



BOSCH

Video Recording Manager

en

Operation Manual

Table of contents

1	Introduction	5
1.1	About this manual	5
1.2	Conventions in this document	5
1.3	Additional documentation	5
2	System overview	6
2.1	iSCSI storage pools	6
2.2	Video Recording Manager functions	6
2.3	VRM Server	6
2.4	VRM Monitor	7
2.5	Configuration Manager	7
2.6	VRMeXport Wizard	7
3	Installation	8
3.1	Installing the Video Recording Manager program	8
3.2	Verifying installation	8
3.3	Uninstalling	9
4	Licensing	10
4.1	Requesting an authorization number	10
4.2	Getting the installation code	10
4.3	Requesting the activation keys	10
4.4	Activating the license	11
5	Accessing a Video Recording Manager system	12
6	Used icons	13
7	Configuring a Video Recording Manager system	15
7.1	Adding a Video Recording Manager to the system	15
7.2	Managing iSCSI systems	15
7.2.1	Adding a storage pool	15
7.2.2	Adding an iSCSI system	15
7.2.3	Removing an iSCSI system	16
7.2.4	Adding LUNs	16
7.2.5	Formatting LUNs	16
7.2.6	Configuring the LUN type	17
7.3	Allocating detected devices	17
7.4	Allocating a device manually	17
7.5	Clearing device allocations	18
7.6	Authorizing an encoder permanently	18
7.7	Creating groups of allocated devices	19
7.8	Configuring recording preferences	19
7.9	Configuring logs	19
8	Configuring Video Streaming Gateway	20
8.1	Adding a Video Streaming Gateway device to the system	20
8.2	Adding a camera to a Video Streaming Gateway device	20
8.3	Editing cameras assigned to Video Streaming Gateway devices	20
8.4	Adding a camera to a Video Streaming Gateway device manually	21
8.5	Configuring multicast	21
8.6	Starting/stopping recordings	22
9	Configuring a failover server	23
10	Managing user groups	24
10.1	Creating a user group	24

10.2	Editing a user group	24
10.3	Renaming a user group	24
10.4	Creating a user	24
10.5	Editing a user	24
10.6	Deleting a user group or user	25
10.7	Default user groups	25
10.8	Dual authorization (security logon)	25
11	User interface	26
11.1	Unit Access tab (Video Recording Manager)	26
11.2	Date/Time tab (Video Recording Manager)	26
11.3	VRM Settings tab (Video Recording Manager)	27
11.4	User Management tab (Video Recording Manager)	27
11.5	SNMP tab (Video Recording Manager)	28
11.6	Details tab (Video Recording Manager)	28
11.7	Advanced tab (Video Recording Manager)	29
11.8	License tab (Video Recording Manager)	29
11.9	Recording encryption tab (Video Recording Manager)	30
11.10	Certificates tab (Video Recording Manager)	31
11.11	Pool tab	31
11.12	General tab	33
11.13	Basic Configuration tab	33
11.14	Load Balancing tab	35
11.15	Target Settings tab	35
11.16	Recording Management tab	35
11.17	Recording Preferences tab	36
11.18	Recording Management tab (Video Streaming Gateway)	37
11.19	Recording profiles tab	37
11.20	Assignment tab (Video Streaming Gateway)	38
11.21	Multicast tab (Video Streaming Gateway)	38
11.22	Advanced tab (Video Streaming Gateway)	39
11.23	LUN Assignment dialog box	39
11.24	Device Allocator dialog box	39
11.25	Device Editor dialog box	39
11.26	Camera Editor dialog box (Video Streaming Gateway)	40
	Index	42

1 Introduction

1.1 About this manual

This manual is intended for persons responsible for setting up and using the Configuration Manager program to configure the Video Recording Manager system.

1.2 Conventions in this document

The symbols and notations that follow are used to draw attention to special situations:



Notice!

This symbol indicates special features and provides tips and information for easier, more convenient use of the software.

Terms that you can find in the program, such as menu options, commands or text in the user interface, are written in **bold**.

1.3 Additional documentation

After the program has been installed, this document is also available as Help within the program.

More information

For more information, software downloads, and documentation, go to www.boschsecurity.com and the corresponding product page.

2 System overview

The Video Recording Manager software is used to support iSCSI-based storage systems and Bosch video-over-IP devices, for example, IP cameras and IP video encoders. This involves recording video sequences that are provided in the system by an IP camera or an encoder on iSCSI RAID arrays. Recordings managed by the Video Recording Manager system can be played back, exported and, if necessary, stored on a CD or DVD using the Bosch Video Management System or Video Client application.

Video Streaming Gateway provides the integration of 3rd party cameras and NVR-like recording, in low-bandwidth networks for example.



Notice!

For each device that you want to record (for example, in low-bandwidth networks) using Video Streaming Gateway make sure that the I-Frame distance has the maximum value 60. Otherwise recording is not possible. For non-Bosch devices, refer to the manual of the respective camera how to perform this task.

2.1 iSCSI storage pools

A storage pool can be used to have a logical mapping of the network topology to the Video Recording Manager system. For example: 2 buildings, both containing storage and devices, you want to avoid routing the network traffic from one building to the other. Storage pools can also be used to group cameras and storage systems by an important aspect of view. For example a system contains of some very important cameras and a lot of less important ones. In this case it is possible to group them into two storage pools, one with a lot of redundancy features and one with less redundancy.

You can configure the following load balancing properties for a storage pool:

- Recording preferences (**Automatic** or **Failover**)
- Secondary target usage
Secondary target is used in case of **Failover** mode if the assigned primary target fails. If this option is turned off, the recording stops on all devices assigned to this failed primary target.
In case of **Automatic** mode: if one target fails, VRM Server performs an automatic reassign of the related devices to other storages. If the VRM Server is down while a target fails, the recording is stopped on the devices currently recording on the failed target.
- Block reservation for downtime
- Sanity check period

2.2 Video Recording Manager functions

The application has the following modules:

- VRM Server
- VRM Monitor
- Configuration Manager
- VRMeXport Wizard
- Transcoder Service

2.3 VRM Server

The VRM Server manages the recordings of the devices. Further, it monitors the system's health status, for example, cameras, storage online / offline, and problems of the system.

2.4 VRM Monitor

The VRM Monitor interface is used to monitor the status of a Video Recording Manager system from any PC in the network.

The VRM Monitor interface provides information on the Video Recording Manager system and limited options for replaying the recordings.

You cannot configure the Video Recording Manager system using the VRM Monitor interface. To configure the Video Recording Manager system, use the Configuration Manager program first to get a basic configuration.



Notice!

Check the Windows Firewall settings. The default settings can possibly prevent the display of live images.

2.5 Configuration Manager

Use the Configuration Manager program to configure the Video Recording Manager system. The program can be installed on one or more Windows PCs that provide network access to the computer on which VRM Server has been started.

Using this program, you specify which IP cameras and encoders have their recordings managed using the Video Recording Manager system, as well as the iSCSI storage systems on which the recordings are stored.

The Configuration Manager program allows you to create users who may belong to various user groups with different rights. Only users who are set up here can access the system settings and the recordings managed in the Video Recording Manager system.

Access to the Video Recording Manager system is only permitted for users who log on using a valid user ID. Different types of access privilege may be granted.

2.6 VRMeXport Wizard

The VRMeXport Wizard is used to export recordings on external data carriers.

To export recordings, open the VRMeXport Wizard, and follow the instruction in the wizard.

3 Installation

System requirements

For system requirements, refer to the Video Recording Manager data sheet in the Online Product Catalog.

VRM Server

The VRM Server program is installed on a Windows platform.

Make sure a possibly installed web server does not interfere with HTTP and HTTPS ports of the Video Recording Manager system.

Note:

- We recommend that you install the VRM Server program on a dedicated platform.
- For installing the VRM Server program you need Windows administrator rights.

VRM Monitor

The VRM Monitor interface is an HTML-based web interface for monitoring the Video Recording Manager system. The VRM Monitor interface is automatically installed along with the Video Recording Manager system.

Configuration Manager

The Configuration Manager program is automatically installed along with the Video Recording Manager system. The Configuration Manager program can also be installed on other PCs with network access to the computer on which VRM Server has been started.

VRMeXport Wizard

The VRMeXport Wizard program is automatically installed along with the Video Recording Manager system.

3.1 Installing the Video Recording Manager program

To install the Video Recording Manager program:

1. Close all applications before the installation.
2. Download the VRM MasterInstaller software from the Bosch Online Product Catalog or the Download Area.
3. Extract the zip file locally.
4. Expand the MasterInstaller folder, then double-click start.exe.
5. Follow the instructions in the installation wizard.

3.2 Verifying installation

The Video Recording Manager program starts automatically after the installation and every time the computer is started. If necessary, verify whether the Video Recording Manager program has been installed correctly:

To verify the Video Recording Manager program status:

1. In Windows, open the **Component Services** window.
2. Select **Services (Local)**.
3. Search for the Bosch Video Recording Manager entry in the list of all installed services.

The following details must appear here:

- **Status: Running**
- **Startup Type: Automatic**

Note: For Video Streaming Gateway service

If you have installed Video Streaming Gateway, search for one Bosch Video Streaming Gateway entry and all Bosch VSG Worker Instance entries you have installed.

If you stop the Bosch Video Streaming Gateway service, all Bosch VSG Worker Instance services are also stopped.

If you start the Bosch Video Streaming Gateway service, all Bosch VSG Worker Instance services are also started.

Stopping a single Bosch VSG Worker Instance service has no impact on the other Bosch VSG Worker Instance services and on the Bosch Video Streaming Gateway service.

The following details must appear at each service:

- **Status: Running**
- **Startup Type: Automatic**

3.3 Uninstalling

If you do not use one of the programs on a computer, you can uninstall the program at any time.



Notice!

The Video Recording Manager license is only valid for a specific computer hardware and cannot be used on other computers. Uninstalling a licensed program and then updating the same computer does not affect the license. The license is still valid but must be imported again.

Contact your sales partner if you want to use a license on another computer.

4 Licensing

Main window > **My Devices** tab >  > **Service** > **License** tab

To license the Video Recording Manager software, do the steps that follow:

- Request an authorization number by purchasing a license.
- Get the installation code displayed in the Configuration Manager program.
- Request an activation key.
Note: For this you need the authorization number and the installation code.
- Activate the license.



Notice!

The license applies to the computer on which VRM Server is installed. If you have uninstalled VRM Server and wish to reinstall it on a different computer, you must request new activation keys.

Video Streaming Gateway does not need a license.

4.1 Requesting an authorization number

Purchase a license for each PC on which you install the software. As confirmation you will receive 1 authorization number for each license by e-mail.

The authorization number is needed to request the activation keys.

4.2 Getting the installation code

In addition to the authorization number, you need the installation code to request the activation keys.

To get the installation code:

1. Open the Configuration Manager program.
2. Click the **My Devices** tab.
3. Click the **Service** tab, and then click the **Licenses** tab. The **Licenses** pane appears.
4. Note or copy the installation code displayed in the **Installation code** box.

4.3 Requesting the activation keys

To activate the software you need the activation keys.

To request the activation keys:

1. From any PC, go to: <https://activation.boschsecurity.com/>
The Bosch Security Systems Software License Manager Welcome page appears.
2. If you already have an account, enter your e-mail address and password.
The License Activation page appears.

Note:

If you have no account, create a new account by clicking the respective link.

or

Click the link where you can continue without logging in.

3. Enter the authorization number, then click the check mark to the right.
4. Enter the installation code along with brief information about the installation location.
You may also add a comment. This information will assist you later in assigning the activation key.
5. Click Submit .
2 activation keys are created. Use these keys to activate the software.
6. You can also have the keys e-mailed to you. To do this, click the **Email Activation Key** link.

4.4 Activating the license

You need 2 activation keys to activate the license.

To activate the license:

1. Open the Configuration Manager program.
2. In the **My Devices** list, click the respective Video Recording Manager device.
3. Click the **Service** tab, and then click the **Licenses** tab. The **Licenses** pane appears.
4. In the **Activation key** box, enter the first activation key.
5. Click the **Save** icon.
6. In the **Activation key** box, enter the second activation key.
7. Click the **Save** icon.

The software is now licensed.

5 Accessing a Video Recording Manager system

The Configuration Manager program is part of the Video Recording Manager installation and is used to configure the Video Recording Manager system.



Notice!

After installing the Video Recording Manager program successfully, you will find the Configuration Manager icon on your desktop:

To access the Video Recording Manager configuration:

1. Open the Configuration Manager program.
2. Click the **My Devices** tab, then select the respective Video Recording Manager icon.
3. Configure the Video Recording Manager components according to your needs.

Refer to

- *Configuring a Video Recording Manager system, page 15*

6 Used icons

The devices in the **Network Scan** or **My Devices** tabs are represented by the following icons:

Device icons

	Camera
	Device (for example, Encoder/Decoder/Streaming Gateway)
	Hardware recorder (for example, DIVAR)
	Storage system (for example, DIVAR)
	DomeCamera
	iSCSI target
	Video Recording Manager server
	Video Recording Manager failover server
	Video Recording Manager server for second recording stream
	Video Recording Manager failover server for second recording stream
	Unknown

Device icons

	Camera
	Device (for example, Encoder/Decoder/Streaming Gateway)
	Hardware recorder (for example, DIVAR)
	Storage system (for example, DIVAR)
	DomeCamera
	iSCSI target
	Video Recording Manager server
	Video Recording Manager failover server
	Video Recording Manager server for second recording stream
	Video Recording Manager failover server for second recording stream
	Unknown

Device status icons

The status of the icons is shown exemplarily by using a camera. Other devices are displayed in the same manner

Icon	Color	Status	Online	Authentication	Secure connection	Trusted certificates
	Camera grey	OK	No	Unknown	Unknown	Unknown
	Camera grey, exclamation mark yellow	Warning *	No	Unknown	Unknown	Unknown
	Camera grey, exclamation mark red	Error *	No	Unknown	Unknown	Unknown
	Camera grey, lock red	No access	No	No *	Unknown	Unknown
	Camera blue	OK	Yes	Yes	No	Not relevant
	Camera blue, exclamation mark yellow	Warning	Yes	Any	No	Not relevant
	Camera blue, exclamation mark red	Error	Yes	Any	No	Not relevant
	Camera blue, lock red	No access	Yes	No	No	Not relevant
	Camera yellow	OK	Yes	Yes	Yes	No
	Camera yellow, exclamation mark yellow	Warning	Yes	Any	Yes	No
	Camera yellow, exclamation mark red	Error	Yes	Any	Yes	No
	Camera yellow, lock red	No access	Yes	No	Yes	No
	Camera green	OK	Yes	Yes	Yes	Yes
	Camera green, exclamation mark yellow	Warning	Yes	Any	Yes	Yes
	Camera Green, exclamation mark red	Error	Yes	Any	Yes	Yes
	Camera green, lock red	No access	Yes	No	Yes	Yes

* Device was online

7 Configuring a Video Recording Manager system

7.1 Adding a Video Recording Manager to the system

Main window > **Network Scan** tab

You can add a Video Recording Manager to the system to assign storage devices and encoders to this Video Recording Manager.

To add a Video Recording Manager:

1. In the tree structure to the left, click the desired Video Recording Manager icon.
2. Click the **General** tab, then click the **Unit Access** tab.
3. In the **Add To System** group, click **Add to system**.

The Video Recording Manager is added to the system and appears in the **My Devices** tree structure.

You can add a secondary Video Recording Manager if already two Video Recording Manager instances are running on a computer and/or no broadcast scan is possible on your system.

To add a secondary Video Recording Manager without scan:

1. Start the Configuration Manager program.
2. Click the **My Devices** tab, right-click the desired group, then click **New Device...**
The **Device Editor** dialog box appears.
3. In the **URL** field, enter the IP address and port number of the desired secondary Video Recording Manager instance.

Example: `172.22.5.6:1754`

4. In the **Group** and **Variant** list, select the desired entry.
5. Click **OK**.

Refer to

- *Device Editor dialog box, page 39*

7.2 Managing iSCSI systems

To configure a working iSCSI storage, you must add a storage pool, an iSCSI system and LUNs.

7.2.1 Adding a storage pool

Main window > **My Devices** tab > right-click  > click **New Pool...** > **Pool Editor** dialog box

To add a pool:

- ▶ In the **Pool Editor** dialog box, enter a name for the storage pool.

A **Pool** folder is added.

To configure a pool:

1. Click  **Pool n**.
2. On the **Pool** page, do the required changes.
For example, in the **Recording preferences mode** box, select **Automatic** or **Failover**.

Refer to

- *Pool tab, page 31*

7.2.2 Adding an iSCSI system

Main window > **My Devices** tab > expand  > expand  **Pool n** > right-click  **Storage Systems** > **Add iSCSI System...** > **Add iSCSI System** dialog box

To add an iSCSI system:

1. In the **Add iSCSI System** dialog box, enter the IP address of the iSCSI storage system.

2. In the **Type** list, select the devices.
Note: Configure the devices in the Configuration Manager program or directly using their management software tool if available.
3. In the **SNMP IP address** box, enter the IP address.
4. In the **Configuration user** box, enter the user.
5. In the **Configuration password** box, enter the iSCSI storage system configuration password.
The Video Recording Manager system tries to establish a connection with the device.
Note: The device is added to the system and displayed in the tree structure.

7.2.3 Removing an iSCSI system

Main window **My Devices** tab > expand  > expand  **Pool n** > expand  **Storage Systems**

To remove an iSCSI system:

- ▶ Right-click the desired iSCSI system , then click **Delete**.

7.2.4 Adding LUNs

Main window > **My Devices** tab > expand  > expand  **Pool n** > expand  **Storage Systems** > click 

You can add individual LUNs to the system and configure them.

The type of a LUN (standard/read-only) is stored on the LUN itself. So, if configuration is lost, the LUN can be added without risk of data loss. The correct type of the LUN is read out and is set correctly.

To add LUNs:

1. Right-click an iSCSI system , and then click **LUN Assignment...** to add new LUNs. The **LUN Assignment** dialog box appears.
The left pane displays the LUNs that are available for this target and have not yet been added to the system. The right pane displays the LUNs that have already been added to the system.
2. Drag a LUN from the left to the right pane to add it.
3. Click **OK**.
The LUNs are added to the Video Recording Manager system. The **LUN Assignment** dialog box is closed.

To remove LUNs:

- ▶ Open the **LUN Assignment** dialog box and drag the LUNs from the right to the left pane.

Refer to

- *Target Settings tab, page 35*

7.2.5 Formatting LUNs

Main window > **My Devices** tab > expand  > expand  **Pool n** > expand  **Storage Systems** > expand  > click  > click **Target Settings** tab

You can format each added LUN. Formatting deletes all data on this LUN.

To format LUNs:

1. Click **LUN Assignment...**
2. In the **Format** column, select the corresponding check box for each LUN that you want to format.
3. Click **Set** to start formatting.

**Notice!**

To record data you must format the LUNs. On unformatted LUNs it is not possible to record data.

Refer to

- *Adding LUNs, page 16*
- *Target Settings tab, page 35*

7.2.6**Configuring the LUN type**

Main window > **My Devices** tab > expand > expand **Pool n** > expand **Storage Systems** > expand > click **Target n** > click **Target Settings** tab

You can configure the type of each added LUN. Some types require formatting of the LUN.

To configure the LUN type:

1. In the **Type** list, select the corresponding item (Standard/Read only) for each LUN that you want to configure.

Note: Read only LUNs are LUNs that keep their current recordings but cannot be used for further recordings.

2. Click **Set** to start configuration.

Refer to

- *Target Settings tab, page 35*

7.3**Allocating detected devices**

Main window > **Tools** menu > **Device Allocator...** command > **Device Allocator** dialog box

You can allocate devices to a Video Recording Manager pool. On devices allocated during recording the configuration changes are not performed as long as recording is active. Perform the configuration changes after recording has stopped.

**Notice!**

When adding an encoder to a Video Recording Manager system, the recording of this device stops automatically.

To allocate detected devices:

1. Drag a device (for example, an encoder) from the left pane to the Video Recording Manager item on the right pane.
The device is now a child item of the Video Recording Manager item.
2. Click **OK**.

Note: Required configuration changes are done automatically.

Refer to

- *Date/Time tab (Video Recording Manager), page 26*
- *Pool tab, page 31*

7.4**Allocating a device manually**

Main window > **Tools** menu > **Device Allocator...** command > **Device Allocator** dialog box

You can allocate devices to the Video Recording Manager system that were not detected during the network scan, for example, if they belong to a different subnet or have not yet been turned on.

To allocate a device manually:

1. In the **Device Allocator** dialog box, right-click the **Allocated devices** area, a **Devices** or **Group** folder, and then click **New Device...**
The **Device Editor** dialog box appears.
2. In the **URL:** box, enter the IP address of the device. If required, add a valid port number to the IP address.
Example: `172.22.5.6:1754`
3. In the **Group** or **Variant** list, select the device group and variant.
4. Select the **Managed by VRM** check box for recordings that should be managed by the Video Recording Manager system.
5. Click **OK**.
The device appears in the **Allocated devices** area and is allocated to the Video Recording Manager system.



Notice!

You can only allocate supported devices. In the tree structure, these devices are marked with a red cross until they are available in the network.

Refer to

- *Date/Time tab (Video Recording Manager), page 26*
- *Device Editor dialog box, page 39*

7.5

Clearing device allocations

Main window > **Tools** menu > **Device Allocator...** command > **Device Allocator** dialog box

You can remove devices from the Video Recording Manager system at any time by clearing the allocation. The devices will then no longer be listed in the tree structure.



Notice!

If you clear the allocation for a device or a group, all associated stored video data is still available but not accessible. The video data is not deleted immediately, in case you have deleted a camera accidentally. If you add the same cameras again, the video data of the original camera is assigned again and can be played back if the retention time is not expired. If you need free storage capacity immediately, open the Video Recording Manager **Monitoring** webpage, then delete the video data on the **Legacy recordings** page.

To clear device allocations:

1. Drag a device from the right to the left pane.
2. Click **OK**.
The storage media type is automatically set to **Off** — no more recordings are made for this device until it is manually reconfigured for this.



Notice!

Groups can also be deleted in the same way. If you delete a group, you also clear the allocation of all devices that you have allocated to that group.

7.6

Authorizing an encoder permanently

Main window > **My Devices** tab > expand  > expand  **Pool n** > expand  **Devices** > click  > click **General** tab > click **Unit Access** tab

You can enter the access data for an encoder so that you do not have to repeat authorizing after each restart of the Configuration Manager program. Note that it is mandatory to enter “service” for the user and the corresponding password.

As soon as an encoder is added to the system, all necessary changes for management by the Video Recording Manager system are usually carried out automatically.

To authorize permanently:

1. In the **Device access** pane, enter the user name “service” (mandatory) and the corresponding password.
2. Click the **Save** icon.

7.7 Creating groups of allocated devices

Main window > **Tools** menu > **Device Allocator...** command > **Device Allocator** dialog box

The **Device Allocator** dialog box allows you to group the devices in the list.

To create groups:

1. In the **Device Allocator** dialog box, right-click the **Allocated devices** area, and then click **New Group...**
The **Add New Group** dialog box appears.
2. Enter a name for the new group.
3. Click **OK**.
The group appears in the list.
4. Drag a device from the list to the group.
The device is added to the group.
5. Click **OK**.

To create a sub-group:

- ▶ Drag a group to the name of another group.

To rename a group/sub-group:

1. Right-click the group/sub-group, then click **Rename** .
2. Enter the new group name.

7.8 Configuring recording preferences

Main window > **My Devices** tab > expand  > click  **Pool n**

To configure the Recording preferences mode:

1. In the **Recording preferences mode** list, click **Automatic** or **Failover**.
2. Click the **Save** icon.

7.9 Configuring logs

Main window > click  > click **Service** tab > click **Advanced** tab

This page allows you to select different logging criteria.



Notice!

Extensive logging requires significant CPU power and hard disk capacity. We recommend that you do not use extensive logging in continuous operation.

To configure logs:

1. Select the logging options that you want to be logged.
2. Click the **Save** icon.

Refer to

- *Advanced tab (Video Recording Manager), page 29*

8 Configuring Video Streaming Gateway

This chapter contains descriptions of tasks that you can do to configure a Video Streaming Gateway software device.

Depending on your system, not all tasks might be required.



Notice!

If you assign a camera to a Video Streaming Gateway device repeatedly or assign this camera to multiple Video Streaming Gateway devices, the camera can be overloaded. To avoid overloading, configure multicast.

8.1 Adding a Video Streaming Gateway device to the system

Main window > click **Devices** tab

You can add a Video Streaming Gateway device to allow assigning and configuring cameras to this device.

To add Video Streaming Gateway devices:

1. On the **Tools** menu, click **Device Allocator...**
The **Device Allocator** dialog box appears.
2. In the **Installed devices** list, select the desired Video Streaming Gateway devices and drag them to the desired Video Recording Manager in the **Allocated devices** list.
The Video Streaming Gateway devices are automatically added to the **Devices** folder of the Video Recording Manager.
The video of the cameras that are assigned to this Video Streaming Gateway device.

8.2 Adding a camera to a Video Streaming Gateway device

Main window > **My Devices** tab > expand  > expand  **Pool n** > expand  **Devices** > click  Video Streaming Gateway device > click **Assignment** tab > click **Video** tab

To add a camera to a Video Streaming Gateway: device:

1. In the **Network scan (remote)** list, select the desired cameras, then click  to add them to the **VSG cameras** list.
The camera appears in the **VSG cameras** list.
Note: Select cameras of the same type, for example only Bosch cameras. Otherwise the  button is not available.
2. Click the **Save** icon.

Refer to

- *Assignment tab (Video Streaming Gateway), page 38*
- *Camera Editor dialog box (Video Streaming Gateway), page 40*

8.3 Editing cameras assigned to Video Streaming Gateway devices

Main window > **My Devices** tab > expand  > expand  **Pool n** > expand  **Devices** > click  Video Streaming Gateway device > click **Assignment** tab > click **Video** tab

You can edit the camera entries if necessary, for example, you can change the camera name to a Video Streaming Gateway camera name.

To edit a Video Streaming Gateway camera:

1. In the **VSG cameras** list, select a camera.
2. Click **Edit...**
The **Camera Editor** dialog box appears.

3. Make your changes in the respective boxes, for example **User name** and **VSG Camera Name**.
4. Click **OK**.
5. Click the **Save** icon.

8.4 Adding a camera to a Video Streaming Gateway device manually

Main window > **My Devices** tab > expand  > expand  **Pool n** > expand  **Devices** > click  Video Streaming Gateway device > click **Assignment** tab > click **Video** tab

You can add Bosch cameras, ONVIF cameras and also 3rd party cameras that support RTSP (Real Time Streaming Protocol) or JPEG. You need the URL of each camera that you want to add manually.

To add a camera to a Video Streaming Gateway device manually:

1. Below the **VSG cameras** list, click **Add...**
The **Camera Editor** dialog box appears.
2. In the **URL** box, enter the camera's URL.
3. Enter the user name and password.
4. Click **Connect**.
Note: If the connection to the encoder is established successfully, the configuration settings in the **Protocol settings** group are active.
If you do not want to wait until the connection is established, click **Skip**.
5. If required, change the settings in the **Protocol settings** group.
6. If required, enter a separate name for the camera in the **VSG Camera Name** column.
7. Click **OK**.
8. Click the **Save** icon.

8.5 Configuring multicast

Main window > **My Devices** tab > expand  > expand  **Pool n** > expand  **Devices** > click  Video Streaming Gateway device > click **Network** tab

For each camera assigned to a Video Streaming Gateway device you can configure a multicast address and port.



Notice!

If you assign a camera to a Video Streaming Gateway device repeatedly or assign this camera to multiple Video Streaming Gateway devices, the camera can be overloaded. To avoid overloading, configure multicast.

To configure multicast:

1. In the **Enable** column, select the desired check box to make multicast available.
2. Type a valid multicast address and a port number.
3. If required, in the **Streaming** column, select the check box to configure continuous multicast streaming.
4. Click the **Save** icon.

Refer to

- *Multicast tab (Video Streaming Gateway), page 38*

8.6 Starting/stopping recordings

Main window > **My Devices** tab > expand  > expand  **Poo n** > expand  **Devices** > click a camera or  Video Streaming Gateway device > click **Recording** tab > click **Recording Scheduler** tab

To display detailed information about the active recordings:

- ▶ Point to the  icon.

To start the recordings:

- ▶ Click the **Recording Scheduler** tab, then click **Start Recording**.

To stop the recordings:

- ▶ Click the **Recording Scheduler** tab, then click **Stop Recording**.

9 Configuring a failover server

Main window > **My Devices** tab > click  > click **General** tab > click **VRM Settings** tab
The Video Recording Manager program is running on the master and on the failover server.
Both master and failover server must have the same version of the Video Recording Manager program.

To configure a master and a failover server:

1. On the master server, create a failover group and a failover user with corresponding password. The name of the group and the user must be backup. The group should not have any rights.
2. Select the failover server and click the **VRM Settings** tab.
3. Select the **Use as failover server** check box.
4. In the **Master server IP address** box, type the IP address of the master server.
OR
Click the arrow next to the box to display a list of available servers. Then *you* can select an entry.
5. In the **Password** box, type the password for the failover user.
6. Click the **Save** icon,
In normal operation, the failover server is passive.



Notice!

To check the connection between master and failover server, connect to the master server using VRM Monitor and check whether the **Failover server connected to master server.** entry is listed in the log.

Refer to

- *VRM Settings tab (Video Recording Manager), page 27*

10 Managing user groups

This page allows you to create users and groups.

10.1 Creating a user group

Main window > **My Devices** tab > click  > click **General** tab > click **User Management** tab

To create a user group:

1. Click the **Groups** list.
2. Click **Add...**
The **Add Group** dialog box appears.
3. Enter a name for the group.
4. Click **OK**.
5. Enter a password.
6. Confirm the password.
7. Click the **VRM Rights** tab and assign the desired rights to the group.

10.2 Editing a user group

Main window > **My Devices** tab > click  > click **General** tab > click **User Management** tab

To edit an existing user group:

1. In the **Groups** list, select the desired user group.
2. Click the **VRM Rights** tab and assign the desired rights to the group.

10.3 Renaming a user group

Main window > **My Devices** tab > click  > click **General** tab > click **User Management** tab

To rename an existing user group:

1. In the **Groups** list, select the desired user group.
2. Click **Edit...**
The **Edit Group** dialog box is displayed.
3. Change the name of the group.
4. Click **OK**.

10.4 Creating a user

Main window > **My Devices** tab > click  > click **General** tab > click **User Management** tab

To create a user:

1. Click the **Users** list.
2. Click **Add...**
The **User** dialog box is displayed.
3. Enter a name.
4. Enter a password for the user and confirm the password.
5. Assign a group to the new user.
6. Click **OK**.

10.5 Editing a user

Main window > **My Devices** tab > click  > click **General** tab > click **User Management** tab

To edit an existing user:

1. Select the desired user in the **Users** list.
The **User** dialog box is displayed.
2. Change the password if necessary, and confirm it.
3. Change the group assignment if necessary.

4. Click **OK**.

10.6 Deleting a user group or user

Main window > **My Devices** tab > click  > click **General** tab > click **User Management** tab

To delete user groups or users:

1. Select an entry in the list.
2. Click **Remove**.
3. In the displayed dialog box, click **OK**.



Notice!

Default user groups cannot be deleted.

10.7 Default user groups

Main window > **My Devices** tab > click  > click **General** tab > click **User Management** tab

The rights of the admin group are unlimited and cannot be changed or deleted.

The admin group must have at least one member to make sure that access to the system is guaranteed.

Only members of the admin group have write access to all device settings in Configuration Manager. This ensures that only these users create new users or set rights.

The observer group is used for the dual authorization.

10.8 Dual authorization (security logon)

Main window > **My Devices** tab > click  > click **General** tab > click **User Management** tab

The Video Recording Manager program offers the option to create users who can only log on together according to the principle of dual authorization.

To configure dual authorization:

1. Create a user group for which the **Dual authorization** option is activated.
2. Create a user with password in this user group.
3. Create a user with password in the observer user group.
No rights are set in the observer user group. Effectively, the observer takes on the rights of the main user logging on with him.

To sign in with dual authorization enabled:

1. The main user enters his user name followed by a colon.
2. The main user then enters his password followed by a colon.
3. The observer enters his user name directly after the colon following the main user's user name (for example: username_user:username_observer).
4. The observer enters his password directly after the colon following the main user's password (for example: password_user:password_observer).
5. Click **OK**.

Refer to

- *User Management tab (Video Recording Manager), page 27*

11 User interface

This chapter contains information on all Video Recording Manager related pages available in the Configuration Manager program.



Notice!

Depending on the devices, there can be a difference in the settings displayed on the pages. For detailed information about the different device configuration options, refer to the relevant device documentation and the Help in the device web browser view.



Notice!

Some settings can only be changed if the device is not recording. If necessary, stop any recordings before making changes.

11.1 Unit Access tab (Video Recording Manager)

Main window > **My Devices** tab > click  > click **General** tab > click **Unit Access** tab
This page allows you to enter unit access information.

Info group

- **Device type**
Displays the device type.
- **VRM Server name**
Enter the server name.
- **Server initiator name**
Displays the server initiator name.

Failover VRM Server information group

- **IP address failover server**
Displays the IP address of the failover server.

Device access group

- **IP address**
Enter the IP address.
- **Protocol**
Select the protocol from the list.
- **Port**
Enter the port number.
- **User name**
Enter your user name.
- **Password**
Enter your password.

Version information group

- **Hardware version**
Displays the hardware version.
- **Firmware version Firmware version**
Displays the firmware version.

11.2 Date/Time tab (Video Recording Manager)

Main window > **My Devices** tab > click  > click **General** tab > click **Date/Time** tab
This page allows you to enter or change the date, time and time zone and to synchronize the date and time according to your computer or a time server.

Date:

Enter the date.

Time:

Enter the time.

Synchr. PC

Synchronizes system date and time according to your computer.

Time zone

Select the time zone.

Time server IP address Time server IP address

Enter the IP address of a time server to synchronize system date and time by the time server.

11.3

VRM Settings tab (Video Recording Manager)

Main window > **My Devices** tab > click  > click **General** tab > click **VRM Settings** tab

Access group– **System-wide CHAP password**

Enter the password that you have configured in the iSCSI storage device. The CHAP password is valid for the Video Recording Manager and is sent to all devices automatically. Replay clients do not need additional configuration. You must configure the iSCSI systems manually with the CHAP password. If you are using a CHAP password, all storage systems have to be configured to use the CHAP password. Only one system wide CHAP password is supported by the Video Recording Manager system.

Note: Due to security reasons, we highly recommend that you use a CHAP password.

Failover VRM Server group– **Use as failover server**

Select the **Use as failover server** check box to use the VRM Server as failover server.

Note: You can set up a computer as master server, provided that VRM Server is started on it, and set up another computer as a failover server. The configuration settings of the master server are then synchronized on the failover server. If the master server fails, the failover server automatically takes over the management of the Video Recording Manager system.

– **Master server IP address**

Enter the IP address of the master server.

– **Password**

Enter the password of the backup user configured in the master server.

Global settings group– **Check Now**

Click to reassign the devices of all storage pools to their iSCSI storage systems. This is only being performed on storage pools with **Automatic** recording mode.

Refer to

- *Configuring a failover server, page 23*
- *Recording Preferences tab, page 36*

11.4

User Management tab (Video Recording Manager)

Main window > **My Devices** tab > click  > click **General** tab > click **User Management** tab

Allows you to configure user groups and users and their rights used for configuring the VRM Server.

Groups list

Displays all available groups.

Users list

Displays all available users.

Add...

Click to display the **Add Group** or **User** dialog box.

Edit...

Click to display the **Edit Group** or **User** dialog box.

Remove

Click to remove the selected user group or user.

Password

Type a password for the selected user.

Confirm

Confirm the password.

VRM Rights tab

Click the respective checkboxes to configure rights for a selected user group and user.

Refer to

- *Creating a user group, page 24*
- *Editing a user group, page 24*
- *Renaming a user group, page 24*
- *Creating a user, page 24*
- *Editing a user, page 24*
- *Deleting a user group or user, page 25*
- *Default user groups, page 25*
- *Dual authorization (security logon), page 25*

11.5

SNMP tab (Video Recording Manager)

Main window > **My Devices** tab > click  > click **Network** tab > click **SNMP** tab
Allows you to send SNMP traps to 2 destination addresses in case of certain events.

1 SNMP host address

In case of certain events, first destination address of the SNMP traps sent by the Video Recording Manager.

2 SNMP host address

In case of certain events, second destination address of the SNMP traps sent by the Video Recording Manager.

Check now

Sends a test SNMP trap to check whether transmission is possible.

11.6

Details tab (Video Recording Manager)

Main window > **My Devices** tab > click  > click **Network** tab > click **Details** tab

HTTP browser port

Enter the port number to allow establishing an HTTP connections.

HTTPS browser port

Enter the port number to allow establishing an HTTPS connections.

Min. TLS version

Select **Auto** or a version.

This is a global setting. The camera or encoder with the earliest firmware version defines the supported TLS version. For FW 6.20 or later, select TLS 1.2. For firmware earlier than FW 6.20, select TLS 1.0.

Auto means: The latest version supported by the firmware is used automatically. We recommend that you use **Auto**.

Actual Min. TLS version

Displays the currently used version.

HSTS

Select **On** in case of SSL certification to provide secure web access.

MAC address

Displays the MAC address of the VRM Server.

11.7**Advanced tab (Video Recording Manager)**

Main window > **My Devices** tab > click  > **Service** tab > click **Advanced** tab

This page allows you to select different logging criteria.

**Notice!**

Extensive logging requires significant CPU power and hard disk capacity. We recommend that you do not use extensive logging in continuous operation.

RCP+ logging / Debug logging / Replay logging / VDP logging / Performance logging

Activate the different logs for VRM Server and Configuration Manager.

The log files for VRM Server are stored on the computer on which VRM Server has been started, and can be viewed or downloaded with VRM Monitor.

The log files for Configuration Manager are stored locally in the following directory:
%USERPROFILE%\My Documents\Bosch\Video Recording Manager\Log

Retention time (days)

Specify the retention time for log files in days.

Complete memory dump file

Only select this check box if necessary, for example, if the Technical Customer Service team requests a complete summary of the main memory.

Telnet support

Select this check box if access with the Telnet protocol is to be supported. Only select if necessary.

**Notice!**

Extensive logging requires considerable CPU power and HDD capacity.
Do not use extensive logging in continuous operation.

Refer to

– *Configuring logs, page 19*

11.8**License tab (Video Recording Manager)**

Main window > **My Devices** tab > click  > click **Service** tab > click **License** tab

Provides information on your license.

License type

Displays the type of your license, for example, **Full version**.

Remaining days

Displays how long the license is valid.

Licensed inputs

Displays how many inputs are licensed.

Used inputs

Displays how many inputs are currently used.

Installation code

Displays the installation code. The installation code is needed to get the activation key to license the Video Recording Manager software.

Activation key

Enter the activation key.

Refer to

- *Licensing, page 10*

11.9**Recording encryption tab (Video Recording Manager)**

Main window > **My Devices** tab > click  > click **Service** tab > click **Recording encryption** tab

To enable recording, a redundancy key is needed.

Global configuration group

- **Total**
Number of all video inputs attached to the Video Recording Manager system.
- **Support encryption**
Number of video inputs that support recording encryption.
- **Configured**
Number of video inputs configured for encrypted recording.

Video input / IP address / Status

List with the total number of video inputs, IP addresses and status.

Note: The status is important because it says what happened to the camera. Therefore the status allows you to discover issues with encrypted recording configuration.

- **Not configured**
Recording encryption is not configured for this camera.
- **Device is too old and does not support encryption.**
The device is too old to support encryption.
- **Current firmware version does not support encryption.**
The firmware of the device is too old, but an update might be possible.
- **Offline**
The device is offline or for other reasons a check of the status is not possible.
- **Idle**
The recording is not active.
- **Recording error**
An error occurred during recording itself. The encryption status is unknown.
- **Encrypting**
The recording is active and the recording is an encrypted recording.
- **Error: Not encrypted**
The recording is active but the recording is not encrypted.

Certificates group

Lists certificates used for recording encryption.

- **Issued to**
Common name of the certificate used for recording encryption.
- **Issued by**
Common name of the certificate issuer. If **Issued to** and **Issued by** are identical, the certificate is self-signed.

Redundancy key group

The redundancy key allows you to decrypt recordings if you have lost the regular key. The redundancy key decrypts recordings after its generation time. Recordings before the generation time of the redundancy key cannot be decrypted by the redundancy key.

Redundancy key

Click to create a redundancy key.

11.10**Certificates tab (Video Recording Manager)**

Main window > **My Devices** tab > click  > click **Service** tab > click **Certificates** tab
This page shows a list of available certificates.

Certificates list

Shows certificates installed on the target device. In the **Usage** column you can define the usage of the certificate, for example:

- **SERVER AUTH**
The certificate with its private key are used to authenticate the server identity to the clients. The certificate is used as web server certificate when connection is established.
- **CLIENT AUTH**
The certificate and its private key are used for client authentication purposes when establishing a connection to third-party devices.
- **rec1/rec2**
The certificate and private key are used for encrypting recordings.
- **Trust**
Trusted root CA certificate.
- **Intermediate**
Trusted intermediate CA certificate.
- **Client trust**
Issuers of certificates to be trusted for certificate based client authentication.

Upload certificate

Allows you to upload certificates.

Generate signing request

The target system generates an own private key and CSR with specified parameters. This entry will appear in the certificate list and can be signed by external Certificate Authority or MicroCA.

Generate self-signed certificate

The target system generates an own private key and a corresponding self-signed certificate with specified parameters.

Certificate Wizard

Opens the **Create certificates** wizard to create a new certificate.

11.11**Pool tab**

Main window > **My Devices** tab > expand  > click  **Pool n**

Allows you to configure recording settings valid for all devices that are collected in this storage pool.

Name

Enter a name for the storage pool.

Recording preferences mode**– Failover**

Recordings are saved only to primary target. If it is not possible to save to this target, the recording will be saved to the target entered under secondary target.

A failure situation is reached if the primary target does not provide storage blocks, for example, due to system down, network error, or no capacity left.

You can leave the secondary target list empty. In this case no failover is possible but the number of required iSCSI sessions is reduced and no disk space on secondary target is allocated. This reduces system overhead and extends the system retention time.

Note: For each camera and encoder you must then configure the primary and secondary target.

– Automatic

Load balancing is configured automatically. The **Automatic** mode tries automatically to optimize the retention time of the available iSCSI targets. To allocate the blocks of the second iSCSI target, select **On** in the **Secondary target usage** list.

Sanity check period (days)

Enter the required time period. After this time period the Video Recording Manager program makes an analyze whether the storage distribution in the **Automatic** mode is still optimal. And if not, the Video Recording Manager program makes changes.

Secondary target usage

Allows you to select whether blocks are distributed from a second target.

Select **On** or **Off** to turn on or off the use of a secondary target.

- **On:** Select **On** to use a secondary target to reduce the recording gap in case of primary target failure. If the primary target is available, the blocks on the secondary target are not used but the storage is allocated. This redundancy reduces the retention time of the system.
- **Off:** Select **Off** if you want to use no secondary target. In case of primary target failure the Video Recording Manager program needs more time to reorganize. This means that the recording gap is larger.

Block reservation for downtime

Enter the number of days that the assigned encoders will be recorded although the VRM Server is down.

For example, if you enter 4, the encoders will be recorded during approximately 4 days of VRM Server downtime.

If your system has encoders with low bit rate, you can significantly reduce the pre-allocated disk space. This ensures a proper distribution of storage capacity and extends the retention time.

LUN support

Enter the LUN size.

Note: Devices with firmware version earlier than version 6.30 cannot handle LUNs with more than 2 TB.

Check Now

Click to reassign the devices of this storage pool to their iSCSI storage systems. This is only being performed on storage pools with **Automatic** recording mode.

Refer to

- *Adding a storage pool, page 15*
- *Recording Preferences tab, page 36*

11.12**General tab**

Main window > **My Devices** tab > expand  > expand  **Pool n** > expand  **Storage Systems** > click desired iSCSI device  > click **General** tab

SNMP group– **SNMP IP address**

Enter the relevant SNMP IP address if the RAID system has its own port for SNMP requests.

Device access group– **Password**

Enter the password that allows you to configure the iSCSI storage system.

Identification group– **Unit name**

Displays the name of the unit.

– **Serial number**

Displays the serial number of the unit.

Password group– **Configuration password**

Enter the password that enables the Video Recording Manager system to access the iSCSI storage system for configuration purposes.

– **CHAP password** (only for DSA E-Series)

Enter the CHAP password.

Version information group (only for DSA E-Series)– **Firmware Version**

Displays the firmware version.

iSCSI System Management group (only for DSA E-Series)– **Management address**

Displays the iSCSI system management address. The IP address is used for configuring the drive and finding the drive with the network scan.

11.13**Basic Configuration tab**

Main window > **My Devices** tab > expand  > expand  **Pool n** > expand  **Storage Systems** > click desired iSCSI device  > click **Basic Configuration** tab

This page only appears if the device is an iSCSI storage system supported by Bosch, for example, DSA E-Series or DIVAR IP devices.

Depending on the devices, there can be a difference in the settings displayed on the pages.

For DIVAR IP devices**Physical capacity [GB]**

Information on the total capacity of the storage system.

Number of LUNs

You can change the number of LUNs.

**Notice!**

If you change the number of LUNs, the entire iSCSI system is reorganized and any sequences saved on the system are lost.

Therefore, before making changes, check the recordings and back up any important sequences.

Initialization status (%)

Additional information is displayed during initialization. When initialization is complete (100%), you will also have the opportunity to delete all LUNs again.

Set

Makes a basic setup with all adjusted options.

Additional information

Displays additional information, for example information that the storage system is not configured correctly and that therefore no setup is possible.

For DSA E-Series devices**Physical capacity [GB]**

Information on the total capacity of the storage system.

Number of LUNs

Displays the number of currently created LUNs.

Capacity for new LUNs [GB]

As 256 is the maximum number of LUNs of a storage array, the LUN size should not be set to a too small value. Otherwise no more LUNs can be created in the future, if an additional shelf is installed.

Target spare disks

Number of spare disks the user wants the system to have.

Actual spare disks

Number of spare disks which are currently in the system. This number can differ from the number above, for example, if the storage system is reconfigured manually or if disks are broken.

RAID 5

Select this option if you want to use the RAID type RAID 5.

RAID 6 (reliability focused)

Select this option if you do not want to use the specified RAID type RAID 5, but would prefer to use the more reliable RAID type RAID 6.

DDP

Dynamic Disk Pool is a RAID type developed by NetApp. The advantage of DDP is that a rebuild after replacing a disk is very fast but there is less storage available for recordings.

Initialize

Makes a basic setup with all adjusted options, for example, LUN size, RAID type, and spare disks.

Clear

Clears the configuration, for example, deleting all LUNs.

Defaults

Sets the storage system back to its factory default. Additionally the storage system name and all iSCSI IP addresses are deleted. Only management addresses and the configuration password are retained.

11.14 Load Balancing tab

Main window > **My Devices** tab > expand  > expand  **Pool n** > expand  **Storage Systems** > click desired iSCSI device  > click **Load Balancing** tab

Prerequisite: Configure the **Automatic** recording mode.

Hard limit

Max. bit rate [Mbps] / Max. number of iSCSI sessions

If necessary, enter the upper limits for the permitted bit rate and the number of simultaneous iSCSI connections for each iSCSI device. If these limits are exceeded, data is no longer being written to the iSCSI device and is lost.

The Video Recording Manager system will manage that these limits are not exceeded to prevent the iSCSI drives are in overload and recording might become unstable or corrupt.

Note:

For supported Bosch devices (for example, DSA E-Series), use the default values.

For other devices, refer to the documentation delivered with this device. We recommend that you start testing with small values.

11.15 Target Settings tab

Main window > **My Devices** tab > expand  > expand  **Pool n** > expand  **Storage Systems** > expand  > click  > click **Target Settings** tab

LUN Assignment...

Displays the **LUN Assignment...** dialog box.

Format

Select the respective check boxes for each LUN that you want to reformat. You can also use the **Select All** and **Deselect All** buttons.

Type

Define the LUN type.

- **Standard**
Standard Video Recording Manager LUN for saving and replaying recordings.
 - **Read only**
Recordings can be replayed from the LUN, but no new data will be written to the LUN.
- If (**format**) is displayed after the selected type, the LUN is automatically formatted when this type is selected.

Status

Shows the current process. **Ready** means that the LUNs are available.

Set

All changes are saved and the necessary processes (type changes, formatting) are started. Progress information is displayed in the Status column.

11.16 Recording Management tab

Main window > **My Devices** tab > expand  > expand  **Pool n** > expand  **Devices** > click a camera > click **Recording** tab > click **Recording Management** tab

Primary Recording group

The **Primary Recording** group displays the preferred storage target type. And also, for example, the address the recording is managed, and if available, whether Encryption is possible.

Secondary Recording group

Allows you to add and configure a secondary target (for example, an SD card), and to define a the retention time.

Retention time group

Define the minimum and maximum retention time, and select the **Lock** check box if you want to prevent accidental changes.

- **Maximum retention time (days)**
Recordings are automatically deleted as soon as this value and the minimum retention time are exceeded.
The maximum retention time is valid also for already existing recordings.
The value 0 means infinite. In this case VRM Server tries to keep the recordings according to the minimum retention time, for example 10 days. But if enough storage is available, older recordings can exist, for example 20 or more days.
VRM Server checks every 60 minutes, whether recordings are available that has exceeded the maximum and the minimum retention time. This data is deleted.
- **Minimum retention time (days)**
Recordings cannot be deleted until this value is exceeded. This value is stored when the data is written to the disk. It cannot be changed afterwards. If changed, only new recordings are affected.
Note: If you configure a minimum retention time that needs more disk space than available, recording stops until the configured minimum retention time is exceeded.
- **Lock**
Select the check box if you want to prevent accidental changing of the retention time values.



Notice!

Before you make any changes, you must stop any active recordings. Active recordings are

indicated by this icon:

To display detailed information about the active recordings:

▶ Point to the icon.

To stop the recordings:

▶ Click the **Recording Scheduler** tab, then click **Stop Recording**.

To start the recordings:

▶ Click the **Recording Scheduler** tab, then click **Start Recording**.

11.17 Recording Preferences tab

Main window > **My Devices** tab > expand > expand **Pool n** > expand **Devices** > click a camera > click **Recording** tab > click **Recording Preferences** tab

This page only appears if a device is assigned to a Video Recording Manager system.

Primary target

Only visible if the **Recording preferences mode** list on the **Pool** page is set to **Failover**.

Select the entry for the required target.

Secondary target

Only visible if the **Recording preferences mode** list on the **Pool** page is set to **Failover** and if the **Secondary target usage** list is set to **On**.

Select the entry for the required target for configuring failover mode.

11.18 Recording Management tab (Video Streaming Gateway)

Main window > **My Devices** tab > expand  > expand  **Pool n** > expand  **Devices** > click  Video Streaming Gateway device > click **Recording** tab > click **Recording Management** tab

Primary target

Only visible if the **Recording preferences mode** list on the **Pool** page is set to **Failover**.
Select the entry for the required target.

Secondary target

Only visible if the **Recording preferences mode** list on the **Pool** page is set to **Failover** and if the **Secondary target usage** list is set to **On**.

Select the entry for the required target for configuring failover mode.

Primary Recording group

The **Primary Recording** group displays the preferred storage target type. And also, for example, the address the recording is managed, and if available, whether Encryption is possible.

Secondary Recording group

Allows you to add and configure a secondary target (for example, an SD card), and to define a the retention time.

Retention time group

Define the minimum and maximum retention time, and select the **Lock** check box if you want to prevent accidental changes.

– Maximum retention time (days)

Recordings are automatically deleted as soon as this value and the minimum retention time are exceeded.

The maximum retention time is valid also for already existing recordings.

The value 0 means infinite. In this case VRM Server tries to keep the recordings according to the minimum retention time, for example 10 days. But if enough storage is available, older recordings can exist, for example 20 or more days.

VRM Server checks every 60 minutes, whether recordings are available that has exceeded the maximum and the minimum retention time. This data is deleted.

– Minimum retention time (days)

Recordings cannot be deleted until this value is exceeded. This value is stored when the data is written to the disk. It cannot be changed afterwards. If changed, only new recordings are affected.

Note: If you configure a minimum retention time that needs more disk space than available, recording stops until the configured minimum retention time is exceeded.

– Lock

Select the check box if you want to prevent accidental changing of the retention time values.

11.19 Recording profiles tab

Main window > **My Devices** tab > expand  > expand  **Pool n** > expand  **Devices** > click  Video Streaming Gateway device or click a camera > click **Recording** tab > click **Recording Profiles** tab

This page shows an overview of the available recording profiles and allows you to change and edit them.

Recording Profiles group

In the **Recording Profiles** group you can add, configure and delete recording profiles.

Advanced group

In the you **Advanced** group you can define additional options, for example, the recording of audio, the recording of metadata, the export to an account.

11.20 Assignment tab (Video Streaming Gateway)

Main window > **My Devices** tab > expand  > expand  **Pool n** > expand  **Devices** > click Video Streaming Gateway device > click **Assignment** tab

Allows you to assign cameras to the selected VSG device and to configure the VSG cameras.

Network scan (remote)

In the list, select the camera type that you want to display.



buttons

Click to assign or unassign selected cameras to or from a Video Streaming Gateway device.

Note: When you select multiple cameras in the **Network scan (remote)** list, select only cameras of the same type, for example, only Bosch cameras or only ONVIF cameras. Otherwise the  button is disabled.

VSG cameras

Displays the cameras that are assigned to a Video Streaming Gateway device and the lines that are available for assigning a camera.

Refresh

Click to update the list of scanned cameras.

Add...

Click to display the **Camera Editor** dialog box for assigning a camera to your Video Streaming Gateway device. Allows you to configure properties like IP address or protocol settings.

Note: When you add multiple ONVIF cameras in the **Network scan (remote)** list, in the **Token** list only the common tokens are displayed.

Edit... (only available if you select an entry in the **VSG cameras** list)

Click to display the **Camera Editor** dialog box. Allows you to edit the properties of a VSG camera.

Refer to

- *Adding a camera to a Video Streaming Gateway device, page 20*
- *Device Editor dialog box, page 39*

11.21 Multicast tab (Video Streaming Gateway)

Main window > **My Devices** tab > click  Video Streaming Gateway device > click **Network** tab > click **Multicast** tab

Allows you to configure multicast for the assigned cameras.

Enable

Click to enable multicast for this camera.

Multicast Address

Insert a valid multicast address (in the range 224.0.0.0 - 239.255.255.255).

Enter *1.0.0.0*. A unique multicast address is automatically inserted based on the MAC address of the device.

Port

When a firewall is used, enter a port value that is configured as non-blocked port in the firewall.

Streaming

Click to enable continuous multicast streaming to the switch. This means that the multicast connection is not preceded by a RCP+ registration. The encoder streams always all data to the switch. The switch in return (if no IGMP multicast filtering is supported or configured) sends this data to all ports, with the result that the switch will flood.

You need streaming when using a non-Bosch device for receiving a multicast stream.

Refer to

– *Configuring multicast, page 21*

11.22 Advanced tab (Video Streaming Gateway)

Main window > **My Devices** tab > expand  > expand  **Pool n** > expand  **Devices** > click  Video Streaming Gateway device > click **Service** tab > **Advanced** tab

Allows you to activate logging for Video Streaming Gateway.

11.23 LUN Assignment dialog box

Main window > **My Devices** tab > expand  > expand  **Pool n** > expand  **Storage Systems** > expand  > click  > click **Target Settings** tab > click **LUN Assignment...** button
Add individual LUNs to the system and configure them.

The LUN type (standard/read-only) is stored on the LUN itself, so if configuration is lost, the LUN can be added without risk of data loss. The correct type of the LUN is read out and is set correctly.

Source

Displays the LUNs that are available for this target and have not yet been added to the system.

VRM System

Lists the LUNs that have already been added to the system.

11.24 Device Allocator dialog box

Main window > **Tools** menu > **Device Allocator...** command > **Device Allocator** dialog box

Installed devices

Displays all devices detected in the network.

- ▶ To sort them, click the relevant table header.

Allocated devices

Displays all devices allocated to the Video Recording Manager system.

- ▶ To sort them, click the relevant table header.

Filter

Enter the search criteria. The results appear in the list below.

11.25 Device Editor dialog box

Main window > **My Devices** tab > expand  > expand  **Pool n** > right-click  **Devices** > click **New Device...**

The **Device Editor** dialog box allows you to add devices manually that cannot be found by the device scan.

URL

Enter the URL or IP address. For devices in another network add the port number.

Example: 172.22.5.6:1754

Group:

Select **<Auto detect>**. If the device type cannot be found, select the required entry manually.

Variant

Select the device variant if you have not selected **<Auto detect>** in the **Group:** list.

Recording

Select the **Managed by VRM** check box if the recordings of the device should be managed by the Video Recording Manager system.

11.26**Camera Editor dialog box (Video Streaming Gateway)**

Main window > **My Devices** tab > expand  > expand  **Pool n** > expand  **Devices** > click Video Streaming Gateway device > click **Assignment** tab > click **Add...** button
or

Main window > **My Devices** tab > expand  > expand  **Pool n** > expand  **Devices** > click Video Streaming Gateway device > click **Assignment** tab > select cameras in the **VSG cameras** list > click **Edit...** button

URL

In the list, select the IP address or the URL of the desired Video Streaming Gateway device.

Bosch device: IP address or DNS name

ONVIF, RTSP, JPEG: URL (starts with http)

User name

Type the user name to sign in to the device. Usually the user name is service.

Password

Type the password to sign in to the device.

Connect

Click to connect to the device and to assign it to the Video Streaming Gateway.

After signing in was successful, configure the protocol settings if required.

Skip

Click to activate the configuration settings in the **Protocol settings** group.

This button does not appear, if you configure a camera that was detected by network scan and added by clicking .

The button appears, if you select a line in the **VSG cameras** list and click the **Add...** or the **Edit...** button.

Protocol settings

Make the desired protocol settings. Note that the available configuration settings change with the selected entry in the **Type** list.

Type

Note: The available configuration settings change with the selected entry.

Entry in the Type list	Available configuration settings
Bosch RCP+	Video input Select the number of the desired camera if you configure a multichannel device.
	Stream Select the number of the stream of the selected camera.
	Protocol

Entry in the Type list	Available configuration settings
	<p>TCP Used for transmission in the Internet and / or for lossless data transmission. Ensures that no data packet gets lost. Bandwidth requirement can be high. Use if the device is located behind a Firewall. Does not support multicast.</p> <p>UDP Used for connectionless and lightweight data transmission in private networks. Data packets can get lost. Bandwidth requirement can be low. Supports multicast.</p>
ONVIF	<p>Stream ONVIF Media Profile Contains advanced settings including a specific camera including amongst others the encoding settings.</p> <p>Video source Contains basic video settings including a specific camera. Corresponds to a physical video input.</p> <p>Token Select a profile number. If you selected Video source, usually only one entry is available.</p> <p>Name Displays the display name of the profile if ONVIF Media Profile is selected. If multiple names are available, <multiple> is displayed.</p>
RTSP	Select for adding a 3 rd party camera that supports the Real Time Streaming Protocol.
JPEG	<p>Select for adding a 3rd party camera that can send JPEG images (usually every video camera).</p> <p>Video input / Stream Displays the number.</p> <p>Rate [ips] Select the desired value.</p>

Tab. 11.1: Protocol settings

VSG Camera Name

Change the camera name if required. This name is used in Video Recording Manager and Video Client program.

Refer to

- *Adding a camera to a Video Streaming Gateway device, page 20*
- *Editing cameras assigned to Video Streaming Gateway devices, page 20*
- *Adding a camera to a Video Streaming Gateway device manually, page 21*



Bosch Security Systems B.V.

Torenallee 49
5617 BA Eindhoven
Netherlands

www.boschsecurity.com

© Bosch Security Systems B.V., 2020