pairs of comma-separated user names and passwords, one pair per line

Use the *Reset* button below to discard all changes and start entering scan parameters again. When you are ready, press *OK* button below to begin scanning.

			-	•	×
Scan parameters					
O Scan network adapter address range					
Scans one or more network adapters and attached devices					
O Scan IP address range					
Scans specified address range and attached devices					
Scan attached devices					
Scans attached devices					
		_			_
Reset	OK		Can	cel	

Scan attached devices

				×		
Scar	n para	meters				
• se	can net	work adapter address range				
Scans	one or	more network adapters and attached dev	ices			
	1	ADAPTER	IP ADDRESS	MASK		
		Realtek PCIe GBE Family Contro.	192.168.1.83	255.255.252.0		
	×	VirtualBox Host-Only Ethernet	192.168.56.1	255.255.255.0		
O Sc Scans Ports	can att attache s	ached devices ed devices				
80.8	080					
Com	ma sepa	rated list of port numbers				
Pass	words					
adm adm root	admin,admin admin,1234 root.pass					
Usern a com	ames ar nma.	nd passwords (one combination per line)	Usernames and pa	sswords separated by		
R	leset		OK	Cancel		

Scan network adapter address range
					-	• ×
Scan par	ameters					
O Scan n	etwork adapter address	range				
Scans one o	ir more network adapters an	d attached	device	5		
Scan IP	address range					
Scans speci	fied address range and attac	hed device	15			
From:	192.168.10.2		to:	192.168.10.187		
O Scan at	ttached devices					
Scans attack	hed devices					
Deste						
POIS						
80,8080						
Comma sep	parated list of port numbers					
Passwords	5					
admin,ad	min					^
admin.12	34					
roocpass						
Usernames a comma.	and passwords (one combin	ation per l	ine). Us	ernames and password	ls sepi	v srated by
Reset				ОК	Cano	æl

Scan IP address range

Device Autodiscovery

After scanning has been completed, you will be taken to the Device Autodiscovery dialog box, which will allow you to review the found <u>devices and their channels</u>, and enter/modify related settings. Use the *Search* field in the upperright-hand corner to find a specific device by name, model, IP, port or hardware ID (for IP devices, ID includes MAC address).

There are two types of selection in the item list: checkboxes and colour highlight. **Checkboxes** are used to choose the items to be added to server configuration after you close the dialog box; **highlighted** items are subject to immediate properties changes. Use *CTRL+click* or *Shift+click* to select all or several items at once to change their settings.

Click a device in the item list to load its settings into the *Device Properties* window. Note that some settings may be missing for some of the automatically found devices; this depends mostly on device and whether user data was correctly provided. In such cases, simply fill in the missing data manually and click the *Apply* button below to save the configuration changes.

Device autodiscovery						-	×		
Device autodiscovery	Found devices								
Found devices Found channels	Scanning for new devices			98%					
	Device properties		Fe	ound devices			Q		
	Device name			DEVICE NAME Axis (Legacy Autodetect) on 192,168,3,4	MODEL Axis (Legacy Autodetect)	 HOST 192,168,3,4 	PORT 1		
	Grundig GCI-H0522V on 19 Device name	92.168.3.14		Grundig GCI-H0522V on 192.168.3.14	Grundig GCI-H0522V	192.168.3.14	80 ;		
	Model		•	■ KT&C KNC-SPDNi120HD on 192.168.3.2	KT&C KNC-SPDNi120HD	192.168.3.2	80		
	Grundig GCI-H0522V	Change		= 4 ©	Select model	192.168.3.36	80		
	Device model		~	Vivotek IP7131 on 192.168.3.12	Vivotek IP7131	192.168.3.12	80		
	Host		2	Vivotek IP7131 on 192.168.3.3	Vivotek IP7131	192.168.3.3	80		
	192.168.3.14			Vivotek IP7131 on 192.168.3.19	Vivotek IP7131	192.168.3.19	80		
	Host name or IP address								
	Port								
	80								
	Port number								
	Username								
	admin								
	Username to access the device								
	Password								
	1234								
	Password to access the device		1						
	Apply Reset		۲.				>		
					Add selected devices and ch	annels Cano	el		

Set up discovered devices

If device is not integrated with the software (native support), it may be detected as generic type (e.g., ONVIF). If you think some devices have not been discovered, check if they have different HTTP ports; also, try adding them <u>manually</u>.

Setting	Description	Default value
Device name	User-defined video source name	Autodetected model + IP, empty if not detected
Model	Device manufacturer and model, or generic type	Autodetected vendor and model, empty if not detected
Host	Device IP address	Autodetected
Port	Device HTTP port	Autodetected
Username	Device user credentials; note that you have to provide administrative profile credentials in order to be able to change device settings via software interface	
Password	Device user password	Appropriate password from provided list or autodetected

Make sure you select all the devices you wish to add by putting a checkmark next to them. Devices with missing configuration (model and/or IP) are unchecked by default and will not be added to active server configuration.

A Device models set on this step cannot be altered in future. In order to change the model further on, you will need to delete the channel attached to such a device, and then create a new channel with your desired model: see how to replace a camera for details.

Switch to *Channels* tab to review the detected video channels of the discovered devices: this is particularly important if you are using multichannel devices, e.g., capture boards and encoders. Use the *Search* field in the upper-right-hand corner to find specific channels by name or device name.

Device autodiscovery				_ _ ×
Device autodiscovery	Found channels			
Found devices	Start device search Scanning has be			
X Found channels	Start device search	1		
	Channel properties	Found channels		Q
		CHANNEL NAME	RECORDING SETTING	S DEVICE
	Channel name	🗙 Axis (Legacy Autodetect) on 1	Axis (Legacy Autodetect) on 1	
	Vivotek IP7131 on 192.168.3.12 Channel name	X Vivotek IP7131 on 192.168.3	none	Vivotek IP7131 on 192.168.3
		X Vivotek IP7131 on 192.168.3	none	Vivotek IP7131 on 192.168.3
	Recording settings	🗙 eVidence Apix - 18ZBox / M2	none	eVidence Apix - 18ZBox / M2
	none Change Recording settings	X Samsung SNP-3120V on 192	none	Samsung SNP-3120V on 192
	Apply Reset	-		
		·	Add se	elected devices and channels Cancel

Set up discovered channels

Here you can edit the channel name and assign recording configuration. By default, recording is enabled for all channels: click the *Change* button near *Recording settings* to <u>manage recording profiles</u> and <u>assign them</u> to your channels. To add a new recording profile, click the + *New recording configuration* button below; you can find more details about recording profiles in the <u>corresponding section</u>. Click *OK* to save and return back to devices and channels; click Apply to save configuration changes.

After changing the channel recording configuration, do not forget to click *Apply*, otherwise the changes will not take effect.

Recording configuration here is assigned to the main streams of the target channels. In order to set up substream recording, please go to <u>channel configuration</u>.

Select recording configuration	×
	ৎ
Available recording configurations	
TITLE	ID TYPE
No recording	(31) Recording configuration
Continuous recording	(32) Recording configuration
New recording configuration	OK Cancel

Select the recording configuration or create a new recording profile

Click the Start device search button above at any time to restart device discovery.

All previously discovered devices and all configuration changes will be discarded if you restart camera autodiscovery.

When you have finished with configuration, click Add selected devices and channels to go back to the wizard.

VMS Console Setup Wizard	- • ×
Step 1 of 1 completed!	
+ . + .	
VMS Console Setup Wizard	
Setup Wizard helps you to easily configure VMS Console. Just follow the wizard's step-by-step process.	
Step 1. Devices and channels	
Setup Wizard completed.	
Restart wizard	
Launch VMS Client	Done

Wizard completed successfully

You can now either restart the wizard to cover the rest of your devices, or close it. Press the *Launch Luxriot Monitor* button to switch to the monitoring mode at once.

Migration From Previous Product Versions

It is possible to migrate the basic configuration from the older Luxriot software version, Luxriot VMS. All you have to do is export an XML file from Luxriot VMS and then import it via Luxriot Console.

In your Luxriot VMS Client, right-click your desired server and choose Tasks -> Configuration Export.



Run Configuration Export from the server right-click menu

Export wizard will display a summary of all the exported resources and give you an option to save the configuration in XML format. In order to do this, click the *Export to*... button and choose a location and enter the filename, then click *Save*.

a	Message	
7	5 user(s) and 1 user group(s) fetched	
9	Start of fetching of devices	
	Fetching device "Park Gate"	
	Fetching device "Main Entrance"	
	Fetching device "Beach"	
	Fetching device "Gate"	
	Fetching device "1st Floor"	
	Fetching device "Conference Hall"	
	Fetching device "Park PTZ"	
	End of fetching of devices	
	0 7 device(s) fetched	
	End of fetching of server configuration	

Export tool

Next, switch to your Luxriot EVO installation where you want to load the configuration: open Luxriot Console and log into the target server. In Luxriot Console, click the application menu button located in the upper-right-hand corner of the Luxriot Console window and choose *Configuration import*. Locate your pre-saved XML file in the *Open file* dialog box and click *Open: Configuration import* dialog box will open, giving you the option to review the resources to be imported.

lesources	Devices						
Devices	Devices		Q	Details			
🛠 Channels	TITLE	MODEL A	ACTION				
Users	Park Gate	(Emulation) Vide A	dd	Title	Park Gate		
User groups	Main Entrance	Grundig GCI-N0 A	dd	IP address			
	Beach	LG LND7300 A	dd	Port number	0		
	Gate	Canon VB-H41 A	dd	Fort number	0		
	✓ ■ 1st Floor	CBC (Ganz) Pixel A	dd	Vendor			
	Conference Hall	(Generic) ONVIF A	dd	Model name	(Emulation) Video File		
	Park PTZ	(Emulation) Vide A	dd	User name			
				Password			
	Import via						
	● Add ○ Merge						
	_ ·					OK	Cancel



Review the list of devices to be imported from your pre-saved configuration; note that you can only view the settings but there is no option to change them. You will be able to alter device settings later, after you import the configuration. At this stage, you can choose whether or not the device will be imported: to do this, simply put a checkmark next to each device name. By default, all devices are selected for import.

Configuration import								- • ×
Resources	Channels							
Devices	Channels			Q	Details			
🔀 Channels		TITLE	DEVICE TITLE	ACTION				
L Users	Park C	Gate Park	k Gate A	dd	Title	Park Gate		
L User groups	🗹 🔀 Main I	Entrance Mai	n Entrance A	dd	Enabled	yes		
	🗹 💢 Beach	Bead	ch A	dd	Device	Park Gate		
	🗹 🔀 Gate	Gate	e A	dd				
	🗹 ズ 1st Flo	oor 1st	Floor A	dd				
	🗹 🔀 Confe	rence Hall Con	ference Hall A	dd				
	Park P	PTZ Park	A PTZ A	dd				
	Import via							
	● Add O Mer	rge						
							ОК	Cancel

Choose channels to be imported

Next, switch to the Channels tab and review the channel list.

Configuration import								_ (×
Resources	User	ſS							
Devices	Users			Q	Details		Permissions	۹	
🔀 Channels		TITLE	LOGIN	ACTION			TITLE	VERB	
L Users	v 1	Built-in adminis	admin	Merge	Full name	Built-in Administrator account			
👪 User groups	- 1	Built-in demo u	demo	Add	Login name	admin			
	☑ 💄		Joe Doe	Add	2				
	☑ 🛓	•	Johnny English	Add					
	☑ 🛓		Judy Monroe	Add					
	Import	via							
	OAdd	Merge							
							ОК	Cance	9

Choose users to be imported

When you have finished with devices and channels, review users and user groups to be imported.

If some resource is already present in Luxriot EVO configuration, the wizard will mark the imported copy to be merged to the existing one; you can change this by selecting the desired resource and choosing the import type below: *Import via -> Add/Merge*. Otherwise, the import wizard will simply add the target resource to your configuration and action type choice will be grayed out.

Configuration import					- 🗆 🗙
Resources	User groups				
Devices	User groups Q	Details	Members Q	Permissions	Q
🔀 Channels	TITLE ACTION		TITLE	TITLE	VERB
L Users	🗌 🕌 Built-in adminis Add	Title Built-in administrator user gr	💄 Built-in administrator user	Park Gate	Admin ^
👪 User groups				🔀 Park Gate	Admin
				🔀 Park Gate	Receiv
				🔀 Park Gate	Access
				🔀 Park Gate	Navig
				🔀 Park Gate	Contr
				Main Entrance	Admin
				🔀 Main Entrance	Admin
				🔀 Main Entrance	Receiv
	Import via			🔀 Main Entrance	Access
				🗙 Main Entrance	Navig
				Main Entranco	Contr V
				ОК С	Cancel

Choose user groups to be imported

When you are done, click OK to import the configuration. Luxriot EVO will show you a short summary and ask you to confirm the action.

A Warning	- ×
	Proceed with import?
	You are going to import selected items into the database. The operation cannot be undone.
	Devices: 7 (new) / 0 (merged) of 7 Channels: 7 (new) / 0 (merged) of 7 Users: 3 (new) / 1 (merged) of 5 User groups: 0 (new) / 0 (merged) of 1
	Yes No

Confirm import

After the import, you will be able to edit the newly added resources as usual via corresponding menu sections.

Start & Stop Server Service

After software installation (except for the Luxriot Console or Luxriot Monitor only installations), two components are registered as Windows services: Luxriot Server service and the accompanying Watchdog service. Both these services are set to automatic start meaning that they will be launched straight after Windows start-up regardless of whether any user is logged in or not.

By default, the server will run in silent service mode, i.e., without any status indication other than that in the Windows Services management console; from there, both services can be stopped, started and restarted.

Double-click the server shortcut on your desktop to launch the system tray shell for the server: the server icon will appear in the system tray, allowing you to start and stop the service by right-clicking it and selecting your desired option. Luxriot EVO Watchdog service runs silently in background as an auxiliary service and has no user interface except for the settings' dialog box in Luxriot Console.



Start and stop the server service from the system tray

If the server service is stopped while Luxriot Console connections are active, the wait-for-server-connection window will appear on top of Luxriot Console, disabling any input. The same thing will happen if there are any problems with server connectivity. It will automatically disappear when the server is online again; alternatively, you can click *Close* to exit Luxriot Console at this point and open it manually later.

Connecting – ×
Connection to the server has been lost.
Console is trying to reconnect the server.
Connecting
Please wait until connection to the server is restored, or cancel and close the Console.
Cancel

Connection lost

Interface Overview: Management Application

Luxriot Console is a straightforward graphics user interface tool with access to all possible server settings. To ensure comfortable and easy navigation, it is important that you become acquainted with its structure before starting to use it.

Configuratio	n > Users Built-in Administrator	account 👤 C Search	৹ ≡
Configuration	➡ New user Edit As:	sign group 🗱 1 selected	
Servers	TITLE	ID LOGIN NAME	EMAIL
L Users	L Built-in Administrator account	(1) admin	
■ Devices	上 John Doe	(124) johndoe	johndoe@email.com
🔀 Channels	🛃 Admins	(126)	
_	🄱 Built-in Administrators group	(3)	
Recording	👪 Local admins	(127)	
🔜 Layout templates	L Operators	(125)	
🔛 Configuration			
Monitoring	Recently added, 0 Recently u	pdated, 0 Groups, 4 U	lsers, 2
Luxriot Console manageme	in application interface		

Navigation Panel

Configuration > Users	Built-in Administrator account 💄 (C Se	earch	Q
Luvriot Consolo Navigation Panol				

Luxriot Console Navigation Panel

The blue panel on top serves as navigation bar and its usage is similar to that of Windows Explorer. Here are its main components (from left to right):

- Left and Right arrows enable navigation through your browsing history and allow you to switch between previous and next locations; you can also use Backspace on your keyboard to go back
- Your current location is displayed right next to these arrows
- If you are in the Organisations view, an *Exit* button will appear
- Currently logged in User account button with options to view user profile or to log out
- Refresh button reloads current item list
- Search field only items matching the search criteria will be displayed in the list

Application Menu



Application Menu, position: top right

Application menu button in the upper-right-hand corner gives you the following launches the options:

- launch the <u>Setup Wizard</u>
- import a pre-saved configuration from an XML file
- change console settings
- open the <u>About</u> section

Sections

🔛 Configuration	
Events & Actions	
Monitoring	
🛄 Audit	

Sections panel, position: bottom left

The bottom left panel allows you to switch between the four main Luxriot Console sections: Configuration, Events & Actions, Monitoring and Audit. The contents of the components panel on the left will change depending on the selected section.

Components

The panel on the left will display the list of all available configuration components based on the selected section. As a result of license limitations, some of the items may be greyed out or unavailable. The list below shows maximum available items by category:

- Configuration
 - Organisations, Networks, Servers, Failover clusters, Users, Devices, Channels, Recording, Maps, Layout templates, Layouts, Visual groups
- Events & Actions
 - Rules, Events, Actions, Global Events, Conditions, Schedules, Mail servers
- Monitoring
 - Servers, Devices, Channels, User Sessions, Video Walls
- Audit
- Servers, Users



Components panel, position: left

Item List

TITLE	ID LOGIN NAME	EMAIL
L Built-in Administrator account	(1) admin	
💄 John Doe	(124) johndoe	johndoe@email.com
👪 Admins	(126)	
👪 Built-in Administrators group	(3)	
Local admins	(127)	
4 Operators	(125)	

Item list, position: centre

The main part of the Luxriot Console window displays items in the selected category depending on the search and/or item filters. You can select one or more items at once using the *Shift* or *CTRL* button.

Click any column title to use is as a sorting basis for the whole item list; the little arrow near the column title indicates that it is currently being used for arrangement - either 🔺 ascending or 🔻 descending.

Right-click item list header for sorting options and column fit settings:

TITLE	LOGIN NAME	ORGANISATION ENABLED
L Built-in Administrator account	admin	2 Sort Ascending
L James Bond	jamesbond	Best Fit
L Jimmy Neutron	jimmyneutron	Best Fit (all columns)
L Johnny English	johnnyenglish	
👪 Built-in Administrators group		

Supervisors

Right-click header for additional options

If you choose to remove a column from presentation of the item list, the settings will remain in effect until the Luxriot Console restart.

Item Actions



Item actions panel, position: top right, under Navigation panel

The panel above the item list displays the available actions, if applicable. Usually, the buttons here will allow you to create a new item, edit or delete existing ones, create or edit contiguous items, etc.

Item Filters

Recently added, of Recently updated, of Groups, 4 Osers, 2	Recently added, 0		Recently updated, 0		Groups, 4	Users, 2]
--	-------------------	--	---------------------	--	-----------	----------	---

Item filters panel, position: bottom right

The bottom panel contains miscellaneous item filters, such as: recently added and updated, corresponding groups etc. Click any of the filters to apply them; use the *X* button to reset and display the full item list.

About Product

Information about currently running software can be viewed from the local computer in the following ways:

- **Luxriot EVO info**: right-click the system tray icon and select *About* (if there is no tray icon, launch server shortcut to run the tray shell);
- Luxriot Monitor info: from Luxriot Monitor, go to the main menu, click *Help* and select *About;*
- Luxriot Console info: from Luxriot Console, go to the main menu, click *Help* and select *About*.

About VMS	G Console – ×
	VMS Console
	Product Version 1.0.0.41609 x86 Beta by AB6#20878
	Licence: Global
	Web: <u>http://www.VMS.com</u> Email: sales@VMS.com
	Manage license
	Copyright © VMS 2015.
	Warning: this computer programme is protected by copyright law and international treaties. Unathorised reproduction or distribution of this programme, or any part of it, may result in severe civil and criminal penalties, and offenders will be punished to the fullest extent possible under the law.
	OK

About Server

Conventions and Keyboard Shortcuts

Mouse Gestures

Double-click item containing more entities (e.g., any group): opens item contents in the same window **Double-click non-expandable** item (e.g., server, user): opens entity configuration dialog box **CTRL+click** or **Shift+click**: select multiple items in a list

Keyboard Shortcuts

Backspace: browse one step back in Luxriot Console Alt+F4: close Luxriot Console CTRL+A: select all items

Visual Elements

General

+ New item (click 🔽 drop-down arrow to see available options)

Remove item(s)

X Deselect item(s)

😢 Unacceptable filed value

More information about the item

C Refresh item list

Q Search

Luxriot Console sections

Configuration

Events & Actions

Wealth monitoring

Management



- Server
- Server group

Software Watchdog

Storage

Resources (all or any type)

LUSER account/session

User group

General details Hembers of the current item A Current item membership in other groups HUser and user group permissions for target item ■ Device (physical equipment) Device group Channel (stream) Channel group Recording profile (core recording settings) • Recording schedule (recording itinerary based on core recording settings) • Recording configuration (recording interface assignable to channels) ★ Motion detector Layout Template Audit Journal (software log) Set (period etc.) **Events & Actions %** Rules **F**Events ♦ Actions Global events **U**Conditions DEvent & Action schedules Mail servers Action delay timers

©2016. A&H Software House, Inc. All Rights Reserved.

Server Settings

In order to access Luxriot EVO S server settings via Luxriot Console, select *Configuration* section and then choose *Servers* components from the menu on the left.

Configuratio	n > Servers	Built-in Administrator account 👤	C Search	۵	∎
Configuration	Edit 🗶 1 selected				
Servers	TITLE				
L Users	Sector 31-1				
Devices					
🔀 Channels					
Recording					
🗔 Layout templates					
🔛 Configuration					
Monitoring					

Configuration -> Servers

Double-click server or click the *Edit* button on the upper panel to access server configuration dialog box.

Server Sector 31-1	-	□ ×
Server	Details	
🖋 Details	Title	
💂 Connections	Sector 31-1	
🗛 Membership	Server name	
rermissions		
Katchdog		
Storage		
	OK Cano	cel

Server details

On the *Details* tab, you can change the server name: it will appear everywhere in Luxriot Console and in the connected Luxriot Monitor applications, including Web clients.

Server Sector 31-1		- 🗆 🗙
Server	Connections	
🖋 Details	VMS port	
🜻 Connections	60554	
Membership	VMS port	
📫 Permissions	HTTP port 8080	
📥 Watchdog	HTTP port, enter 0 to disable	
Storage		
	ОК	Cancel

Connection properties

The *Connections* tab allows you to define **ports** for Luxriot Monitor and Luxriot EVO Streaming Server connection; the default ports are 60554 for Luxriot Monitor and 8080 for Luxriot EVO Streaming Server (HTTP).

The following sections describe the remaining aspects of server settings in details.

Storage

Server storage configuration includes storage directories, size and duration quotas, cleanup time settings and storage differentiation by name for further flexible allocation of the recorded streams.

To access the storage settings for the server via Luxriot Console, choose the *Configuration* section, then select *Servers* from the menu on the left, double-click your server and then click the *Storage* tab.

Server Central Server		×
Server	Storage	
Details	Storage properties	
_≝ Connections	Manage storage directories, set duration guota, retention and view	
Membership	storage usage statistics.	
🛉 Permissions	Open storage properties	
📥 Watchdog		
Storage		
	OK Cancel	

Access storage settings for selected server

Click Open storage properties to open the configuration dialog box.

Directories

All available **local disks** (also mapped network shares that appear as drives in Windows Explorer) will be automatically listed and checked for recording with default archive directories. You can also add network paths to remote storage locations. Use UP and DOWN arrows on the right to change the disk order (priority).

For each storage location, the following information will be displayed:

- storage priority: determined by the item position in the list
- storage profile (see description below)
- current quota size
- free space on disk
- total disk size

Storage properties							- 🗆 🗙
Storage properties	Directories						
Directories	Edit directory details	+ New	Directories				Ē
Duration quota		PATH	STORAGE	QUOTA	FREE SPACE	TOTAL SIZE	
2 Retention	Path	1 D:\L	Default	500.00 GB	764.71 GB	803.51 GB	
	F:\Archive Files	2 C:\L	Disabled	25.56 GB	28.40 GB	127.90 GB	
	Quota (GB)	3 E:\L	Disabled	70.16 GB	77.96 GB	78.12 GB	
	614.49	4 F:\L	Important	614.49 GB	682.77 GB	725.38 GB	
	Amount of disk space to store archive data. For	5 G:\L	Disabled	115.03 GB	127.81 GB	127.90 GB	^
	Storage	6 H:\L	Disabled	63.00 MB	70.00 MB	99.00 MB	
	Storage	7 I:\Lu	Disabled	62.00 MB	69.00 MB	99.00 MB	•
	-	8 Q:\L	Disabled	0.00 KB	0.00 KB	0.00 KB	
	Apply changes Cancel						
	, 					ОК	Cancel

Configure storage directories

Each directly attached storage location will be automatically assigned a quota of 90%; each network storage will have a zero quota by default so you need to enter the quota size manually. We strongly advise that you review all the settings and make sure that all the storage locations have sufficient free space, and, if necessary, set a lower quota or free up some space. It is recommended that every recording location has 10-15% of free space: this helps avoid fragmentation effect and also allows highly loaded software to effectively enforce recording quotas.

We advise against recording to the system drive because it is often used by other processes like defragmentation and system backup, not to mention OS itself, and thus doing so may affect recording efficiency and stability. As a result, disk C: is not selected for recording by default.

To change the disk quota, simply highlight the desired location for storage from the item list, then enter the quota size in GB and click *Apply changes*.

Storages

You can either use the *Default* storage category for all locations, or create multiple different **storage** profiles (types, names). These can be used for manually distributed streaming between storage directories:

- storage directories are marked with corresponding storage tags
- each channel is <u>assigned</u> to a recording location

To choose a storage profile different from the *Default*, select the storage location from the *Directories* list and click the *Change* button.

Storage

🞴 Default	Change
Storage	

Change storage

Select one of the built-in storage profiles or create and edit a new one.

E Storages			-	×
				Q
Available storages			ø	Ē
Title	Туре			
Disabled				
🖴 Default	Storage			
ImportantCams	Storage			
New storage		OK	Cano	el

Choose storage profile

The built-in storage types are:

- Disabled: no data will be recorded
- Default

These profiles cannot be edited or removed.

Click + *New storage* button to create a new storage profile, or select an existing one and click the *Edit* button in the upper-right-hand corner to change its name.

Storage SecondaryStreams*	_	×
Storage	Details	
	Title SecondaryStreams Storage name	
	OK Cancel	

New storage profile

Enter the storage profile title and click *OK* to save and exit.

The storage tag you have selected or just created will appear as selected. Click the *Apply* button below to **confirm** storage configuration settings before proceeding.

Remote storage locations

In order to add a **network storage** (NAS, SAN, network share) that is not mapped as a drive in Windows, click + *New* button on the upper panel and enter the setup details.

Storage properties					-	×
Storage properties	Directories					
Directories	Edit directory details	New	Directories			Ē
🛗 Duration quota			011074	EREE SDACE		
C Potentian	Path		EDO DO CR	CO2 O2 CP		
► Retention	\\192.168.10.51\Share	Default	500.00 GB	625.05 GB	605.51 GB	
		Disabled	23.47 GB	26.08 GB	127.90 GB	
	Username	Disabled	70.16 GB	77.96 GB	78.12 GB	
	j.bond	Disabled	614.49 GB	682.77 GB	725.38 GB	
	☑ Set password	Disabled	115.03 GB	127.81 GB	127.90 GB	
	•••••	Disabled	63.00 MB	70.00 MB	99.00 MB	^
	Quota (GB)	Disabled	62.00 MB	69.00 MB	99.00 MB	\checkmark
	5000.00	Disabled	0.00 KB	0.00 KB	0.00 KB	
	Amount of disk space to store archive data. For best					
	Storage					
	Default Change					
	Storage	~				
	Create Cancel					
		<				>
				OK	Cano	el

Add new storage directory

Setting	Description	Default Value
Path	Full network path to the storage directory	\\Server\Share\Luxriot\Archive Files
Username	User name to connect to the storage	[empty]
Password	Define storage access password, if applicable	[empty]
Quota	Maximum amount of storage in gigabytes to be used for recording; 85-90% is recommended	0.00
Storage	Storage profile to be assigned to the target storage directory	Disabled

Duration Quota

Set the global recording duration limit for your server here: enable quota management and then enter desired number of days. All recordings older than the number of days specified will be erased.

Storage properties		×
Storage properties	Duration quota	
Directories	Use the controls below to setup the global recording duration. Selected quota will be applied to all media devices and storage	2
🛗 Duration quota		
€ Retention	Storage duration: 90 Days v Mote that Server will maintain configured maximal storage duration so that it will force erasure of footage older than the specified point in time.	
	OK Cancel	

Global duration quota

Note that the global duration quota has priority over the individual (per-channel) duration quota that is set in the recording configurations.

Retention

You can set the software erasing mechanism so that it cleans up old recordings only during specific periods of time, e.g., when the recorder is less overloaded or when the quality of recordings are less important.

Storage properties	- 1	×
Storage properties	Retention	
 Directories Duration quota 	To recover disk space, storage subsystem deletes the oldest footage and implements ring buffer recording. Use the contribelow to finetune the process.	ols
€ Retention	 Enable cleanup hours 18:00 Image: Second sec	
		~
	OK Cance	

Set cleanup hours

To do this, enable the cleanup hours setting and specify the time period during which erasing is allowed.

🛕 This control has priority over the storage quota. Setting insufficient cleanup time may lead to storage overflow and result in recordings being lost. We strongly recommend that you do not enable any cleanup hours' restrictions unless you absolutely know what you are doing.

Watchdog

General

Server Watchdog is an integral part of the server core. It protects the software from certain types of failures by automatically attempting to restart the server.

Watchdog operates based on the software and system overall health monitoring; default trigger values have been selected on the grounds of our analysis of extensive tests run on systems of different configuration and stability level.

Although it is possible to disable the Server Watchdog service, we strongly advise against doing so, as the principal role of Watchdog is to keep the software operation as stable as possible in the given circumstances.

Watchdog operation can be tracked by messages in the Windows Application log. If you do experience frequent disturbances such as software restarts or server rebooting, this will be an indication of some serious issue related to the software, operating system and/or underlying hardware. In such a situation, the best course of action is to:

- carefully read the messages in the Windows Application Log, as these may already contain some indication of why Watchdog was triggered;
- refer to the <u>relevant topic in the Troubleshooting section</u> of this manual to read about typical causes of such cases;
- send a <u>Problem Report</u> from the faulty server, providing as much information as possible about the issue;
- consult the Luxriot technical support team directly via support@luxriot.com.

Configuration

Watchdog operation can be configured for each server independently. To access Watchdog settings, in Luxriot Console select *Configuration* in the bottom left menu and select *Servers* from the list on the left, then double-click the desired server or simply click *Edit* button on the top panel for the pre-selected server.

🗉 VMS Management Console 2015 - localhost 🛛 🗕 🗖 🗙			
	n > Se rver s	C Search	৹ ≡
Configuraion	➡ Create server ▼	Edit Assign group 🗱 1 selected	
Organizations	TITLE	ID FAILOVER CLUSTER	
Networks	Sentral Server	(101)	
Servers			
Failover clusters			
L Users			
■ Devices			
X Channels			
Recording			
🖽 Configuraion			
Events & Actions			
 Monitoring 	Recently added, 0	Recently updated, 0 Groups, 0 Ser	vers, 1

Locate server for Watchdog configuration

In the Server dialog box, select Watchdog from the left menu.

Server Central Server*	- D ×
Server	Watchdog
🖋 Details	~
🜻 Connections	Watchdog options
A Membership	☑ Enable watchdog
Permissions	Operation
A Weekder	After the start of the application, the watchdog will not perform restart or reboot actions within this grace interval.
	Grace interval, seconds: 30
🖴 Storage	The watchdog may be set to reboot in cases of frequent failure. If at least the specified number of failures are detected within the specified amount of time, a restart of Windows will be initiated. Entering zero in any field below will disable the restart.
	Reboot interval, minutes: 5
	Number of failures to reboot: 3
	Performance
	Configure watchdog to monitor system performance, detect contingent situations and attempt to fix problems.
	Monitor system committed memory usage ratio
	Maximum allowed: 80
	Monitor system pool non-paged memory usage (MB)
	Maximum allowed: 0
	Monitor server private memory usage ratio
	Maximum allowed: 45
	Monitor server virtual memory usage ratio
	OK Cancel

Watchdog configuration

The table below contains a detailed explanation of Watchdog settings. Please note that for most cases default and near-default settings are recommended; it is advisable that you consult with Luxriot support if for some reason you plan to make extensive changes to these settings. Click the information icon next to each setting to read more about them.

Setting	Description	Default Value
Enable Watchdog	Enables Watchdog operation for the target server	Enabled
Grace Interval, seconds	Time interval in seconds, counting from server start, during which Watchdog will not attempt to restart the software	30
Reboot Interval, minutes	Watchdog will reboot Windows if there have been a certain number (N) of software restarts (N is specified below) in the given time interval; the default for rebooting is 3 restarts in 5 minutes; setting the specified number to 0 will disable rebooting	5
Number of Failures to Reboot	Watchdog will reboot Windows in case there have been N software restarts in the time interval specified above; the default for rebooting is 3 restarts in 5 minutes; setting the specified number to 0 will disable rebooting	3
System Committed Memory Usage Ratio, %	Watchdog will restart the software if the ratio of total system committed memory exceeds the specified percentage; this value is shown under Memory section of Performance tab in the Windows Task Manager	Enabled, 70%
System Pool Nonpaged Memory Usage, MB	Watchdog will restart software if the amount of system nonpaged pool memory exceeds the specified amount	Disabled
Private Memory Usage Ratio, %	Watchdog will restart software if the amount of private memory used by server process exceeds the specified value	Enabled, 45%
Virtual Memory Usage Ratio	Watchdog will restart software if the amount of virtual memory used by server process exceeds the specified ratio; ratio shows the amount of virtual memory used by server process versus maximum per-process virtual memory allowed by OS	Enabled, 90%
Enable Periodic Restart	Enables automatic software restart every N days or hours; use hours for troubleshooting purposes	Enabled, 7 days
Enable Periodic Restart Hours	Limit periodic restart to specific hours, e.g. only restart at night; we recommend to leave at least a 1h interval for the restarts	Disabled

Overview of Devices and Channels

The traditional idea of cameras as surveillance software entities has been developed, resulting in the concept of devices and channels. Essentially, it represents the separation of physical and data layers for reasons of security and easier management.

"Device" refers to any piece of physical equipment that serves as a data provider; a hardware piece delivering video, audio and event streams to the server. IP cameras, video encoders, capture boards, USB web cameras - these are all examples of devices that can be added to Luxriot software. Devices do not include any data streams.

"**Channel**" refers to any actual video stream (with corresponding audio/event stream, if applicable) delivered to the server from any of the configured devices. Software <u>licensing mechanism</u> counts channels and not devices.

In Luxriot Console, devices hold camera TCP/IP and user settings, as well as actual hardware model. By contrast, channels do not possess these properties: this allows them to be handled as virtual entities, detaching and reattaching them from/to devices. Channels feature video stream configuration settings - resolution, frame rate, bit rate and others - as well as all supplementary data streams, such as audio, motion and digital input/output events, PTZ control and camera-side analytics information.

As there are also some multichannel devices, e.g., capture boards and video encoders, each device can have one or more channels attached to it - these can either be assigned or detected automatically; maximum number of channels for each specific device is stipulated by the device model.

Devices only appear within Luxriot Console, allowing the administrator to apply all necessary configurations. Luxriot Monitor only displays the channels and does not provide any access to the devices' properties to the end users.

Both devices and channels can be grouped independently. For internal Luxriot Console management, device groups and channel groups are available; for Luxriot Monitor channel grouping, <u>visual groups</u> can be used.

Add Devices Using Autodiscovery

Use automatic device discovery feature to find all available devices. This method is of great help when dealing with large amounts of cameras, and also when exact addresses of devices are not available.

To access the configuration dialog box from Luxriot Console, open *Configuration* section and select *Devices* in the menu on the left; in the upper panel, click down arrow near *New device* button and then select *Find devices*.

• Configuration > Devices			
Configuration	+ New device - Edit		
Servers	New device group		
L Users	Create multiple devices		
■ Devices			
Image Title			

Scan Parameters

First, select scan mode; the following options are available:

- scan IP address range: specify a continuous LAN segment to be scanned
- scan network adapter address range: select one or more network interfaces to be fully scanned
- scan attached devices: the local hardware system will be scanned for capture boards and Direct Show video sources

If you have chosen to search for IP video sources, you should review additional connection settings and change or update them, if required:

- ports: HTTP ports, comma separated
- user credentials: pairs of comma-separated user names and passwords, one pair per line

Use the *Reset* button below to discard all changes and start entering scan parameters again. When you are ready, press *OK* button below to begin scanning.

			-	•	×
Scan parameters					
O Scan network adapter address range					
Scans one or more network adapters and attached devices					
O Scan IP address range					
Scans specified address range and attached devices					
Scan attached devices					
Scans attached devices					
		_			_
Reset	OK		Can	cel	

Scan attached devices

				- • ×
Scar	n para	meters		
• Sc	an net	work adapter address range		
Scans	one or	more network adapters and attached dev	ices	
	×	ADAPTER	IP ADDRESS	MASK
		Realtek PCIe GBE Family Contro	192.168.1.83	255.255.252.0
	¥	VirtualBox Host-Only Ethernet	192.168.56.1	255.255.255.0
O Sc Scans Ports	an atta attache	ached devices ed devices		
80,8	080			
Comm	na sepa	rated list of port numbers		
Passv	vords			
admi admi root	in,adm in,123 pass	in 4		^
Userna a com	emes ar ma.	nd passwords (one combination per line).	Usernames and pas	swords separated by
R	eset] [ОК	Cancel

Scan network adapter address range

					-	• 🖻	<
Scan par	ameters						
O Scan n	etwork adapter address	range					
Scans one o	or more network adapters an	id attached	device	5			
Scan IP	address range						
Scans speci	fied address range and attac	ched device	15				
From:	192.168.10.2		to:	192.168.10.187]
O Scan at	ttached devices						
Scans attack	hed devices						
Deste							
POIS							1
80,8080							
Comma sep	parated list of port numbers						
Passwords	5						
admin,ad	min					1	
admin.12	34						
roocpass							
Usernames a comma.	and passwords (one combin	nation per l	ine). Us	ernames and password	ls sepi	srated b	y
Reset				ОК	Cano	xel	

Scan IP address range

Device Autodiscovery

After scanning has been completed, you will be taken to the Device Autodiscovery dialog box, which will allow you to review the found <u>devices and their channels</u>, and enter/modify related settings. Use the *Search* field in the upperright-hand corner to find a specific device by name, model, IP, port or hardware ID (for IP devices, ID includes MAC address).

There are two types of selection in the item list: checkboxes and colour highlight. **Checkboxes** are used to choose the items to be added to server configuration after you close the dialog box; **highlighted** items are subject to immediate properties changes. Use *CTRL+click* or *Shift+click* to select all or several items at once to change their settings.

Click a device in the item list to load its settings into the *Device Properties* window. Note that some settings may be missing for some of the automatically found devices; this depends mostly on device and whether user data was correctly provided. In such cases, simply fill in the missing data manually and click the *Apply* button below to save the configuration changes.

Device autodiscovery						-	×
Device autodiscovery	Found devices						
Found devices Found channels	Scanning for new devices Stop						
	Device properties		Fo	ound devices			Q
	Device name	· · · · · · · · · · · · · · · · · · ·		DEVICE NAME Axis (Legacy Autodetect) on 192.168.3.4	MODEL Axis (Legacy Autodetect)	 HOST 192.168.3.4 	PORT 1
	Grundig GCI-H0522V on 19 Device name	92.168.3.14		Grundig GCI-H0522V on 192.168.3.14	Grundig GCI-H0522V	192.168.3.14	80 ;
	Model		V	KT&C KNC-SPDNi120HD on 192.168.3.2	KT&C KNC-SPDNi120HD	192.168.3.2 192.168.3.36	80
	Grundig GCI-H0522V	Change		-	Select model		80
	Device model		2	Vivotek IP7131 on 192.168.3.12	Vivotek IP7131	192.168.3.12	80
	Host		V	Vivotek IP7131 on 192.168.3.3	Vivotek IP7131	192.168.3.3	80
	192.168.3.14		•	Vivotek IP7131 on 192.168.3.19	Vivotek IP7131	192.168.3.19	80
	Host name or IP address						
	Port						
	80						
	Port number						
	Username						
	admin						
	Username to access the device						
	Password						
	1234						
	Password to access the device		·				
	Apply Reset		<				>
					Add selected devices and ch	annels Cano	el

Set up discovered devices

If device is not integrated with the software (native support), it may be detected as generic type (e.g., ONVIF). If you think some devices have not been discovered, check if they have different HTTP ports; also, try adding them <u>manually</u>.

Setting	Description	Default value
Device name	User-defined video source name	Autodetected model + IP, empty if not detected
Model	Device manufacturer and model, or generic type	Autodetected vendor and model, empty if not detected
Host	Device IP address	Autodetected
Port	Device HTTP port	Autodetected
Username	Device user credentials; note that you have to provide administrative profile credentials in order to be able to change device settings via software interface	Appropriate username from provided list or autodetected
Password	Device user password	Appropriate password from provided list or autodetected

Make sure you select all the devices you wish to add by putting a checkmark next to them. Devices with missing configuration (model and/or IP) are unchecked by default and will not be added to active server configuration.

A Device models set on this step cannot be altered in future. In order to change the model further on, you will need to delete the channel attached to such a device, and then create a new channel with your desired model: see how to replace a camera for details.

Switch to *Channels* tab to review the detected video channels of the discovered devices: this is particularly important if you are using multichannel devices, e.g., capture boards and encoders. Use the *Search* field in the upper-right-hand corner to find specific channels by name or device name.

Device autodiscovery				_ = <mark>×</mark>
Device autodiscovery	Found channels			
Found devices	Shad during south - Compiles has be			
X Found channels	Start device search Scanning has be			
	Channel properties	Found channels		Q
	0	CHANNEL NAME	RECORDING SETTING	S DEVICE
	Channel name	X Axis (Legacy Autodetect) on 1	none	Axis (Legacy Autodetect) on 1
	Vivotek IP7131 on 192.168.3.12 Channel name	X Vivotek IP7131 on 192.168.3	none	Vivotek IP7131 on 192.168.3
		X Vivotek IP7131 on 192.168.3	none	Vivotek IP7131 on 192.168.3
	Recording settings	🗙 eVidence Apix - 18ZBox / M2	none	eVidence Apix - 18ZBox / M2
	none Change Recording settings	X Samsung SNP-3120V on 192	. none	Samsung SNP-3120V on 192
	Apply Reset	-		
			Add se	elected devices and channels Cancel

Set up discovered channels

Here you can edit the channel name and assign recording configuration. By default, recording is enabled for all channels: click the *Change* button near *Recording settings* to <u>manage recording profiles</u> and <u>assign them</u> to your channels. To add a new recording profile, click the + *New recording configuration* button below; you can find more details about recording profiles in the <u>corresponding section</u>. Click *OK* to save and return back to devices and channels; click Apply to save configuration changes.

After changing the channel recording configuration, do not forget to click *Apply*, otherwise the changes will not take effect.

Recording configuration here is assigned to the main streams of the target channels. In order to set up substream recording, please go to <u>channel configuration</u>.

Select recording configuration	- 🗆 X
	۵
Available recording configurations	
TITLE	ID TYPE
No recording	(31) Recording configuration
Continuous recording	(32) Recording configuration
New recording configuration	OK Cancel

Select the recording configuration or create a new recording profile

Click the Start device search button above at any time to restart device discovery.

All previously discovered devices and all configuration changes will be discarded if you restart camera autodiscovery.

When you are ready, click the *Add selected devices and channels* button below; all checked devices will be added with selected corresponding channels. Newly added devices and channels will be added to the item list.

Configuration	on > Devices		C Search	৹ ≡
Configuration	➡ New device ▼ Edit Assign group	View channels 🛍 🕱 1	selected	
Servers	TITLE	ID DEVICES/MODEL	HOST/IP	PORT HARDWARE ID
L Users	■ (Generic) ONVIF Compatible on 192.168	(104) (Generic) ONVIF Compatible	192.168.3.33	80 MAC:00:00:00:9A:16:EC:92:0B
Devices	■ Asoni CAM613 on 192.168.3.47	(102) Asoni CAM613	192.168.3.47	80 MAC:00:00:00:0F:0D:20:D5:AA
X Channels	■ Basler BIP2-1600c-dn on 192.168.3.148	(107) Basler BIP2-1600c-dn	192.168.3.148	80 MAC:00:00:30:53:10:CD:CA
	■ eVidence Apix - 18ZBox / M2 on 192.16	(103) eVidence Apix - 18ZBox / M2	192.168.3.5	80 MAC:00:00:00:D0:89:08:D6:26
Recording	Mobotix M25M-Secure on 192.168.3.137	(106) Mobotix M25M-Secure	192.168.3.137	80 MAC:00:00:03:C5:10:2B:70
🔜 Layout templates	Mobotix Q25M-Secure on 192.168.3.138	(105) Mobotix Q25M-Secure	192.168.3.138	80 MAC:00:00:00:03:C5:10:21:F0
Configuration				
Monitorina				
age monitoring	Recently added, 0 Recently updated, 0	Groups, 0 Devices, 6		

Added devices will appear in the item list

Use the buttons on the upper panel to manage your devices. You can now add new devices and/or device groups, launch autodiscovery again, assign devices to groups, as well as removing both devices and groups.

▲ When deleting devices, remember that corresponding channels will **not** be **removed** at the same time and therefore your newly discovered devices may not be added due to license limitation. Go to the *Channels* tab to manage them separately.
Add Devices Manually

You can add devices manually instead of using autodiscovery in the following cases:

- actual devices have not been connected yet
- devices are not connected at the current stage but it is planned that they will be connected later
- the server needs to be configured while being away from its future position
- some devices in use cannot be automatically discovered

P Only IP devices can be added manually. Attached devices (e.g., capture boards) require <u>autodiscovery</u>.

Add single device

To access the configuration dialog box from Luxriot Console, open the *Configuration* section and select *Devices* in the menu on the left; in the upper panel, then click the + *New device* button.

Device		-	×
Device	Details		
🖋 Details	Title		
Arm Membership	Inte		
	ОК	Cano	2

Add new device

Enter a user-defined name for your new device and pick a model. If your camera model is not listed, select the closest similar model or choose a generic type.

Select device model	- 8	×
		Q
Available models		
VENDOR	MODEL	
(Emulation)	JPEG File	^
(Emulation)	Video File	
(Generic)	Custom Config	
(Generic)	DirectShow Device	
(Generic)	JPEG/M-JPEG Compatible	
(Generic)	ONVIF Compatible	
(Generic)	RTSP Compatible	
360 Vision	Predator HD	
3sVision	N1011	
3sVision	N1012	
3sVision	N1031	~
	OK Cancel	

Select device model

After you have chosen manufacturer and model, additional tabs will become available in the main configuration dialog box: *Network* and *Channels*. These tabs are described in details later in this section.

vice	Details	
Details	Title	
Membership	Park South	
Permissions	Device name	
Network	Model	
Channels	Model	
	Hardware Id	
	Unique hardware Id	
		OK Cancel

Network and Channels become available after device model has been chosen

Details

Setting	Description	Default value
Title	User-defined device name	[empty]
Model	IP device manufacturer and model, or generic type	[empty]
Hardware ID	Unique hardware identifier containing a device hardware identifier; this filed should be left empty, as it will be filled automatically later, when the device has been connected and identified	[empty]

Membership

Choose groups for the current device to become a member of. Use *Add* and *Remove* buttons below or double-click to manipulate groups. One device may belong to several groups at once.

Device Park South*				- • ×
Device	Membership			ৎ
🖋 Details	Selected groups		Available groups	
👫 Membership	TITLE	ID TYPE	TITLE	ID TYPE
Permissions	Dutdoors	(117) Device group		
Network				
🔀 Channels				
	Remove		Add	
				OK Cancel

Define groups for the device being added

Permissions

Add users and/or user groups simply by checking at least one permission for the target server; remove by clearing permissions - either by deselecting them or by clicking the *Clear* button below. You can also double-click users to remove them from the list of privileged users. Devices with an empty permission list will not be available to anyone except for the root (global) administrator.

Device Park South*				-	□ ×
Device	Permissions	5			Q
🖋 Details	Selected users			Available users	
Membership	TITLE	ID TYPE	PERMISSIONS	TITLE ID TYPE	
📫 Permissions	L John Doe	(120) User	Administer		
Network					
🔀 Channels					
			Clear		
	, ,		·	ОК Са	ncel

Add user permissions for this device

Network

Enter TCP/IP settings for device access here.

■ Device Park South*		x
Device	Network	
🖋 Details	Host	
👫 Membership	192.168.10.155	
I Permissions	Host name or IP address	
Network	Port 80	
≭ Channels	Port number Username admin Username to access the device New password Password to access the device Open device in browser Ping device	
	OK Cancel	

Enter TCP/IP settings for device access

Before filling in the details, make sure the settings match those on the camera. If device has not been connected yet, ensure that the same settings are applied during the camera installation. You can use the *Ping Device* button to check camera availability and/or verify your settings; the *Open Device in Browser* button will try to reach your camera Web interface using you default browser.

Setting	Description	Default value
Host	Device IP address	[empty]
Port	Device HTTP port	80
Username	Device user credentials; note that you need to provide a valid administrative user profile to be able to change device settings via software	[empty]
Password	Password for camera access	Enabled

Channels

Here you can detach automatically detected channels from the device and replace them with one of the existing 'free' channels (not attached to any device). Use the *Reset* button to undo any changes made to the channels (this only works for current editing session, reset will not be available after you save the changes and reopen this dialog box).

If you wish the original camera channel(s) to stay attached to the device, just leave the channel list as it is.

Device Park South*		-	□ ×
Device	Channels		
🖋 Details	Channels Detach Attach Reset		
👫 Membership	TITLE		
rermissions	1 🔀 Park South		
😂 Network			
🔀 Channels			
	ОК	Canc	el

Channels

Add multiple devices*

*Feature is subject to license limitations and may be unavailable in some software editions.

If you have a number of devices of the same type in your system, you can add them all at once to save time. This method is also suitable is you have multiple groups of devices of the same type.

Open the *Configuration* section and select *Devices* in the menu on the left; in the upper panel, click the little arrow next to the + *New device* button and select *Create multiple devices*.

Add devices

Multiple devices creation					-	×
Create multiple devices	New de	vices				
Add Devices	Available	models	Q	New devices		Q
	VENDOR	MODEL	CHANNELS	DEVICE NAME	MODEL	
	(Generic)	Custom Config	1 ^			
	(Generic)	JPEG/M-JPEG Compatible	1			
	(Generic)	ONVIF Compatible	1			
	(Generic)	RTSP Compatible	1			
	3sVision	N1073	1 ~			
	Device na	ame Amount	+ Add			
	custom c		• • • • • •	<		>
					ОК Са	ncel

Create multiple devices dialog box

You can add any number of different devices here (assuming this is permitted by license limitations). First, select the device model from the list, and then enter your desired number of existing devices of the same model.

Multiple devices creation				-	×
Create multiple devices	New devices				
Add Devices	Available models	Q	New devices		Q
	VENDOR MODEL	CHANNELS	DEVICE NAME	MODEL	
	CBC (Ganz) ZN-S1000AE	1 ^			
	CBC (Ganz) ZN-S1000VE	1			
	CBC (Ganz) ZN-S100V	1			
	CBC (Ganz) ZN-S4000AE	4			
	CBC (Ganz) ZN-Y11	1			
	CBC (Ganz) ZN-YH305	1			
	CBC (Ganz) ZN1-D4FN5	1			
	CBC (Ganz) ZN1-M4FN3	1			
	CBC (Ganz) ZN1-N4NFN6	1			
	CBC (Ganz) ZV-S306	1 🗸			
	Device name	Amount			
	ZN-S4000AE	10 🕂 Add	<		>
				OK Cance	el

Select the desired model and number of devices

When you are ready, click the + *Add* button below to attach the camera set to the new devices list. As soon as there is at least one device, additional tabs will become available: *Device Parameters* and *Channel settings*. Device list on the right will be available in all tabs.

To **remove** any of the listed items, select them with your left mouse button (use *CTRL+click* or *Shift+click* to select multiple devices at once) and hit the *Delete* button on the upper panel or on your keyboard. Select any device and use the + *Add* button on the upper panel to add a copy of that device.

Multiple devices creation					- 🗆 ×
Create multiple devices	New de	vices			
■ Add Devices	Available	models	Q	New devices 🕂 🛄	م
🖋 Device parameters	VENDOR	MODEL	CHANNELS	DEVICE NAME	MODEL
🔀 Channel settings	(Generic)	RTSP Compatible	1 ^	ONVIF Compatible 1	(Generic) ONVIF Compa
	(Generic)	JPEG/M-JPEG Compatible	1	ONVIF Compatible 2	(Generic) ONVIF Compa
	(Generic)	ONVIF Compatible	1	ONVIF Compatible 3	(Generic) ONVIF Compa
	(Generic)	Custom Config	1 🗸	ONVIF Compatible 4	(Generic) ONVIF Compa
	Device nan ONVIF Co	me Amount	+ Add	K	>
	1			Ok	Cancel

Add several new devices

Device parameters

For each added device, enter corresponding settings. Note that you can skip IP and port on this step if you wish to use automatic incremental IP assigning (see *IPs and Ports* tab description below).

Multiple devices creation				- 🗆 🗙
Create multiple devices	New devices			
■ Add Devices	Device parameters		New devices 🕂 🔟	۵
🖉 Device parameters		^	DEVICE NAME	MODEL
Channel settings	Device name		1st Floor Lounge	(Generic) ONVIF Compa
	1st Floor Lounge		ONVIF Compatible 2	(Generic) ONVIF Compa
	Model		• ONVIF Compatible 3	(Generic) ONVIF Compa
	(Generic) ONVIF Compatible Change		• ONVIF Compatible 4	(Generic) ONVIF Compa
	Device model	Ŷ		
	Apply Reset			
			<	>
			Ok	Cancel

Modify device parameters

Select a device by clicking on it in the item list: it will become highlighted green and related available settings will be displayed in the *Device parameters* window. You can select multiple devices by holding *CTRL* or *Shift* when clicking.

Setting	Description	Default value
Device name	User-defined device name	Device model
Model	Device manufacturer and model, or generic type; click Change to alter	Loaded automatically
Host	Device hostname or IP address	[empty]
Port	Device HTTP port	80
Username	Device user credentials; note that you need to provide a valid administrative user profile to be able to change device settings via software	[empty]
Password	Password for camera access	[empty]
Server	Target server, to which the device will be attached	Central Server

When you have finished, click the Apply button below for the changes to take effect.

▲ If you do not apply the modifications, they will be discarded when you select a different device from the item list. Remember to always click the *Apply* button.

You will be asked to review the list of modified fields and confirm the changes.

Confirm chang	jes for 3 devi	ce(s)	
Updated proper	rties		
Host			
Port			
Username			
Password			

Confirm changes

Click OK to accept the changes and go back to the configuration dialog box.

You can select multiple devices and assign IP addresses incrementally with the defined increment. Similarly, it is possible to change the HTTP port for all devices at once, if required (port value stays the same for all selected devices, with no increment). In order to do this, select desired devices by using *CTRL+click* or *Shift+click*, then start entering the IP address: the field will expand, giving you the option to enter the increment.

Multiple devices creation				_ 🗆 🗙
Create multiple devices	New devices			
■ Add Devices	Device parameters		New devices 🔸 🔟	Q
🖋 Device parameters		^	DEVICE NAME	MODEL
X Channel settings	192.168.7/11 Host name or IP address		1st Floor Lounge2nd Floor Lobby	(Generic) ONVIF Compa (Generic) ONVIF Compa
	Auto increment 1 Last selected IP will be 192.168.7.12 Apply Reset	~	 ONVIF Compatible 3 ONVIF Compatible 4 	(Generic) ONVIF Compa (Generic) ONVIF Compa
			< Ok	Cancel

Assign IP addresses with increment

Click the Apply button below to save the changes, similarly to the previous step.

Channel Settings

Here you can modify channel names and recording configuration. Note that channel name is not copied from the device name.

Unlike with automatic device discovery, default recording configuration here is [none], meaning that recording is not conducted. Select one or multiple devices and then click the *Change* button in order to choose an existing recording configuration for the target devices or create a new one.

Depending on the selected device model, the number of channels may coincide with or exceed the number of devices, e.g., when device is a 4-channel encoder.

Multiple devices creation				- 🗆 ×
Create multiple devices	New channels			
■ Add Devices	Channel settings		New channels	۹
Device parameters		^	CHANNEL NAME	RECORDING SET
🔀 Channel settings	Channel name		X ONVIF Compatible 1	none
	Channel name		CONVIF Compatible 2	none
	Recording settings		CONVIF Compatible 3	none
	none Change		CONVIF Compatible 4	none
	Recording settings	¥		
	Apply Reset		4	
	1		Ok	Cancel

Channel properties

Select one or multiple devices and click *Change*, then select appropriate recording profile or <u>create a new one</u>. When you have finished, click *OK* to add all the new devices and their channels to your server configuration.

Manage Devices and Device Groups

This topic describes general device handling as well as common use cases in device management.

Manage Devices

Device management is accessible via Luxriot Console *Configuration* section, under *Devices* category in the menu on the left.

Configuratio	n > Devices	Built-in Ad	lministrator account 💄 C	Search	৹ ≡
Configuration	➡ New device ▼	Edit Assign grou	ıp Assign server	View channels	🔟 🗶 1 selected
L Users	TITLE	ID SERVER	DEVICES/MODEL	HOST/IP	PORT HARDWARE ID
■ Devices	■ (Generic) ONVIF Com.	(Primary (101)	(Generic) ONVIF Com	. 192.168.3.33	80 MAC:00:00:9A:16:EC:92:0B
Channels	■ Axis 215 PTZ on 192	(Primary (101)	Axis 215 PTZ	192.168.3.4	80 MAC:00:00:00:40:8C:8B:09:99
Recording	Grundig GCI-H0522V	(Primary (101)	Grundig GCI-H0522V	192.168.3.14	80 MAC:00:00:B8:41:5F:01:B0:5F
	Samsung SNP-3120V.	(Primary (101)	Samsung SNP-3120V	192.168.3.11	80 MAC:00:00:00:09:18:70:D1:F6
Maps 🗸	■ Vivotek IP816A on 19	(Primary (101)	Vivotek IP816A	192.168.3.12	80 MAC:00:00:02:D1:31:B4:8F
🔠 Configuration	■ Vivotek PZ7131 on 1	(Primary (101)	Vivotek PZ7131	192.168.3.19	80 MAC:00:00:02:D1:0A:35:F8
Events & Actions					
	Recently added, 0	Recently updated, 1	Groups, 0 De	vices, 6 Replie	cation devices, 0
	Unassigned, 0				

Configuration -> Devices

Upper panel items allow you to add devices <u>automatically</u> or <u>manually</u>, edit, view and <u>u</u> remove them, as well as quickly assign groups and servers. Double-click any device to open it for editing; click *View channels* on the upper panel to open channel-specific controls in the same window. If device has multiple channels, all of them will be listed.

Please refer to the *Add Devices Manually* section of this document for detailed description of all available tabs and settings.

Use bottom panel buttons to quickly filter recently added/updated devices, choose groups only or solely devices not assigned to any of the servers.

Add Device Groups

As with other resources, devices can be grouped together for easier management. Click the little arrow near + *New device* button and select *New device group*.

Device group	×
Device group	Details
🖋 Details	Title
Members	8
👖 Membership	Group name
🛉 Permissions	
	OK Cancel

Device group details

Enter a name for the device group in the *Details* tab, then switch to the *Members* tab and choose devices to join this group. Double-click items or use the *Add/Remove* buttons below to select and deselect devices.

Device group PTZ*					- • ×
Device group	Members				Q
🖋 Details	Selected members		Available memebers		
📽 Members	TITLE	ID TYPE	TITLE	ID TYPE	
👫 Membership	Axis 215 PTZ on 192.1	(103) Device	■ Vivotek IP816A on 19	(105) Device	^
Permissions	Vivotek PZ7131 on 19	(104) Device	■ (Generic) ONVIF Com	(106) Device	
			Grundig GCI-H0522V	(107) Device	
			Samsung SNP-3120V	(108) Device	~
	Remove		Add		
				ОК	Cancel

Device group members

In the Membership tab, you can select 'higher' level groups to contain this device group (nested architecture).

Device group PTZ*					- 🗆 🗙
Device group	Permissions				۵
🖋 Details	Selected users			Available users	
Members	TITLE	ID TYPE	PERMISSIONS	TITLE	ID TYPE
4 Membership	L Johnny English	(119) User	✓ Administer	L James Bond	(120) User
🛉 Permissions	Supervisors	(122) User group		L Jimmy Neutron	(121) User
			Clear		
				ОК	Cancel

Device group permissions

Finally, open the *Permissions* tab to assign user privileges for this device groups: check at least one permission to select the user or user group, uncheck all or use the *Clear* button below to deselect. When you have finished, click *OK*; the newly created group will then appear in the item list.

Double-click any group to open its contents in the same window; use the buttons on the upper panel to edit/remove it. Click *Edit* to adjust group settings: procedure is similar to that of creating a new device group.

Replace Camera

Consider the following common scenario: one of the installed cameras needs to be replaced by a device that is better/more suitable/backup/etc. while keeping the whole configuration effective. As long as the replacement device has the same model, the process is virtually unnoticed by the software. If the new camera model does differ from the original, some modifications are required to be made in Luxriot Console.

The procedure in Luxriot Console is the following:

- go to Devices
- open the *Device properties* of the target device, go to the *Channels* tab and detach all the channels, then close the *Device properties*
- delete old device from the *Devices* list
- create a new device with the necessary model
- open the new device's *Device Properties*, go to the *Channels* tab, detach its new channel(s) meaning they will not be created and attach old one(s)

As a result, the *device* part of the configuration will be replaced and all the *channel* configurations will stay untouched.

P Note that video stream specific configurations - resolution, FPS, frame adjustments - are not saved when reattaching the channel due to differences between device capabilities. However, the channel permissions, membership, recording configuration and motion detector settings are all preserved.

Configure Channels

Channels are video streams received from physical devices attached to the system. Several channels can originate from a single device - in the case of multichannel devices, i.e., capture boards, but single channel can only be attached to one device at a time, as it makes no sense for a video stream to come from two cameras at once. Channels are created automatically at the same time as the source device but can later be detached and attached to different devices.

Channels include the video stream configuration settings - resolution, frame rate, bit rate and others - as well as all supplementary data streams, such as audio, motion and digital input/output events, PTZ control and camera-side analytics information. Recording configurations are assigned to channels and they are also displayed in Luxriot Monitor.

To access the channel configuration dialog box in the Luxriot Console, open the *Configuration* section and select *Channels* from the menu on the left side. Use the filters on the bottom panel to quickly access specific channel sets.

The upper panel buttons enable you to create new items in this category, as described below, and perform channelspecific actions, such as editing, assigning groups, assigning recording configuration and deleting selected channels. To select multiple items, hold *CTRL* or *Shift* and click items in the list.

Channels currently bound to devices cannot be deleted: the university recycle bin button will only appear when detached channels are selected. To remove a channel, first go to *Devices*, then open the target device properties and disengage the channel on the *Channels* tab by clicking *Detach* button.

Configuration	on > Channels	c s	earch	৹ ≡
Configuration	 Create channel group 	Assign group Assign recording configuration	🗊 🕱 1 selected	
Servers	TITLE	ID DEVICE	Ib	PORT
L Users	🔀 (Generic) ONVIF Compatible	(106) (Generic) ONVIF Compatible on 192.168.3.33 (103)	192.168.3.33	80
Devices	X Asoni CAM613 on 192.168.3	(104) Asoni CAM613 on 192.168.3.47 (102)	192.168.3.47	80
X Channels	X Asoni CAM613 on 192.168.3	(105) Asoni CAM613 on 192.168.3.47 (102)	192.168.3.47	80
•	🔀 Grundig GCI-G1536F on 192	(114) Grundig GCI-G1536F on 192.168.3.214 (109)	192.168.3.214	80
Recording	🔀 Grundig GCI-K0622D on 192	(113) Grundig GCI-K0622D on 192.168.3.215 (108)	192.168.3.215	80
Layout templates	Crundig GCI-K1627D on 192	(116) Grundig GCI-K1627D on 192.168.3.216 (111)	192.168.3.216	80
	🔀 Parking	(129) Parking (128)		
	X Vivotek FD8154 on 192.168	(115) none		
Configuration				
🗱 Monitoring	Recently added, 0 Recently upd	lated, 0 Groups, 0 Channels, 8 Replication ch	annels, 0 Detached, 1	

Configuration -> Channels

All available channels and channels groups will be listed here. The upper panel offers a range of configuration opportunities.

Create Channel Group

Channel groups can be added for easier management in Luxriot Console; by default, there exist no built-in channel groups. Click + *Create channel group* button to bring up the corresponding dialog box.

Enter the group title here, select channels to be group members and select higher level group(s) to contain target group as a member, if desired. Set user permissions for channels in this group.

Channel group PTZ Channels*		- "	×
Channel group	Details		
🖋 Details	Title		
🐨 Members	PTZ Channels		
A Membership	Group name		
+ Permissions			
	ОК	Cance	I

Edit Channel group properties

Click *OK* when you are ready: newly created group will appear in the item list.

Edit Channel Group

Double-click any existing channel group in the list or use the *Edit* button in the upper panel to bring up the configuration dialog box. Available options are analogous to the ones displayed during group creation time.

Edit Channel

Channels are automatically created together with each newly created device; it is not possible to create a channel separately. Click any channel in the list twice or use the *Edit* button on the upper panel to manage the channel properties.

X Channel Parking Entrance on	192.168.3.215*	_ 🗆 🗙
Channel	Details	
🏈 Details	Title	
📌 Motion detector	Parking Entrance on 192.168.3.215	
🛃 Membership	Channel title	
🛉 Permissions	Recording configuration	
🖽 Channel configuration	Weekends (121) Change Recording configuration	
	OK	Cancel

Edit channel properties

The configuration dialog box enables the following changes:

- Details tab: change channel title and assign recording configuration
- Motion detector tab: choose between camera-side or software-side motion detector*, default state is disabled
- Membership tab: select group to the contain target channel as member
- Permissions tab: allow users and user groups to access and administer target channel
- **Channel configuration tab**: open an additional channel configuration dialog box to manage video stream settings, frame adjustments and DI/DO

Please refer to the <u>Channel Settings</u> topic for detailed description for each of the tabs.

*Motion detector on the software side has two options: high performance and high accuracy:

High Performance mode: this type of analysis is performed for only key frames whose frequency can vary from several frames per second to one frame every few seconds - this is less sensitive for picture quality, but greatly affects detector operation. CPU consumption is significantly lower due to this, and it can be additionally reduced by increasing time interval between two analyzed frames.

High Accuracy mode: this mode performs motion analysis for the whole video stream, so we recommend selecting this option when you want to achieve best detection results. The lower time interval means higher precision. Keep in mind that CPU and virtual memory usage is much greater if this mode is selected.

Assign Group

Channel membership can be managed via the channel properties dialog box. To quickly assign group to any of existing channels, select desired channel(s) (use CTRL+click or Shift+click to select multiple items) and click *Assign group* button on the upper panel.

Assign group	×
	ৎ
Available groups	
TITLE	ID TYPE
PTZ Channels	(130) Channel group
	OK Cancel

Assign channel group

Pick a group from the existing channel groups' list and click *OK* to save. If any of the channels already belonged to some group, it is not a problem: membership in multiple channel groups is allowed.

Replace Camera

Consider the following common scenario: one of the installed cameras needs to be replaced by a device that is better/more suitable/backup/etc. while keeping the whole configuration effective. As long as the replacement device has the same model, the process is virtually unnoticed by the software. If the new camera model does differ from the original, some modifications are required to be made in Luxriot Console.

The procedure in Luxriot Console is the following:

- go to Devices
- open the *Device properties* of the target device, go to the *Channels* tab and detach all the channels, then close the *Device properties*
- delete old device from the Devices list
- create a new device with the necessary model
- open the new device's *Device Properties*, go to the *Channels* tab, detach its new channel(s) meaning they will not be created and attach old one(s)

As a result, the *device* part of the configuration will be replaced and all the *channel* configurations will stay untouched.

Note that video stream specific configurations - resolution, FPS, frame adjustments - are not saved when reattaching the channel due to differences between device capabilities. However, the channel permissions, membership, recording configuration and motion detector settings are all preserved.

Other

Select one or multiple channels/channel groups and click the *Disable* button on the upper panel to deactivate target items. **Disabled** channels will not be requested from actual physical devices, and, as a consequence, will not be recorded; neither will they be displayed in Luxriot Monitor application(s).

The filter panel at the bottom enables you to view recently added/updated items, as well as other relevant filters. The filter that is currently active is highlighted blue: click the *N filtered* button to reset all filters and display all the available items again.



Channel Settings

The channel configuration dialog box has several setting categories; these are described in details in this topic.

Details

Here you can change channel title and assign recording configuration.

Channel Secret Gate on 192.1	68.3.4 – – ×
Channel	Details
🖋 Details	Title
📌 Motion detector	Secret Gate on 192.168.3.4
Membership	Channel title
🛉 Permissions	Recording configuration Recording by motion (33) Change.
🔛 Channel configuration	Recording configuration
	OK Cancel

Channel details

Click the *Change* button to choose the recording configuration: you can pick an existing configuration or create a new one, or a schedule on the spot from the same dialog box.

When you assign a **motion-based recording configuration** to a channel with a disabled motion detector, the software will automatically suggest enabling motion detection for the target channel. The camera-side detector is given priority; if it is not available, the software-side detector will be enabled and set to the high-performance mode. We recommend that you **review** the motion detector settings to make sure it operates as desired, especially if the camera-side detector is in use.

Note that if you leave motion detection OFF and assign motion-based recording configuration to the target channel, no data will be recorded.

O Question	_ ×
	The channel has no motion detector enabled!
	The recording configuration applied uses motion detection events, but one or more selected channels have motion detector disabled. Click 'Yes' to enable the motion detector. The devices' motion detectors will be used if this kind of integration is available, otherwise software high performance mode will be enabled). Please check on the devices' side to make sure you have motion detection enabled with required sensitivity settings. Click 'No' to leave the motion detector disabled and ensure motion events will not trigger recordings while the motion detector is disabled.
	Yes No Cancel

Automatically enable motion detection

Motion detector

Choose between camera-side or software-side motion detectors; the detector's default state is *disabled*.

▲ When selecting **camera-side motion detection**, make sure to go to device Web interface to enable and configure motion detector. Settings may vary depending on device manufacturer; also, check with Luxriot to make sure hardware motion detection is supported for the target device.

Camera-side motion detection is recommended for two basic reasons:

- computational load is transferred from servers to devices, decreasing server load, and
- on most devices, hardware-side motion detection is performed on raw video stream, which means superior accuracy compared to software-side detector, as software only gets access to compressed stream.

Channel	Notion datastar
	Motion detector
Details	Mode
* Motion detector	Software (High Accuracy)
Membership	The motion detection will take place in VMS server software. Software analysis is sensitive to input image quality and availability of CPU resources, s this option is recommended for raw video frame grabber hardware.
Permissions	Motion detection is based on decoding an entire video stream and processing frames, with its frequency defined by a specific time interval.
단 Channel configuration	Note that this mode might involve high CPU usage due to the complexity of the computation. Time interval 20 Time interval in milliseconds Sensitivity Software motion detection sensitivity Use low-resolution stream if available Low-resolution stream will be used for motion analysis
	OK Cancel

Software side motion detection settings

The motion detector on the software side has two options: high performance and high accuracy:

High Performance mode: this type of analysis is performed for only key frames whose frequency can vary from several frames per second to one frame every few seconds - this is less sensitive for picture quality, but greatly affects detector operation. CPU consumption is significantly lower due to this, and it can be additionally reduced by increasing time interval between two analyzed frames.

High Accuracy mode: this mode performs motion analysis for the whole video stream, so we recommend selecting this option when you want to achieve best detection results. The lower time interval means higher precision. Keep in mind that CPU and virtual memory usage is much greater if this mode is selected.

In both modes, the **level of sensitivity** can be adjusted, as can the time interval setting which defines the frequency of frame analysis.

Regardless of which mode you select, you can further decrease the amount of server-side calculations by using a **lower-resolution stream** (if available). For example, if your main stream is 3MP and your substream is D1, the motion detection engine will spend much less system resources on D1 analysis than it would spend on a 3MP image. Note that some cameras deliver lower-resolution streams as cropped high-resolution images (not resized, as it would be expected) - in such cases, using a substream for MD analysis will produce wrong results and therefore doing so is not advisable.

Most cameras provide second stream as first stream image scaled to fit low resolution; however, some devices crop the centre of a high-resolution image to fit the small frame, and thus the substream picture appears as if it were zoomed in. Keep this in mind when you are using substream for live view and especially for software-side motion detector analysis.

Click the *Motion detection exclusions* button in order to set up **exclusion zones**. Note that these settings only cover the software-side motion detector; in order to configure the exclusions for the camera-side motion detector, go to the Web interface of the target device.

★ Motion detection exclusions	X
Motion detection exclusions	
Grid size	
Motion detection gird size	
05-02-2016 10-21-54	
	T0-12310P1
✓ Maintain aspect ratio ✓ Show motion	
	Apply OK Cancel

Set up exclusion zones for the motion detector

First, choose the **grid size** for the detector: this will define the size of the smallest detection region. Minimum grid size is 2x2 cells (resulting in four detection areas), and maximum size is 64x64 cells. Then, mark your desired exclusion area simply by clicking and dragging on the viewport; you can **draw** several rectangles to form a complex polygonal area. Exclusion area(s) will be highlighted light green. In order to cancel the selection, simply draw a rectangle over it.

Settings in the bottom are here to ease the configuration process:

- Maintain aspect ratio: displays original picture proportions, if selected, or stretches the picture to fill the viewport
- Show motion: shows currently present motion, if selected

In order to test the behaviour of the selected grid size, enable the *Show motion* option, the click *Apply* and see how the detector works with your defined grid.

When you have finished, click OK to return to the main channel configuration dialog box.

Membership

Choose the group(s) you want to contain the target channel as a member: double-click the relevant items or use the *Add/Remove* buttons below to select/deselect.

X Channel Secret Gate on 192.	168.3.4*			_ 🗆 🗙
Channel	Membership			٩
🖋 Details	Selected groups		Available group:	5
📌 Motion detector	TITLE	ID TYPE	TITLE	ID TYPE
🗛 Membership	Z PTZ	(118) Channel group		
ref Permissions				
🔛 Channel configuration				
	Remove		Add	
				OK Cancel

Choose channel membership

Permissions

Allow users and user groups to access and administer target channel. To add a user or user group, simply select at least one permission, then remove all the users or user groups by clearing all permissions - either manually or by using the *Clear* button below.

Channel Secret Gate on 192.10	58.3.4*				- 🗆 🗙
Channel	Permissions				٩
🖋 Details	Selected users			Available users	
🛪 Motion detector	TITLE	ID TYPE	PERMISSIONS	TITLE	ID TYPE
👫 Membership	💄 Johnny English	(119) User	Administer	L James Bond	(120) User
🛉 Permissions	👪 Supervisors	(122) User group	✓ ReceiveData	L Jimmy Neutron	(121) User
H. Channel configuration			AccessArchive		
			Navigate		
			 ControlDigitalOutput 		
			Clear		
				ОК	Cancel

Change user privileges

Channel Configuration

The *Channel Configuration* tab allows you to adjust advanced channel settings. Some of these can be changed via Luxriot Console but sometimes software does not cover some of the device settings, so you are also given the option to go straight to the device Web interface - simply click the *Open device in browser* button to do this.

Channel samsung ptz		-		x
Channel	Channel configuration			
🖋 Details	Channel properties			
📌 Motion detector				
A Membership	Manage channel properties			
• • • • •	Open channel properties			
Permissions	Open device in browser			
🔛 Channel configuration				
	ОК	Cano	el	

You can open the target device in browser or go to the software provided settings' dialog box

Click *Open channel properties* to access the additional channel configuration dialog box. The available tabs depend on the device model and capabilities: for some cameras, only basic configuration options are present, while for others, advanced settings are accessible. If you see that a camera has certain capabilities that are not configurable via Luxriot Console configuration interface, go to the device's Web interface in order to change that specific setting.

- Video Input tab: set video transport (the available list of options depends on the device type and model; common types include HTTP, RTSP* and native transport)
- Video Adjustment tab: fine-tune picture settings such as brightness and contrast level
- Substream tab: enable second (lower resolution) stream
- Video Configuration tab: choose streaming settings**
- Motion Detection tab: with some devices, the camera-side motion detector must be explicitly enabled here
- Events tab: enable event generation from device digital inputs (DI)
- **External PTZ tab**: adjust external PTZ controller settings; communication port must match the communication port that the RS232/485 controller is connected to, and baud rate has to match the baud rate of your PTZ controller/analog PTZ camera
- Digital Outputs tab: enable control for camera digital (relay) outputs (DO)
- **RTSP tab**: appears if RTSP transport type has been chosen; set RTSP port and mode (TCP/UDP/multicast***) here
- Dewarp tab: configure generic dewarp settings or enable dewarp engine for the Panomorph lens

*You may have to specify the RTSP port on the corresponding tab if it differs from default (port 554 for most cameras). To do this, select the RTSP transport type and then click *Apply*: as a result, the RTSP tab will become available.

******Remember, the higher the resolution/bitrate/quality/frame rate you set, the more storage space and bandwidth it will use when recording. These settings also affect CPU/virtual memory resource consumption for live video and

software-side motion detection.

***Multicast mode availability depends on device integration.

? Note that a valid administrative account login and password for the camera should be provided in *Device* settings in order to access and set the device configuration.

Configure Recording Profiles

This topic describes how to create and configure stream recording profiles. For global server storage settings, please see the <u>Storage</u> section of this document.

To access recording configuration dialog boxes in Luxriot Console, select the *Configuration* section and choose *Recording* in the menu on the left.

There are three types of resources in the *Recording* setup:

- profile: choose what data streams are recorded and in what mode (continuous/alert triggered)
- schedule: set a recording timetable based on profiles
- configuration: profile- or schedule-based recording configuration to be assigned to channels

Buttons on the upper panel give the option to create, edit and remove recording resources.

A Recording resource cannot be deleted if it is currently in use, i.e., when a recording profile is assigned to a recording configuration or a schedule, or when any of the recording resources are assigned to a channel.

Create Recording Profile

Recording profiles allow users to set which data streams are recorded and how. Profiles cannot be assigned directly to devices; rather, these are used as components for recording schedules and recording configurations. For this reason, profiles do not include such settings as pre-recording interval: this setting is defined per-channel and, therefore, is set in the recording configuration.

To add a new recording profile, click the down arrow button near + *New recording configuration* and select + *New recording profile*. The profile creation dialog box will appear.

Recording profile Continuo	us recording*
Recording profile	Details
✓ Details	 Title Continuous recording Recording profile as seen by others Continuous recording ✓ Video stream Continuous video stream recording ✓ Limit frame rate 10 Maximum frame per second rate to video stream recording (default is 10). Frame rate reduction on a video format with temporal compression(H.264/MPEG4) results in losing additional frame, esp. down to as low as key frame rate. ✓ Motion stream Continuous motion detection information recording Alert recording
	OK Cancel

Recording profile properties

The dialog box has two sections: for continuous and event-driven recording. Note that you only can select one mode at a time: if continuous recording is selected, alert-based recording options will be grayed out.

To configure **motion-based recording**, enable *Video stream* in the *Alert recording* section and enable *Detected motion triggers alert* setting. If you wish to record still frames at low rate during non-motion period, keep the *Video stream* option in the *Continuous recording* section enabled and set your desired frame rate - e.g., 1FPS - then set high FPS or no limit in the *Alert recording* section. If you only wish to record while motion is present, deselect the *Video stream* option in the *Continuous recording* section.

When you assign a **motion-based recording configuration** to a channel with a disabled motion detector, the software will automatically suggest enabling motion detection for the target channel. The camera-side detector is given priority; if it is not available, the software-side detector will be enabled and set to the high-performance mode. We recommend that you **review** the motion detector settings to make sure it operates as desired, especially if the camera-side detector is in use.

Setting	Description	Default Value
Title	User-defined recording profile name	[empty]
Video stream (continuous)	Select to enable continuous video recording	Disabled
Limit frame rate (for continuous video recording)	Set frame rate restriction for recorded video; note that for compressed video streams (e.g., H.264) actual frame rate may differ due to compression algorithms	10 FPS
Video stream (alert)	Select to enable alert-driven video recording; video will only be recorded after alert generation, for the time period defined in the <i>Post-recording interval</i>	Disabled
Limit frame rate (for alert video recording)	Set frame rate restriction for recorded video; note that for compressed video streams (e.g., H.264) actual frame rate may differ due to compression algorithms	10 FPS
Post-recording interval	The time period during which alert-driven recording will be conducted after alert generation	10 seconds
Detected motion triggers alert	Motion will act as a trigger for recording; enable this setting to set up motion-based recording	Disabled

When done, click *OK* to save recording profile: it will appear in the item list of the *Recording* section. The profile is now ready for further configuration.

Create Recording Schedule

Recording schedules are sets of recording profiles that define what recording profiles are used depending on the day and time of the week.

To add a new recording schedule, click the down arrow button near + *New recording configuration* and select + *New recording schedule*. The schedule creation dialog box will appear, allowing you to enter a user-defined name for the new schedule and add multiple profiles to define recording behaviour.

O Recording schedule Weekends	Only*	- 🗆 🗙
Recording schedule	Details	
	Title Weekends Only Recording profile as seen by others Scheduled profiles DAY TIME PROFILE	
	Monday 12:00 AM No recording	
	Saturday 12:00 AM Continuous recording	
	Add	Remove
	ОК	Cancel

Recording schedule properties

Click the Add button below to insert a new profile with defined start time.

Scheduled profile	- 🗙
Schedule item setup	
Day	Time
Sunday 🗸	2:00:00 AM
Day of the week	Time of the day
Recording profile	
Continuous recording (22)	Change
Description	
	OK Cancel

Add a profile to the recording schedule

Note that only begin time is set for each added profile: the end time is determined by the start time of the next profile. For example, if you require continuous recording during weekdays and motion-driven recording during weekends, your continuous recording profile should be scheduled to start on Monday at 12 a.m. and motion-driven one - on Saturday at 12 a.m.

Click *OK* to save and add the profile to the schedule. Multiple profiles will be automatically sorted based on their start time.

Use the *Edit* and *Remove* buttons below to manage the profiles added. When you are finished, click *OK* to save; the newly created schedule will be added to the item list in the *Recording* section.

Create Recording Configuration

Recording configurations are global recording arrangements that can be assigned to a per-channel recording setup. Recording configurations can be based on a single recording profile or on a pre-defined recording schedule.

To add a new configuration, click the down arrow button next to + New recording configuration.

Recording configuration Wee	
Recording configuration	Details
Details	Title Weekends Recording profile as seen by others Controlled by O Weekends Only (120) Change Prefile or schedule Precording interval 10 Time interval to keep recording before alert was signalled in seconds (default is 10) Amount quota (GB) 0 Maximum amount of data to be kept in stored archive Duration quota (days) 5 Number of days to keep stored in archive footage
	OK Cancel

Recording configuration dialog box

The corresponding dialog box will then appear, allowing you to enter the configuration properties.

Setting	Description	Default Value
Title	User-defined recording configuration name	[empty]
Controlled by	Choose existing recording profile or schedule for current configuration or create a new one from the sub-dialog	
Pre-recording interval	Set the pre-recording interval for alert- driven recording, if applicable; note that large pre-recording interval will increase virtual memory usage	
Amount quota	Storage quota in GB: the maximum o amount of space that can be taken up by recordings, if the maximum size is reached, the oldest footage will deleted; set o to disable any limitations	
Duration quota	Duration quota in days: the maximum number of days that recordings are kept in the archive; after this, recordings will be erased; set o to disable any limitations	o (unlimited)

Before setting recording limitations, make sure there is sufficient space in the server storage for all cameras. The quotas may be ignored if actual storage size is insufficient, and this will result in shorter footage durations.

P Note that quotas do **not** give priority to channels that are assigned configuration. For example, if you set the duration quota to ten days, it merely means that the maximum recording duration will be ten days for a channel with given configuration; this will **not** reduce recording duration for other channels.

When you have finished, click *OK* to save and exit. Recording configuration will now be added to the item list and will become available in channel recording configuration.

Assign Recording Profiles

Recording configurations can be assigned to channels and channel groups to define how data streams are recorded. There are several ways to assign a recording configuration:

- when using device autodiscovery: via Found channels tab
- when creating multiple devices: from multiple channel creation dialog box, Channel settings tab
- for existing channels, per channel: via Edit channel dialog box, Details tab
- for existing multiple channels: via *Channels* section, using *Assign recording configuration* button on the upper panel

Topic body below explains how to assign configurations via main Luxriot Console window (latter option). All the rest alternatives are similar: you are offered configuration selection list at once from corresponding setup window.

Enable Recording

Configuratio	on > Channels	C Search Q
Configuration	Create channel group Edit	Assign group Assign recording configuration 🗱 4 selected
Servers	TITLE	ID DEVICE IP
L Users	🗙 (Generic) ONVIF Compatible	(106) (Generic) ONVIF Compatible 192.168.3.33
Devices	🗙 Asoni CAM613 on 192.168.3	(104) Asoni CAM613 on 192.168.3 192.168.3.47
X Channels	🗙 Asoni CAM613 on 192.168.3	(105) Asoni CAM613 on 192.168.3 192.168.3.47
	Crundig GCI-G1536F on 192	(114) Grundig GCI-G1536F on 192 192.168.3.214
Recording	🔀 Grundig GCI-K0622D on 192	(113) Grundig GCI-K0622D on 192 192.168.3.215
🔜 Layout templates	🔀 Grundig GCI-K1627D on 192	(116) Grundig GCI-K1627D on 192 192.168.3.216
	X Vivotek FD8154 on 192.168	(115) Vivotek FD8154 on 192.168 192.168.3.212
	X Vivotek IP7131 on 192.168.3	(112) Vivotek IP7131 on 192.168.3 192.168.3.211
	First Floor	(122)
	<	
🔛 Configuration		
🏧 Monitoring	Recently added, 1 Recently upd	ated, 5 Groups, 1 Channels, 8 Replication channels, 0

Select the channels that are subject to recording configuration changes

In Luxriot Console, choose *Configuration* section and select *Channels* from the menu on the left. Select one or multiple channels and/or channel groups (use *CTRL+click* or *Shift+click* to select several items at once) and then click the *Assign recording configuration* button on the upper panel. The list of available configurations will appear.

Select recording configuration	- 🗆 🗙
	ଦ୍
Available recording configurations	
TITLE	ID TYPE
No recording	(31) Recording configuration
Continuous recording	(32) Recording configuration
motion	(117) Recording configuration
Weekends	(121) Recording configuration
New recording configuration	OK Cancel

Choose a recording configuration for the channels selected

Note that you can only directly assign **configurations**, not profiles or schedules. Click the + *New recording configuration* button below to create additional configurations from existing profiles/schedules at this point.

When you assign a **motion-based recording configuration** to a channel with a disabled motion detector, the software will automatically suggest enabling motion detection for the target channel. The camera-side detector is given priority; if it is not available, the software-side detector will be enabled and set to the high-performance mode. We recommend that you **review** the motion detector settings to make sure it operates as desired, especially if the camera-side detector is in use.

Recording configuration We	ekends*	- • ×
Recording configuration	Details	
Details	Title Weekends Recording profile as seen by others Controlled by Image:	
	ОК	Cancel

Add new recording configuration

Press *OK* to save and go back to the channel list: newly created recording configuration will be automatically assigned to channels previously selected.

Disable Recording

To disable recording for any channel(s), choose the *No recording* configuration, which is present in the list by default. If you have deleted it, simply create a new recording profile without any streams selected for recording and then create a recording configuration for this profile.

Add Users and User Groups

User management is accessible via the *Users* component of the *Configuration* section. By default, the system already features a built-in global Administrator account and built-in Administrators group.

P The built-in Administrator user account and built-in Administrators group are root users with access to absolutely all the available resources. As a result, resources choice is unavailable for the Administrators group, and it is also impossible to add Administrator user to any other group.

Any users added as members to the built-in Administrators group will have the same full authority as root users.

Configuratio	n > Users	C Search	৹ ≡
Configuration	➡ New user ▼ Edit Assign gro	up 🗱 1 selected	
Servers	TITLE	D LOGIN NAME	ENAB EMAIL
L Users	L Built-in Administrator account (l) admin	yes
Devices	& Built-in Administrators group (3)	
X Channels			
Recording			
🗔 Layout templates			
E Configuration			
	Recently added, 0 Recently updated,	0 Groups, 1 Users, 1	

Configuration -> Users

Add Users

Click the + *New user* button on the upper panel to bring up the configuration dialog box.

Details

Enter user login information here.

Luser jdoe*		_ 0	×
User	Details		
🖋 Details	User login name		
🗛 Membership	jdoe		
Resources	Account name to log into the system. Case-sensitive		
	 ☑ Active Remove to disable account for any connection type User's full name John T. Doe Insert user's first name and last name Email address idoe@domain.com Email address for notifications ☑ Set password Password to log into the server eenter password PTZ priority 		
	5 PTZ priority		
	OK	Cancel	

Enter user details

The table below details the available settings.

Setting Description		Default Value
User login name	Alphanumeric user name for login, no spaces allowed	
Active	Allow the user to log in via Luxriot Console and Luxriot Monitor: any users who have been disabled will not be able to use software	
User full name	User full name	empty
Email address	User email address used for notifications	empty
Set/new password	Check to enter a password - his is obligatory when creating new user	empty
PTZ Priority	0 = lowest, 10 = highest	5

P Deleting a user also removes all the settings related to that user; restoring these may be time-consuming. Use the *Active* setting to enable/disable users and temporarily block access for those.

Membership

Choose which groups you want the selected user to be a member of. Every user can participate in one or multiple groups, depending on the system structure.

Luser John Doe*				- 🗆 🗙
User	Membership			Q
🖋 Details	Selected groups		Available groups	
🗛 Membership	TITLE	ID TYPE	TITLE	ID TYPE
Resources	Local admins	(127) User group	👪 Built-in Administrators	(3) User group
			L Operators	(125) User group
			Admins	(126) User group
	Remove		Add	
				OK Cancel

Add the groups you want the selected user to be a member of

Manipulate the groups by double-clicking a group or using the *Add/Remove* buttons below. Use the *Search* field in the upper-right-hand corner to filter the groups available.

Resources

Each user can be granted <u>permissions</u> for server and channel/channel group administration. Select resources by adding at least one permission; remove them by clearing permissions using the *Clear* button below, or simply by double-clicking them in the *Selected resources* list.

Luser John Doe*			×
User	Resources		Q
🖋 Details	Selected resources		Available resources
A Membership	TITLE ID TYPE	PERMISSIONS	TITLE ID TYPE
💼 Resources	Securital Server (101) Server	Administer	Asoni CAM613 (102) Device
	🗙 Asoni CAM613 (105) Channel	☑ ReceiveData	■ (Generic) ONVI (103) Device
	🔀 (Generic) ONVI (106) Channel	✓ AccessArchive	🗙 Asoni CAM613 (104) Channel
	Vivotek IP7131 (112) Channel	☑ Navigate	Vivotek IP7131 (107) Device
		ControlDigitalOutput	Grundig GCI-K (108) Device
			Grundig GCI-G (109) Device
			■ Vivotek FD815 (110) Device
			Grundig GCI-K (111) Device
			🗙 Grundig GCI-K (113) Channel
			🗙 Grundig GCI-G (114) Channel
			X Vivotek FD815 (115) Channel
			🗙 Grundig GCI-K (116) Channel
			First Floor (122) Channel group
		Clear	
			OK Cancel

Add resources for the selected user

Click *OK* when you have finished to return to *Users*; the newly created account will be added to the item list. Use the buttons on the upper panel to edit user details at any time, to quickly assign groups and remove specified users (hold *CTRL* of *Shift* to select multiple items at once).

If there are a large number of user accounts, the *Search* field in the upper-right-hand corner and the content filters in the bottom panel can help you quickly find the accounts you are looking for.

Add User Groups

When the number of users is large, it may be more convenient to create multiple user groups and then distribute resources between user groups, rather than between individual users. One user can be a member of several groups.

Click the down arrow near the + *Create new user* button and select *New user group* from the drop-down list to bring up the configuration dialog box.
👪 User group Remote Operators	ĸ .	_ (- >	٢
User group	Details			
🖋 Details	Title			
Members	Remote Operators			
🕂 Membership	Group name			
💼 Resources				
	ОК С	ance	:	

New user group

In the *Details* tab, enter group name.

Ser group Remote Operators*	K			- • ×
User group	Members			۹
🖋 Details	Selected members		Available memebers	
Members	TITLE	ID TYPE	TITLE	ID TYPE
Membership	💄 John Doe	(124) User	L Built-in Administrator a	(1) User
💼 Resources	A Operators	(125) User group	Built-in Administrators	(3) User group
			Admins	(126) User group
			Local admins	(127) User group
	Remove		Add	
				OK Cancel

Choose group members

In the *Members* tab, choose which users and/or user groups will become members of the target group: manipulate items by double-clicking them or using the *Add/Remove* buttons below.

Let user group Remote Operator	S*			_ □ ×
User group	Membership			ଦ୍
🖋 Details	Selected groups		Available groups	
Members	TITLE	ID TYPE	TITLE	ID TYPE
👫 Membership	& Built-in Administrators	(3) User group	L Operators	(125) User group
Resources			Admins	(126) User group
			Local admins	(127) User group
	Remove		Add	
				OK Cancel

Choose group membership

In the *Membership* tab, select the group(s) you want to include the current group as a member: manipulate items by double-clicking them or use *Add/Remove* buttons below.

Finally, you can grant resources permissions using the *Resources* tab in a similar way to adding a single user. Select resources by adding at least one permission; remove them by clearing the permissions using the Clear button below, or simply by double-clicking them in the *Selected resources* list.

Click *OK* when you have finished to return to *Users*; the newly created group will be added to the item list. Use the buttons on the upper panel to edit the group details at any time. If there are a large number of user accounts, the *Search* field in the upper-right-hand corner and the contents filters in the bottom panel can help you to quickly find the accounts you are looking for.

Permissions and Membership

Permissions

You can handle the user and user group permissions for channels, devices and servers via the *User* and *User group* configuration dialog box -> *Resources* tab, or via server/device/channel settings -> *Permissions* tab.

All the available resources are listed in the column on the right; double-click the items or use the *Add/Remove* buttons below to move items between columns. When you have finished, click *OK* to save and exit.

The following basic types of permissions are available:

- Server
 - Administer: access server configuration
 - Access archive: playback
- Channel
 - Administer: access channel configuration
 - Receive device data: live view
 - Access archive: playback
 - Navigate: PTZ control
 - Control digital output: send commands for DI control

Membership

Users can be grouped logically to make permissions management easier. Groups can overlap, meaning that a single user can belong to multiple groups at once, and some groups can be nested - i.e., one group can contain one or more other groups.

To manage user membership from the user configuration dialog box, double-click any user. This will open the properties window, where you can switch to *Membership* tab. Here you can pick which group - or groups - this user will be a member of.

LUSER John Doe*				- 🗆 X
User	Membership			٩
🖋 Details	Selected groups		Available groups	
🗛 Membership	ΤΙΤΙΕ	ID TYPE	TITLE	ID TYPE
nesources	L Operators	(125) User group	Built-in Administrators	(3) User group
	Local admins	(127) User group	Admins	(126) User group
	Remove		Add	
				OK Cancel

User membership

Double-click on groups or use the *Add/Remove* buttons below to move groups between columns. When you have finished, click *OK* to save changes and exit.

Alternatively, you can select one or multiple users from the users list, then click the *Assign group* button on the upper panel: a list of available groups will appear, allowing you to select one of the existing groups. After this, click *OK* to add selected users to the target group.

Configuration	on > Users	Built-in Administrator account 💄 C	Search Q 🚍
Configuration	➡ New user ▼ Edit A	ssign group	
Servers	TITLE	ID LOGIN NAME	EMAIL
L Users	L Built-in Administrator account	(1) admin	
■ Devices	💄 John Doe	(124) johndoe	johndoe@em
Channels	& Admins	(126)	
	🎎 Built-in Administrators group	(3)	
Recording	Local admins	(127)	
🔜 Layout templates	A Operators	(125)	
🔛 Configuration			
🔯 Monitoring	Recently added, 0	updated, 1 Groups, 4 Users,	2

Select multiple users and assign them to a group

Streaming Server Configuration

Get permanent access to live streaming and archive video, no matter where you are in the world. The Luxriot EVO Streaming Server allows quick and easy access to your cameras via web browser and/or native mobile applications.

Luxriot EVO Streaming Server is a part of Luxriot EVO software integrated into the Luxriot EVO Server core. It is designed for video streaming to multiple web-browsing platforms such as Mozilla Firefox and Google Chrome. Some major Luxriot EVO Streaming Server features are: video stream live view, archive playback, Pan-Tilt-Zoom control. The Luxriot EVO Streaming Server optimises video streaming for web or mobile clients, to a degree dependent on connection speed and device viewing capabilities.

At this point, the browsers recommended for clients are Google Chrome and Mozilla Firefox (under any operating system).

Audio and event streaming are **not** supported by the Luxriot EVO Streaming Server.

Luxriot EVO Streaming Server configuration on the Luxriot Console side is simple and only consists of HTTP port for streaming connections. To access the Luxriot EVO Streaming Server setup in Luxriot Console, go to the *Configuration* section and then click *Servers* in the menu on the left; double-click the target server to bring up the configuration dialog box and switch to the *Connections* tab.

Server Sector 31-1	X
Server	Connections
🖋 Details	VMS port
🜻 Connections	60554
🗛 Membership	VMS port
🛉 Permissions	8080
🔶 Watchdog	HTTP port, enter 0 to disable
Storage	
	OK Cancel

Server setup

You only need to define a HTTP port for Luxriot EVO Streaming Server; the default port is 8080. No other settings require modification.

A Please make sure that your chosen HTTP port:

- is opened on the target server firewall;
- is properly configured for port forwarding on all intermediate network equipment, if necessary;
- is not being used by any other application or service on the target server.

Once you are done with the settings, click *OK* to save and close the dialog box. Your Luxriot EVO Streaming Server will now be set up and accessible via a local - and, if used, external - IP. You can immediately check the connection at once: just open your browser and type: *<local IP>:<HTTP port>;* for example, server configuration for the snapshot above will require *192.168.1.83:8082*.

Streaming Server User Interface

When configured, Luxriot EVO Streaming Server is accessible via browser from the server itself and from computers on the local network, and, if system is not isolated, from the Internet. To access the Luxriot EVO Streaming Server, open your browser and type:

<Server IP>:<HTTP port>

then press *Enter*. Your browser will connect to Luxriot EVO Streaming Server, and user authentication will be requested: enter your user name and password to proceed.

Authentication	Required	×
0	A username and password are being requested by http://192.168.1.83:8082. The site says: "CMSSystem"	
User Name:	admin	
Password:	•••••	
	OK Cancel	

Authentication required

After logging in, you will see Luxriot EVO Streaming Server user interface:

- left menu: channel list and setup tabs
- **main window**: live-streaming area
- upper-right-hand corner: layout templates and layouts
- **upper-left-hand corner**: the Luxriot EVO Streaming Server logo; click the logo to extend viewing area by minimising the menu on the left

The channel availability depends on the user permissions. The built-in administrator has access to all resources.

To allow channel access, go to *Configuration* section of Luxriot Console, choose *Users*, then select the user or user group for editing and add privileges on the *Permissions* tab:

- Receive Device Data: enables live view
- Access Archive: enables access to recorded video
- *Navigate*: enables PTZ control

Luser Johnny English*					ĸ
User	Resources			۵	
🖋 Details	Selected resource	25		Available resources	
A Membership	TITLE	ID TYPE	PERMISSIONS	TITLE ID TYPE	_
🖶 Resources	🗙 Axis 215 PTZ o	(118) Channel	Administer	■ UDP IPX3302 (117) Device	^
			✓ ReceiveData	X Vivotek IP816 (119) Channel	
			AccessArchive	X Vivotek PZ71 (120) Channel	
			🗌 Navigate	🗙 (Generic) ONV (121) Channel	
			ControlDigitalOutput	🗙 Grundig GCI (122) Channel	
				🗙 Samsung SNP (123) Channel	
			Clear	Channel UDP IPX3302 (124) Channel	~
				OK Cancel	

Set user permissions in order to see channels in Luxriot EVO Streaming Server

Left Menu: Configuration

The menu on the left has two tabs: *devices*, which shows which channels are available, and *setup*, which contains streaming settings. Click on the titles to switch between them.

Devices	Setup			
Axis 215 PTZ or	n 192.168.3.4			
Vivotek IP816A	on 192.168.3.12			
Vivotek PZ7131	Vivotek PZ7131 on 192.168.3.19			
📑 (Generic) ONVI	F Compatible on 19			
Grundig GCI-H	0522V on 192.168.3			
Samsung SNP-	3120V on 192.168.3			
UDP IPX3302H	D on 192.168.3.53			

Devices

The video sources are loaded in a single list. To start streaming from a particular device, select layout template from the menu in the upper-right-hand corner, then click your desired viewport so that it is highlighted blue, and then click a device from the list.

Devices	Setup
Show PTZ control	
Always	•
When selected	Θ
Never	•
Stream options	
Main	•
Secondary	•
Auto	•

Setup

The Setup tab allows you to choose PTZ control behaviour and configure stream options:

- PTZ controls:
 - Always: if the camera supports Pan-Tilt-Zoom, virtual PTZ sphere will be always shown as overlay control
 - When selected: if the camera has PTZ capabilities, the virtual PTZ sphere will be shown when the corresponding stream is selected
 - Never: do not show PTZ controls at all, meaning that PTZ functionality will be disabled
- Stream options:
 - Main: only the first (main) stream, [usually] of a larger resolution will be used for all devices
 - **Secondary**: only the secondary stream (substream), [usually] of a smaller resolution will be used for all devices
 - Auto: the most appropriate stream will be selected automatically based on viewport size

Main Window: Streams

Live

To start live-streaming, select a layout template from the upper-right-hand menu (1x1, 1x2, 2x1 or 2x2), then click your desired viewport so that a blue frame selection appears around it, and then choose the target stream from the *Devices* list on the left. To replace the existing live stream, either select it and choose a device 'on top' of it, or click the *X* button in the upper-right-hand corner of the viewport to close it and then assign a new stream to this viewport.

Notice that some images may appear with horizontal or vertical black stripes at the sides: this happens because image aspect ratio is maintained instead of it being stretched to fill the viewport. When the picture size is smaller than the target viewport, there will be a black background on either sides.



Live view with overlay PTZ controls

Each live view item contains the following information and controls:

- upper-left-hand corner: stream name (static info)
- upper-right-hand corner: archive playback (if applicable), presets button (click to load preset list), *X* button (press to close the live stream and free the viewport)
- bottom-right-hand corner: PTZ mode (if applicable), stream resolution, stream codec (MP4/JPEG/WEBM) (static info) and zoom mode ON (static info)
- centre: stream picture, virtual PTZ sphere (overlay control) (if applicable)

To **pan and tilt** the PTZ-capable cameras, use overlay PTZ controls: left-click and hold in the desired direction. By default, pan/tilt mode is enabled for PTZ cameras: notice the *PanTilt* label in the bottom-right-hand corner of live view.

In order to **zoom** IN and OUT: first, scroll your mouse wheel DOWN to enable zoom mode - in the bottom-righthand corner, a *Zoom* label will appear. In this mode, virtual PTZ sphere works for zoom only: click and drag UP (upper hemisphere) to zoom IN, and DOWN (lower hemisphere) to zoom OUT. To release zoom mode and go back to the pan-tilt sphere, simply scroll your mouse wheel UP until the *Zoom* label disappears.

For some cameras, you may notice that the further you drag the cursor from the sphere centre, the faster the camera goes: in this way, PTZ speed is controlled; however, for other cameras, only the constant speed is supported either by software or device itself, and the pan/tilt speed will remain constant no matter what position your mouse cursor is in.

Archive Playback

If recording is enabled for the target channel, the stream overlay controls will include an archive playback button in the upper-right-hand corner. Press the button to begin **playback**: the target stream will be displayed in single channel mode. To switch **back to live view**, press the 'eye' button in the upper-right-hand corner; this will restore your previous layout.



Archive playback view

Playback view contains the following information and controls:

- upper-left-hand corner: stream name (static info)
- upper-right-hand corner: 'eye' icon to go back to live view, *X* button (press to close the live stream and free the viewport)
- bottom-right-hand corner: timestamp (current time and server time zone shift)
- centre: stream picture
- centre bottom: playback controls

Overlay controls allow you to start/pause playback and jump back/forward by ten seconds, one minute, ten minutes or an hour.

Upper Right Menu: Layouts

Layout templates allow you to choose viewport layout: 1x1, 2x1, 1x2 and 2x2 are currently available options.



Default layout templates

Click on any thumbnail at any time to immediately load the corresponding **layout template** on the screen. If there are any active streams, they will be discarded. If the target layout template has been already used in the same browser and cookies have not been cleared, previously used channels will be loaded; if not, an empty template will be displayed.

If you wish to **save the layout** currently being displayed, click on the 'portrait' button.



Layouts menu button

The layouts menu will appear, allowing you to save your layout under a user-defined name: enter the layout name and click the *Save* button. Note that, at this point, only Latin characters [A-Za-z] and Arabic digits [0-9] are supported for layout names; special symbols or characters from non-Latin alphabets are not allowed.

Current: 2_2	Presets X
Default	
StreetView	
Enter layout na	me Save

Layouts menu

From here, you can also load previously saved layouts simply by clicking them; if your layout list is longer than the menu window, use the mouse wheel to scroll down.

The layouts are saved in your browser **cookies**, so:

- Luxriot EVO Streaming Server layouts cannot be transferred to other browsers, user accounts or computers
- · layouts are removed when browser cookie data is cleared

Mobile Application for Streaming Server

Install the Luxriot EVO Mobile application from Play Store (for Android users) or iTunes (for iOS users).

Supported OS:

- Android 4.4 and higher;
- iOS 8.2 and higher.

Add Server

Tap the *Add Server* button on the bottom panel to create a new server connection. The following parameters should be filled in:

- Name: server friendly name.
- Host: server IP or domain name.
- **Port**: HTTP port to use (must match the one configured on the server side), the default one is 8080.
- Username and password: user account credentials to connect to the Luxriot EVO server.
- **Startup Server**: select if you wish to automatically connect to the target server on starting the application. On startup, the app will load server list and try to connect to the selected server automatically.

	🛱 🇊 🖊 59% 🖬 16:10
× CANCEL	✓ DONE
Sector 31-2	
192.168.1.83	
8082	
admin	
•••••	
Set as startup server	

Server settings

When you are ready, tap *Done* to save and exit the dialog box, or tap *Cancel* to discard the changes made and go back to the main menu. To edit the existing server settings, tap and hold the server name in the list, then release and then tap the *Edit* button that will appear in the upper-right-hand corner; existing server configurations can be removed in the same way.

Settings

Note that these settings are global for all servers.

- Language: set application localisation; languages available so far are English (US), English (UK), Polish, Russian and Turkish
- Date Format: set the date presentation format you want the application to use, e.g., YYYY/MM/DD
- **Time Format**: set the time presentation format you want the application to use, e.g., HH:MM:SS (24h)
- Stream Quality:
 - Main: only the first (main) stream, [usually] of a larger resolution will be used for all devices
 - Secondary: only the secondary stream (substream), [usually] of a smaller resolution will be used for all devices
 - Auto: the most appropriate stream will be selected automatically based on viewport size

	🖄 🗊 🖊 59% 🛑 16:10
Kettings	
GENERAL	
Language English US	
Date format	
Time format HH:MM:SS (24 h)	
STREAMS	
Quality preference	
ABOUT	

Application settings

In addition to the settings, this menu section contains legal info and information about the application version...

Live View

When you connect to a server, the live view will be loaded by default. If you have previously connected to the selected server previously, live view layout from the last time it was opened will be loaded. Each camera name will be displayed in the upper-left-hand corner of the picture. Tap the camera live view video to switch to full screen; pinch to zoom IN/OUT (digital zoom).

Tap the "<" Back button in the upper-left-hand corner to return back; tap back once again to return to Home screen.



Live view

Swipe left/right to load the next set of cameras on the same layout. Tap and hold camera live view to bring available camera list (similarly to the camera selection menu, will replace selected camera).

Menu Controls

You can find the server control buttons in the upper-right-hand corner. For vertical screen orientation, all menu controls (except for the timer) collapse into a single button with drop-down list.

- **Eye icon/timer**: shows current server time. When you tap it, you are given the option to select the time (the app will automatically switch to Archive mode afterwards)
- **Cameras**: tap to select a camera from the list of available cameras. Note that every camera can only be mapped once and attempts to map cameras for the second time will result in their being placed in the new position and removed from the old one
- **Views**: tap to open layout selection. The layouts currently available are: 1x1, 2x1, 2x2, 3x2. "Add Current" enables you to save current layout under a specified name. If a larger layout has been selected, existing cameras will be mapped automatically and all the extra slots will appear blank. To add cameras, tap the "Cameras" button and pick a camera; all the slots will become marked with a blue frame, tap any of them to place a new camera there.
- **Snapshot**: tap to save a snapshot to the gallery.



Archive Playback

To switch to Archive mode, tap click the *Archive* tab on the bottom panel. Alternatively, tap the eye/timer icon to go to a specific time: choose a point in time to begin playback at, then tap *Set*. **Timer** can be manipulated in the following manner:

- use UP/DOWN arrows or swipe UP/DOWN to change the value of each position
- switch between the *Time* and *Date* tabs by tapping them
- press Cancel to go back to Live mode, or tap Set to proceed with playback

When switching to Archive mode from a multiple camera view: all viewports will be highlighted blue - tap a camera to select it. Note that this mode enables you to view one camera at a time: selecting a larger layout will result in an automatic switch to live view.

Archive timeline controls:

- green colour represents data, maroon means there is no recorded data for that period
- tap the Next/Previous Frame arrows on the sides to go to the next/previous available picture
- use the **Play** button in the centre to start/pause playback
- tap the +/- labels to jump back/forward by ten seconds, one minute, ten minutes or an hour
- tap the camera icon in the bottom-left-hand corner to save a **snapshot**



Archive view

Swipe left/right to switch between cameras within the current layout; tap and hold the image to bring up the available camera list (just as in the camera selection menu, this will exit the current layout and switch to single-camera layout). Use the timeline below to browse the recorded video and use the play/stop buttons to control the playback.

Event & Action Overview

Event and action (E&A) management is a component of Luxriot EVO, which provides additional opportunities for handling surveillance system work under certain conditions. The main task is to assign flexible device/server reactions on a user-defined basis.

Events are entities that arise when something happens in the system - namely, when system or system component states changes. These changes can be set up to trigger certain **actions** so that system administrators and/or users can react to them in a timely fashion. Additionally, there are also extra controlling entities that allow a flexible and advanced setup of event-action rules: conditions, delay times and schedules.

Using event & action management, you can specify your desired outcome for your video surveillance system's operation and determine how software reacts to any event caught on any server and how it turns them into an automated process. Send emails, activate DI/DO, interact with any other software or just bring the attention of the operator to the device that requires their immediate action. The functionality can be used not just for a single event, but on a set of sequenced events to get rid of false alarms and improve the efficiency of the surveillance system.

Possible **E&A scenarios** may be:

- sending alerts through the server of camera digital input events;
- starting or stopping video recording;
- switching to a specific camera PTZ preset, if the door sensors go off at night;
- directing the camera to a specific PTZ preset, if another camera registers the same movement;
- etc, etc.

Event & action management offers the following **functionalities**:

- event & action configurator rules
- standard (default) events
- standard (default) actions
- custom events of certain types
- custom actions of certain types
- global events
- delay timers
- special conditions
- schedules
- mail server configuration

Each of these components is described in details in the corresponding section of this document.

Rules

All rules defined via *Event & Action Configurator* are listed in the Rules section. You can perform the following actions from the *Rules* section without opening the *E&A Configurator*:

- view the complete list of existing rules (per server)
- disable a specific rule or a set of rules
- enable a specific rule or a set of rules
- test a specific rule

Add Rules

All existing and added entities of E&A can be combined to create **rules** (rule map) for each server, which will define server behaviour if events are triggered. This section will guide you through related features, explain the meaning and purpose of used items and provide usage examples.

The rule map is created via the *Event & Action Configurator*: to open it, go to the *Events & Actions* section in Luxriot Console and then click *Rules* in the menu on the left, then select the target server for which you wish to add the E&A setup, and then click the *Open configurator* button on the upper panel. To change the target server, click the *Change* button next to the server name and then pick one from the available server list.

Server	Slobal Server (101)	Change	Open configurator
--------	---------------------	--------	-------------------

Events and actions configurator				- 🗆 🗙
Events and actions configurator				
Server 🕏 Global Server (101)				
Events		Rules		Actions
EVENT		RULE		ACTION
4 🗶 West Rd 2	>		+	- 🗶 West Rd 1 🗇 ^
Video lost				Generate alert substream
Video restored	<			₄ 🗶 West Rd 2
⊿ 📢 ALARM			>	Generate alert
Global event				Generate alert substream
4 😂 Global Server				⊿ 📢 ALARM
Recording error			_	Send global event
Disk excluding 🗸		U Condition Schedule Clear		~
Event Edit event		🔟 Delay timer		+ Action Edit action
				OK Cancel

The Event & Action Configurator will open in a new window; by default, no rules are defined.

Event & Action Configurator

You can pre-create all events, actions, conditions and schedules beforehand using the relevant menu sections in Luxriot Console, or create necessary items as you go from the configurator. Delay timers can only be created as you go for the specified rule and are not saved as independent entities.

Add and Edit Events

Choose the target item from the Events list and then click the + *Event* button below: configuration dialog box will then open with the target device pre-selected. Here you can add alerts from device digital inputs and VCA notifications; see the detailed description of how to create events in the <u>Add Events</u> section.

Built-in (default) types of events - lost/restored video, recording errors etc. - cannot be edited. This is also the case for built-in actions.

Add and Edit Actions

Choose a target item from the Actions list and then click the + *Action* button below: the configuration dialog box will then open with the target device pre-selected. Here you can add reactions to the following types of events:

- trigger device digital output
- write to OS Application log
- activate target device's PTZ preset
- activate main/secondary stream recording profile

- send an email notification
- run a third-party program

See the detailed description of how to create and configure actions in the Add Actions section.

Manage Rules

To start combining events, actions and additional controls, simply follow this scheme:

- find your desired **event** in the *Events* list use search filter on the top panel, if required
- use the < and > arrows or double-click events to add/remove them to/from the *Rules* list
- click free space of the target rule in the *Rules* list (use CTRL or Shift to select multiple ones) the selected rows will then become highlighted green
- find your desired action in the Actions list use search filter on top, if required
- use the < and > arrows or double-click actions to add/remove them to/from the *Rules* list
- select desired actions and add auxiliary controls by clicking buttons on the bottom panel (see description below for details)

💡 Useful tips:

- double-click a device (highlighted grey) to add **all** its events to the rule map
- to **replace** an action, select the target action in the *Rules* list, then select a new action in the *Actions* list and click < button
- to **add** an action to an existing rule, use the + button instead of the < button: the original event will be duplicated and new action will be added to the copy
- use the + button between *Rules* and *Actions* lists to add **multiple actions** of the same type to the selected rule(s)
- to clear *Rules* list, select all rules using Shift or CTRL+A, then press < button on the left to remove all events

The rule header displays the event source and event itself; below, related actions are listed, each with its own set of special controls. Actions of the same type are listed under the same rule header; for all other cases, the events are duplicated, resulting in a separate rule. One condition, one schedule and one delay timer can be attached to **each action**.

Platform 3/4 >> Main Gate Opened

Gate Open >> Set condition
 ■

Working Hours

Platform 3/4 >> Main Gate Opened

ALARM >> Send global event

Platform 3/4 >> Main Gate Opened

West Rd 1 >> > Activate PTZ preset > Gate

🗩 Working Hours 🕱 00:00:10 extend

Example of a rule set for the same event source

Once the rule map has been created, click the *OK* button in the bottom right corner to **save and exit**. Note that simply closing the *Event & Action Configurator* is analogous to clicking *Cancel*: no changes will be saved.

Conditions, Schedules and Delay Timers

For each event/action pair that is added to the rule map, additional options can be defined in the form of <u>conditions</u>, <u>delays periods</u> and <u>schedules</u>. Select one or multiple target events from the *Rules* list and then click desired control item in the bottom panel.

U Condition D Schedule	Delay timer	Clear
------------------------	-------------	-------

To remove auxiliary controls from a rule, select it in the *Rules* list and click the *Clear* button on the bottom panel. Note that all defined conditions, timers and schedules will be removed from the target rule, and it is not possible to de-attach them one by one.

Delay Timers

To add a pause timer for specific actions, select one or more of the mapped rules (use *CTRL+click* or *Shift+click* to mark multiple items) subject to delay, and then click the *Delay Timer* button on the bottom panel of the central part of the *Event & Action Configurator*.

E Set pause timer – – ×
Caption
Time delay 00:02:00 Set time delay for the action Pause mode Create a separate action A new action will be created even if there is an identical action queued. Extend a postponed action No new action will be created if there is an identical action queued.
OK Cancel

Delay timer properties

Set the delay period for the target timer. Time can be adjusted in the following ways:

- click hours/minutes/seconds and then use the UP and DOWN arrows on the right, or
- click hours/minutes/seconds and use the mouse scroll, while still holding mouse cursor over the relevant timestamp section, or
- enter time manually using the keyboard numpad.

Next, choose pause mode:

- **Create a separate action**: new actions of the same type will be created regardless of the acting delay timer, and queued in the same way as the original delayed action
- Extend a postponed action: no new actions of the same type will be created during the delay period

When you have finished, click *OK* to save and exit the dialog box. The newly created delay timer will be assigned to the pre-selected actions.

Extending (postponing) **an action** allows you to accumulate triggered actions for the defined pause period. For example, if incoming events are of a *Recording Error* type, there may come too much of them at once e.g. in case of a major storage issue, causing a lot of triggered actions of the same type, while only a single action may be desirable.

Say, if required action is *Write to application log*, setting a delay timer to *5 minutes + extended action* will make log entries appear once per 5 minutes; **separate action** option, on the contrary, will force logging for every single triggered event.

To remove a delay timer from rule configuration, click the timer to highlight it within the rule, and then click the *Clear* button in the bottom panel. Note that, if there are schedules and/or conditions attached to the same rule, they will be removed as well.

Schedules

Schedules are used when you wish a rule to be active based on a pre-defined itinerary. You can create any number of custom schedules via the *Conditions* section in the Luxriot Console and then use them for rule control: see <u>Create</u> <u>Schedules</u> section in this document for a detailed explanation of this.

Select one or multiple target events from the Rules list and then click Schedule button in the bottom panel.

Conditions

Conditions are supplementary variables that can allow or prevent action execution. The decision is taken based on the condition state: if the condition is **ON**, the planned action will be executed; if the condition is **OFF**, the action will not be performed regardless of the frequency of the triggered event. The condition state can be changed as a result of some other event, so ad additional rule should be added to perform this task; alternatively, you can manually set and unset conditions at your will. Thus, conditions allow the activation and deactivation of rules without requiring them to be entirely deleted.

To assign a condition to the rule, choose one or multiple target events from the *Rules* list and click the *Condition* button on the bottom panel, then either select target condition from the list or create a new one.

Please read the <u>Conditions</u> topic of this document if this feature is new to you: it contains detailed description and usage examples.

Examples

Here are a few examples of the *Event & Action Configurator* usage. You will find more examples in each of the related topics.

Email Notification on Video Loss

Task: send an email notification when the video stream from certain devices is not available for more than five minutes.

Preliminary setup:

- configure a <u>mail server</u>
- create an action: send email to the responsible person using the pre-configured SMTP server

Rules:

• the *Video lost* event from each of the target devices triggers the *Send email* action

RULE

Camera A >> Video lost

🕿 Gmail >> Send email to admin

Camera B >> Video lost

🕿 Gmail >> Send email to admin

Camera C >> Video lost

🕿 Gmail >> Send email to admin

Email Notification on Video Loss

Note that you do not need to create the Video lost event as it is already built in.

Global Handling of Recording Errors

This example will cover a use case with a global event, showing how multiple servers within a single system can be involved in a more sophisticated chain of events and actions.

Task: if there are recording errors on Server A, log this event locally and also add corresponding entry to Windows Application log on the central server. The *Recording error* event is there by default and so there is no need to create it.

Preliminary setup:

- Server A: Write to A Application log action
- Central Server: Write to CS Application log action
- Global event Recording Error on Server A

Rules for Server A:

- Recording error event triggers local Write to A Application log action
- Recording error event triggers Send global event action for the Recording Error on Server A event

Central Server rules:

• Recording Error on Server A global event triggers its own Write to CS Application log action

RULE

Server A >> Recording error

Server A >> Write to A application log

Server A >> Recording error

Recording Error on Server A >> Send global event

Rules for the Server A

Server A generates a global alert and sends it to all servers in the system.

RULE

Recording Error on Server A >> Global event

Central Server >> Write to CS application log

Rules for the Central Server

The Central Server is subscribed to the global alert and therefore reacts with the assigned action.

Default Events

Events are entities that appear when something happens in the surveillance system - namely, when the system or system component state changes. These changes can be set up to trigger certain actions so that system administrators and/or users can react to them in a timely fashion.

For each Luxriot EVO server, there are a set of default events, which behave in an identical way on all servers and cannot be altered or deleted. These are:

- **Central Server Connected**: the connection with central server restored; event is available for noncentral servers
- **Central Server Disconnected**: the connection with central server unavailable; event is available for non-central servers
- **Disk Excluding**: one of the storage locations has been marked as unusable and has been excluded from the recording configuration; event is available for every server
- **Global Event**: global (system-wide) event from one of the servers; event is available for all defined <u>global</u> <u>events</u>
- Motion Started: some motion has been detected; event is available for each channel
- Motion Stopped: no more motion is being detected; event is available for each channel
- **Recording Error**: problem encountered while recording video data to the storage; event is available for each server
- User Button Clicked: user button was pressed; event is available for all user buttons
- Video Lost: no video stream available for this specific channel; event is available for each channel
- Video Restored: video stream connection re-established; event is available for each channel

Events Acti	ions > Events		Built-in Administrator account 💄	C Search	৹ ≡
Events & Actions	➡ New event Edit 3	1 selected			
𝗞 Rules	TITLE	EVENT TYPE	SOURCE		
🗲 Events	Central server connected	CentralServerConnected			
Actions	Central server disconnected	CentralServerDisconnected			
Slobal events	🗲 Disk excluding	Disk excluding			
d) contribution	🗲 Global event	Global event			
U Conditions	Recording error	Recording error			
Schedules	🗲 User button clicked	Button pressed			
Sa Mail servers	🗲 Video lost	Video lost			
	🗲 🗲 Video restored	Video restored			
Configuration					
Events & Actions					
Monitoring	Recently added, 0 Recen	tly updated, 0			

Default events

Default events are available in the *Event & Action Configurator* and can be used in the same way as user-defined events.

Add Events

Events are entities that appear when something happens in the system - namely, when system or system component state changes. These changes can be set up to trigger certain actions so that system administrators and/or users can react to them in a timely fashion.

In addition to the the default set of events, certain types of events can be added manually.

To access event management in Luxriot Console, select the *Events & Actions* section and then select *Events* from the menu on the left.

To create an event, click + *New event* button on the upper panel; event configuration dialog box will open. It is also possible to add events as you go, from the *Event & Action Configurator*.

In addition to default event types, it is possible to add custom events of the following types: **digital input** (DI) and edge (camera-side) video analytics (**VCA**).

- Before creating events from camera DI/VCA source, make sure to:
 - DI: enable alert generation in <u>channel settings</u> via Luxriot Console;
 - edge VCA: enable and set up rules via camera Web interface.

Without these settings, the event source will be not available for the target device in the event settings.

A Removing and adding event sources (e.g., deleting and creating edge VCA rule with the same name) again may render them unusable if they are already included in the *Event & Action* configuration. Make sure to check the event operability and then re-create and re-insert the event after modifying it, if necessary.

🗲 Event	_ □ ×
Event	Details
	Event type Select event type Digital input VCA
	OK Cancel

Choose event type

Choose type for the target event.

Digital Input

The following settings are available for *Digital Input* event:

- **Title**: a user-defined event name; by default it is > *Digital Input* >, suggesting that before and after the >> arrows you can insert device name and DI signal source or, alternatively, you can re-define the whole title according to your own naming convention
- **Source**: choose the device from which the DI event originates; event generation must be enabled in <u>channel settings</u>
- **Digital Input**: select one of the DIs of the target device to serve as event trigger; the number of inputs depends on the total available and configured inputs
- **Digital Input Mode**: the binary input state to trigger alert; must conform with the DI state set up in <u>channel settings</u>

Event *		
ent	Details	
Details	Event type Digital input Select event type from list of possible event types Title Gate > Digital input > Event name Source Input 2 Digital input Input 1 Digital input Digital input Digital input Input 1 Digital input Digital input Digital input Reload	
		OK Cancel

Settings for the Digital Input event type

VCA

For camera-side VCA events, the available settings are:

- **Title**: user-defined event name; by default it is > *VCA* >, suggesting that before and after the >> arrows you can insert the device name and VCA event source or, alternatively, re-define the whole title according to your own naming convention
- **Source**: choose device from which the edge VCA event originates; analytics rules must be enabled via the camera Web interface (some cameras have basic VCA events enabled by default, e.g. volume detection)
- VCA Rule: video analytics rule to trigger event alert; available rules depend on device model, capabilities and configuration

F Event *		- 🗆 🗙
Event	Details	
Details	Event type VCA v Select event type from list of possible event types Title VCA > Event name Source VCA rule Volume Detected v VCA rule Reload	
	ОК	Cancel

Settings for VCA event type

When you are finished, click *OK* to save and close the dialog box. The newly created event will appear in the item list under *Events* and will be available for setup in the *Event & Action Configurator*.

Defaults Actions

For each Luxriot EVO server, there exists a set of default actions that have identical behaviour on all servers and cannot be altered (edited) or deleted. These are:

- **Generate Alert**: generate an alarm that can be used as recording basis in recording profiles; this action is available for each channel
- **Generate Alert Substream**: generate an alarm that can be used as recording basis in recording profiles; this action is available for each channel substream
- **Send Global Event**: send a global event notification to all servers; this action is available for each defined <u>global event</u>
- Set Condition: change the target condition state to ON; this action is available for each condition
- Unset Condition: change the target condition state to OFF; this action is available for each condition

Events Action	ons > Actions		Built-in Administrator account 💄	C Search	৹ ≡
Events & Actions	New action Edit	■ 1 selected			
∞ Rules	TITLE		TARGET		
F Events	Generate alert	(46) Generate alarm			
Actions	Send global event	(43) Send global event			
📢 Global events	Set condition	(44) Set condition			
U Conditions	Unset condition	(45) Unset condition			
Schedules					
🕞 Mail servers					
🔛 Configuration					
Events & Actions					
🐺 Monitoring	Recently added, 0	cently updated, 0			

Default actions

Default actions are available in the *Event & Action Configurator* and can be used in the same way as the userdefined actions.

Add Actions

To access action management in Luxriot Console, choose the *Events & Actions* section and select *Actions* from the menu on the left.

In order to create an action, click the + *New action* button on the upper panel; an action configuration dialog box will open. It is also possible to add actions as you go using the *Event & Action Configurator*.

➡ Action		-		×
Action	Details			
	Action type Select action type Write to application log Activate recording profile Send mail Run program Activate PTZ preset Control digital output			
	ОК	Cano	el	

Choose action type

First, choose your desired action type from the drop-down menu to see action-specific settings.

Write to Application Log

The *Application log* action type allows you to write a log entry into the Windows Application log, which will be accessible via Windows Event Viewer. The log entry level is *Information* and entry source is Luxriot EVO Server. You can define:

- Title: a use-defined action name inside the Luxriot Console; by default it is > Write to Application log
- Log Message: the message text to appear in Windows Application log

Action *	-	□ X
Action	Details	
	Action type Vrite to application log Select action type from list of available action types Title > Write to application log Action name Log message Achtung! Log message	< v
	OK Canc	el

Action: write to application log

Activate Recording Profile

Any of the existing recording profiles can be activated for the device of your choice as a result of a triggered event. You can separately activate main stream and substream recording: use *Activate Recording Profile* action for main stream and *Activate Substream Recording Profile* action for secondary stream. Enter action details as follows:

- **Title**: the user-defined action name; by default it is > *Activate recording profile* > *none*, suggested that before and after >> arrows you can insert the device name and profile name or, alternatively, re-define the whole title according to your own naming convention
- **Target**: the target device for which recording is to be activated
- **Recording profile**: the pre-configured recording profile to be activated as an action; you will find profile configuration tips further on this section of the manual

The recording profile is activated for the duration of time period defined in the profile as **post-recording time**; after that, the profile operation is terminated and target channel is returned to its normal recording configuration.

Action *		- 🗆 🗙
Action	Details	
	Action type Activate recording profile Select action type from list of available action types Title > Activate recording profile > none Action name Target ✓ Axis 215 PTZ on 192.168.3.4 (120) Action target Recording profile Image: Image:	
	ОК	Cancel

Action: activate recording profile

Recording Profile Usage Examples

When a recording profile is activated as a result of an action, its engagement time is determined by the profile's *post-recording time* parameter. The default (built-in) recording profiles have post-recording intervals of 10 seconds, which may be fine when conducting, e.g., motion-based recording (video is recorded for 10s after motion event), but may not be suitable for other types of actions. In such case, you can pre-configure any number of different recording profiles and use them for action setup.

Scenario 1. The camera's recording configuration is normally motion-based. The action is intended to be used for recording based on digital input events, which are triggered when someone opens main entrance door; starting from that point, the video and audio streams will be recorded continuously for one minute.

- channel base recording configuration: motion-based video recording
- action recording profile: continuous video + audio, post-recording interval set to 60 seconds

Scenario 2. The camera normally records continuous video with low FPS during the daytime, and does not record anything at night and during weekends. If camera VCA detects fire or smoke in the area, continuous recording at full frame rate will be conducted for one hour.

- channel base recording configuration: based on schedule, continuous recording at restricted FPS + no recording
- action recording profile: continuous video without frame rate limitation, post-recording interval set to 3600 seconds

Recording profile Alarm Trigger	ed Continuous Recording –	□ ×
Recording profile	Details	
🖋 Details	 Audio stream Alert audio stream recording Post-recording interval 3600 Length of time to continue recording after alert, in seconds (default is 10) 	^
	Detected motion triggers alert Alert is triggered by motion detector OK Canc	v el

Set desired post-recording interval in the target profile

Send Email

In order to send an email notification, you are requested to define the following values in the action settings:

- **Title**: a user-defined action name; by default it is > *Send email*, suggesting that before and after >> arrows you can insert the device name and target email address or, alternatively, you can re-define the whole title according to your own naming convention
- **Target**: specify the SMTP server to be used for email sending; if none are selected, the action will be available for selection on any of the existing configured mail servers when creating a rule
- To: notification recipient email address
- **Subject**: email notification subject
- Body: email notification body text

<u>Configure your SMTP server(s)</u> before creating email-related actions.

Action *		- • ×
Action	Details	
	Action type Send mail Select action type from list of available action types Title Send email Action name Target Gmail SMTP (139) Change Mail server. If none is selected, the action will be visible on all mail servers. To admin@torchwood.gov Send to Subject Achtung Subject of the email Body	
	Catastrophic failure Email body	Cancel

Action: send email

Run Program

The Run program option gives you the opportunity to define a third-party application (script, batch or a GUI application) that will be launched as a reaction to defined camera events. The following parameters should be specified:

- **Title**: a user-defined action name; by default it is *Run program* >, suggesting that after the > arrow you can insert the target program name or, alternatively, you can re-define the whole title according to your own naming convention
- Target: target Luxriot EVO server to execute program on
- File Path: full path to the executable file
- Parameters: input parameters, if the program launched accepts any (e.g., a batch file)
- **Run Mode**: execution mode hidden (silent, invisible to server user), minimised (minimised to taskbar) or normal (program will run in its default state)

Action *		x
Action	Details	
Details	Action type Run program Select action type from list of available action types Title Run program > open gate script Action name Target Image: Clobal Server (101) Target server. If none is selected, the action will be visible to all servers. File path CAopengate.bat Executable file path Parameters Parameters Run mode Hidden	
	OK Cancel	

Action: run third-party program

Activate PTZ Preset

This action type allows you to make a PTZ camera go to a specific pre-configured preset. You just need to specify:

- **Title**: a user-defined action name, by default it is > *Activate PTZ preset* >, implying that before and after >> arrows you can insert the camera and preset names or, alternatively, re-define the whole title according to your own naming convention
- Target: the target device which is to accept the PTZ command
- **PTZ priority**: priority to execute PTZ action with, 0 = lowest, 10 = highest
- Preset: pick one of the automatically loaded target device presets from the drop-down list

PTZ priority parameter is used when two or more simultaneous PTZ command requests (either from action or from direct user input) are sent at the same time. When this happens, request with a higher priority is fulfilled while request with a lower priority is delayed for ten seconds.

Default PTZ priority for all actions is equal to five (medium priority), which also coincides with the default per-user PTZ priority. You can assign any action a higher PTZ priority (six to ten) or a lower one (four to zero) by editing the *Activate PTZ Preset* action properties.

Use the *Reload* button to refresh the list of presets: this will be useful if you have created new presets while keeping the action creation dialog box open.

Action *		- 0	x
Action	Details		
Details	Action type Activate PTZ preset Select action type from list of available action types Title Axis 215; Activate Preset #1 Action name. Target Action name. Target Axis 215 PTZ on 192.168.3.4 (112) Action target PTZ priority 10 v PTZ priority PTZ preset Preset #1 v PTZ preset Reload		
	OK	Cancel	

Action: activate PTZ preset

Control Digital Output

Devices having relay (digital) outputs (DOs) can have them triggered as a result of the *Control digital output* action. You are asked to enter the following details for this action type:

- **Title**: user-defined action name, by default it is > *Activate PTZ preset* >, suggesting that before and after >> arrows you can insert the camera name and DO number/target or, alternatively, re-define the whole title according to your own naming convention
- Target: the target device which is to accept the digital input control command
- Digital Output: pick one of the available DOs of the target device to be triggered
- **Digital Output Mode**: choose whether an activation or deactivation command is sent to the target relay output

Digital output(s) must be enabled in <u>channel settings</u> for the target camera; otherwise, you not will see any available DOs in the drop-down list after selecting the target device.

Action *		- 🗆 🗙
Action	Details	
✓ Details	Action type Control digital output Select action type from list of available action types Title >Canon DO > ON Action name Target Image Canon VB-S800D on 192.168.3.40 (123) Action target Digital output Digital output Digital output Image Canon VB-S800D on 192.168.3.40 (123) Action target Digital output Digital output Digital output Digital output mode Activate Ingital output mode	
	ОК	Cancel

Action: control relay output

Highlight On Map

If your target device is attached to one or more maps, you can visually accent it on the map as a result of the triggered event. It is possible to define one particular map or make the device become highlighted on all maps where is has been placed.

Action Hall Panorama - Highligh	ht on map	- 🗆 X
Action	Details	
	Action type Highlight on map or all maps where corresponding Acti v Select action type from list of available action types Title Hall Panorama - Highlight on map Action name Target Z Hall Panorama (104) Action target Highlight on All mans	
	Map or all maps	v
	·	OK Cancel

Action: highlight target device on a map

Action Parameters

Actions that handle text information (log messages, send emails and run third-party program) can accept macro commands. Currently, the available parameters are:

- {EVENT_ID} internal identifier of the triggered event
- {EVENT_TITLE} user-defined name of the triggered event
- {EVENT_SOURCE_ID} internal identifier of the event source
- {EVENT_SOURCE_TITLE} user-defined name of the event source
- {EVENT_UTIME} event UTC time
- {EVENT_UDATE} event UTC date
- {EVENT_TIME} event local time
- {EVENT_DATE} event local date
- {EVENT_TIMESTAMP} event UTC timestamp in a system-independent format YYYY-MM-DD hh:mm:ss.ms

Example of a text string containing macro: "{EVENT_TITLE} event occurred on {EVENT_UDATE} at {EVENT_UTIME}".

Event sources are listed for every rule in the *Rules* section of *Events & Actions*; typically, these are servers, devices and other resources capable of generating events (e.g., user buttons).

When you have finished, click *OK* to save and close the dialog box. The newly created action will appear in the item list under *Actions* and will be available for configuration.

Manage Mail Servers

One or multiple different outgoing SMTP servers can be configured in order to send alert notifications emails through them. You can use/set up your own SMTP server, if your organisation already has one and/or it is affordable for your organisation; alternatively, free Internet services can be used for this purpose.

SMTP servers provided by popular free services and/or ISPs usually have limitations on the number/frequency of emails going through them daily. Make sure you check with SMTP service provider to learn about this.

To access mail server setup via Luxriot Console, open the *Events & Actions* section and select *Mail servers* from the menu on the left. Click the + *New mail* server button on the upper panel or double-click an existing mail server from the item list to open the configuration dialog box. Note that there are not any default (pre-configured) mail servers in Luxriot Console.

SMail server Gmail SMTP*	-	×
Mail server	Details	
Mail server	Details Title Gmail SMTP Mail server name Host smtp.gmail.com Host name or IP address Port 587 Port number Username some.account@gmail.com Username	
	Password to log into the server Security mode TLS Security mode	~
	OK Cance	el

SMTP server settings
Setup here is similar to configuring an email client. The table below contains detailed information on the available settings.

Setting	Description	Default Setting
Title	User-defined mail server name	[empty]
Host	Outgoing SMTP server IP address or hostname	[empty]
Port	Outgoing SMTP server port; default is 25, common ports for encrypted connection are 465 and 587	[empty]
Username	Enter valid user account details to log onto the target SMTP server	[empty]
Password	Enter valid user account details to log onto the target SMTP server	[empty]
Security Mode	Logon authentication type according to the SMTP server configuration requirements	none
Sender	Email address on whose behalf emails will be sent	[empty]
Aggregation* Count	Max number of notifications to be aggregated into a single email	10
Aggregation* Time	Max time period in seconds during which notifications are collected together to be sent in a single email	10

*Email aggregation can be used to accumulate alert notifications and send them in bunches rather than one at a time. This decreases SMTP server load and does not 'spam' your notification inbox, making it easier to search and analyze alerts, and is thus especially useful if the number or frequency of events is high.

Click *OK* to save mail server settings; newly created configuration will appear in the item list. Your mail server is now ready to be used for sending notifications.

▲ Some mail servers require additional settings to be changed on the server side to allow third-party applications to send emails through their SMTP service. For example, Google security requires that you log into your account via a browser using the server that will be utilising the SMTP service in order to enable account access from that computer.

If you can successfully use SMTP settings to send emails from the same computer, Luxriot EVO will also have no trouble sending your notifications.

Create Schedules

Apart from <u>conditions</u> and <u>delay timers</u>, there are **schedule** elements that determine if a rule has been executed based on a pre-defined itinerary.

To add, remove and manage event and action schedules in Luxriot Console, go to *Events & Actions* section and choose *Schedules* from the menu on the left. Schedules can be also added as you go from the <u>Event & Action</u> <u>Configurator</u>.

Click the + New schedule button on the upper panel to bring up schedule configuration dialog box.

Chedule Night Watch							- 🗆 🗙
Schedule	Details						
	Title Night Watcl Event schedule	e title dules					
	DAY FROM	▲ TIME FROM	▲ DAY TO ▲	TIME TO			
	Sunday	10:00 PM	Monday	8:00 AM			
	Monday	10:00 PM	Tuesday	8:00 AM			
	Tuesday	10:00 PM	Wednesday	8:00 AM			
	Wednesday	10:00 PM	Thursday	8:00 AM			
	Thursday	10:00 PM	Friday	8:00 AM			
	Friday	10:00 PM	Saturday	8:00 AM			
	Saturday	10:00 PM	Sunday	8:00 AM			
	Add	Edit					Remove
						ОК	Cancel

Add new schedule

Enter a user-friendly **title** for the new schedule and then add one or multiple time intervals to form the timetable. Manipulate **schedule items** with the button in the bottom panel.

For each time interval, you can define its starting point (day and time) and ending point (day and time).

Days can be selected from the drop-down list; time can be entered manually or adjusted using the arrows on the right; you can also manipulate time by selecting (highlighting) the hours/minutes/seconds and scrolling your mouse wheel up/down, while still hovering your mouse cursor over the relevant highlighted value.

Schedule item		_ X
Schedule item setup		
Day from		Time from
Sunday	~	10:00:00 PM
Day of the week		Beginning of the period during which the event will be fired
Day to		Time to
Monday	~	8:00:00 AM
Day of the week		End of the period during which the event will be fired
		OK Cancel

New schedule item

Click *OK* when you have finished to save and close the dialog box. The newly created schedule will appear in the item list and will become available for selecting in the *Event & Action Configurator*.

Use the buttons on the upper panel to edit and remove the existing schedules; the filters on the bottom panel will help you load recently added or recently edited items.

Events Action	ons > Schedules	Built-in Administrator account 💄	C Search	৹ ≡
Events & Actions	➡ New schedule Edit III ¥ 1 selected			
∞ Rules	TITLE			
🗲 Events	Day Watch			
Actions	D Have a Nice Weekend			
	D Night Watch			
Configuration	Sinners Never Sleep			
🗲 Events & Actions	🕑 Twilight Watch			
n Monitoring	Recently added, 5 Recently updated, 0			

Multiple schedules

Understanding Conditions

Conditions are auxiliary controls for event/action rule operation: these are **condition variables**, 'locks' for the defined event/action mappings.

Each condition can only be in one of two states: **OFF** or **ON** (0 or 1, *false* or *true*, to put it in terms of formal logic). When applied to a rule, the condition serves as an additional clause for the action execution: the action will only be performed if attached condition is ON, and is never performed if condition is OFF - regardless of whether the event has been triggered. The condition **state** can be manipulated using the *Set condition* and *Unset condition* actions (these exist by default for each and every created condition), which, in their turn, can be set off by some other events.

The conditions are available in the *Event & Action Configurator*: click the *Conditions* button in the bottom part of the *Rules* section to load the existing condition list or create a new one.

Add Condition

To add, remove and manage the conditions in the Luxriot Console, go to the *Events & Actions* section and choose *Conditions* from the menu on the left. Conditions can be also added as you go from the <u>Event & Action Configurator</u>.

Click the + *New condition* button on the upper panel to bring up the condition configuration dialog box. Here you have to:

- enter an comprehensible **title** for the condition usually, the best ones are those which express a state, e.g., camera offline, motion present, door opened etc.
- choose the **target server** conditions, as non-global events, are local and operate within a single server
- set condition **default state**, i.e., the state it is in before it is set or unset for the first time; this can be either ON or OFF

ப் Condition Gate Opened*		- 🗆 🗙
Condition	Details	
✓ Details	Title Gate Opened EventCondition name Server Server Default state Off The initial value that EventCondition takes at sever startup	
	ОК	Cancel

New Condition dialog box

When you have finished, click *OK* to save and close the dialog box; the newly created condition will appear in the item list and will become available in the *Event & Action Configurator*.

Use the buttons on the upper panel to edit and remove the conditions; the filters on the bottom panel will help you load recently added or recently edited items.

Condition Usage Examples

Consider a system that has three cameras installed: *Camera A* overlooking area A, *Camera B* overlooking area B that is just next to area A, and *Camera C*, which is a supplementary PTZ device and can be turned to view both areas and even more, and overlooks area C by default. If a person walks into area A, he/she will be detected by *Camera A's* video analytics; if he moves on, he will enter area B and the security guard will see him on *Camera B*.

Now, imagine that *Camera B* suddenly goes offline. The security guard is OK with that, until there is someone in area B; he notices some motion in area A and takes control of *Camera C*, and makes it overlook area B, but the person of interest is long gone by that time, and there is no footage of him being present in area B. So, the task is to automate the process so that *Camera 3* serves as a backup while *Camera B* is offline; the configuration in such a case may look as follows:

- Event 1: VCA, source: Camera A
- Event 2: Video Lost, source: Camera B
- Condition: Camera B Offline, default state: OFF
- Action 1: make *Camera C* go to preset *Area B*
- Action 2: Set Condition, target: condition Camera B Offline

Rules:

- Event 2 triggers Action 2 (that switches the state of condition Camera B Offline to ON)
- Event 1 triggers Action 1 upon the condition Camera B Offline

Thus, Action 1 (go to the PTZ preset) is only actually triggered then and then only if *Camera B Offline* condition state is ON, which is not possible while *Camera B* is online.

Now, we need this to work both ways, i.e., we want to return *Camera C* to its home position and reset condition state back to *OFF* when *Camera B* comes online again. New configuration elements will be added:

- Event 3: Video Restored, source: Camera B
- Action 3: Unset Condition, target: condition Camera B Offline
- Action 4: make *Camera C* go to preset *Area C*

Rules:

- Event 3 triggers Action 3 (that switches condition state to OFF)
- Event 3 triggers Action 4

These new rules ensure that, once *Camera B* is streaming again, *Camera C* will go back to its original position, thus terminating it as a backup device; and the condition is *OFF*, meaning that the triggering of VCA rules in area A will not make *Camera C* move.

The whole setup in Event & Action Configurator is as follows:

RULE

```
Camera A >> VCA: motion in Zone1
```

🗶 Camera C >> Activate PTZ preset > Area B

U Camera B Offline

▲ X Camera B >> Video lost

U Camera B Offline >> Set condition

Camera B >> Video restored

UCamera B Offline >> Unset condition

Camera B >> Video restored

🗶 Camera C >> Activate PTZ preset > Area C

Sample rules

Delay Timers

Delay timers are supplementary entities for controlling action launching. Unlike conditions and schedules, timers cannot be pre-created in the main Luxriot Console *Events & Actions* section, but rather are defined as you go for each rule with the *Event & Action Configurator*, which is available via the *Rules* section.



Delay Timer button in the Event & Action Configurator

To add a pause timer for specific actions, select one or more of the mapped rules (use *CTRL*+*click* or *Shift*+*click* to mark multiple items) subject to delay, and then click the *Delay Timer* button on the bottom panel of the central part of the *Event & Action Configurator*.

E Set pause timer – – ×
Caption
Time delay 00:02:00 * Set time delay for the action Pause mode • Create a separate action A new action will be created even if there is an identical action queued. • Extend a postponed action No new action will be created if there is an identical action queued.
OK Cancel

Delay timer properties

Set the delay period for the target timer. Time can be adjusted in the following ways:

- click hours/minutes/seconds and then use the UP and DOWN arrows on the right, or
- click hours/minutes/seconds and use the mouse scroll, while still holding mouse cursor over the relevant timestamp section, or
- enter time manually using the keyboard numpad.

Next, choose pause mode:

- **Create a separate action**: new actions of the same type will be created regardless of the acting delay timer, and queued in the same way as the original delayed action
- Extend a postponed action: no new actions of the same type will be created during the delay period

When you have finished, click *OK* to save and exit the dialog box. The newly created delay timer will be assigned to the pre-selected actions.

Extending (postponing) **an action** allows you to accumulate triggered actions for the defined pause period. For example, if incoming events are of a *Recording Error* type, there may come too much of them at once e.g. in case of a major storage issue, causing a lot of triggered actions of the same type, while only a single action may be desirable.

Say, if required action is *Write to application log*, setting a delay timer to *5 minutes + extended action* will make log entries appear once per 5 minutes; **separate action** option, on the contrary, will force logging for every single triggered event.

To remove a delay timer from rule configuration, click the timer to highlight it within the rule, and then click the *Clear* button in the bottom panel. Note that, if there are schedules and/or conditions attached to the same rule, they will be removed as well.

Layout Templates

Custom layouts templates can be created and then used in any Luxriot Monitor applications connected to the target server.

To access layout templates via Luxriot Console, go to the *Configuration* section in the bottom left panel and select the *Layout templates* component in the menu on the left. Use the *Search* field in the upper-right-hand corner to filter existing items; press *Refresh* button to reload the item list.

🔲 VMS Management Console 2015 - localhost 🗕 🗖 🗙					
Configuratio	on > Layout templates		с	Search	৹ ≡
Configuration	 New layout template 	Edit 🔟 🛪 1 selected			
Servers	TITLE	ID MATRIX	VIEWPORTS		
L Users	1+ 2	(117) 2 × 2	3		
Devices	1+4+bundle	(118) 8 × 4	21		
🗶 Channels					
Recording					
🔛 Layout templates					
E Configuration					
Monitoring	Recently added, 2 Recen	ntly updated, 0			

Layout templates

Click the + *New layout template* button on the upper panel to bring up the configuration dialog box.

Layout template 1+4+bundk	e*			×
Layout template	Details			
🖋 Details	Title 1+4+bundle			
	Grid size 8 • × 4 Viewports base grid: vertical × horizont	v = 32 tal, maximum 100		
	1	2	3	
	5	6	7	4
	8	9	10	11
	12	13	10	14
	15	16		
	18	10	1	7
	10	20	1	/
	19	21		
	Merge Unmerge			1 of 21 viewport(s) selected
				OK Cancel

Create new custom layout template

Enter the template name, choose grid size and then modify the grid, if desired: you can select multiple cells at once with your mouse and then use the *Merge* and *Unmerge* buttons below to create custom cell combinations. Note that you can only create rectangular regions, not just any polygonal areas.

When you have finished, click the *OK* button; the newly created layout template will appear in the item list and it will also appear in any connected Luxriot Monitor applications after synchronisation.

Use the *Edit* button to alter any template at any time: modifications will immediately be synchronised with Luxriot Monitor after you save the changes and modified templates will be available for use. However, if the modified layout was already in use, its current output will not be altered, allowing you to save the old layout in Luxriot Monitor. Drag and drop the new layout template to the Luxriot Monitor live view display to load the updated template version.

Maps

To access map management via Luxriot Console, select the *Configuration* section from the bottom-left-hand menu and then click *Maps* in the menu on the left.

Create Map

Click the + New map button on the upper panel to bring up the map configuration dialog box.

Map Section 31*	X
Мар	Details
🖋 Details	Title
• Marking	Section 31
Membership	User name
🛉 Permissions	Organisation
	Organisation to which the user belongs
	Map image
	Select image Select image of the desired plan in PNG, JPG, TIF, BMP or static GIF format. Please note, the system will reproduce the provided image without scaling or effects. The best results will be with 16:9 images of approximately 1600x900 pixels.
	OK Cancel

Map details

On the map *Details* tab, enter a user-friendly name for your new map, then select the organisation it represents, if applicable, and upload a picture that will be used as plan basis. All major raster picture formats are supported: JPG/JPEG, BMP, PNG, TIF/TIFF and GIF.

- ▲ There are the following limitative requirements for the pictures loaded as maps:
 - picture resolution should be less than 8.25MP
 - file size should be less than 5MB

Files not meeting these limitations will not be uploaded.

Place Camera Markings

Switch to the Marking tab to place cameras on the map.

Map Section 31*			- 🗆 🗙
Мар	Marking		
🖋 Details		Properties	
• Marking		Title	(Generic) ONVIF Compatible on 192.168
👫 Membership	ev ha	Icon	84
🖷 Permissions		Channel	🔀 (Generic) ONVII Change
	(Generic) ONVIE Compatible on 192.168.3.33	Rotation angle	-38.8297424
		View angle	268.75592
	MI Canalaba	Radius	35.77334
		Show sector	
	Reset Fit		
			OK Cancel

Map marking

Manipulate your map picture by zooming IN and OUT with the mouse wheel, dragging the picture with the left mouse button and using the *Reset* and *Fit* buttons below. *Reset* a shows non-zoomed 100% size picture (or a picture fragment, if it is larger than the window), and *Fit* zooms your picture so that it fits into the preview window.

To place a camera marker, drag the \blacksquare camera icon from the upper-left-hand corner and drop it on the scene. Camera markers will allow you to pop up channels by double-clicking the markers in Luxriot Monitor. The following actions are possible:

- select the camera by clicking the amera icon on the plan (and **not** the blue sector representing the viewing area)
- move the camera around by dragging it (the sensitive area is within the pink circle)
- change coverage sector by dragging two pink dots on the sides of the blue sector: drag to the sides to adjust the vertical angle, drag to/from the centre to change radius
- correct camera position: drag central pink dot to the sides to rotate camera, drag to/from the centre to change radius
- remove the marking by selecting it and pressing the Delete button on your keyboard

The properties window on the right enables you to:

- choose target device for the currently selected marking
- view information about marking angles and radius
- turn ON/OFF displaying of coverage area

Other Markings

It is also possible to add map markers and use them as shortcuts to other maps: target maps will pop up when corresponding map markers are double-clicked in Luxriot Monitor. To place a map marker, drag the map icon from the upper-left-hand corner and drop it onto the scene.

🔮 Мар МуМар*	_	_ 🗆 🗙
Мар	Marking	
🖋 Details	= 0	Properties
• Marking		Title Map 1
Membership		•
A Permissions	Reset Fit	Map 💽 none Change
		OK Cancel

Map markings

Click a map marking and use the properties window on the right to browse for a map that you wish to be a target for the current shortcut. Remove markers by selecting them and then hitting the *Delete* button on the keyboard.

Membership And Permissions

Map Section 31*	_			- 🗆 🗙
Мар	Membership			۹
🖋 Details	Details Selected groups		Available groups	
• Marking	TITLE	ТҮРЕ	TITLE	ТҮРЕ
🕂 Membership	Sector 31: public areas	Map group	Sector 31: restricted area	Map group
🛉 Permissions			Sector 31: facilities	Map group
	Remove		Add	
	·			OK Cancel

Just as other resources, maps can be grouped and assigned user permissions.

Map membership

In the *Membership* tab, you choose groups for this map to become a member of: select groups by double-clicking items in both columns or by using the *Add/Remove* buttons below.

Map Section 31*					- 🗆 ×
Мар	Permissions	Permissions			۹
🖋 Details	Selected users			Available users	
• Marking	TITLE	ID TYPE	PERMISSIONS	TITLE	ID TYPE
🕂 Membership	L Johnny English	(119) User	✓ Administer	L James Bond	(120) User
🛉 Permissions			View	L Jimmy Neutron	(121) User
				Supervisors	(122) User group
			Clear		
			· · · · · · · · · · · · · · · · · · ·	ОК	Cancel

Map permissions

Permissions tab enables you to choose the users and user groups that will have access to this resource. Select at least one permission to select a user/user group; uncheck all manually or using *Clear* button below to deselect. *Administer* permission means user will be able to see, open and edit map via Luxriot Console, and *View* only allows user to load the map in Luxriot Monitor.

When you have finished, click *OK* to save and close the dialog box. The newly created map will appear in the item list of the *Maps* section.

Use the buttons on the upper panels to perform item-specific actions: remove, edit and quickly assign map group; the filters on the bottom panel will help you switch between recently created/updated items and display maps/map groups only.

Create Map Group

Map groups can be used for easier management in Luxriot Console. Note that map groups are not displayed in Luxriot Monitor.

Click the drop-down arrow near the + *New map button* and select *New map group* to bring up the map configuration dialog box.

A Map group Sector 31: classified	* Z
Map group	Details
🖋 Details	Title
Wembers	Sector 31: classified
🕂 Membership	Group name
🛉 Permissions	
	OK Cancel

Map group details

Enter group name on the Details tab and proceed with selecting maps for this group on the Members tab.

lassified*			-	□ ×
Members				Q
Selected members		Available memebers		
TITLE	ID TYPE	TITLE	ID TYPE	
Section 31	(117) Map	👪 Sector 31: public area	s (136) Map group	,
Sector 31: restricted area	(147) Map group	Sector 31: facilities	(148) Map group	
Remove		Add		
			OK Canc	el
	Assified* Members Selected members TITLE Section 31 Sector 31: restricted area Remove	Assified* Members Selected members TITLE ID TYPE Section 31 (117) Map Sector 31: restricted area (147) Map group Remove Remove	Assified* Members Available members TITLE ID TYPE TITLE ID TYPE Section 31 (117) Map Sector 31: restricted area (147) Map group Remove Add	Assified*

Choose members for the target map group

You can select both maps and map groups to be members of any map group.

Amp group Sector 31: classifie	ed*			×
Map group	Membership			ব্
🖋 Details	Selected groups		Available groups	
Members	TITLE	ID TYPE	TITLE	ID TYPE
🗛 Membership			Sector 31: public areas	(136) Map group
🛉 Permissions			Sector 31: restricted a.	(147) Map group
	Remove		Add	
				OK Cancel

Map group membership

On the *Membership* tab, choose groups to contain target map group as a member, thus creating nested groups.

A Map group Sector 31: class	sified*			- 🗆 🗙	
Map group	Permissions				۹
🖋 Details	Selected users			Available users	
Members	TITLE	ID TYPE	PERMISSIONS	TITLE	ID TYPE
Membership	💄 Johnny English	(119) User	✓ Administer	L James Bond	(120) User
🛉 Permissions			✓ View	L Jimmy Neutron	(121) User
			Clear	Supervisors	(122) User group
				ОК	Cancel

User permissions for map group

Switch to the *Permissions* tab to assign user privileges for the target map group. Select at least one permission to select user/user group; deselect by unchecking manually or by using the *Clear* button below to remove all. *Administer* permission means user will be able to see, open and edit all maps in this and nested groups via Luxriot Console, and *View* only allows user to load the maps in Luxriot Monitor.

When you have finished, click *OK* to save and close the dialog box. The newly created map group will appear in the item list in the *Maps* section. Use the buttons on the upper panels to perform item-specific actions: remove, edit and quickly assign map group; filters on the bottom panel will help you switch between recently created/updated items and load maps/map groups only.

Dewarp For Fisheye Cameras

Fisheye lens is an ultra-wide-angle lens that produces a wide panoramic image at the cost of strong visual distortion. Usually, devices with such lenses capture a 360-degree geometrically distorted image and projects it as a circle within the image frame. Fisheye lens can be either built-in by design or purchased separately and installed on your desired camera. Luxriot EVO dewarp feature allows to correct the perspective and obtain several "normal" views from a single distorted fisheye picture.

In order to access dewarp settings via Luxriot Console, open the *Configuration* section and choose *Channels* from the menu on the left. Find the channel you wish to dewarp in the list (use *Search* or filters, if necessary) and doubleclick it in order to open it for editing (alternatively, use the *Edit* button on the upper panel to open the dialog box), then switch to the *Channel Configuration* tab and click the *Open channel properties* button. In the *Properties* dialog box, choose the *Dewarp* tab.

🕻 Channel Hall Panorama		
Channel	Channel configuration	Hall Panorama Properties
Details	Channel properties	Events Audio PTZ Configuration Video Input Video Configuration Frame Adjustments
Motion detector	Manage channel properties	External PTZ Control Dewarp Video Analytics
Membership	Open channel properties	Please select lens installed on the device and configure it.
🛉 Permissions	Open device in browser	Regular lens is installed on the device.
[반] Channel configuration		 ImmerVision Enables@ Lens ImmerVision Enables@ lens is installed on the device. Dewarp will be used for Digital PTZ. Lens Model: Panomorph A0**V v Mounting Direction: Celling v
		Fisheye circle projection properties within image.
		Apply OK Cancel

Access dewarp settings via Luxriot Console

You have the following options here:

- Regular lens: choose this option if you wish to disable the dewarp engine
- Immervision Enables® lens: choose this option if your camera has a Panomorph lens installed (you can check this in the camera specification)
- Fisheye lens: choose this option if your camera has a regular 360-degree view lens

For devices having a Panomoph lens, choose the lens model from the drop-down list - you can find this information in your camera specification or request it from the device manufacturer. You do not need to define any parameters manually here; rather, you only need to choose your camera mounting position, and the dewarp engine will automatically produce a correct dewarping result.

Note that the dewarp engine will fail to operate if you choose a wrong lens model. Check with your camera documentation and manufacturer for the precise lens model information.

For a regular fisheye lens, you are given the option to enter the dewarp parameters:

- Hemisphere **diameter**, in pixels: usually, it is equal to the picture side if the picture is square, and is equal to the picture shorter side if it is rectangular
- **Horizontal** and **vertical** centre, in pixels: offset of the circular projection centre from the top left picture corner (actually, from any picture corner)

• Focal length of the lens: common lengths range from 8 to 10 mm

Hall Panorama Properties					
Events	Audio	n			
Video Input	Video Config	uration	1	Frame Adjustm	ents
External PTZ Co	ontrol	Dewar	р	Video Analy	tics
Enables	Mounting Dire	ction:	Ceilin	ig .	
Fisheye Lens					
Fisheye lens for Digital PT	is installed on Z.	the de	vice. [Dewarp will be us	ed
Fisheye	ir <mark>cl</mark> e projectior	n prope	erties	within image.	
	Diameter:	1920			
Horiz	ontal center:	960		(i)	
Ve	ertical center:	960		00400	=
Fisheye lens focal length, in millimeters. Common focal lengths for fisheye lens range between 8 mm and 10 mm.					
	Focal length:	8.00			*
	ОК		Car	ncel Ap	ply

Enter parameters for the dewarp engine

Here are two examples of the dewarp setup.

1. Camera produces a 1024x1024 picture; dewarp parameters will be as follows:

- diameter = 1024px
- vertical centre = 1024/2 = 512px
- horizontal centre = 1024/2 = 512px

2. Fisheye image has dimensions of 2560x1600 pixels, the visible area is not cropped on the shorter side

- diameter = shorter picture side = 1600px
- vertical centre = half of the shorter side = 1600/2 = 800px
- horizontal centre = half of the longer side = 2560/2 = 1280px

Audio

Luxriot EVO is capable of receiving audio streams from cameras, recording and playing them back, as well as sending audio back to the cameras from Luxriot Monitor stations. It is also possible to bind an external audio source to a video channel.

There are a few conditions stipulating audio feature availability:

- the target device should be capable of sending/receiving audio
- relevant additional equipment should be plugged into the device (microphone and/or speakers), if necessary (if these are not built in by design)
- one-way or two-way audio should be enabled and set up on the camera (encoder) side so that it is available via device Web interface
- selected audio codec should be G.711
- audio should be enabled in the channel settings via Luxriot Console (see the description below)
- feature should be supported by Luxriot EVO for the target device (see the list of supported devices and features provided by Luxriot)
- in order to send audio to the device, Luxriot Monitor workstation should have a microphone connected to it
- if you plan to use an external audio source, relevant audio capturing equipment should be plugged into the server, to which the target device is connected, and enabled via Windows audio settings

▲ G.726 and AAC audio codecs, which are often implemented on the camera side, are not supported at this point, so please always select the G.711 option. Setting other codecs on the device side may result in Luxriot EVO being unable to decode the incoming video stream.

In order to enable audio capabilities for your desired device, open the *Configuration* section and choose *Channels* from the menu on the left, then open your target channel for editing - either by double-clicking it or by selecting it with a single click and clicking the *Edit* button on the upper panel. In the channel settings' dialog box, switch to the *Channel configuration* tab.

Channel Reception*	×
Channel	Channel configuration
🖋 Details	Channel properties
🕏 Motion detector	Manage shared second
🗛 Membership	Open channel properties
- Permissions	Open device in browser
🔛 Channel configuration	
	OK Cancel

Go to the Channel configuration tab

If you plan to use camera-side audio and have not checked audio configuration on the camera side yet, click the *Open device in browser* button to go to the camera Web interface and adjust the settings, then make sure that audio

is operable in the browser preview (you may need to install an ActiveX control in order to get it working; please check with your device's user guide for tips and browser requirements).

Press the *Open channel properties* button to bring up the dialog box and switch to the *Audio* tab. Here, you have three options:

- disable audio functionality for the target device (default)
- enable audio reception from the camera side and sending the reverse audio to the camera
 - choose an audio input from the drop-down list, if the target device has multiple ones
- use an external audio source connected to the same server as the target camera
 - choose an audio input device from the drop-down list, if the target server has multiple ones connected to it

HD3500P.101 Properties									
External PTZ	Control	Dewarp	Video /	Analytics					
Video Input	Audio	Audio Events Summary F							
Use controls below to select and configure an audio source device to be used or attached to video hardware.									
🔿 No Audi	io Source								
International	I Audio So	urce							
Use built video ca	Use built-in audio capture capabilities available along with video capture								
Input:	Input 1			~					
○ Externa	Input 1 C External Audio Source Attached								
Attach a audio pa	n external a art for the ho	udio input dev st video captu	ice to act as ar Ire device	n integral					
Input:				~					
Properties									
	OK Cancel Apply								

Choose the audio delivery option

When you have chosen your preferred option, click *OK* to save and exit, then close the *Channel settings* dialog box. You should now be able to listen to live audio, record it along with the video stream and talk back to your camera.

Health Monitoring

Luxriot EVO provides health monitoring data for server, devices and channels, as well as live status of connected user sessions.

To access live reports in Luxriot Console, choose the *Monitoring* section in the bottom-left-hand panel and switch between components using the menu on the left. Use the *Search* field in the upper-right-hand menu to filter the records; press the *Refresh* button to reload the item list.

Servers

The server status includes information about connection and synchronisation: both have numeric status code and corresponding textual status.

	> Servers					C Search O	۷ ≡
Monitoring	TITLE	ID CONNECTED	SYNCHRONIZED	STATUS	CONNECTION CONNECTION TEXT	SYNCHRONIZA SYNCHRONIZATION TEXT	
-	S Central Server	(101) yes	yes	Success	0 The operation completed successfully	0 The operation completed successful	lly
Servers							
Devices							
X Channels							
L User sessions							
🗓 Audit journal							
E Configuration							
Monitoring	<						>
-	Recently added, 0	Recently updated, 0	Groups, 0	Servers, 1	Not connected, 0 Not synchronized, 0		
Q 1:	·						

Servers live monitoring

Devices

The device summary provides configuration update status and the time of the last communication between the server and device.

	> Devices				C Search	ৎ ≡	
Monitoring	TITLE	ID SERVER	DEVICES/MODEL	TIME	CONFIGURA CONFIGURATION UPDATE RESULT TEXT	STATUS	
-	(Generic) ONVIF Compatible	(103) Central Server (101)	ONVIF Compatible	11:57:44 AM	0 The operation completed successfully	Success	
Servers Servers	Asoni CAM613 on 192.168.3	(102) Central Server (101)	CAM613	11:57:44 AM	0 The operation completed successfully	Success	
■ Devices	Grundig GCI-G1536F on 192	(109) Central Server (101)	GCI-G1536F	11:57:44 AM	0 The operation completed successfully	Success	
X Channels	Grundig GCI-K0622D on 192	(108) Central Server (101)	GCI-K0622D	11:57:44 AM	0 The operation completed successfully	Success	
LUSER Sessions	Grundig GCI-K1627D on 192	(111) Central Server (101)	GCI-K1627D	11:57:44 AM	0 The operation completed successfully	Success	
	Vivotek FD8154 on 192.168	(110) Central Server (101)	FD8154	11:57:44 AM	0 The operation completed successfully	Success	
👭 Audit journal	Vivotek IP7131 on 192.168.3	(107) Central Server (101)	IP7131	11:57:44 AM	0 The operation completed successfully	Success	
E Configuration							
2 Monitoring	Recently added, 0 Recently updated, 0 Groups, 0 Devices, 7						

Devices live monitoring

Channels

Along with configuration update results, channel monitoring contains information about:

- video loss
- stream bit rate
- stream frame rate (FPS)
- recording status

Recording status has the following denotation: O=currently not recording, 1=recording is active. Note that 'not recording' may both mean either that recording is not configured (disabled) or that recording has not been activated according to the schedule.

(Monitoring	> Channels				C Search		৹ ≡
Monitoring	TITLE	ID SERVER	STATUS	TIME	CONFIGURATI CONFIGURATION UPDATE RESULT TEXT	VIDEO LOST	BETRATE
	🗯 (Generic) ONVIF Compatible	(106) Central Server (101)	Success	12:23:30 PM	0 The operation completed successfully		98893
Servers	🗙 Asoni CAM613 on 192.168.3	(104) Central Server (101)	Success	12:23:30 PM	0 The operation completed successfully	yes	0
Devices	X Asoni CAM613 on 192.168.3	(105) Central Server (101)	Success	12:23:30 PM	0 The operation completed successfully	yes	0
🗙 Channels	🔀 Grundig GCI-G1536F on 192	(114) Central Server (101)	Success	12:23:30 PM	0 The operation completed successfully		471087
LUSER SESSIONS	🕱 Grundig GCI-K0622D on 192	(113) Central Server (101)	Success	12:23:30 PM	0 The operation completed successfully		53273
	🔀 Grundig GCI-K1627D on 192	(116) Central Server (101)	Success	12:23:30 PM	0 The operation completed successfully		68642
🛄 Audit journal	X Vivotek FD8154 on 192.168	(115) Central Server (101)	Success	12:23:30 PM	0 The operation completed successfully		33169
	X Vivotek IP7131 on 192.168.3	(112) Central Server (101)	Success	12:23:30 PM	0 The operation completed successfully		29266
E Configuration							
Manitorina	<						>
age roomooning	Recently added, 0 Recently updated, 0 Groups, 0 Channels, 8 Replication channels, 0 Detached, 0						

Channels live monitoring

User Sessions

This monitoring area displays currently active incoming Luxriot Monitor connections with the following details:

- user account
- remote address
- remote (outgoing) port
- session start time
- type (Luxriot Console/Luxriot Monitor)

Disconnected sessions will automatically disappear from the list.

(Monitoring	C Search	৹ ≡			
Monitoring	USER	ID REMOTE ADDRESS	START TIME		
Servers	L Built-in Administrator account	(1) 192.168.1.83:54237	12/22/2015 12:53:39 PM		
● Cevices					
🗶 Channels					
L User sessions					
👖 Audit journal					
E Configuration					
Monitoring	Recently added, 0 Recently update	ted, 0			

User Sessions live monitoring

Audit

To access the global audit log in Luxriot Console, choose Audit section in the bottom-left-hand panel.

The audit log contains detailed information about the most important user activities and server events. Events are organised in a way similar to the Windows Event log, and can be filtered and sorted by any field just by clicking on the relevant field. By default, entries are sorted by time, with latest on top. Use *Search* field in the upper-right-hand menu to filter the records; press *Refresh* button to reload the item list.

The log has two sections: *Servers* and *Users*; these can be accessed by clicking the corresponding items in the menu on the left, when in *Audit* section.

Servers

Each event contains the following values (internal ID fields omitted):

- Time: event timestamp in system locale-specific format
- Server: name of the server from which the event originates
- **Event**: a brief description of the event; there are the following types:
 - *Configuration loaded*: configuration has been successfully loaded from the database and applied to the target server
 - *Central server connected*: central server has successfully connected to the target recording server
 - *Central server disconnected*: central server has disconnected from the target recording server because the target server is offline, unreachable, has been removed from the central server configuration or has invalid configuration
 - *Synchronisation completed*: central server has successfully synchronised configuration data with the target recording server
- **Information**: additional information relevant to the event, e.g., session ID for the central server connections

Audit > Serve	ers		Built-in Administrator a	account 💄 C Search	ৎ ≡
Audit	Define filter View 38 1 s	elected			
Servers		SERVER	EVENIT	INFORMATION	
L Users	(59) 4/5/2016 5:31:08 PM	Global Server (101)	Configuration loaded	The operation completed successfully	^
	(60) 4/5/2016 5:31:58 PM	Global Server (101)	Configuration loaded	The operation completed successfully	
	(62) 4/5/2016 5:35:24 PM	Global Server (101)	Configuration loaded	The operation completed successfully	
	(63) 4/5/2016 5:36:03 PM	Global Server (101)	Configuration loaded	The operation completed successfully	
	(64) 4/5/2016 5:36:59 PM	Global Server (101)	Configuration loaded	The operation completed successfully	
	(67) 4/5/2016 6:00:36 PM	Global Server (101)	Configuration loaded	The operation completed successfully	
	(68) 4/5/2016 6:00:38 PM	Unknown resource (112)	Central server disconnected	1	
	(69) 4/5/2016 6:00:38 PM	Unknown resource (112)	Configuration loaded	The operation completed successfully	
🔛 Configuration	(70) 4/5/2016 6:00:39 PM	Unknown resource (112)	Central server connected	2	
🗲 Events & Actions	(71) 4/5/2016 6:00:51 PM	Global Server (101)	Configuration loaded	The operation completed successfully	
Monitoring	(72) 4/5/2016 6:00:53 PM	Unknown resource (112)	Syncronization completed		
III and	(73) 4/5/2016 6:00:53 PM	Unknown resource (112)	Configuration loaded	The operation completed successfully	
ing Audit	(74) 4/5/2016 6:26:18 PM	Global Server (101)	Configuration loaded	The operation completed successfully	
					~

Audit log, Servers section

Double-click any event to open it in a separate dialog box with additional information about source server, such as event classification and IP address.

🛄 Event 70:Central server connected	×
Event d <i>e</i> tails	
Id	(70)
Time	4/5/2016 6:00:39 PM
Class	Server
Subclass	Server activity
Event	Central server connected
Server	Unknown resource (112)
Remote address	192.168.1.83:59174
Session Id	2
	ОК

Event example for the *Servers* audit log

Users

Each event contains the following values (internal ID fields omitted):

- Time: event timestamp in system locale-specific format
- User login name: user login information, if available
- User's full name: full name of the user, as specified in Luxriot Console settings
- Connection address: remote IP and outgoing port used for connection
- **Connection type**: shows whether the user was logged in from Luxriot Console, Luxriot Monitor or mobile/browser client
- Event: event type
 - Log in: the specified user has logged in to the target server
 - *Log out*: the specified user has logged out
 - *Unsuccessful log in*: an attempt to log in was made but it failed because either username or password was incorrect
 - *Receive Data*: user has requested device data via Luxriot Monitor; target device can be found under *Information*
 - *Navigate*: user has activated device PTZ control via Luxriot Monitor; target device can be found under *Information*
- Server: name of the server from which the event originates
- Information: additional information related to the event, e.g., the device name

Audit > Users						Built-in Administrator accoun	t 💄 C Search		Q	≡
Audit	Define	filter View	x	1 selected						
Servers	10	TTI IS						PL IP L IP	OF DUED	NICODA
•	IU (0.1) -			JSEK LUGIN NAME	USER'S FULL NAME	CONNECTION ADDRESS	CONNECTION TYPE	EVENT	SERVER	
L Users	(24) 3	/23/2016 3:27:25	²M a	admin	Built-in Administrator account (1)	127.0.0.1:62454	Monitor	Log out	Global Server (101)	
	(22) 3	/23/2016 2:19:41	PM a	admin	Built-in Administrator account (1)	127.0.0.1:62454		Receive Data	Global Server (101)	apix
	(20) 3	/23/2016 2:10:27	PM a	admin	Built-in Administrator account (1)	127.0.0.1:62454		Receive Data	Global Server (101)	wtk
	(19) 3	/23/2016 2:10:27	PM a	admin	Built-in Administrator account (1)	127.0.0.1:62454		Receive Data	Global Server (101)	test
	(16) 3	/23/2016 2:06:55	PM a	admin	Built-in Administrator account (1)	127.0.0.1:62454		Receive Data	Global Server (101)	wtk
	(12) 3	/23/2016 1:55:42	PM a	admin	Built-in Administrator account (1)	127.0.0.1:62454		Receive Data	Global Server (101)	test
	(11) 3	/23/2016 1:55:41	PM a	admin	Built-in Administrator account (1)	127.0.0.1:62454	Monitor	Log in	Global Server (101)	
	(10) 3	/23/2016 1:55:35	PM a	admin	none			Unsuccessful log in	Global Server (101)	- 6
🔛 Configuration	(9) 3	/23/2016 1:55:30	PM a	admin	none			Unsuccessful log in	Global Server (101)	
🗲 Events & Actions	(8) 3	/23/2016 1:55:27	PM a	admin	none			Unsuccessful log in	Global Server (101)	
Monitorina	(7) 3	/23/2016 1:55:24	PM a	admin	none			Unsuccessful log in	Global Server (101)	
	(3) 3	/23/2016 1:54:14	PM a	admin	Built-in Administrator account (1)	127.0.0.1:62443	Console	Log in	Global Server (101)	
🛄 Audit	(2) 3	/23/2016 1:54:09	PM a	admin	none			Unsuccessful log in	Global Server (101)	~

Audit log, Users section

Define Filter

Audit logs can be filtered for easier analysis. Click the *Define filter* button on the upper panel to bring up the dialog box.

In the *Set period* tab, specify the time limits for log output. You can set the date and time manually or use automated controls for preset time boundaries: last day/week/month, the whole time, and also set start/end boundaries equal to the log beginning/end.

E Filter			- 🗆 🗙
Filter	Set period		
Set period			
Select events	Set query period		
Select resources	All time F Last day S Last week T Last month D	From date and time 10/15/2015 v 2:52:03 PM From beginning tarts query from the first time the system was set up To date and time 12/22/2015 v 2:52:03 PM Description V Until now inds query when timestamp submitted	
Reset query		Submit query	Cancel

Set the time boundaries for audit log output

In the *Select events* tab, choose specific event types to narrow down the search. Note how the choice differs for the *Servers* and *Users* log filters.

Filter	_ 🗆 🗙
Filter	Select events
Set period	
Select events	Select events
	EVENTS
Select resources	Central server connected
	Central server disconnected
	Configuration loaded
	Failover status changed
	Clear
Reset query	Submit query Cancel

Specify event types for the Servers audit log output

Filter	- 🗆 🗙
Filter	Select events
Set period	
Select events	Select events
Select resources	EVENTS
Select resources	Log in
	Log out
	✓ Administer
	Navigate
	✓ Receive Data
	Unsuccessful log in
	Clear
Reset query	Submit query Cancel

Specify event types for the Users audit log output

In the *Select resources* tab, you can choose which resources will be mentioned in the log entries. Note that if multiple resources are chosen, the filter will apply *OR* logic, meaning that output log will only be displayed if it contains log entries for **at least one** specified resource, and not for the combination of all specified resources.

r	Select resources			
Set period	Bassing in success		All	
Select events	Resources in query		All resources	
Salact resources		ID TYPE		ID TYPE
Select resources	Canaria) ONIV//Comm	(124) Oser	Central Server	(101) Server
	Generic) Olivvir Comp	(106) Channel	Built-in Administrator	(1) User
			Ruilt in Administrator	(126) User group
			Local administrator	(3) User group
				(127) User group
			Asoni CAM613 on 19	(123) Oser group
			Asoni CAM613 on 19	(105) Channel
			Grundia GCL-G1536E	(114) Channel
			Grundig GCI-K0622D	(113) Channel
			Grundig GCI-K1627D	(116) Channel
			Vivotek ED8154 on 1	(115) Channel
			Vivotek IP7131 on 19	(112) Channel
			First Floor	(122) Channel group
			Generic) ONVIF Com	(103) Device
			Asoni CAM613 on 19	(102) Device
			Grundia GCI-G1536F	(109) Device
	Remove		Add	

Narrow down your search by specifying resources

Use the *Search* field to filter the resource list; both the list of *Resources in query* and general *All resources* will be affected by the *Search* filter. Press the *Reset query* button in the bottom left corner at any time to restart filter configuration; when you have finished, click *Submit query* to view the results. To discard filtering, simply switch to a different section in the menu on the left and then switch back to your desired section.

Problem Report Wizard

4

Luxriot software offers a comprehensive wizard-like tool for structured and detailed problem reporting. The tool is automatically installed at the same time as the product and is thus available on any machine on which Luxriot software is installed.

Access Problem Report Wizard via *Start -> All Apps -> Luxriot -> Problem Report Wizard* (in Windows 7 and older versions, use *Start -> All Programs -> software installation folder -> Tools -> Problem Report Wizard*); alternatively, use Windows Start Menu *Search* to locate the Problem Report Wizard in the programs menu.

A	Make sure you run the Problem Report Wizard on the right computer: it gathers information from the
	machine it has been launched on, and not from any of the servers connected via Luxriot Console or Luxriot
	Monitor.

A	VMS Client Application Problem Report Wizard —	×
Wel	come to VMS Problem Report Wizard!	
	VMS Client Application This wizard will guide you through the steps required to submit a problem report to the Support. You will be able to provide your comments and have wizard gathered relevant information and attached it to the report.	
	Step 1. User contact information Provide your name and e-mail for support feedback	
	Step 2. Problem descriptions Take a survey or write down problem descriptions with text	
	Step 3. Gathering system information and sending data Collecting and sending data	
	☑ 1 agree on delivery system files ①	
	Back Next Canc	el

Run Problem Report Wizard from Windows Start menu

Agree to deliver system files to Luxriot support and hit *Next*. You can check which files are being taken from your system by clicking on the information button next to the agreement checkbox. Note that Luxriot will not transfer your data to any third-party companies; all the information gathered is required to help Luxriot efficiently resolve the reported problems.

A	VMS Client Application Problem Report Wizard —	×
Step	1 of 3. User contact information	
	User name and valid e-mail address	
	Provided information will be used to send back solution or any other instructions based on provided Problem Report. It is highly recommended to use valid email address.	
	User Name	
	E-mail address	
	Back Next Can	cel

Enter your contact information

Enter your name and your email address so that the Luxriot support team can contact you. Click Next to proceed.

A	VMS Client Applica	ation Problem Report Wizard	- ×				
Step 2 of 3. Prob	lem descriptions						
Problem descriptions							
PROBLEM		STEPS TO REPRODUCE	FOUND SOLUTION				
Add problem de	scription	Problem description	already provided				
		Back Send report	Cancel				

Problem description

If you were asked by support team to generate a problem report, copy the **ticket ID** from the email communication and add it to the report by clicking the *Problem description already provided* button. This will help the support team to classify your report faster, and it will also guarantee that your report will go directly to the team member

responsible for the thread.

A	VMS Client Application Problem Report Wizard	- ×
Step 2 of 3. Problem des	criptions	
Problem descriptions		
PROBLEM	Add Support Ticket Number	PRODUCE FOUND SOLUTION
	Please specify Support Ticket number you were issued per your support request. Support Ticket Number 2015122810000291 Add Cancel	
Add problem description	Prot	olem description already provided
	Back	Send report Cancel

Insert ticket number

If you are applying a new, unreferenced problem report, click the *Add problem description* button.

A short comprehensive wizard will guide you through the main issue categories, allowing you to choose the ones that are most applicable to your situation. You will be given the chance to enter error messages/codes, if there are any, and to attach snapshot(s). Make sure you provide the maximum amount of relevant information about the issue you are experiencing; always include **snapshots** if they are available.

▲	VMS Client Application Problem Report Wizard	-	×
Step 2	Problem description ×		
Problem	Server / Disconnects/restarts / Fill necessary fields and press Next Message do connection could be made because the target machine actively refused it Error code Provide snapshot (optionally) Browse for snapshot untitled.png	LUTION	
A	Back Next Cancel	provid	ed
	Back Send report	Cance	9

Enter problem classification and relevant details

You can add **multiple** descriptions to a single report. When you are ready, press the *Send report* button; the wizard will then try to send the report automatically.

▲	VMS Client Application Problem Report Wizard —	\times	
Ste	ep 3 of 3. Gathering system information and sending data		
	Finalizing wizard		
	Submission is in progress. Wizard is trying to contact website. Please wait, this could take some time. Once the request succeeded, wizard will take you to the next page. To abort the sumbission, click Cancel.		
	Gathering system information		
	Cano	el	

Submitting report

If the server is offline, wizard will not be able to submit the report to Luxriot; instead, you will be invited to save the generated report locally. Press the *Finalise wizard without upload* button to finish.

A	VMS Client Application Problem Report Wizard —	×
Step	3 of 3. Gathering system information and sending data	
	Finalizing wizard	
	Submission is in progress. Wizard is trying to contact website. Please wait, this could take some time. Once the request succeeded, wizard will take you to the next page. To abort the sumbission, click Cancel.	
	Unable to connect! Try again	
	Finalize wizard without upload	el

Retry report submission or finish the wizard

Click *Save report as file* to save the compressed report on your computer; you are welcome to send it manually from any other computer to support@luxriot.com. Click *Exit* to close the wizard.