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## Glossary

## Index
1 Using the Help

To find out more about how to do something in Bosch Video Management System, access the online Help using any of the following methods.

To use the Contents, Index, or Search:

- On the Help menu, click Help. Use the buttons and links to navigate.

To get Help on a window or dialog:

- On the toolbar, click .

OR

- Press F1 for help on any program window or dialog.

1.1 Finding information

You can find information in the Help in several ways.

To find information in the Online Help:

1. On the Help menu, click Help.

2. If the left-hand pane is not visible, click the Show button.

3. In the Help window, do the following:

<table>
<thead>
<tr>
<th>Click:</th>
<th>To:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contents</td>
<td>Display the table of contents for the Online Help. Click each book to display pages that link to topics, and click each page to display the corresponding topic in the right-hand pane.</td>
</tr>
<tr>
<td>Index</td>
<td>Search for specific words or phrases or select from a list of index keywords. Double-click the keyword to display the corresponding topic in the right-hand pane.</td>
</tr>
<tr>
<td>Search</td>
<td>Locate words or phrases within the content of your topics. Type the word or phrase in the text field, press ENTER, and select the topic you want from the list of topics.</td>
</tr>
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Texts of the user interface are marked bold.

- The arrow invites you to click on the underlined text or to click an item in the application.

- Click to get step-by-step instructions

Related Topics

- Click to display a topic with information on the application window you currently use. This topic provides information on the application window controls.

Section 25 Concepts provides background information on selected issues.

CAUTION!

Medium risk (without safety alert symbol): Indicates a potentially hazardous situation. If not avoided, this may result in property damage or risk of damage to the unit. Cautionary messages should be heeded to help you avoid data loss or damaging the system.

NOTICE!

This symbol indicates information or a company policy that relates directly or indirectly to the safety of personnel or protection of property.

1.2 Printing the Help

While using the Online Help, you can print topics and information right from the browser window.
To print a Help topic:
1. Right-click in the right pane and select **Print**. The **Print** dialog box opens.
2. Click **Print**. The topic is printed to the specified printer.
2 Introduction

Bosch Video Management System integrates digital video, audio and data across any IP network.

The system consists of the following software modules:
- Central Server
- NVR (Network Video Recorder)
- Operator Client (Bosch VMS NVRs / DiBos 8 DVRs / VRM recording / iSCSI recording /
  Vidos NVRs / local recording)
- Configuration Client

To achieve a running system, you must perform the following tasks:
- Install services (Central Server and NVR / VRM)
- Install Operator Client and Configuration Client
- Connect to network
- Connect devices to network
- Basic configuration:
  - Add devices (e.g. by device scan)
  - Build logical structure
  - Configure schedules, cameras, events, and alarms
  - Configure user groups
- Basic operation

Bosch VMS Archive Player displays exported recordings.
3 System overview

See data sheets on Bosch workstations and servers for information on computers where Bosch Video management System can be installed.

All these software modules can optionally be installed on one PC.

Tasks of the software modules

– **Central Server**: Stream management, alarm management, priority management, central logbook, user management

– **NVR**: Collecting the stream data from IP cameras, administering data on the connected hard disk drives, distributing *events* from connected cameras. Manages MPEG-4 SH++ streams.

– **VRM**: Distributing storage capacities on iSCSI devices to the encoders, while handling load balancing between multiple iSCSI devices. Streaming playback video and audio data from iSCSI to Operator Clients. Manages MPEG-4 SH++ and H.264 streams.

– **Configuration Client**: System configuration and administration for Operator Client.

– **Operator Client**: Live monitoring, storage retrieval and playback, alarm.

3.1 Hardware requirements

See the data sheet for Bosch Video Management System. Data sheets for platform PCs are also available.

3.2 Software requirements

See the data sheet for Bosch Video Management System. Bosch Video Management System must not be installed on a computer where you want to install Bosch VMS Archive Player.

3.3 License requirements

See the data sheet for Bosch Video Management System for the available licenses.
You can connect the following hardware to Bosch Video Management System:

- Various IP cameras and encoders
  Connected via network
- Live only encoders with local storage
  Connected via network
- iSCSI storage devices
  Connected via network
- VIDOS NVR computer
  Connected via network
- Analog cameras
  Connected to encoders, DiBos System
- Decoders
  Connected via network
- Analog monitors
  Connected to a decoder, to a Bosch Allegiant matrix, to a Bosch Video Management System Client workstation
- DiBos system (see the data sheet for Bosch Video Management System for supported versions)
  Connected via network
- Bosch Allegiant matrix (Firmware version: 8.75 or greater, MCS version: 2.80 or greater)
  Connected to a COM port of the Central Server or to a remote computer and to an IP encoder on the network.
- CCTV keyboard
  Connected to the COM port of a Bosch Video Management System workstation
  (Firmware version: 1.82 or greater) or to a hardware decoder (VIP XD).
  If you connect the keyboard to a workstation, the user can control the complete system with the keyboard. If you connect the keyboard to a VIP XD decoder, the user can only control analog monitors with the keyboard.
  Only the Bosch IntuiKey Digital Keyboard is supported.
- SMS device
  Connected to a COM port of the Central Server
- SMTP E-mail server
  Connected via network
- POS
  Connected via network
- ATM
  Connected via network
- Network monitoring device
  Connected via network

CAUTION!
Do not connect a device to more than one Bosch Video Management System! This can lead to recording gaps and other undesired effects.
- I/O modules
  Connected via network
  Only ADAM devices are supported.

All devices connected via network are connected to a switch. The computers of the Bosch Video Management System are also connected to this device.

### 4.1 Installing hardware

The following illustration shows an example of a small Bosch Video Management System network with NVR / DVR storage:

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<td>Communication devices: SMTP E-mail server connected to network, <em>GSM</em> device connected to a COM port of the Central Server</td>
</tr>
<tr>
<td>8</td>
<td>Virtual inputs</td>
</tr>
<tr>
<td>9</td>
<td>Operator Client workstations, Configuration Client workstation</td>
</tr>
<tr>
<td>10</td>
<td>Monitors connected to a decoder (analog monitor groups for alarm processing are possible)</td>
</tr>
<tr>
<td>11</td>
<td>DiBos Systems (only version 8 is supported) with cameras</td>
</tr>
</tbody>
</table>

Additionally you can connect the following devices:
- *ATM / POS* (Automatic Teller Machine / Point of Sale)
- *RAID* subsystems to increase storage capacity
- CCTV keyboard
  - Only Bosch IntuiKey Digital Keyboard is supported.
- I/O modules
  - Only ADAM devices are supported.
- Local storage *encoders*
5 Getting started

This chapter provides information on how to get started with Bosch Video Management System and with Bosch VMS Archive Player.

5.1 Installing the software modules

**CAUTION!**

Do not install DiBos Web client on any Bosch VMS computer. Otherwise Operator Client on each computer with the web client crashes after the Web client is started.

Install every software module on the computer that is supposed to be used for this module.

**To install:**

1. Insert the product CD-ROM.
2. Start `setup.exe` or start the Bosch Video Management System Setup on the Welcome screen.
3. In the next dialog box, select the modules to be installed on this computer.
4. Follow the instructions on the screen.

5.2 Installing Bosch VMS Archive Player

**CAUTION!**

Install Bosch VMS Archive Player only on a computer where Bosch Video Management is not installed.

You can include the setup for Bosch VMS Archive Player in an export you create with Bosch VMS Operator Client.

If there is no setup available with the export, you can find it on a computer where Bosch VMS is installed: `C:\<Installation directory>\Bosch\VMS\Update\NvrArchivePlayer\NvrArchivePlayerSetup.exe`

**To install:**

1. Copy the Setup program file on a computer where Bosch VMS is not installed.
2. Start `NVRArchivePlayerSetup.exe`.
3. Follow the instructions on the screen.

5.3 Activating the software licenses

Main window

When you install Bosch Video Management System for the first time, you must activate the licenses for the software packages that you have ordered, including the base package and any expansions and/or optional features.

To obtain the Activation Key for a license, you need the Authorization Number. This number is included in your product box.

With a Bundle Information file you can ease the process of activating.
To activate the software:
1. Start the Configuration Client.
2. On the Tools menu, click License Manager...
   The License Manager dialog box is displayed.
3. Click to check the boxes for the software package, the features, and the expansions that you want to activate. For the expansions, enter the number of licenses.
   If you have received a Bundle Information file, click Import Bundle Info to import it.
4. Click Activate.
   The License Activation dialog box is displayed.
5. Write down the computer signature or copy and paste it into a text file.
6. On a computer with Internet access, enter the following URL into your browser:
   https://activation.boschsecurity.com
   If you do not have an account to access the Bosch License Activation Center, either create a new account (recommended) or click the link to activate a new license without logging on. If you create an account and log on before activating, the License Manager keeps track of your activations. You can then review this at any time.
   Follow the instructions to obtain the License Activation Key.
7. Return to the Bosch Video Management System software. In the License Activation dialog box, type the License Activation Key obtained from the License Manager and click Activate.
   The software package is activated.

5.4 Starting Configuration Client

Only a user of the default user group Admin can log on to Configuration Client.

Note:
You cannot start Configuration Client when another user on another computer in the system has already started Configuration Client.

To start Configuration Client:
1. From the Start menu, select Programs > Bosch VMS > Config Client.
   The dialog box for logging on is displayed.
2. In the User Name: field, type your user name.
   When you start the application for the first time, enter Admin as user name, no password required.
3. In the Password: field, type your password.
4. Click **OK**.
The application starts.

### 5.5 Starting Operator Client

**Note:**
- Before using the system, activate the licenses that you have ordered. For activating the licenses, see Section 5.3 Activating the software licenses, page 16.
- To be sure that your Bosch Video Management System uses the language that you need, please configure this language in your Configuration Client. See Section 5.7 Configuring the language of Configuration Client, page 18 for details.

If a newer version of the application is stored on the Central Server, this version is installed automatically by no-touch deployment when you log on.

**To start Operator Client:**
1. From the **Start** menu, select **Programs > Bosch VMS > Operator Client**.
The dialog box for logging on is displayed.
2. In the **User Name:** field, type your user name.
   When you start the application for the first time, type **Admin** as user name, no password required.
3. In the **Password:** field, type your password.
4. In the **Connection** list, select the IP address or the **DNS** name of the Central Server.
5. Click **OK**.
   If dual authorization has been configured for your user group, the next logon dialog is displayed.
   A user of the configured second user group enters the required information.
   The application starts.
   If dual authorization is optional, just click **OK** again on the second logon dialog box. But you then only have the user rights of your user group and not the potentially extended user rights of your dual authorization group.

**To quit Operator Client:**
1. On the **System** menu, click **Exit**.
The application quits.
   If you logged on to Operator Client as a user who is not authorized to quit the application, the **Enter Logoff Password** dialog box is displayed.
2. Ask a user with corresponding user rights to enter his user name and password to confirm the process.

### 5.6 Starting Bosch VMS Archive Player

You install Bosch VMS Archive Player only on a computer where Bosch Video Management System is not installed.

**To start Bosch VMS Archive Player:**
- From the **Start** menu, select **Programs > Bosch VMS > Bosch VMS Archive Player**.
The application starts.

### 5.7 Configuring the language of Configuration Client

You configure the language of your Configuration Client independently of the language of your Windows installation.
To configure the language:
1. On the **Settings** menu, click **Options...**
   The **Options** dialog box is displayed.
2. In the **Language of the Configuration Client** list, select the desired language.
   If you select **Default system language**, the language of your Windows installation is used.
3. Click **OK**.
   The language is switched after the next restart of the application.

### 5.8 Configuring the language of Operator Client
You configure the language of your Operator Client independently of the language of your Windows installation and of your Configuration Client. This step is performed in the Configuration Client.

**To configure the language:**
1. Click **User Groups**. Click the **User Group Properties** tab.
2. In the **Language** list, select the desired language.
3. Click ![Save Settings](image) to save the settings.
4. Click ![Activate](image) to activate the configuration. Restart Operator Client.

### 5.9 Adding a new license
Main window
Have the Activation Letter at hand that you received from Bosch.

**To add a new license:**
1. On the **Tools** menu, click **License Manager...**
   The **License Manager** dialog box is displayed.
2. Select the software package that you want to activate.
3. Click **Activate**.
   The **License Activation** dialog box is displayed.
4. Type the License Activation Key that you find in the Activation Letter.
5. Click **Activate**.
   The software package is activated.
6. Repeat this procedure for each software package that you want to activate.
6 Configuring devices

Main window > Devices

This chapter provides information on how to configure the devices in your system.

Changing the Device Tree impacts other pages of the Configuration Client:

- **Maps and Structure**
  With the devices of the Device Tree you create a user defined structure called Logical Tree. Hence, if you remove a device from the Device Tree, this device is automatically removed from the Logical Tree. But adding a device to the Device Tree does not add this device to the Logical Tree.

- **Cameras and Recording**
  All cameras of the Device Tree are available in the Camera Table and the Recording Tables. You cannot modify DiBos or Bosch Allegiant cameras.

- **Events**
  All devices of the Device Tree are available in the corresponding Event Tables.

- **User Groups**
  You can reduce the functional range of the devices on several permission pages (per user group).

You can configure the following devices:
- Primary NVR and Failover NVR
- Encoders
- Encoders with local storage or live only
- Decoders
- DiBos systems
- Analog matrices
- Workstations
- Communication devices
- ATM and POS devices
- Virtual inputs
- I/O modules
- Network monitoring system
- CCTV keyboard
- Analog monitor groups
- Video Recording Manager devices

▶ Click to save the settings.

▶ Click to undo the last setting.

▶ Click to activate the configuration.

Follow these references to get detailed information on the available application windows:
- Section 17.2 Network Scan dialog box, page 85
- Section 17.4 Failover NVR Manager dialog box, page 87
- Section 17.5 IP Device Configuration dialog box, page 87
- Section 17.6 Set IP Addresses dialog box, page 87
- Section 17.7 Set Display Names dialog box, page 88
- Section 17.8 NVRs / Failover NVRs / Redundant NVRs page, page 88
- Section 18 Encoders / Decoders page, page 111
6.1 Detecting NVRs, their recorded encoders, and decoders

Main window > Devices > NVR & Decoder Scan > Network Scan dialog box
You scan the network to detect the following devices:
- NVRs
- Decoders
- Encoders
The system automatically adds a default analog monitor group with the detected decoders assigned. This analog monitor group is added below.

When you scan the network for the first time, NVRs and decoders are automatically assigned to the system. You must manually assign detected encoders to NVRs.

To avoid conflicts with duplicate IP addresses you start the initial device scan. This is useful when you integrate new devices in your network which have duplicate IP addresses or the factory default IP address (192.168.0.1). You cannot perform this initial device scan successfully with devices that are password protected.

When you want to add devices that are not members of the same subnet, perform the initial device scan.

To start the initial device scan:
1. On the Hardware menu, click Initial Device Scan....
The Initial Device Scan dialog box is displayed.
2. Click a cell to change the desired address. For changing multiple devices, select the desired rows. You can select multiple devices by pressing the CTRL- or the SHIFT-key. Then right-click the selected rows and click Set IP Addresses... or click Set Subnet Mask... to change the corresponding values.
   You must enter the correct subnet mask before changing an IP address.
3. Click OK.
To scan the network:

1. Click 🎥.

The Network Scan dialog box is displayed and all available NVRs, decoders, and encoders are detected.

The detected decoders are listed in the Decoders list and assigned automatically to the 📲 tree item of the Device Tree. If no analog monitor group has already been created, the detected decoders are added to a new analog monitor group under 📲 > 📲. If you do not want to use a decoder or an NVR, remove the item manually: right-click the item and click Remove.

The detected NVRs are assigned automatically to the 📲 tree item of the Device Tree.

2. In the Unassigned Encoders list, select an encoder and drag it to an NVR in the Assigned Encoders and NVRs list. The encoder’s cameras are recorded on the selected NVR.

3. Repeat the above step for every detected encoder that you want to be part of your system. Encoders that you do not drag to an NVR, are completely invisible in Bosch Video Management System.

4. Click Next >.

If required, a dialog box is displayed for changing the device names of the connected devices of the detected IP devices to be used for display. Bosch Video Management System names the devices with default names. If desired, you can use the existing names of the devices.

5. Make the required settings. For changing the displayed device names of a complete column at once, right-click a column with check boxes and click Select Column.

6. Click Finish.

6.2 Detecting VRM devices, live only and local storage encoders, VIDOS NVRs

Main window > 📲 Devices > 📲 VRM & iSCSI Devices Scan > Bosch VMS Scan Wizard dialog box

You scan the network to detect the following devices:
- VRMs
- iSCSI devices: you add them manually.
- Live only and local storage encoders
- VIDOS NVRs

You scan for each device group separately. Just right-click the appropriate item in the Device Tree, for example right-click VRM Devices and click Scan VRM Devices.

To scan VRM devices:

1. Select the desired check boxes for the device types that you want to integrate. Click Next >>.

2. Select the desired check boxes for the VRM devices that you want to integrate. Click Next >>.

3. Click Add iSCSI device.

The Add iSCSI Device dialog box is displayed.
4. Type a desired display name, the IP address of an iSCSI device, and the device type and click **OK**. 
The iSCSI device is added to Scan Wizard.

5. Select an iSCSI device and select the desired VRM, and click **Assign** to assign the iSCSI device to the VRM. 
Click **Next >>**.

6. Select the required encoders, select the desired VRM and click **Assign** to assign them to the VRM. 
The video data of these encoders will be stored on the assigned iSCSI device. 
Click **Next >>**.

7. Type all user names and passwords of the listed device in the appropriate cells. 
Click **Test all** to authenticate all devices. 
Click **Test selected** to authenticate only the selected devices. This is useful when you repeat the device scan and you want only the new ones to be authenticated. 

8. Click **Save >>**. 
Click **Finish** when you did not select further devices to be scanned.

---

6.3 Adding a device

**Main window > Devices**

You add the following devices to the *Device Tree* manually because these devices are not added by a network scan:

- DiBos system
- Analog matrix
  
  For adding a *Bosch Allegiant* device, you need a valid Allegiant configuration file.

- Bosch Video Management System workstation
  
  A workstation must have the Operator Client software installed.

- Communication device
Bosch ATM/POS Bridge, ATM device
- Virtual input
- Network monitoring device
- CCTV keyboard
- analog monitor group
- I/O module
- Allegiant CCL emulation

Decoders, encoders, NVRs including VIDOS NVRs, and VRMs are detected by the network scan.

NOTICE!

After having added a device, click to save the settings.

To add a DiBos system:

1. Right-click .
2. Click Add DiBos Recorder.
   The Add DiBos System dialog box is displayed.
3. Enter the appropriate values.
4. Click Scan DiBos.
   The DiBos system is added to your system.
5. In the displayed message box, click OK to confirm.

To add a Bosch Allegiant device:

1. Right-click and click Add Allegiant.
   The Open dialog box is displayed.
2. Select the appropriate Allegiant configuration file and click OK.
   The Bosch Allegiant device is added to your system.

Note: You can add only one Bosch Allegiant matrix.

To add a Bosch Video Management System workstation:

1. Right-click and click Add Workstation.
   The Add Workstation dialog box is displayed.
2. Enter the appropriate value click OK.
   The workstation is added to your system.

To add an analog monitor group:

1. Expand , right-click and click Add Monitor Group.
   The Create New Analog Monitor Group dialog box is displayed.
   If you already have performed a network scan, and decoders have been detected, there is already a default analog monitor group available with all detected decoders assigned.
2. Make the appropriate settings.
3. Click OK.
   The analog monitor group is added to your system.
To add a communication device:

1. Expand ☐, right-click ☐ and click the required command. The appropriate dialog box is displayed.
2. Enter the appropriate settings.
3. Click OK.
   The communication device is added to your system.

To add a peripheral device:

1. Expand ☐, right-click ☐ and click the required command. The appropriate dialog box is displayed.
2. Enter the appropriate settings.
3. Click OK.
   The peripheral device is added to your system.

To add a virtual input:

1. Expand ☐, click ☐. The corresponding page is displayed.
2. Click Add Inputs.
   A row is added to the table.
3. Make the appropriate settings.
4. Click Add.
   The virtual input is added to your system.

To add a network monitoring device:

1. Expand ☐, right-click ☐ and click Add SNMP. The Add SNMP dialog box is displayed.
2. Type a name for the SNMP device.
   The network monitoring device is added to your system.

To add a CCTV keyboard:

1. Expand ☐, click ☐. The corresponding page is displayed.
2. Click Add Keyboard.
   A row is added to the table.
3. Make the appropriate settings.
   The keyboard is added to your system.

To add an I/O module:

1. Expand ☐, right-click ☐ and click Add New ADAM. The Add dialog box is displayed.
2. Type the IP address of the device.
   If you want to skip the currently selected device and jump to the next one, click Skip.
3. Select the device type.
   The corresponding page is displayed.
4. Click the Inputs tab to change the display names of the inputs if required.
5. Click the **Name** tab to change the display names of the Relays if required.

**NOTICE!**
You can also perform a scan for ADAM devices (**Scan for ADAMs**). The IP addresses of the devices are detected. If available the device type is preselected. You must confirm this selection.

**To add an Allegiant CCL emulation:**
1. Expand ☐️, click ☐️.
   The **Allegiant CCL Emulation** tab is displayed.
2. Click to check **Enable Allegiant CCL Emulation**.
3. Make the required settings.
   The Allegiant CCL emulation service is started on the Central Server.

### 6.4 Configuring an encoder / decoder

**To configure an encoder:**

Main window > ☐️ Devices > Expand ☐️ > Expand ☐️ > ☐️

or

Main window > ☐️ Devices > Expand ☐️ > Expand ☐️

or

Main window > ☐️ Devices > ☐️

**To configure a decoder:**

Main window > ☐️ Devices > Expand ☐️ > Expand ☐️

**To configure an encoder or a decoder:**

► Make the appropriate settings on the tab pages of the encoder or decoder.

See the Online Help for the ☐️ pages for details.

**NOTICE!**
IP devices can be connected that do not have all configuration pages that are described here.

### 6.5 Configuring a decoder for use with a CCTV keyboard

Main window > ☐️ Devices > Expand ☐️ > Expand ☐️

Perform the following steps to configure a VIP XD decoder that is connected to a CCTV keyboard.

**To configure a decoder:**

1. Click the appropriate decoder which is used for connecting a CCTV keyboard.
2. Click the **Periphery** tab.
3. Ensure that the following settings are applied:
   - Serial port function: **Transparent**
   - Baud rate: 19200
   - Stop bits: 1
   - Parity check: None
   - Interface mode: RS232
   - Half-duplex mode: Off

6.6 Configuring multiple encoders / decoders

Main window
You can modify the following properties of multiple encoders and decoders at once:
- Display names
- IP addresses
- Firmware versions

**NOTICE!**
Changing the IP address of an IP device can make it unreachable.

To configure multiple IP addresses:
1. On the **Hardware** menu, click **IP Device Configuration...**.
   The **IP Device Configuration** dialog box is displayed.
2. Select the required devices.
   You can select multiple devices by pressing the CTRL- or the SHIFT-key.
3. Right-click the selected devices and click **Set IP Addresses...**.
   The **Set IP Addresses** dialog box is displayed.
4. In the **Start with:** field, type the first IP address.
5. Click **Calculate**.
   In the **End with:** field, the last IP address of the range for the selected devices is displayed.
6. Click **OK**.
7. In the **IP Device Configuration...** dialog box, click **Apply**.
   The new IP addresses are updated in the selected devices.

To configure multiple display names:
1. On the **Hardware** menu, click **IP Device Configuration...**.
   The **IP Device Configuration** dialog box is displayed.
2. Select the required devices.
   Multiple selection is possible by pressing the SHIFT key.
3. Right-click the selected devices and click **Set Display Names...**
   The **Set Display Names** dialog box is displayed.
4. In the **Start with:** field, type the first string.
5. Click **Calculate**.
   In the **End with:** field, the last string of the range for the selected devices is displayed.
6. Click **OK**.
7. In the **IP Device Configuration...** dialog box, click **Apply**.
   The calculated names are updated in the selected devices.

To update firmware for multiple devices:
1. On the **Hardware** menu, click **IP Device Configuration...**.
   The **IP Device Configuration** dialog box is displayed.
2. Select the required devices.
3. Click **Update Firmware**.
4. Select the file containing the update.
5. Click **OK**.

### 6.7 Configuring a DiBos system

**Main window > Devices > Expand**

**NOTICE!**

You do not configure the DiBos system itself but only the Bosch Video Management System related properties.

#### To scan for new DiBos devices:

- Right-click and click **Scan for DiBos Devices**.
  The DiBos system is scanned for new devices and they are added.

#### To remove an item:

1. Click the **Cameras** tab, the **Relays** tab, or the **Inputs** tab.
2. Right-click an item and click **Remove**.
   The item is removed.

#### To rename a DiBos device:

1. Right-click a DiBos device and click **Rename**.
2. Type the new name for the item.

### 6.8 Configuring a Bosch Allegiant device

**Main window > Devices > Expand**

You do not configure the **Bosch Allegiant** device itself but only the Bosch Video Management System related properties.

#### To assign an output to an encoder:

1. Click the **Outputs** tab.
2. In the **Usage** column, click **Digital Trunk** in the desired cells.
3. In the **Encoder** column, select the desired encoder.

#### Adding an input to a Bosch Allegiant device:

1. Click the **Inputs** tab.
2. Click **Add Inputs**.
   A new row is added to table.
3. Type the required settings in the cells.

#### Deleting an input:

1. Click the **Inputs** tab.
2. Click the required table row.
3. Click **Delete Input**.
   The row is deleted from the table.

### 6.9 Configuring a startup Command Script

See Section 12.5 Configuring a startup Command Script, page 66.
6.10 Changing the network address of a workstation

Main window > Devices > Expand

To change the IP address:

1. Right-click and click Change Network Address. The Change Network Address dialog box is displayed.
2. Change the entry in the field according to your requirements.

6.11 Enabling Forensic Search on a workstation

Main window > Devices > Expand > Settings page

You must enable Forensic Search on a workstation.

Note:
Enable video content analysis on each encoder. Use the VCA page of the encoder in the Device Tree.

To enable Forensic Search:

► Click to select the Enable Forensic Search check box.

6.12 Assigning an analog monitor group to a workstation

Main window > Devices > Expand > Analog Monitor Groups page

You assign an analog monitor group to a Bosch Video Management System workstation. In the Options dialog box, you can configure that all workstations can control analog monitor groups regardless of the setting here.

To assign an analog monitor group:

► In the Assigned Analog Monitor Groups column, select the check box.

6.13 Configuring an analog monitor group

Main window > Devices > Expand

You configure the monitors in an analog monitor group logically in rows and columns. This arrangement does not have to meet the physical arrangement of the monitors.

To configure an analog monitor group:

1. In the Name: field, type a name for the analog monitor group.
2. In the Columns: and Rows: fields, enter the desired values.
3. Drag each available decoder to an analog monitor image on the right.
   The logical number of the decoder is displayed as a black number on the monitor image and the color of this image changes.
   If no decoder is available, unassign a decoder from another analog monitor group or repeat network scan.
4. Click the Advanced Configuration tab.
5. Change the logical numbers of the assigned decoders as required. If you enter an already used number, a message box is displayed.
6. Click **Quad View** to enable quad view for this decoder.

**NOTICE!**
We do not recommend configuring quad view for H.264 cameras.

7. In the **Initial Camera** column, select the desired camera.
8. In the OSD related columns, select the desired options.

### 6.14 Configuring a communication device

Main window > **Devices > Expand > Expand**

To configure a communication device:

1. Click the required device: or .
2. Make the appropriate settings.

For detailed information on the various fields, see the Online Help for the appropriate application window.

### 6.15 Configuring a peripheral device

Main window > **Devices > Expand > Expand > or**

To configure a peripheral device:

- Change the required settings.

For detailed information on the various fields, see the Online Help for the appropriate application window.

### 6.16 Configuring network monitoring

Main window > **Devices > Expand**

To configure the SNMP trap receiver:

1. Click to display the **SNMP Trap Receiver** page.
2. Make the required settings.

For detailed information on the various fields, see the Online Help for the appropriate application window.

### 6.17 Configuring a CCTV keyboard (workstation)

Main window > **Devices > Expand**

To configure a CCTV keyboard connected to a workstation:

1. Click the **Settings** tab.
2. In the **Keyboard Serial Port Settings** field, make the required settings.
For detailed information on the various fields, see the Online Help for the appropriate application window.

### 6.18 Configuring a CCTV keyboard (decoder)

Main window > ![Devices] > Expand ![Expand] > ![Expand] > ![Expand]

**To configure a CCTV keyboard connected to a decoder:**
1. In the **Connection** column, click a cell, and select the appropriate decoder. You can also select a workstation, if the CCTV keyboard is connected to it.

   A workstation must be configured on the ![page] page.
2. In the **Connection Settings** field, make the required settings. For detailed information on the various fields, see the Online Help for the appropriate application window.

### 6.19 Configuring an I/O module

Main window > ![Devices] > Expand ![Expand] > ![Expand] > ![Expand]

**To configure an I/O module:**
1. Click the **ADAM** tab.
2. In the **ADAM type:** list, select the appropriate device type.

**CAUTION!**
Do not change the device type if not really necessary. If you for example change the device type to a type with less inputs, all configuration data for the removed inputs get lost.

3. Click the **Inputs** tab.
4. In the **Name** column, change the display name of an input if required.
5. Click the **Relays** tab.
6. In the **Relays** column, change the name of a relay if required.

For detailed information on the various fields, see the Online Help for the appropriate application window.

### 6.20 Configuring an Allegiant CCL emulation

Main window > ![Devices] > Expand ![Expand] > ![Expand]

**To configure an Allegiant CCL emulation:**
1. Click **Enable Allegiant CCL Emulation**.
2. Configure the communication settings as required.

For detailed information on the various fields, see the Online Help for the appropriate application window.
6.21 Adding a VRM device with iSCSI storage

Main window > Devices

In your network, you need a VRM service running on a computer, and an iSCSI device.
With Operator Client you cannot display VRM devices.

CAUTION!
When you add an iSCSI device with no targets and LUNs configured, start a default configuration and add the IQN of each encoder to this iSCSI device.
When you add an iSCSI device with targets and LUNs pre-configured, add the IQN of each encoder to this iSCSI device.
See Section 6.22 Configuring an iSCSI device, page 33 for details.

To add a VRM device and an iSCSI device:

1. Right-click and click Scan VRM Devices.
   The Bosch VMS Scan Wizard is displayed.
2. Click to check the IP address of the desired VRM computer. You can select multiple computers.
3. Click Next >.
   The next step of the wizard is displayed.
4. Click Add iSCSI device.
   The Add iSCSI Device dialog box is displayed.
5. Type a desired display name, the IP address of an iSCSI device, and the device type and click OK.
   The device is added to the scan wizard dialog box.
6. Assign the iSCSI device to the VRM.
   If required assign multiple iSCSI devices.
7. Click Next >.
   The next step of the wizard is displayed.
8. Assign the desired IP devices to the VRM.
9. Click Next >.
   The next step of the wizard is displayed.
10. Type the user names and passwords of the devices in the table.
11. Click Test all to log on to all devices.
    If required, select the desired devices and click Test selected to log on to these devices.
    In the Status column, the successful logons are indicated with .
    The failed logons are indicated with .
12. Click Finish.
    The iSCSI device is connected to the VRM. Video streams from an IP device assigned to this VRM are recorded on the assigned iSCSI device.
    If required, a dialog box is displayed for changing the device names of the detected IP devices to be used for display. Bosch Video Management System names the devices with default names. If desired, you can use the existing names of the devices.
Notes:
- You can manually add devices like a VRM or an iSCSI device by right-clicking the parent device. For example: Right-click and click Add VRM.

6.22 Configuring an iSCSI device

After adding VRM devices, iSCSI devices, and encoders, perform the following tasks to ensure that video data of encoders is stored on the iSCSI devices or video data can be retrieved from these iSCSI devices:
- Execute the default configuration to create LUNs on each target of the iSCSI device. This step is optional. You do not need to perform this step on an iSCSI device with LUNs pre-configured.
- Scan the iSCSI device to add the targets and LUNs to the Device Tree after default configuration.

Note:
Not all iSCSI devices support the default configuration and automatic IQN mapping.

To perform the default configuration of an iSCSI device:

1. Expand the appropriate VRM device , click the appropriate iSCSI device .
2. Click the Default Configuration tab. LUNs are created on the targets of the iSCSI device.
3. Format these LUNs. See Section 6.24 Formatting a LUN, page 34.
4. When the process has finished, click to save the settings.
5. Click to activate the configuration.

To scan the iSCSI device:

1. Expand the appropriate VRM device , click the appropriate iSCSI device .
2. Right-click and click Scan ISCSI Device. The process is started.
   Targets and LUNs are detected and added to the Device Tree below the iSCSI node.
3. Click to save the settings.
4. Click to activate the configuration.

To perform IQN mapping:

1. Expand the appropriate VRM device , click the appropriate iSCSI device .
2. Right-click and click Map IQNs. The iqn-Mapper dialog box is displayed and the process is started.
   The encoders that are assigned to the selected VRM device are evaluated and their IQNs are added to this iSCSI device.
3. Click to save the settings.

4. Click to activate the configuration.

6.23 Adding a LUN

Main window > Devices > Expand > Expand

Usually the network scan adds the desired iSCSI devices with their targets and LUNs automatically. If your network scan did not work correctly or you want to configure your iSCSI device offline before it is actually integrated into your network, you configure a target in your iSCSI device and on this target you configure one or more LUNs.

To configure:

1. Right-click and click Add Target.
   The Add Target dialog box is displayed.
2. Enter the desired target number and click Ok.
   The target is added.
3. Click the new target.
   The LUNs page is displayed.
4. Click Add.
   The Add LUN dialog box is displayed.
5. Enter the desired LUN number and click Ok.
   The LUN is added as a new table row.
   Repeat this step for each desired LUN.

Notes:
- To remove a LUN, click Remove.
  The video data remains on this LUN.
- To format a LUN, click Format.
  All data on this LUN is removed!

6.24 Formatting a LUN

Main window > Devices > Expand > Expand > Expand

You format a LUN to prepare it for the first use.

NOTICE!
All data on the LUN is lost after formatting.

To configure:
1. On the LUNs page, select the desired LUN and, in the Format column, click to check.
2. Click Format LUN.
3. Read the displayed message carefully and confirm the message if desired.
   The selected LUN is formatted. All data on this LUN is lost.
6.25 Adding a local storage or live only device

Main window > Devices

or

Main window > Devices

You can add encoders with local storage or live only encoders.

To add a local storage:

1. Right-click and click Scan Local Storage Encoders. The Bosch VMS Scan Wizard is displayed.
2. Assign the device. If required assign multiple devices.
3. Click Next >>. The next step of the wizard is displayed.
4. Click Finish. The device is connected to your Bosch Video Management System.

To add a live only device:

1. Right-click and click Scan live-only Encoders. The Bosch VMS Scan Wizard is displayed.
2. Assign the device. If required assign multiple devices.
3. Click Next >>. The next step of the wizard is displayed.
4. Click Finish. The device is connected to your Bosch Video Management System.
7 Configuring NVRs

Main window > Devices
This chapter provides information on how to configure NVRs in your system.

*Primary NVRs* record the images of all assigned encoders and IP cameras connected to your system.

A *Failover NVR* is a server that takes over the tasks of a failing Primary NVR. The Failover NVR starts recording as soon as the Primary NVR fails. A Failover NVR cannot have any encoders directly assigned. A Failover NVR can take over the tasks of a Primary NVR even when Central Server is not available.

You can assign maximum one Failover NVR to a Primary NVR and you can assign multiple Primary NVRs to one Failover NVR.

When the Primary NVR works correctly again, the Primary NVR takes back his tasks from the Failover NVR automatically. The Failover NVR stops recording some seconds after the Primary NVR has started recording. The recordings of the down time stay on the Failover NVR.

A *Redundant NVR* performs the same recording tasks as the assigned Primary NVR. A Primary NVR can have maximum one Redundant NVR assigned. On a Redundant NVR, you cannot configure the recording and event settings of the assigned devices independently from the Primary NVR. A Redundant NVR just retrieves video and audio streams and forwards them to a database. When you change the recording settings on the Primary NVR, these settings are synchronized on the Redundant NVR.

If you remove an NVR from the Device Tree, the recordings of this NVR are not deleted. You can retrieve them by activating a previous configuration version containing this NVR.

You can assign a Failover NVR to a Redundant NVR. When the Redundant NVR fails, the Failover NVR takes over its tasks, i.e. it acts like a Redundant NVR.

The recordings are performed in different modes depending on your configuration:

- Continuous recording
- Pre-event recording
- Motion recording
- Alarm recording

▶ Click  to save the settings.
▶ Click  to undo the last setting.
▶ Click  to activate the configuration.

7.1 Configuring a Primary NVR

Main window > Devices > Expand > Expand > Expand
You can perform the following tasks to configure a selected NVR:

- Configure video and audio storage
- Assign a Failover NVR
- Configure backup

**To configure an NVR:**
1. Click the Global Settings tab to assign a Failover NVR to this NVR.
   The Switch over to: list contains only NVRs that have been configured as Failover NVRs.
2. Click the Disk Storage tab to configure the storage settings of the selected NVR.
3. Click the **Camera Storage** tab to define minimum and maximum storage times, manage protected recordings, and to optionally schedule the backup of the assigned cameras. If scheduled backups are desired, you must first create a Task Schedule in **Schedules**.

### 7.2 Switching an NVR to a Failover NVR

Main window > Devices > Expand > Expand > Expand

To configure a *Failover NVR* you must first change an *NVR* to a Failover NVR.

**To switch an NVR:**
1. Right-click an NVR.
   - This NVR must not have any encoders assigned.
2. Click **Act as Failover NVR**.
   - The NVR is moved to the **Failover NVRs** node.

### 7.3 Switching an NVR to a Redundant NVR

Main window > Devices > Expand > Expand > Expand

To configure a *Redundant NVR* you must first change an *NVR* to a Redundant NVR.

**To switch an NVR:**
1. Right-click an NVR.
   - This NVR must not have any encoders assigned.
2. Click **Act as Redundant**.
   - The NVR is moved to the **Redundant NVRs** node.

### 7.4 Configuring a Failover NVR

Main window > Devices > Expand > Expand > Expand

Before you can configure a *Failover NVR* you must switch a Primary *NVR* to a Failover NVR. After having configured a Failover NVR, you assign it to one or multiple NVRs.

You can perform the following tasks to configure a selected Failover NVR:
- Configuring video and audio storage
- Assigning NVRs

**To configure a Failover NVR:**
1. Click the **Global Settings** tab to display network settings of the selected Failover NVR.
2. Click the **Disk Storage** tab to configure the storage settings of the selected Failover NVR.
3. Click the **Assigned NVRs** tab to add or remove NVRs to the selected Failover NVR.

For detailed information on the various fields, see the Online Help for the appropriate application window.

### 7.5 Configuring a Redundant NVR

Main window > Devices > Expand > Expand > Expand

Before you can configure a *Redundant NVR* you must switch a Primary *NVR* to a Redundant NVR.

After having configured a Redundant NVR, you assign it to one or multiple NVRs.
You can perform the following tasks to configure a selected Redundant NVR:
- Configuring video and audio storage
- Assigning NVRs

**To configure a Redundant NVR:**
1. Click the **Global Settings** tab to display network settings of the selected Redundant NVR.
2. Click the **Disk Storage** tab to configure the storage settings of the selected Redundant NVR.
3. Click the **Camera Storage** tab to configure the camera settings of the selected Redundant NVR. This page is only available, if on the **Assigned NVR** page the **Backup** option is checked.
4. Click the **Assigned NVR** tab to add or remove NVRs to the selected Redundant NVR.
   For detailed information on the various fields, see the Online Help for the appropriate application window.

### 7.6 Assigning NVRs to Failover NVRs

You can configure a **Failover NVR** that takes over the tasks of the NVR if it fails. Ensure that an NVR is switched to a Failover NVR.

**To assign an NVR to a Failover NVR:**
1. Expand
2. Select an NVR as required.
3. Click the **Global Settings** tab.
4. In the **Failover NVR** list, select the required Failover NVR.

**To assign multiple NVRs to a Failover NVR:**
1. Expand
2. Select the desired Failover NVR.
3. Click the **Assigned NVRs** tab.
4. In the **Time [h]** column, select the required NVRs.
5. Click **Add NVR**.
   Each added Primary NVR has the selected Failover NVR assigned.

### 7.7 Assigning NVRs to a Redundant NVR

You can only assign one NVR to a **Redundant NVR**. If you select a Primary NVR that already has been assigned to another Redundant NVR, the assignment to the previous Redundant NVR is removed.

Ensure that an NVR is switched to a Redundant NVR.

**To assign a Primary NVR to a Redundant NVR:**
1. Select the desired Redundant NVR.
2. Click the Assigned NVR tab.
The table displays all Primary NVRs.

3. In the first column, click to check the desired NVR.
   Each checked primary NVR has the selected Redundant NVR assigned.

4. In the Backup column, make the desired setting.
   When cleared, the Camera Storage tab becomes active.

7.8 Displaying information on an NVR

Main window > Devices > Expand > Expand
You can display the following information on an NVR:
- Network related information
- Disk usage statistics and the available disk space on the NVR.

To display information on an NVR:
► Click the Disk Storage tab to view information on the selected NVR.

7.9 Changing the network address of an NVR / Failover NVR / Redundant NVR

Main window > Devices > Expand > Expand
or

Main window > Devices > Expand > Expand
or

Main window > Devices > Expand > Expand

To change the IP address of an NVR / Failover NVR / Redundant NVR:

1. Right-click / / and click Change network address.
The Network address dialog box is displayed.

2. Change the entry in the field according to your requirements.
8 Configuring the structure

Main window > Maps and Structure
This chapter provides information on how to configure the Logical Tree and how to manage resource files such as maps.

On the Maps and Structure page, you configure the Logical Tree.
The Logical Tree is used in the Operator Client to control cameras and other devices.
Use the User Groups page to customize this tree for each user group that can access the Operator Client. In the Operator Client only those parts of the Logical Tree are displayed which are permitted for the user group.

NOTICE!
If you move a group of devices in the Logical Tree, these devices lose their permission settings. You must set the permissions in the User Groups page again.

You can arrange all the devices of your system according to your requirements. For example, you can add all cameras of one part of a building to a corresponding folder.
You can integrate maps into your structure. On these maps you can place cameras or other devices which helps the user to localize the devices. You can only import 2D DWF files.
On a map, you can create links to other maps so that the user can click from one map to a linked one.
Follow these references to get detailed information on the available application windows:
– Section 19.1 Resource Manager dialog box, page 127
– Section 19.2 Select Resource dialog box, page 128
– Section 19.3 Sequence Builder dialog box, page 128
– Section 19.4 Add Sequence dialog box, page 129
– Section 19.5 Add Sequence Step dialog box, page 130
– Section 19.6 Add URL dialog box, page 130
– Section 19.7 Select Map for Link dialog box, page 130

► Click to save the settings.
► Click to undo the last setting.
► Click to activate the configuration.

8.1 Configuring the Logical Tree

Main window > Maps and Structure
You can add devices, resource files and folders to the Logical Tree. Devices are listed in the Device Tree and you can drag any level of the Device Tree to the Logical Tree.
A resource file can be a site map, document, Web file, audio file, a Command Script, or a camera sequence file.
A site map is a 2D DWF file that you can add to the Logical Tree. Adding a map to the Logical Tree, creates a map folder in which you can organize the logical devices that are specific to the map.
A folder allows you to further organize devices in the Logical Tree.
When you start the Configuration Client for the first time, the Logical Tree is empty.
If a *user group* does not have the permission to access a device (e.g., a camera), the device is not being displayed on the map or in the Logical Tree.

You can add the following items from the Device Tree or the Logical Tree to a map:
- Cameras
- Relays
- Inputs
- Documents
- *Command Scripts*
- Camera sequences

Adding an item to a map creates a *hot spot* on the map.

When you add an item to a map folder in the Logical Tree, it is also displayed on the upper left corner of the map. When you add an item to a map, it is also added under the corresponding map node in the Logical Tree of the Operator Client.

To configure the Logical Tree you perform some of or all the following steps several times.

**To configure the Logical Tree:**

1. Click ![folder icon] to add folders according to your needs.
2. Drag devices from the Device Tree to the appropriate folders.
   - You can select multiple devices by pressing the CTRL- or the SHIFT-key.
3. Click ![resource file icon] to add resource files to your structure.
4. Select a folder and click ![map icon] to add maps under the selected folder.
5. Right-click a folder and click *Assign Map* to assign a map to the selected folder.
6. Select a folder and click ![command script icon] to add a Client Command Script under the selected folder.
7. Select a folder and click ![document icon] to add a document under the selected folder.
8. Select a folder and click ![camera sequence icon] to add a camera sequence under the selected folder.
9. Drag devices from the Logical Tree or the Device Tree to a map to locate them.
   - You can add an item only once in a map but you can add it to several locations in the Logical Tree and to several maps.

### 8.2 Adding a device to the Logical Tree

**Main window > Maps and Structure**

**To add a device:**

- Drag an item from the *Device Tree* to the required location in the *Logical Tree*.
  - You can drag a complete node with all sub-items from the Device Tree to the Logical Tree. You can select multiple devices by pressing the CTRL- or the SHIFT-key.

### 8.3 Removing a tree item

**Main window > Maps and Structure**
To remove a tree item from the Logical Tree:

- Right-click an item in the Logical Tree and click **Remove**.
- If the selected item has sub-items, a message box is displayed. Click **OK** to confirm.
- The item is removed.
- When you remove an item from a map folder of the Logical Tree, it is also removed from the map.

### 8.4 Managing resource files

Main window > [Maps and Structure](#)

or

Main window > [Alarms](#)

You can import resource files in the following formats:

- **DWF** files (2 D, map resource files)
  - For use in Operator Client, these files are converted to a bitmap format.
- **HTML** files (map document files)
- **MP3** (audio file)
- **TXT** files (*Command Scripts* or camera sequences)
- **MHT** files (Web archives)
- **URL** files (links to Web pages)
- **WAV** (audio file)

The imported resource files are added to a database. They are not linked to the original files.

**NOTICE!**

After each of the following tasks:

Click ![Icon](#) to save the settings.

#### To import a resource file:

1. Click ![Icon](#).
   - The **Import Resource** dialog box is displayed.
2. Select one or more files.
3. Click **Open**.
   - The selected files are added to the list.
   - If a file has already been imported, a message box is displayed.
   - If you decide to import an already imported file again, a new entry is added to the list.

#### To remove a resource file:

1. Select a resource file.
2. Click ![Icon](#).
   - The selected resource file is removed from the list.

#### To rename a resource file:

1. Select a resource file.
2. Click ![Icon](#).
3. Enter the new name.
The original file name and creation date persists.

**To replace the content of a resource file:**
1. Select a resource file.
2. Click ![resource icon].
The Replace Resource dialog box is displayed.
3. Select a file with the appropriate content and click **Open**.
The resource name persists, the original file name is exchanged with the new file name.

**To export a resource file:**
1. Select a resource file.
2. Click ![export icon].
A dialog box for selecting a directory is displayed.
3. Select the appropriate directory and click **OK**.
The original file is exported.

### 8.5 Adding a Command Script

Main window > ![Maps and Structure]

Before you can add a Command Script, you must have Command Script files imported or created.

If required, see Section 12 Configuring Command Scripts, page 65 for details.

**To add a Command Script file:**
1. Select a folder where you want to add the new Command Script.
2. Click ![add script icon].
The Select Client Script dialog box is displayed.
3. Select a file in the list.
4. Click **OK**.
A new Command Script is added under the selected folder.

### 8.6 Managing pre-configured camera sequences

Main window > ![Maps and Structure]

You can perform the following tasks for managing camera sequences:
- Create a camera sequence
- Add a step with a new dwell time to an existing camera sequence
- Remove a step from camera sequence
- Delete a camera sequence
To create a camera sequence:
1. In the Logical Tree, select a folder where you want to create the camera sequence.
2. Click .
   The Sequence Builder dialog box is displayed.
3. In the Sequence Builder dialog box, click .
   The Add Sequence dialog box is displayed.
4. Enter the appropriate values.
   For detailed information on the various fields, see the Online Help for the appropriate application window.
5. Click OK.
A new camera sequence is added.

To add a step with a new dwell time to a camera sequence:
1. Select the desired camera sequence.
2. Click Add Step.
   The Add Sequence Step dialog box is displayed.
3. Make the appropriate settings.
4. Click OK.
   A new step is added to the camera sequence.

To remove a step from a camera sequence:
   ➤ Right-click the desired camera sequence and click Remove Step.
   The step with the highest number is removed.

To delete a camera sequence:
1. Select the desired camera sequence.
2. Click .
   The selected camera sequence is removed.

8.7 Adding a camera sequence

Main window > Maps and Structure

NOTICE!
When the configuration is changed and activated, a camera sequence (pre-configured or automatic) usually is continued after restart of the Operator Client.
But in the following cases the sequence is not continued:
- A monitor where the sequence is configured to be displayed has been removed.
- The mode of a monitor (single/quad view) where the sequence is configured to be displayed has been changed.
- The logical number of a monitor where the sequence is configured to be displayed is changed.

NOTICE!
After each of the following tasks:
Click to save the settings.
You add a camera sequence to the root directory or to a folder of the *Logical Tree*.

**To add a camera sequence:**
1. In the Logical Tree, select a folder where you want to add the new camera sequence.
2. Click .
   The **Sequence Builder** dialog box is displayed.
3. In the list, select a camera sequence.
4. Click **Add to Logical Tree**.

   A new is added under the selected folder.

### 8.8 Adding a folder

**Main window > Maps and Structure**

**To add a folder:**
1. Select a folder where you want to add the new folder.
2. Click .
   A new folder is added under the selected folder.
3. Click to rename the folder.
4. Type the new name and press ENTER.

### 8.9 Adding a map

**Main window > Maps and Structure**

Before you can add a map, you must have map resource files imported.

To import a map resource file see *Section 8.4 Managing resource files, page 42* for details.

**To add a map:**
1. Ensure that the map resource file that you want to add has already been imported.
2. Select a folder where you want to add the new map.
3. Click .
   The **Select Resource** dialog box is displayed.
4. Select a file in the list.
   If the required files are not available in the list, click **Manage...** to display the **Resource Manager** dialog box for importing files.
5. Click **OK**.

   A new map is added under the selected folder.
   The map is displayed.
   All devices within this folder are displayed in the upper left corner of the map.

### 8.10 Adding a link to another map

**Main window > Maps and Structure**
After you have added at least two maps, you can add a link on one map to the other so that
the user can click from one map to a linked one.

**To add a link:**

1. Click a map folder in the Logical Tree.
2. Right-click the map and click **Create Link**.
   The **Select Map for Link** dialog box is displayed.

3. In the dialog box, click a map.
4. Click **Select**.
5. Drag the item to the appropriate place on the map.

### 8.11 Assigning a map to a folder

**Main window > Maps and Structure**

Before you can assign maps, you must have map resource files imported.

If required, see **Section 8.4 Managing resource files, page 42** for details.

**To assign a map resource file:**

1. Right-click a folder and click **Assign Map**.
   The **Select Resource** dialog box is displayed.
2. Select a map resource file in the list.
3. Click **OK**.

The selected folder is displayed as .

The map is displayed in the map window.

All items within this folder are displayed in the upper left corner of the map.

### 8.12 Managing devices on a map

**Main window > Maps and Structure**

Before you can manage devices on a map you must add a map or assign a map to a folder and
add devices to this folder.

**NOTICE!**

After each of the following tasks:

Click to save the settings.

**To place items on a map:**

1. Select a map folder.
2. Drag devices from the Device Tree to the map folder.
   The devices of a map folder are located on the left upper corner of the map.
3. Drag the items to the appropriate places on the map.

**To remove an item in the Logical Tree only from the map:**

1. Right-click the item on the map and click **Invisible**.
   The item is removed from the map.
   The item remains in the Logical Tree.

2. To make it visible again, right-click the device in the Logical Tree and click **Visible In Map**.
To remove an item from the map and from the Full Logical Tree:
► Right-click the item in the Logical Tree and click Remove.
The item is removed from the map and from the Logical Tree.

To change the icon for the orientation of a camera:
► Right-click the item, point to Change Image, and then click the appropriate icon.
The icon changes accordingly.

To change the color of an item:
► Right-click the item and click to Change Color. Select the appropriate color.
The icon changes accordingly.

8.13 Adding a document

Main window > Maps and Structure
You can add text files, HTML files (including MHT files) or an URL file (containing an Internet address) as documents.
Before you can add a document, you must have document files imported.
To import document files see Section 8.4 Managing resource files, page 42 for details.
To add a map document file:
1. Ensure that the document file that you want to add has already been imported.
2. Select a folder where you want to add the new document.
3. Click .
The Select Resource dialog box is displayed.
4. Select a file in the list.
If the required files are not available in the list, click Manage... to display the Resource Manager dialog box for importing files.
5. Click OK.
A new document is added under the selected folder.
9 Configuring cameras and recording settings

Main window ➤ Cameras and Recording
This chapter provides information on how to configure the cameras in your Bosch Video Management System.
You configure various camera properties and the recording settings.
Follow these references to get detailed information on the available application windows:
– Section 21.1 Cameras page, page 133
– Section 21.2 Recording settings pages, page 135
– Section 21.4 Stream Quality Settings dialog box, page 137
– Section 18.12.1 COM1, page 122
– Section 21.5 PTZ Settings dialog box, page 138
– Section 21.3 Copy Recording Settings dialog box (NVR only), page 136

▲ Click to save the settings.
▲ Click to undo the last setting.
▲ Click to activate the configuration.

9.1 Copying and pasting in tables
You can configure many objects simultaneously within a Camera Table, an Event Configuration Table, or an Alarm Configuration Table.
You can copy the configurable values of a table row in other rows:
– Copy all values of a row to other rows.
– Copy only one value of a row to another row.
– Copy the value of one cell to a complete column.
You can copy the values in two different ways:
– Copy into the clipboard and then paste.
– Direct copy and paste.
You can determine in which rows to paste:
– Copy in all rows.
– Copy in selected rows.
To copy and paste all configurable values of a row into another row:
1. Right-click the row with the desired values and click Copy Row.
2. Click the row heading of the row that you want to modify.
   To select more than one row press the CTRL key and point to the other row headings.
3. Right-click the table and click Paste.
   The values are copied.
To copy and paste one value of a row into another row:
1. Right-click the row with the desired values and click Copy Row.
2. Right-click the cell that you want to modify, point to Paste Cell to, and click Current Cell.
   The value is copied.
To copy all configurable values directly:
1. Click the row heading of the row that you want to modify.
   To select more than one row press the CTRL key and point to the other row headings.
2. Right-click the row with the desired values, point to **Copy Row to**, and click **Selected Rows**.
   The values are copied.

**To copy one value directly:**
1. Click the row heading of the row that you want to modify.
   To select more than one row press the CTRL key and point to the other row headings.
2. Right-click the cell with the desired value, point to **Copy Cell to**, and click **Selection in Column**.
   The value is copied.

**To copy a value of a cell to all other cells in this column:**
   ➤ Right-click the cell with the desired value, point to **Copy Cell to**, and click **Complete Column**.
   The value is copied.

**To duplicate a row:**
   ➤ Right-click the row and click **Add Duplicated Row**.
   The row is added below with a new name.

### 9.2 Configuring the stream quality

Main window > **Cameras and Recording** > **Stream Quality Settings** dialog box

#### NOTICE!
For XFM4 encoders configure the maximum bit rate with the value of the target bit rate plus 10%. The maximum bit rate is used when a scene is busy and contains motion.

#### NOTICE!
Bosch Video Management System uses the two streams in *dual streaming* encoders as follows:
NVR recording: Stream 2 is used for Live and pre-alarm recording, stream 1 is used for motion and alarm recording. The streams can be switched (stream 1 for Live and pre-alarm, stream 2 for recording) for a workstation.
VRM recording and local storage: Stream 2 is used for Live, stream 1 is used for all recording modes.
ARM based firmware: Stream 2 can also be used for recording.
The compression achieved is dependent on the stream quality settings, the image complexity, and the level of motion in the scene. With these interdependencies, it is possible to over-specify encoder performance. For example, with a highly complex scene with high motion, the encoder may not be able to deliver 4 CIF full frame rate on both streams simultaneously. Refer to your encoder guidelines to help estimate the best settings for your conditions.

**To add a stream quality settings entry:**
   ➤ Click + to add a new entry in the list.

**To remove a stream quality settings entry:**
   ➤ Select an entry in the list and click ✗ to delete the entry.
   You cannot delete default entries.

**To rename a stream quality settings entry:**
1. Select an entry in the list.
2. Enter the new name in the **Name** field. You cannot rename default entries.

3. Click **OK**.

**To configure stream quality settings:**
1. Select an entry in the list.
2. Make the appropriate settings.

For detailed information on the various fields, see the Online Help for the appropriate application window.

### 9.3 Configuring camera properties

**Main window > 📷 Cameras and Recording > 📷**

**To change camera properties:**
1. In the **Camera** column, click a cell and type a new name for the camera. This name is displayed in all other places where cameras are listed.
2. Only for **VRM** and **Live Only**: In the **Stream 1 · Codec** or **Stream 2 · Codec** column, select the appropriate codec for encoding stream 1 or stream 2.
3. Only for **VRM** and **Live Only**: In the **Live Video** column, configure the quality of live display. For these devices, you can only set the live quality per camera, not per schedule.
4. Make the appropriate settings in the other columns.

For detailed information on the various fields, see the Online Help for the appropriate application window.

### 9.4 Configuring recording settings (only NVR)

**Main window > 📷 Cameras and Recording > 📷 Click ⌁ > Click a Recording Schedule tab (for example) **

Before you configure the recording settings, configure the stream quality levels.

**Note:** For recording, ensure that the corresponding **NVR** is configured properly (**Devices > Expand > Disk Storage** tab).

**NOTICE!**

For all encoders, live view settings are also used for pre-event recording.

For encoders that support dual-streaming, the settings for live/pre-event recording, motion recording, and alarm recording are all configured independently.

For encoders that support only a single stream (e.g., the VideoJet 8004), live viewing and recording use the same stream. In this case, the recording settings take priority, so the live view uses the stream quality settings for continuous, motion, and alarm recording. You can enter a setting for live/pre-event only if continuous recording is disabled.

You can switch the live stream from stream 2 (default) to stream 1 for a workstation (**Devices > Expand > 📷 > Settings tab > Override recording settings**) or for an encoder. This setting does not affect pre-event recording.
To configure recording settings:

1. In the " column of **Continuous Recording**, select the desired stream quality or disable continuous recording.
2. In the " column, select a check box to activate audio.
3. In the " column of **Live/Pre-event Recording**, select the desired stream quality or select stream 1.
4. In the " column, select a check box to activate audio.
5. In the " column of **Motion Recording**, select the desired stream quality or disable motion recording.
6. In the " column, select a check box to activate audio.
7. In the **Pre-event [s]** column, click a cell and type the appropriate time.
8. In the **Post-event [s]** column, click a cell and type the appropriate time.
9. In the " column of **Alarm Recording**, select the desired stream quality or disable alarm recording.
10. In the " column, select a check box to activate audio.
11. In the **Pre-event [s]** column, click a cell and type the appropriate time.
12. In the **Post-event [s]** column, click a cell and type the appropriate time.

**NOTICE!**

If pre-event time for motion recording and pre-event time for alarm recording differ, the higher value is used for both.

If the configured pre-event time would overlap a preceding alarm or motion recording, the pre-event recording starts after the preceding recording is finished.

For detailed information on the various fields, see the Online Help for the appropriate application window.

### 9.5 Configuring recording settings (only VRM and Local Storage)

Main window > **Cameras and Recording** > Click > Click a **Recording Schedule** tab

(for example )

**Note:** For recording, ensure that the corresponding VRM or local storage is properly configured.

**VRM:** **Devices** > Expand > **

**Local Storage:** **Devices** > Expand > **

To configure recording settings:

1. In the **Recording** column, select **On**.
2. In **Quality Stream 1** column, click a cell and select the appropriate stream quality.
3. Under **Continuous or Prealarm Recording**, in the **Mode** column, select the desired recording mode.
   - If you select **Prealarm** as the recording mode, click a cell in the **Duration** column to select the alarm recording time before the alarm in seconds.
4. Under **Alarm Recording**, in the **Stream** column, select the stream that is recorded in case of an alarm. The settings in the next 2 columns are valid for the selected stream. You can select stream 2 only on encoders running ARM firmware.

   In the **Alarm Quality** column, click a cell to select the stream quality of the selected stream.

   In the **Duration** column, select the desired recording time before the alarm in seconds.

For detailed information on the various fields, see the Online Help for the appropriate application window.

### 9.6 Configuring port settings

Main window > Devices > Expand > Expand > Expand > Interfaces tab > Periphery tab

or

Main window > Devices > Expand > Expand > Interfaces > Interfaces > Interfaces tab > Periphery tab

You can only configure port settings for an encoder where the control of the camera is available and activated.

When the encoder or PTZ camera is exchanged, the port settings are not retained. You must again configure them.

After a firmware update check the port settings.

**To configure the port settings of an encoder:**

1. Make the appropriate settings.

   The settings are valid immediately after saving. You do not have to activate the configuration.

For detailed information on the various fields, see the Online Help for the appropriate application window.

### 9.7 Configuring PTZ camera settings

Main window > Cameras and Recording >

First configure the port settings of your PTZ camera before you can configure the PTZ camera settings. Otherwise the PTZ control is not working in this dialog box.

**To configure a control of a camera:**

1. In the Camera Table, select the required encoder.

2. To activate the control of a camera: In the **** column, select the check box.

3. Click the **** button.

   The dialog box for configuring PTZ settings is displayed.

4. Make the appropriate settings.
For detailed information on the various fields, see the Online Help for the appropriate application window.

5. Click OK.

9.8 Copying recording settings (NVR only)

Main window > Cameras and Recording > Click an icon for recording device (for example ) > Click a Recording Schedule tab (for example ).

You can copy recording settings from one Recording Schedule to another.

To copy the recording settings of a selected table row:
1. Select a table row you with the desired recording settings.
2. Click .
   The Copy Recording Settings dialog box is displayed.
3. In the list, select a Recording Schedule where you want the settings to copy to.
4. Click Copy current selection.
5. Click OK.
   The recording settings of the selected table row are copied.

To copy all recording settings of a Recording Schedule:
1. Click .
   The Copy Recording Settings dialog box is displayed.
2. In the list, select a Recording Schedule where you want the settings to copy to.
3. Click Copy all.
4. Click OK.
   The recording settings of all table rows are copied.
10 Configuring schedules

Main window > Schedules

There are two schedule types available:
- Recording Schedules
- Task Schedules

You can configure a maximum of 10 different Recording Schedules in the Recording Schedule Table. In these segments the cameras can behave differently. For example, they can have different frame rate and resolution settings (to be configured in the Cameras and Recording page). In every point in time, exactly one Recording Schedule is valid. There are no gaps and no overlaps.

You configure Task Schedules for scheduling various events which can occur in your system (to be configured in the Events page).

See Glossary for definitions of Recording Schedules and Task Schedules.

The schedules are used in other pages of the Configuration Client:
- Cameras and Recording page
  Used to configure recording.
- Events page
  Used to determine when events cause logging, alarms, or execution of Command Scripts.
- User Groups page
  Used to determine when the members of a user group can log on.

Follow these references to get detailed information on the available application windows:
- Section 20.1 Recording Schedules page, page 131
- Section 20.2 Task Schedules page, page 131

- Click to save the settings.
- Click to undo the last setting.
- Click to activate the configuration.

10.1 Configuring a Recording Schedule

Main window > Schedules

You can add exception days and holidays to any Recording Schedule. These settings override the normal weekly settings.

The sequence of decreasing priority is: exception days, holidays, weekdays.

The maximum number of Recording Schedules is 10. The first three entries are configured by default. You can change these settings.

Entries with the gray icon do not have a time period configured.

Recording Schedules share the same weekdays.

Each Standard Task Schedule has its own weekdays patterns.

To configure a Recording Schedule:
1. In the Recording Schedules tree, select a schedule.
2. Click the Weekdays tab.
3. In the **Schedule Table** field, drag the pointer to select the time periods for the selected schedule. The selected cells are displayed in the color of the selected schedule.

**Notes:**
- You can mark a time period on a weekday of a Recording Schedule with the color of another Recording Schedule.

## 10.2 Adding a Task Schedule

Main window > ![Schedules](image)

**To add a Task Schedule:**
1. Click **Add**. A new entry is added.
2. Enter the appropriate name.
3. Click **Standard** for a standard **Task Schedule** or **Recurring** for a recurring Task Schedule. If you change the setting, a message box is displayed. Click **OK** if you want to change the schedule type.

A standard Task Schedule is displayed as ![Standard Task Schedule](image), a recurring Task Schedule as ![Recurring Task Schedule](image).

4. Make the appropriate settings for the selected schedule.

## 10.3 Configuring a standard Task Schedule

Main window > ![Schedules](image)

Each standard **Task Schedule** has its own weekdays patterns.

**To configure a standard Task Schedule:**
1. In the **Task Schedules** tree, select a standard **Task Schedule**.
2. Click the **Weekdays** tab.
3. In the **Schedule Table** field, drag the pointer to select the time periods for the selected schedule.

## 10.4 Configuring a recurring Task Schedule

Main window > ![Schedules](image)

Each recurring **Task Schedule** has its own day pattern.

**To configure a recurring Task Schedule:**

1. In the **Task Schedules** tree, select a recurring **Task Schedule**.
2. In the **Recurrence Pattern** field, click the frequency with which you want the Task Schedule to recur (**Daily**, **Weekly**, **Monthly**, **Yearly**) and then make the corresponding settings.
3. In the **Start date** list, select the appropriate start date.
4. In the **Day Pattern** field, drag the pointer to select the appropriate time period.
10.5 Removing a Task Schedule

Main window >  > Select an item in the Task Schedules tree

To remove a Task Schedule:
1. In the Task Schedules tree, select an item.
2. Click Delete.
   The Task Schedule is deleted. All items that are assigned to this schedule, are not scheduled.

10.6 Adding holidays and exception days

Main window >  Schedules
You can add holidays and exception days to a Recording Schedule or to a Task Schedule.
Recording Schedules share the same holidays and exception days.
Each standard Task Schedule has its own holidays or exception days patterns.

To add holidays and exception days to a schedule:
1. In the Recording Schedules or Task Schedules tree, select a schedule.
2. Click the Holidays tab.
3. Click Add.
   The Add Holiday(s) dialog box is displayed.
4. Select one or more holidays and click OK.
   The selected holidays are added to the Schedule Table.
5. Drag the pointer to select the appropriate time period (this is not possible for Recording Schedules).
   The selected cells are cleared and vice versa.
6. Click the Exception Days tab.
7. Click Add.
   The Add Exception Day(s) dialog box is displayed.
8. Select one or more special days and click OK.
   The selected exception days are added to the Schedule Table.
9. Drag the pointer to select the appropriate time period (this is not possible for Recording Schedules).
   The selected cells are cleared and vice versa.
   The sorting order of the added holidays and exception days is chronological.

Notes:
- You can mark a time period on a holiday or exception day of a Recording Schedule with the color of another Recording Schedule.

10.7 Removing holidays and exception days

Main window >  Schedules
You can remove holidays and exception days from a Recording Schedule or a Task Schedule.

To remove holidays and exception days from a Task Schedule:
1. In the Recording Schedules or Task Schedules tree, select a schedule.
2. Click the Holidays tab.
3. Click **Delete**.
   The **Select the holidays to delete** dialog box is displayed.

4. Select one or more holidays and click **OK**.
   The selected holidays are removed from the Schedule Table.

5. Click the **Exception Days** tab.

6. Click **Delete**.
   The **Select the exception days to delete** dialog box is displayed.

7. Select one or more exception days and click **OK**.
   The selected exception days are removed from the Schedule Table.

### 10.8 Renaming a schedule

**Main window >**

**To rename a schedule:**

1. In the **Recording Schedules** or **Task Schedules** tree, select an item.

2. Click .

3. Enter the new name and press ENTER.
   The entry is renamed.
11 Configuring events and alarms

Main window > Events

or

Main window > Alarms

This chapter provides information on how to configure events and alarms in your system. The available events are grouped beyond their corresponding devices. In the Events page, you configure when an event in your Bosch Video Management System triggers an alarm, executes a Command Script, and is logged. If an event is logged, it is also displayed in the Event List of the Operator Client.

Example (part of an Event Configuration Table):

This example means:
If the video signal of the selected camera gets lost, an alarm is triggered, the event is logged, and no script is executed. This only happens if the event lasts at least 500 ms.

In Alarms, you define how an alarm is displayed, and which cameras are displayed and recorded in case of an alarm.

Some system events are configured as alarms by default.

Follow these references to get detailed information on the available application windows:

- Section 22.1 Command Script Editor dialog box, page 141
- Section 22.2 Create Compound Event / Edit Compound Event dialog box, page 142
- Section 22.3 Select Script Language dialog box, page 142
- Section 23.1 Global Alarm Settings dialog box, page 143
- Section 23.2 Select Image Pane Content dialog box, page 144
- Section 23.4 Alarm Options dialog box, page 145

▲ Click to save the settings.

▲ Click to undo the last setting.

▲ Click to activate the configuration.

11.1 Copying and pasting in tables

You can configure many objects simultaneously within a Camera Table, an Event Configuration Table, or an Alarm Configuration Table with a few clicks.

For detailed information, see Section 9.1 Copying and pasting in tables, page 48.
11.2 Removing a table row

Main window > Alarms
You can only remove a table row that you or another user have added, i.e. you can delete duplicated events or Compound Events.
Compound Events are located in the Event Tree under System Devices > Compound Events.

To remove a table row:
1. Select the row.
2. Click .

11.3 Managing resource files

For detailed information see:
– Section 8.4 Managing resource files, page 42.

11.4 Configuring an event

Main window > Events

To configure an event:
1. In the tree, select an event or event state, for example System Devices > Authentication > Operator Authentication Rejected.
   The corresponding Event Configuration Table is displayed.
2. In the Trigger Alarm - Schedule column, click a cell and select the appropriate schedule.
   The schedule determines when the alarm is triggered.
   Select one of the Recording Schedules or Task Schedules that you have configured in the Schedules page.
3. In the Log - Schedule column, click a cell and select the appropriate schedule.
   The schedule determines when the event is logged. Only a logged event is displayed in the Event List of the Operator Client.
4. In the Script - Script column, click a cell and select an appropriate Command Script.
5. In the Script - Schedule column, click a cell and select the appropriate schedule.
   The schedule determines when the event triggers the start of the Command Script.
6. In the Minimum Event Time column, click a cell and type the number of milliseconds as the minimum time between these events. Use this setting to prevent a switching sensor from generating a large number of events.

11.5 Duplicating an event

Main window > Events

You can duplicate an event to trigger different alarms for a particular event.

To duplicate an event:
1. In the tree, select an event condition.
   The corresponding Event Configuration Table is displayed.
2. Select a table row.
3. Click .
   A new table row is added below.
   It has the default settings.

### 11.6 Logging user events

Main window > ![Events] > Expand **System Devices** > **User Actions**

You can configure the logging behavior of several user actions for each available user group individually.

**Example:**

**To log user events:**

1. Select a user event to configure its logging behavior, e.g. **Operator Logon**.
   The corresponding Event Configuration Table is displayed.
   Each user group is displayed in the **Device** column.

2. If available: In the **Trigger Alarm - Schedule** column, click a cell and select the appropriate schedule.
   The schedule determines when the **alarm** that is supposed to notify the user is triggered.
   You can select one of the **Recording Schedules** or **Task Schedules** that you have configured in **Schedules**.

3. In the **Log - Schedule** column, click a cell and select the appropriate schedule.
   The schedule determines when the event is logged.
   In the example, the Operator logon of the Admin Group and the Power User Group are not logged whereas the Operator logon of the Live User Group are logged during **Day** schedule. During the selected schedule, each Operator logon is displayed in the Event List of each user of the Live User group.

4. In the **Minimum Event Time** column, click a cell and type the number of milliseconds as the minimum time period that the event must last to be a single event.
   The following screenshot displays this example:

**11.7 Configuring user event buttons**

Main window > ![Events]

You can configure the user event buttons available in the Operator Client. You can configure that one or more user event buttons are not displayed in the Operator Client.

On the **User Groups** page, you configure that the user event buttons are only available in the Operator Client of the corresponding user group.
To configure user event buttons:

1. In the tree, select **System Devices > Operator Client Event Buttons > Event Button Pressed**.
   The corresponding Event Configuration Table is displayed.
2. Select a user event button to configure its behavior.
3. In the **Trigger Alarm - Schedule** column, click a cell and select the appropriate schedule.
   The schedule determines when the alarm that is supposed to notify the user is triggered.
4. In the **Log - Schedule** column, click a cell and select the appropriate schedule.
   The schedule determines when the event is logged.
   Selecting **Never** makes the user event button unavailable in the Operator Client of all user groups that have the user event button permission.
   During the selected schedule, each Event Button Pressed event is displayed in the Event List of each user.
5. In the **Script - Script** column, click a cell and select an appropriate **Command Script**.
6. In the **Script - Schedule** column, click a cell and select the appropriate schedule.
   The schedule determines when the Command Script is executed.
7. In the **Minimum Event Time** column, click a cell and type the number of milliseconds as the minimum time period that the event must last to be a single event.

### 11.8 Creating a Compound Event

**Main window > Events >**

You create a **Compound Event** by combining maximum 10 events. You can combine only state changes and their objects. Objects can be for example schedules or devices. You can combine both the state changes and their objects with the Boolean expressions **AND** and **OR**.

**Example:** You combine the connection states of an IP camera and a decoder. The Compound Event shall only occur when both the devices loose their connection. In this case you use the **AND** operator for the two objects (the IP camera and the decoder) and for the two connection states **Video Signal Lost** and **Disconnected**.
To create a Compound Event:
1. In the Event States: field, select an event state.
2. In the Objects: field select one or more objects.
   In the Boolean operation between objects field, click AND or OR to associate the selected objects.
   In the Resulting Compound Event will be fired, IF: field, the event condition is displayed.
3. Repeat the previous steps to add as many event states as required (maximum 10).
4. In the Boolean operation between conditions field, click AND or OR to associate the selected event states.
5. Click OK.
   The new Compound Event is added to the Event Configuration Table. You find it in the Event Tree beyond Compound Events.

11.9 Editing a Compound Event

Main window > Events
You can change a previously created Compound Event.
To edit a Compound Event:
1. In the Event Tree, expand System Devices > Compound Event State > Compound Event is True.
2. In the Event Configuration Table, in the Device column, right-click the required Compound Event and click Edit.
   The Edit Compound Event dialog box is displayed.
3. Make the required changes.
4. Click OK.
   The Compound Event is changed.
11.10 Configuring an alarm

Main window > Alarms

Before configuring an alarm you must configure the trigger in Events.

To configure an alarm:
1. In the tree, select an alarm, for example System Devices > Authentication > Operator Authentication Rejected.
   The corresponding Alarm Configuration Table is displayed.
2. In the Priority column, click ... in a cell to type the alarm priority for the selected alarm (100 is low priority, 1 is high priority).
   In the Title column, click ... in a cell to type the title of the alarm to be displayed in Bosch Video Management System, for example in the Alarm List.
   In the Color column, click ... in a cell to display a dialog box for selecting a color for the alarm to be displayed in the Operator Client, for example in the Alarm List.
3. In the 1-5 columns, click ... in a cell to display the Select Image Pane Content dialog box. Make the required settings.
4. In the Audio File column, click ... in a cell to display a dialog box for selecting an audio file that is played in case of an alarm.
5. In the Alarm Options column, click ... in a cell to display the Alarm Options dialog box. This dialog box allows you to configure the following settings for alarms:
   – Cameras that start recording in case of an alarm
   – Enabling protection for these alarm recordings (only for NVR recording)
   – Triggering PTZ commands in case of alarm
   – Notifications that are sent in case of an alarm
   – Workflow that has to be processed in case of an alarm
   – Assigning cameras that are displayed in analog monitor groups in case of an alarm.
   For detailed information on the various fields, see the Online Help for the appropriate application window.

11.11 Configuring settings for all alarms

Main window > Alarms

You can set the following global alarm settings:
– Mode for alarm handling
– Number of image panes per alarm
– Auto-clear time
– Instant playback rewind time
– Manual alarm recording time
– Repeat time for alarm sound
– Configure the behavior of all analog monitor groups

To configure all alarms:
1. Click .
   The Global Alarm Settings dialog box is displayed.
2. Make the appropriate settings.
   For detailed information on the various fields, see the Online Help for the appropriate application window.
3. Click **OK**.
12 Configuring Command Scripts

This chapter describes how to configure Command Scripts. Command Scripts appear at various places of Bosch Video Management System.

- Click to save the settings.
- Click to undo the last setting.
- Click to activate the configuration.

12.1 Managing Command Scripts

Main window
You can create a Command Script using the following scripting languages:
- C#
- VB.Net
You cannot change the scripting language of an existing Command Script.
You can create a Client Script or a Server Script.
You can add scriptlets to every script.

To get help on entering code, click in the Command Script Editor dialog box. The Bosch Script API help is displayed.

To add a server scriptlet:
1. On the Tools menu, click the Command Script Editor... command.
   The Select Script Language dialog box is displayed if no Command Script was created yet.
2. In the Script Language: list, select the required entry.
   The Command Script Editor dialog box is displayed.
3. In the left pane of the Command Script Editor dialog box, right-click ServerScript and click New Scriptlet.
   A new scriptlet is added.
4. Enter your code.

To add a client scriptlet
1. On the Tools menu, click the Command Script Editor... command.
   The Select Script Language dialog box is displayed if no Command Script was created yet.
2. In the Script Language: list, select the required entry.
   The Command Script Editor dialog box is displayed.
3. In the left pane of the Command Script Editor dialog box, right-click ClientScript and click New Scriptlet.
   A new scriptlet is added.
4. Enter your code.

To delete a scriptlet:
1. Open the Command Script Editor dialog box.
2. Click the Server Script tab or the Client Script tab as required.
3. In the Event Tree, right-click the required event and click .
   The scriptlet is removed.
To exit the Command Script Editor dialog box:

- Click .

12.2 Configuring a Command Script to be started automatically

Main window > Alarms > or > Alarm Options column > ...

You configure a Client Command Script to be started in the following cases:
- Workstation starts up.
- User accepts an alarm.

To configure a Command Script at workstation startup:
See Section 6.9 Configuring a startup Command Script, page 28.

To configure a Command Script after user has accepted an alarm:
1. Click the Workflow tab.
2. In the Execute the following Client Script when alarm is accepted: list, select the desired Client Script.
   This script is started as soon as a user accepts the selected alarm.

12.3 Importing a Command Script

Main window
You can import Command Scripts that have been developed on another computer. The file must be written in the same scripting language that you used on your system.

To import a Command Script:
1. On the Tools menu, click the Command Script Editor... command.
   The Command Script Editor dialog box is displayed.
2. Click .
   The dialog box for opening a file is displayed.
3. Select the required script file and click OK.

12.4 Exporting a Command Script

Main window
You can export Command Scripts that have been developed on another computer.

To export a Command Script:
1. On the Tools menu, click the Command Script Editor... command.
   The Command Script Editor dialog box is displayed.
2. Click .
   The dialog box for saving a file is displayed.
3. Type the required script file name and click OK.

12.5 Configuring a startup Command Script

Main window > Devices > Expand > > > Settings page
You configure a Command Script to be started when the Operator Client on the selected workstation is started. You must create a corresponding Command Script. For creating a Command Script, see Section 12.1 Managing Command Scripts, page 65.

**To configure a startup script:**

- In the **Startup script:** list, select the required Command Script.
13 Configuring user groups

Main window > User Groups

This chapter provides information on how to configure user groups. You make all settings per user group and not per user. A user can only be the member of one user group. User group access is limited to the devices of the derived Logical Tree.

You cannot change the settings of a default user group.

This user group has access to all the devices of the Full Logical Tree and is assigned the Always schedule.

For accessing the Windows user groups of a domain, LDAP user groups are used.

Follow these references to get detailed information on the available application windows:

- Section 24.1 User Properties page, page 148
- Section 24.2 User Group Properties page, page 149
- Section 24.3 LDAP Server Settings dialog box, page 149
- Section 24.4 Copy User Group Permissions dialog box, page 151
- Section 24.5 Select User Groups dialog box, page 151
- Section 24.7 Logical Tree page, page 152
- Section 24.8 Events and Alarms page, page 152
- Section 24.9 Permissions page, page 153
- Section 24.10 Priorities page, page 154
- Section 24.11 Camera Permissions page, page 155
- Section 24.12 Decoder Permissions page, page 156
- Section 24.13 User Interface page, page 156

► Click  to save the settings.

► Click  to undo the last setting.

► Click  to activate the configuration.

13.1 Creating a user

Main window > User Groups

You create a user as a new member of an existing user group.

NOTICE!

A user who wants to operate a CCTV keyboard must have a number-only user name and password. The user name can have maximum 3 numbers, the password can have maximum 6 numbers.

To create a user:

1. Select a user group and click .
   A new user is added to the User Groups tree.
2. Right-click the new user and click Rename.
3. Enter the desired name and press ENTER.
4. On the User Properties page, enter the user name and the password.
13.2 Creating a user group

Main window > User Groups
For adapting the user group permissions to your requirements, you must create a new user group and change its settings.

To create a user group:

1. Click .
   A new user group is added to the User Groups tree.
2. Right-click the new user group and click Rename.
3. Enter the desired name and press ENTER.
   For detailed information on the various fields, see the Online Help for the appropriate application window.

13.3 Copying user group permissions

Main window > User Groups
You can copy user group permissions from one user group to other user groups.

To copy user permissions to other user groups:

1. In the User Groups tree, select a user group.
2. Click .
   The Copy User Group Permissions dialog box is displayed.
3. Select the appropriate permissions and the appropriate user groups.
4. Click OK.
   The user group permissions of this user group are copied to the other user groups.
   The dialog box is closed.

13.4 Creating a dual authorization user group

Main window > User Groups > Edit User Group > New Dual Authorization Group dialog box
You select two user groups. The members of these user groups are the members of the new dual authorization group.

To create:

1. Select a user group in each list.
   It is possible to select the same user group in the second list.
2. For each user group, select Force dual authorization if required.
   When this check box is selected, each user of the first group can only log on together with a user of the second user group.
   When this check box is cleared, each user of the first user group can log on alone but he only has the access rights of his user group.
13.5 Configuring LDAP settings

Main window > User Groups

**CAUTION!**
Do not assign an LDAP group to different Bosch Video Management System user groups. This can result in not intended permissions for these users.

**NOTICE!**
Type the search paths accurately. Wrong paths can make the search on an LDAP server very slow.

To configure LDAP settings:
1. In the User Groups tree, select a user group.
2. Click the User Group Properties tab.
3. In the LDAP Properties field, make the appropriate settings.
For detailed information on the various fields, see the Online Help for the appropriate application window.

13.6 Associating an LDAP group

Main window > User Groups
You associate an LDAP group with a Bosch Video Management System user group to give the users of this LDAP group access to the Operator Client. The users of the LDAP group have the access rights of the user group where you configure the LDAP group.
You probably need the help of the IT administrator who is responsible for the LDAP server.

To associate an LDAP group:
1. In the User Groups tree, select a user group.
2. Click the User Group Properties tab.
3. In the LDAP Properties field, click Settings.
   The LDAP Server Settings dialog box is displayed.
4. Enter the settings of your LDAP server and click OK.
For detailed information on the various fields, see the Online Help for the appropriate application window.
5. In the LDAP Groups: list, double-click an LDAP group.
   This LDAP group is entered in the Associated LDAP group: field.

13.7 Scheduling user logon permission

Main window > User Groups
You can limit the members of a user group to log on to their computers at specified time periods.
You cannot change these settings for a default user group.

To schedule logging on:
1. In the User Groups tree, select a user group.
2. Click the User Group Properties tab.
3. In the Logon schedule: list, select a schedule.

13.8 Configuring permissions for devices

Main window > User Groups
You can set the permissions for all devices of the Logical Tree independently. After you have moved permitted devices to a folder that is not permitted for this user group, you must set the permissions for the folder to grant access to its devices.
You cannot change these settings for a default user group.
To configure permissions:
1. In the User Groups tree, select a user group.
2. Click the Logical Tree tab.
3. Select or clear the check boxes as appropriate.
   - Selecting an item below a node, automatically selects the node.
   - Selecting a node, automatically selects all items below.
For detailed information on the various fields, see the Online Help for the appropriate application window.

13.9 Configuring permissions for events and alarms

Main window > User Groups
You configure which events the user group is authorized to process.
You cannot change these settings for a default user group.
To configure permission for events and alarms:
1. In the User Groups tree, select a user group.
2. Click the Events and Alarms tab.
3. Select the Events and Alarms check box to enable all available events and alarms.
   Or:
   - Select the required check boxes to enable the appropriate events and alarms.

13.10 Configuring global permissions

Main window > User Groups
You can configure global permissions like Logbook access.
You cannot change these settings for a default user group.
To configure global permissions:
1. In the User Groups tree, select a user group.
2. Click the Permissions tab.
3. Select or clear the check boxes as appropriate.
For detailed information on the various fields, see the Online Help for the appropriate application window.
13.11 Configuring various priorities

Main window > User Groups
You can configure the following priorities:
– You can configure the priorities for acquiring PTZ controls and Bosch Allegiant trunk lines.
– You can configure the alarm priorities for Live Mode and Playback Mode.
– You can configure a time period for PTZ locking, i.e. a user with higher priority can take
over the camera control from a user with a lower priority and locks it for this time period.

To configure:
1. In the User Groups tree, select a user group.
2. In the Control Priorities field, move the slider as required.
3. In the Automatic Popup Behavior field, move the slider as required.
4. Click the User Interface tab.
5. In the Timeout in min. list, select the required entry.

13.12 Configuring camera permissions

Main window > User Groups
You can configure various permissions for cameras, e.g. PTZ control.
You cannot change these settings for a default user group.

To configure camera permissions:
1. In the User Groups tree, select a user group.
2. Click the Priorities tab.
3. Select or clear the check boxes as appropriate.
For detailed information on the various fields, see the Online Help for the appropriate
application window.

13.13 Configuring decoder permissions

Main window > User Groups
You can configure permissions for decoders.
You cannot change these settings for a default user group.

To configure decoder permissions:
1. In the User Groups tree, select a user group.
2. Click the Camera Permissions tab.
3. Select or clear the check boxes as appropriate.

13.14 Configuring user interface settings

Main window > User Groups
You can configure a multi monitor mode with up to 4 monitors. You set for every monitor what
is displayed on it, e.g. monitor 2 only displays Live Image panes or Monitor 1 and Monitor 2
use the 16:9 aspect ratio for HD cameras.

To configure user interface settings:
1. In the User Groups tree, select a user group.
2. Click the **Decoder Permissions** tab.
3. In the 4 monitor list, select the required entries.
   If you click **Restore Default**, all list entries are reset to their default settings.
4. If required, select the **Save settings when shutting down** check box to enable the user to save his individual settings when shutting down the Operator Client.
14 Managing configuration data

Main window
You must activate the current configuration to make it valid for the Operator Client. The system reminds you to activate when exiting the Configuration Client.

Every activated configuration is saved with the date and with a description if required. At every point in time you can restore a recently activated configuration. All configurations saved in the meantime get lost.

Follow these references to get detailed information on the available application windows:

- Section 16.3 Activation Manager dialog box, page 82
- Section 16.4 Activate Configuration dialog box, page 82
- Section 16.5 License Manager dialog box, page 82
- Section 16.6 License Activation dialog box, page 83
- Section 16.7 Global Alarm Settings dialog box, page 83
- Section 16.8 Stream Quality Settings dialog box, page 83
- Section 16.9 Options dialog box, page 83

14.1 Activating the working configuration

Main window
You activate the currently working configuration. The Operator Client uses the activated configuration after the next start. All open instances of the Operator Client in the network exit and start again. The user of each Operator Client instance usually does not have to log on again. A new logon is only necessary if an automatic restart and relogon happened 3 times or more during the last hour.

You can configure a delayed activation time. If you configure a delayed activation time, the working configuration is not activated at once but at the time configured. If you configure another activation time later (delayed or not does not matter), this time is active now. The first configured activation time is removed.

When you exit the Configuration Client the system reminds you to activate the current working copy of the configuration.

NOTICE!
Each instance of Operator Client restarts when the configuration is activated. Avoid unnecessary activations. Perform activations preferably in the night or during time periods with low activities.

To activate the currently working configuration:

1. Click .
   The Activate Configuration dialog box is displayed.
2. If required, enter a delayed activation time. As per default, the present point in time is configured as activation time. If you do not change the delayed activation time, the activation is performed immediately.
3. Type a description and click OK.
   The current configuration is activated.
   If you configured a delayed activation time, the configuration will be activated later.

14.2 Activating a configuration

Main window
You can activate a previous version of the configuration that you have saved earlier.
To activate a configuration:
1. On the System menu, click Activation Manager....
   The Activation Manager dialog box is displayed.
2. In the list, select the configuration you want to activate.
3. Click Activate.
   A message box is displayed.
4. Click OK.
   The selected configuration is activated.

14.3 
Exporting configuration data

Main window
You can export the device configuration data of Bosch Video Management System in a database file and the user data in a .zip file. You can use this functionality for data backup. You can use these files for restoring a system configuration.

CAUTION!
Stop Bosch Video Management System Central Server service before you copy the exported configuration file.

To export configuration data:
1. On the System menu, click Activation Manager....
   The Activation Manager dialog box is displayed.
2. Click Export.
3. Enter a filename.
   The current configuration is exported. A .bvms file with configuration data and a .zip file with the user data is created.

14.4 
Exporting configuration data to OPC

Main window
You can export the device configuration data of Bosch Video Management System in an XML file to import it in an OPC Server application. The file must be stored in the bin directory of your Bosch Video Management System installation.

For configuring a Bosch VMS - BIS connection the Bosch VMS - BIS Interface Configuration Manual is available.

CAUTION!
Install OPC server and Bosch Video Management System Central Server on different computers.
If both the servers run on the same computer, the performance of the systems is reduced. Additionally serious software crashes can appear.

To export configuration data:
1. On the System menu, click Export Device Information for OPC....
   The Export Device Information File dialog box is displayed.
2. Enter a file name and click Save.
   The file is saved.
   You can import this file in your OPC server application.
15 Configuration examples

This chapter contains examples on how to configure selected devices in Bosch Video Management System.

The following examples are available:
- Section 15.1 Adding a Bosch ATM/POS bridge, page 76
- Section 15.2 Adding a Bosch Allegiant input alarm, page 77
- Section 15.3 Adding and configuring 2 Dinion IP cameras with VRM recording, page 77

15.1 Adding a Bosch ATM/POS bridge

This example describes how to set up a Bosch ATM/POS bridge.

Configuring the ATM/POS bridge
1. Ensure that the device is powered.
2. To configure the IP address and subnet mask of the device connect it to a COM port of your computer with a RS232 cable (use the specified Bosch cable for connection). See the Installation Manual of the Bosch ATM/POS bridge for details.
3. On this computer, start a Hyper terminal session (usually: Start > Programs > Accessories > Communications > Hyper Terminal).
4. Type a name for the session and click OK.
5. Select the COM port number and click OK.
6. Enter the following COM port settings:
   - 9600 bits/s
   - 8 data bits
   - no parity
   - 1 stop bit
   - hardware flow control
   Click OK.
7. Press F1 for displaying the system options menu of the device.
8. Enter 1 to set the IP address and the subnet mask as required.
9. Leave the default settings for the ports:
   - port1: 4201
   - port2: 4200

Adding the ATM/POS bridge to Bosch Video Management System
1. Connect the device to your Bosch Video Management System network.
2. Start Configuration Client.
3. Click Devices, expand the Logical Tree, expand , right-click , click Add Bosch ATM/POS-Bridge.
   The Add Bosch ATM/POS-Bridge dialog box is displayed.
4. Type a name as desired and type the settings that you configured earlier.
5. Click the Inputs tab and select the required inputs.
6. Click to save the settings.
7. Click Events.
8. Expand , expand POS Bridge Input, click Data Input.
9. In the **Trigger Alarm** list, select **Always** to ensure that this event always triggers an alarm. If you want the event trigger an alarm only during a certain time span, select a schedule.

10. Click to save the settings.

11. Click **Alarms**.

12. Configure the desired alarm settings for this event.

13. Click to save the settings and click to activate the configuration.

14. Perform a test to ensure that the alarm is working as desired.

### 15.2 Adding a Bosch Allegiant input alarm

After a Bosch Allegiant device is added to Bosch Video Management System, you add Allegiant alarm inputs.

1. On the Device Tree, click the Allegiant device entry.
2. Click the **Inputs** tab and click **Add Input**.
3. Add the desired input alarms.
4. Click **Events**.
5. In the Event Tree, expand **Allegiant Devices**, expand **Allegiant Input**, and click **Input Closed** or **Input Opened** (depends on your application).
6. In the **Trigger Alarm** list, select **Always** to ensure that an event always triggers an alarm. If you want the event trigger an alarm only during a certain time span, select a schedule.

7. Click to save the settings and click to activate the configuration.

8. Perform a test to ensure that the alarm is working as desired.

### 15.3 Adding and configuring 2 Dinion IP cameras with VRM recording

This section describes how to add 2 Dinion IP cameras for **VRM** recording, how to configure different recording settings and how to configure Forensic Search for these cameras.

**Prerequisite:**

**VRM** and **iSCSI** devices are properly configured.

This means:

- The **VRM** is added to the Device Tree.
- An **iSCSI** device with configured target and **LUN** is assigned to this **VRM**.

**To add the IP cameras to an existing VRM:**

1. Right-click **Device** and click **Add Encoder**.
   - The **Add Encoder** dialog box is displayed.
2. Type the IP address of the IP camera and select the encoder type (**Dinion IP**).
   - Click **OK**.
   - Repeat this step for the other IP camera.
To add the IP cameras to the Logical Tree:

Main window > Maps and Structure
➢ Drag the cameras to the Logical Tree.

To change camera properties:

Main window > Cameras and Recording > > tab
1. In the Live Video column, configure the quality of live display. For these devices, you can only set the live quality per camera, not schedule dependent.
2. Make the appropriate settings in the other columns.

To configure recording settings for the cameras:

1. Click a schedule tab, for example .
2. In the column, click a cell and select the appropriate stream quality.
3. Under Continuous or Prealarm Recording, in the Select column, select the desired recording mode.
   If you click Prealarm: Click a cell in the Duration column to select the alarm recording time before the alarm in seconds.
4. Under Alarm Recording, in the Duration column, click a cell and type the desired recording time.
5. Repeat the previous steps to configure the recording settings for the other camera.

To enable Forensic Search on a workstation:

Main window > Devices > Expand
1. Click the icon of your workstation.
2. Click the Settings tab.
3. Click to select the Enable Forensic Search check box.

Performing a Forensic Search

Operator Client VRM main window > Timeline tab
Perform the Forensic Search on the workstation where you have enabled Forensic Search.

To perform a Forensic Search:
1. Using the Hairline, select the time period on the Timeline and select the corresponding Image pane.
2. Click .
   The Forensic Search dialog box is displayed.
   The selected time period is copied to the Start: and End: fields.
   If required, change the values. Click .
3. In the Algorithm: list, select an IVA entry.
4. In the Surveillance Tasks field, configure your Forensic Search.
   You can find information on this in the relevant documents on the product CD supplied.
5. Click **Search** to start the Forensic Search.

The window with the matching entries is displayed.
16 Global Configuration Client windows

This chapter contains information on some basic application windows available in Bosch Video Management System Configuration Client.

16.1 Configuration window

Main window
Allows you to configure your system. The buttons in the toolbar represent the various pages which you must configure to get a running system. Their sequence represents the recommended workflow of configuration.

- Click a tree item to display the available property pages.

  Devices
  Click to display the Devices page with all devices connected to the system.

  Maps and Structure
  Click to display the Maps and Structure page with Logical Tree, Device Tree, and maps.

  Schedules
  Click to display the Recording Schedules and Task Schedules page.

  Cameras and Recording
  Click to display the Cameras and Recording page with the Camera Table and the recording settings of all cameras.

  Events
  Click to display the Events page.

  Alarms
  Click to display the Alarms page.

  User Groups
  Click to display the User Groups page with all users.

  Click to save the changed settings of the current window.

  Click to restore the saved settings of the current window.

  Click to display the Activate Configuration dialog box.

  Click to delete the selected item. (Not available on every page).
16.2 Menu commands

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</tr>
<tr>
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</tr>
<tr>
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<tr>
<td>Displays the Activation Manager dialog box.</td>
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<td>Displays a dialog box for creating a configuration file that you can import in a 3rd party management system.</td>
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<tr>
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</tr>
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<tr>
<td>Displays the Resource Manager dialog box.</td>
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<tr>
<td>Displays the Sequence Builder dialog box.</td>
</tr>
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<td>Displays the Resource Converter dialog box if old map resources in DWF format are available.</td>
</tr>
<tr>
<td><strong>License Manager...</strong></td>
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<tr>
<td>Displays the License Manager dialog box.</td>
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<td><strong>About...</strong></td>
</tr>
<tr>
<td>Displays a dialog box containing information on the installed system, e.g., the version number.</td>
</tr>
</tbody>
</table>
16.3 **Activation Manager dialog box**

Main window > **System** menu > **Activation Manager**... command

Allows you to activate the current configuration or to rollback to a previous configuration. Additionally you can import or export configuration files.

![Activation Manager dialog box](image)

- **Export**
  Click to display a dialog box for entering a name of the configuration file for export.

- **Activate**
  Click to display the **Activate Configuration** dialog box.

16.4 **Activate Configuration dialog box**

Main window > ![Icon]

Allows you to type a description for the working copy of the configuration to be activated.

**Set Delayed Activation time**
Click to select a delayed activation time.

16.5 **License Manager dialog box**

Main window > **Tools** menu > **License Manager**... command

Allows you to license the Bosch Video Management System package that you have ordered and to upgrade with additional features.

- **Base Packages**
  Displays the available base packages.
**Type Number**
Displays the Commercial Type Number (CTN) of the selected package, feature or expansion.

**Status**
Displays the licensing status if applicable.

**Optional Features**
Displays the available features.

**Expansion**
Displays the available expansions and their count. To change the count point right from a check box and click the up or down arrow.

**Activate**
Click to display the **License Activation** dialog box.

**Import Bundle Info**
Click to import an XML file containing a Bundle Information that you received from Bosch.

**Add New Package**
Click to display a dialog box for selecting a new license file.

---

**16.6 License Activation dialog box**
Main window > **Tools** menu > **License Manager**... command > **License Manager** dialog box > **Activate** button
Allows you to license the Bosch Video Management System packages that you have ordered and to upgrade with additional packages.
For obtaining the License Activation Key you must contact the Bosch Activation Center and specify the desired package and the computer signature of the Central Server. Additionally you need the Authorization Number. This number is included in your software box.

**License Activation Key:**
Allows you to type the License Activation Key received from the Bosch Activation Center.

---

**16.7 Global Alarm Settings dialog box**
Main window > **Settings** menu > **Global Alarm Settings**... command
See Section 23.1 **Global Alarm Settings dialog box**, page 143 for details.

---

**16.8 Stream Quality Settings dialog box**
Main window > **Settings** menu > **Set Recording Qualities**... command
See Section 21.4 **Stream Quality Settings dialog box**, page 137 for details.

---

**16.9 Options dialog box**
Main window > **Settings** menu > **Options**... command

**Language**
Allows you to configure the language of your Configuration Client. If you select **Default system language** the language of your Windows installation is used.
Scan Options
Allows you to configure the scan process. Broadcast allows that scanning is only active in the current subnet. Multicast allows for scanning beyond a router in other subnets. If the scan process does not find devices with one of these options, try the other one.

Analog Monitor Group (AMG) Settings
Allows you to configure that the users can control all analog monitor groups with each Bosch Video Management System client computer. It is then not required to configure this computer as a workstation in the Device Tree.

Logbook Configuration
Allows you to configure the connection string for the Logbook database (Database Connection String:). Change this string only when you want to configure a remote SQL server for the Logbook and only when you are familiar with SQL server technology.
17 Devices page

Main window > Devices
Displays the Device Tree and the configuration pages.
Allows you to configure the available devices, such as encoders, decoders, NVRs, VRMs, local storage encoders, VIDOS NVRs, analog matrices, or peripheral devices like ATM / POS bridges.

To add NVRs, decoders, and encoders to the system, click . The network is scanned for new devices. NVRs and decoders are automatically added to your system. Encoders must be manually assigned to NVRs, even if they are not recorded. Otherwise they are not part of your system. The NVRs manage events and recording for their assigned cameras.
Unassigned encoders do not appear in the Device Tree. They are not part of your system until you assign them to an NVR.

Note:
Video data from encoders that are assigned to an NVR, is always encoded with MPEG-4.
Devices are represented in a tree and grouped by the physical network structure and the device categories.
Video sources like encoders are grouped under NVRs. Digital video recorders such as DiBos are listed separately.

NVR & Decoder Scan
Click to display the Network Scan dialog box.
Scans the network for NVRs, decoders, and encoders. When the scan process is finished, a dialog box for assigning the detected encoders to NVRs is displayed.

VRM & iSCSI Devices Scan
Click to display the Bosch VMS Scan Wizard dialog box.
Scans the network for VRMs, iSCSI devices, live only encoders, local storage encoders, or VIDOS NVRs.

Click to display the Failover NVR Manager dialog box.

Click to display the IP Device Configuration dialog box.
▶ Click a tree item to display the corresponding pane.

17.1 Initial Device Scan dialog box
Main window > Hardware menu > Initial Device Scan... command
Displays the devices which have duplicate IP addresses or a default IP address (192.168.0.1).
Allows you to change such IP addresses and subnet masks.
You must enter the correct subnet mask before changing an IP address.

17.2 Network Scan dialog box
Main window > Devices > NVR & Decoder Scan
Displays detected encoders, NVRs, and decoders.
Allows you to assign detected encoders to an NVR. This is required to store the video data of the encoder on an NVR and to manage events of their assigned devices. Unassigned devices do not appear in the Device Tree.

**NOTICE!**
Only devices in the local subnet are detected automatically. If a device is located in another subnet, add it manually to the Device Tree. To perform this, right-click the required node (for example an NVR), click **Add Encoder**, type the IP address of the device, click the **Network** tab and enter the subnet mask of the device.

**Unassigned Encoders**
Displays the unassigned encoders that were detected.

**Assigned Encoders and NVRs**
Displays assigned encoders and NVRs. NVRs are automatically assigned when they are detected. For assigning encoders you must drag them from the **Unassigned Encoders** list to an NVR.

**Decoders**
Displays the detected decoders.

**Configure Devices**
Click to display the **IP Device Configuration** dialog box.

**Next >**
Click to display the next page of this dialog box. If the device names differ from their names in Bosch Video Management System, a dialog box is displayed for changing the names as required.

**Finish**
Click to confirm the scan results and the assignments of encoders and close the dialog box.

### 17.3 Bosch VMS Scan Wizard

Main window > Devices > VRM & iSCSI Devices Scan
Allows you to detect the following devices and assign them to Bosch Video Management System:
- VRMs, iSCSI storage devices (you can assign encoders during the scan process)
- Live only and local storage encoders
- VIDOS NVRs

**Assign**
Click to assign selected devices to their parent device. For example you assign encoders to a VRM.

**Assign All**
Click to assign all scanned devices to their parent device.

**Remove**
Click to remove a device from its parent device. The recordings of a removed device are not removed. You can find them when you add this device again.
Remove All
Click to remove all devices from their parent device. The recordings of a removed device are not removed. You can find them when you add this device again.

17.4 Failover NVR Manager dialog box

Main window > Devices > Displays status information on your Failover NVRs.

17.5 IP Device Configuration dialog box

Main window > Devices > Displays the following properties of the available IP devices:
- Device name and type
- IP address
- Subnet mask
- System password
- Firmware version
- Gateway IP address

Allows you to set the following properties of the available IP devices:
- Display name
- IP address
- Firmware version

You can configure display names, IP addresses and firmware versions for multiple devices at once.

Update Firmware
Click to update the firmware version of the selected device.

Apply
Click to configure the devices with the entered values without closing the dialog box.

17.6 Set IP Addresses dialog box

Main window > Devices > IP Device Configuration dialog box > Right-click two or more entries > Click Set IP Addresses...

Allows you to set the IP addresses for multiple IP devices.

Start with:
Type the first IP address.

End with:
Displays the last IP address for the selected devices after having clicked Calculate.

Calculate
Click to calculate the range of IP addresses for the selected devices.
17.7 Set Display Names dialog box

**Main window > Devices > IP Device Configuration dialog box > Right-click two or more entries > Click Set Display Names...**
Allows you to set the display names for multiple IP devices.

**Start with:**
Type the first name.

**End with:**
Displays the last name for the selected devices after having clicked **Calculate**.

**Calculate**
Click to calculate the range of display names for the selected devices.

17.8 NVRs / Failover NVRs / Redundant NVRs page

**Main window > Devices > Expand > Expand >**
or

**Main window > Devices > Expand > Expand >**
or

**Main window > Devices > Expand > Expand >**
Displays the property pages of a selected NVR, Failover NVR, or Redundant NVR.

► Click a tab to display the corresponding property page.

17.8.1 Global Settings page

**Main window > Devices > Expand > Expand > Expand > Global Settings tab**
or

**Main window > Devices > Expand > Expand > Expand > Global Settings tab**
Displays the following information:
- **DNS name or IP address of the NVR.**
  This name is used for display in the Device Tree. You can only change this name in the Windows settings of the computer serving as NVR.
- Several network related settings like MAC address or Default Gateway.
Allows you to configure a Failover NVR for the currently selected NVR.

**Switch over to:**
Select a Primary NVR to change its role to a Failover NVR.

17.8.2 Disk Storage page

**Main window > Devices > Expand > Expand > Disk Storage tab**
Main window > Devices > Expand > Expand > Disk Storage tab

CAUTION!
We recommend to store all video data on only one storage drive. Do not use multiple paths. Even if you must use more than 2 TB you can achieve such a large partition with appropriate formatting settings.

Add Network Path
Click to display a dialog box for selecting a network path.

Add Local Drive
Click to display a dialog box for selecting a local drive. This button is active only when a not configured local drive is available. You cannot select drive C:\ for storage.

Remove Storage
Click to display a dialog box for removing an added storage drive.

Use
Select a check box to select a drive for storage.

Drive
Displays the letter and the name of the drive.

Usage
Displays how much GB are used.
17.8.3 Camera Storage page

Main window > Devices > Expand > Expand > Expand > Camera Storage tab

Allows you to configure the backup settings for video data for assigned cameras.

Name
Displays the camera name as configured on the Cameras and Recording page.

Location
Displays the location of the camera as configured on the Maps and Structure page.

Min Time [days]
Click a cell to edit the minimum number of days that video data from this camera is to be retained. Recordings younger than this number of days are not deleted automatically.

Max Time [days]
Click a cell to edit the maximum number of days that video data from this camera is to be retained. All recordings including protected recordings older than this number of days are deleted automatically.

CAUTION!
Select the maximum number of days according to the available disk space or enlarge the disk space. Ensure that maximum 85% of the available disk space is used.

CAUTION!
Recordings with a time stamp lying between minimum and maximum time except for protected recordings are automatically deleted when disk space is low.

Keep Protected Recordings
Select the check box to ensure that protected recordings are not deleted when their time stamp exceeds the maximum storage time. If this option was configured for a camera that has been removed from the Device Tree afterwards, all recordings including protected recordings of this camera are deleted after exceeding the maximum storage time.

Export on
Select the computer where videos are exported for backup. You can select the Central Server computer or this NVR computer. Exporting on the NVR is faster because exporting on the Central Server creates an additional network load.

CAUTION!
If you select the Primary NVR computer, video data that has been recorded on a Failover NVR during a downtime of the Primary NVR is not backed up.
Backup of video data uses as much network bandwidth as possible. Ensure that enough network performance is available.

Path
Select the path for the backup.

Schedule
Select the schedule for the backup.

Time [h]
Enter the number of hours into the past beginning with the scheduled time that you want to back up.
### 17.8.4 Assigned NVRs page

Main window > **Devices** > Expand > Expand > **Assigned NVRs** tab
Displays the Primary NVRs in your system and their assignment to the selected *Failover NVR*. Allows you to assign or un-assign the available NVRs as required.

**Remove NVR**
Click to move the selected Primary NVRs to the **Time [h]** column.

**Export on**
Displays all Primary NVRs that are assigned to the selected Failover NVR.

**Add NVR**
Click to move the selected Primary NVRs to the **Export on** column.

**Time [h]**
Displays all Primary NVRs that are not assigned to the selected Failover NVR.

### 17.8.5 Assigned NVR page

Main window > **Devices** > Expand > Expand > **Assigned NVR** tab
Displays the Primary NVRs in your system and their assignment to the selected *Redundant NVR*. Allows you to assign or un-assign the available NVRs as required.

Click left to the Primary NVR name to configure this Primary NVR to be mirrored by the selected Redundant NVR.

**Backup**
Click to use the same camera storage settings as the Primary NVR. If you clear, the **Camera Storage** tab becomes active and you can configure specific camera storage settings for this Redundant NVR.

### 17.8.6 Add Network Path dialog box

Main window > **Devices** > Expand > Expand > **Disk Storage** tab > **Add Network Path** button
Allows you to add a network path as storage location.

**UNC path (e.g. \\VideoStorage2\NVR4)**
Type a network path. Use the syntax required for UNC paths:

\<computer_name\>\<directory>...

Click to display a dialog box for selecting a network path.

**Logon necessary**
Select the check box if the network path is protected by a user ID.

**User name**
Type the required user name.

**Password**
Type the required password.
17.8.7 **Add Local NVR Drive dialog box**

Main window > Devices > Expand > Expand > Disk Storage tab > Add Local Drive button

Allows you to add a local drive of the selected NVR as storage location. Select a check box to activate the corresponding drive.

- **Select All**
  Click to select all check boxes.
- **Clear All**
  Click to clear all check boxes.

17.9 **Vidos NVRs page**

Main window > Devices > Expand > Expand

Allows you to add and configure Vidos NVRs.

- **Network Address:**
  Type the DNS name or the IP address of your Vidos NVR.
- **User Name:**
  Type the user name for logging on to the Vidos NVR.
- **Password:**
  Type the password for logging on to the Vidos NVR.

17.10 **DiBos page**

Main window > Devices > DiBos

Displays the property pages of a selected DiBos system.

Allows you to integrate a DiBos system into your system.

You cannot configure DiBos systems from within Bosch Video Management System.

- Click a tab to display the corresponding property page.

17.10.1 **Add DiBos System dialog box**

Main window > Devices > Right-click > Add DiBos Recorder command

Allows you to add a DiBos system to your Bosch Video Management System.

- **Network address:**
  Type the DNS name or the IP address of your DiBos system.
- **User name:**
  Type the user name for logging on to the DiBos system.
- **Password:**
  Type the password for logging on to the DiBos system.
17.10.2 Settings page

Main window > Devices > Expand > > Settings tab
Displays the network settings of the DiBos system connected to your system. Allows you to change the settings if required.

17.10.3 Cameras page

Main window > Devices > Expand > > Cameras tab
Displays all cameras available on the DiBos system connected to your system. Allows you to remove cameras.

17.10.4 Inputs page

Main window > Devices > Expand > > Inputs tab
Displays all inputs available on the DiBos system connected to your system. Allows you to remove items.

17.10.5 Relays page

Main window > Devices > Expand > > Relays tab
Displays all relays available on the DiBos system connected to your system. Allows you to remove items.

17.11 Matrix Switches page

Main window > Devices >  Displays the property pages of the Bosch Allegiant device.
You do not configure the Bosch Allegiant device itself but only the Bosch Video Management System related properties. For connecting an Allegiant device with Bosch VMS, see the Concepts chapter in this Online Help. This chapter provides background information on selected issues.
You can additionally configure control priorities for Allegiant trunk lines.
  ▶ Click a tab to display the corresponding property page.

17.11.1 Connection page

Main window > Devices > Expand > > Connection tab
Displays the name of the Bosch Allegiant configuration file.
Bosch Video Management System can read out a configuration file in structured storage format with the names and configuration information of all cameras connected to the Bosch Allegiant device.

Update Configuration
Click to select an updated Bosch Allegiant configuration file.
17.11.2 Cameras page

Main window > Devices > Expand > Cameras tab
Displays a camera table of the cameras that are connected to the Bosch Allegiant device.

No.
Displays the consecutive number of the camera.

Logical Number
Displays the logical number of the camera.

Camera Name
Displays the name of the camera.

17.11.3 Outputs page

Main window > Devices > Expand > Outputs tab
Allows you to configure the usage of a Bosch Allegiant device output and to assign an encoder to an output.
To store the video data of a Bosch Allegiant device output in Bosch Video Management System, you must assign an encoder to the output. This encoder must be connected to the output.

No.
Displays the number of the output.

Allegiant Logical No.
Displays the logical number of the output within Allegiant.

Bosch VMS Logical No.
Allows you to change the logical number of the output within Bosch Video Management System. If you enter an already used number, a message is displayed.

Name
Displays the name of the output.

Usage
Allows you to change the usage of the output.
If you select Digital Trunk, you can assign an encoder to this output in the Encoder field. The Allegiant output becomes network-compatible.
If you select Allegiant Monitor, in the Operator Client the user can assign the camera signal to a hardware monitor. PTZ control is possible if the camera is configured as PTZ camera. In the Operator Client, the user cannot drag this camera on an Image pane.
If you select Unused, the user cannot assign a monitor to an Allegiant camera.

Encoder
Allows you to assign an output to an encoder. You can only select an encoder when you have checked Digital Trunk. The encoder is locked for the Logical Tree. If you assign an encoder that is already in the Logical Tree, it is removed from there. In the Operator Client, the user can drag the camera to an Image pane.
17.11.4 Inputs page

Main window > Devices > Expand > Inputs tab
Allows you to add inputs to a Bosch Allegiant device.

Add Input
Click to add a new row in the table for specifying a new input.

Delete Input
Click to remove a row from the table.

Input No.
Type the required number of the input. If you enter an already used number, a message is displayed.

Input Name
Type the required name of the input.

17.12 Workstation page

Main window > Devices > Expand >
Allows you to configure the following settings for a workstation:
- Add a digital keyboard connected to a Bosch Video Management System workstation.
- Assign a Command Script that is executed on startup of the workstation.
- Select the data stream for live display.
- Enable Forensic Search.
- Assign analog monitor groups to a workstation.
A workstation must have the Operator Client software installed.

To add a CCTV keyboard that is connected to a decoder, expand , click .

To assign an analog monitor group, configure such a group in > > .

17.12.1 Settings page

Main window > Devices > Expand > Settings tab
Allows you to configure a script that is executed when the Operator Client on the workstation is started.
Allows you to configure which stream of an IP device is used for live display.
Allows you to enable Forensic Search for this workstation.
And you can configure the keyboard that is connected to this workstation.

Network address:
Type the DNS name or the IP address of your workstation.

Startup script:
Select the desired script that you want to be started when the workstation’s Operator Client is started. You create or import such a script on the Events page.
Override recording settings
Select the check box to enable selecting the desired stream for live view. The other one is used for continuous, motion, and alarm recording for this workstation. See dual streaming in the glossary.

Enable Forensic Search
Click to enable Forensic Search for this workstation.

Keyboard type:
Select the type of the keyboard that is connected to your workstation.

Port:
Select the COM port that is used to connect your keyboard.

Baudrate:
Select the maximum rate, in bits per second (bps), that you want data to be transmitted through this port. Usually, this is set to the maximum rate supported by the computer or device you are communicating with.

Data bits:
Displays the number of data bits you want to use for each character that is transmitted and received.

Stop bits:
Displays the time between each character being transmitted (where time is measured in bits).

Parity:
Displays the type of error checking you want to use for the selected port.

Port type:
Displays the connection type that is used to connect the CCTV keyboard with the workstation.

17.12.2 Assigned Analog Monitor Groups page

Main window > Devices > Expand > > Assigned Analog Monitor Groups tab
Allows you to assign an analog monitor group to this workstation. Beforehand you must have added an analog monitor group in > > .

Assigned Analog Monitor Groups
Select the check box to assign the analog monitor group to this workstation. In the Options dialog box, you can configure that all other workstations can also control analog monitor groups.

Analog Monitor Group
Displays the name of the each analog monitor group.

17.13 Decoders page

Main window > Devices > Expand > Allows you to configure decoders.
See Section 18 Encoders / Decoders page, page 111 for details.
17.14 Monitor Groups page

Main window > Devices > Expand > Allows you to add and configure analog monitor groups. You assign an analog monitor group to a Bosch Video Management System workstation in

17.14.1 Settings page

Main window > Devices > Expand > Settings tab

Allows you to perform the following tasks:
– Configure an analog monitor group
– Assign decoders to an analog monitor group
– Enable quad view for decoders that support quad view

Name:
Type the name of the analog monitor group.

Columns:
Enter the number of columns for the analog monitor group. The result is displayed.

Rows:
Enter the number of rows for the analog monitor group. The result is displayed.

Unassigned Decoder Channels
Drag a decoder to an available analog monitor.

Monitor image
The white number, if present, displays the logical number of the initial camera. The black number displays the logical number of the decoder.
Right-click an analog monitor image to toggle between single view and quad view. On the Advanced Configuration page, the Quad View column displays the corresponding setting.
To un-assign a decoder, right-click the analog monitor image and click Clear Monitor.

17.14.2 Advanced Configuration page

Main window > Devices > Expand > Advanced Configuration tab

Allows you to perform the following tasks:
– Configure the logical number of a decoder or decoder channel.
– Enable quad view for decoders that support quad view
– Configure the OSD.

NOTICE!
We do not recommend configuring quad view for H.264 cameras.

Note the following hints on switching the decoder between quad view and single view in the Operator Client:
– The user can manually switch the decoder back to single view when it is configured as quad view.
– When the decoder is switched to single view or to quad view and a sequence is just running, only the last video stream remains visible.
– When the user switches to quad view, the last cameras that have been displayed on tile 2-4 are reconnected.
– This also valid for trunklines. There is only one limitation: If the matrix camera cannot be reconnected, this is ignored without an error message. A black tile is visible.
– When switching to single view, all trunklines that are displayed on tile 2-4 are disconnected. Only the camera number is stored for a later switch to quad view.

**Decoder Name**
Displays the display name of the decoder.

**Network Address**
Displays the IP address of the decoder.

**Logical Number**
Enter the logical number of the decoder. If you enter an already used number, a message is displayed.

**Quad**
Displays the position of the decoder on the quad view. 1 is left upper corner, 4 is right lower corner.

**Quad View**
Select the check box to enable quad view for this decoder. On the Settings page, the corresponding analog monitor image displays the quad view. Logical numbers are created automatically. If you want the Operator Client user to be able to switch between quad view and single view, then check Quad View. If you clear Quad View, the Operator Client user cannot switch.

**AMG**
Displays the analog monitor group that the decoder in this row is assigned to.

**Initial Camera**
Click to select the camera that is displayed initially on the monitor after having started the Operator Client. The logical number of the initial camera is displayed as the white number on the monitor image in the Settings page.

**OSD Camera Name**
Check to display the camera name as OSD.

**OSD Camera No.**
Check to display the logical number of the camera as OSD.

**OSD Position**
To set the location of an OSD, select the desired entry.

### 17.15 Communication Devices page

Main window > Devices > Expand
Allows you to add or configure a communication device.
You can configure the following communication devices:
– E-mail
– SMS (GSM or SMSC dial-up provider)
17.15.1  **E-mail/SMTP Server dialog box**

Main window > Devices > Expand > Right-click > Add E-mail/SMTP Device command

Allows you to add an e-mail server to your Bosch Video Management System.

**Name:**
Type the display name of the e-mail server.

17.15.2  **Add SMS Device dialog box**

Main window > Devices > Expand > Right-click > Add SMS Device command

Allows you to add an SMS device to your system.

**Name:**
Type the name of the e-mail server that is used for being displayed.

**GSM modem**
Click to add a GSM modem.

**SMSC dial up**
Click to add a Hayes compatible modem which can connect to an SMSC provider.

17.15.3  **SMTP Server page**

Main window > Devices > Expand > Expand > 

Allows you to configure the e-mail settings of your system. On the Events page, you can assign an event to an e-mail. When this event occurs, the system sends an e-mail. You cannot receive e-mails in Bosch Video Management System.

**SMTP Server Name:**
Type the name of the e-mail server. You get the information about the required entry from your provider. Usually this is the IP address or DNS name of your e-mail server.

**Port:**
Type the required network port number for outgoing mails. You get the information about the required entry from your provider.

**Connection time-out [s]:**
Type the number of seconds of inactivity until the connection is disconnected.

**Authentication:**
Select a check box for the required authentication method. You get the information about the required entry from your provider.

**Username:**
Type the user name for authenticating at the e-mail server. You get the information about the required entry from your provider.

**Password:**
Type the password for authenticating at the e-mail server. You get the information about the required entry from your provider.
17.15.4 Send Test E-mail dialog box

Main window > Devices > Expand > Expand > Send Test E-mail button

Allows you to send a test e-mail.

From:
Type the e-mail address of the sender.

To:
Type the e-mail address of the recipient.

Subject:
Type the subject of the e-mail.

Message:
Type the message.

Send Test E-mail
Click to send the e-mail.

17.15.5 GSM Settings / SMSC Settings page

Main window > Devices > Expand > Expand > Sends Test E-mail button

Allows you to configure the SMS settings of your Bosch Video Management System. On the Events page, you can assign an event to a short message. When this event occurs, the system sends a short message. If the number of entered characters exceeds the highest permitted number (usually 160), an SMS is divided into multiple parts.

Device:
Select the required COM port where the external modem is connected to. If your computer has an internal modem, select the corresponding entry.

Speed:
Select the required transfer rate.

Pin: (for GSM device only)
Type the personal identification number for authenticating at the device.

Data format: (for SMSC device only)
Select the required data format. You get the information about the required entry from your provider.

Unicode (for GSM device only)
Select the check box to enable unicode characters. This reduces the highest number of permitted characters to 80.

Dial string: (for SMSC device only)
Type the number to connect to the SMSC dial-up provider. You get this number from your provider.
Password: (for SMSC device only)
Type the password that the device needs to connect to the SMSC dial-up provider if required. You get the information about the required entry from your provider.

Protocol: (for SMSC device only)
Select the required protocol that the device uses to connect to the SMSC dial-up provider. You get the information about the required entry from your provider.

Recipient:
Type the mobile phone number of the recipient of the short messages. Include the country prefix without + sign (e.g. 0049170123456).

Message (max. 160 chars):
Type the text for the short message.

SMS Test Message
Click to send a test short message.

17.16 POS + ATM page

Main window > Devices > Expand > Allows you to add and configure peripheral devices, for example, a Bosch ATM/POS Bridge. If you want to add multiple bridges at one server, you must use different ports.

17.16.1 Add Bosch ATM/POS-Bridge dialog box

Main window > Devices > Expand > Right-click > Add Bosch ATM/POS-Bridge command
Allows you to add a Bosch ATM/POS Bridge.

Name:
Type an appropriate name for the device.

IP address:
Type the IP address of the device.

Port 1:
Type the appropriate port number used for transmitting the keep alive signal (every 5 seconds).

Port 2:
Type the appropriate port number used for transmitting messages from the device.

17.16.2 Bosch ATM/POS-Bridge page

Main window > Devices > Expand > Expand > Bosch ATM/POS-Bridge tab
Allows you to configure a Bosch ATM/POS Bridge.

IP address:
Type the IP address of the device.
Port 1:  
Type the appropriate port number used for transmitting the keep alive signal (every 5 seconds).

Port 2:  
Type the appropriate port number used for transmitting messages from the device.

17.16.3 Inputs page

Main window > Devices > Expand > Expand > Inputs tab

Allows you to configure an ATM device.

17.16.4 ATM Settings page

Main window > Devices > Expand > Expand

Allows you to configure an ATM device.

Serial Port:
In the list, select the appropriate port.

Inputs
Select a check box to enable the corresponding input.

17.17 Virtual Inputs page

Main window > Devices > Expand

Displays the virtual inputs configured in your system.
Allows you to add new virtual inputs and to delete existing ones.

Add Inputs
Click to display a dialog box for adding new virtual inputs.

Delete Inputs
Click to delete a selected virtual input.

Number
Displays the number of the virtual input.

Name
Click a cell to modify the name of the virtual input.

17.17.1 Add Virtual Inputs dialog box

Main window > Devices > Expand > Add Inputs button

Allows you to add new virtual inputs.

Start:
Select the first number of the new virtual inputs.

End:
Select the last number of the new virtual inputs.
**Name:**
Type the name of the new virtual inputs. A consecutive number is appended.

**Add**
Click to add the new virtual inputs.

### 17.18 SNMP page

Main window > Devices > Expand >

Allows you to add or configure an *SNMP* measurement for maintaining the network quality.

#### 17.18.1 Add SNMP dialog box

Main window > Devices > Expand > Right-click > Add SNMP command

Allows you to add a *network monitoring* system to your Bosch Video Management System.

**Name:**
Type a name for the network monitoring device.

### 17.18.2 SNMP Trap Receiver page

Main window > Devices > Expand > Expand

Allows you to select devices for monitoring and to select *SNMP* trap OIDs that trigger an event for the selected device when they are received.

**NOTICE!**
You must enter the IP address of the Bosch Video Management System Central Server as the trap receiver in your devices that you want to monitor.

**SNMP Trap Sending Devices:**
Allows you to enter a range of IP addresses of the monitored network devices. To monitor a single device enter the corresponding IP address in the *Range From* cell.

Be careful when changing these addresses. Entering a wrong address stops *network monitoring* of this device.

**SNMP Trap Filter Rules:**
Allows you to enter OIDs and corresponding values. You can use wildcards as * and ? to enhance the filter range. If you enter OIDs and values in more than one row, these filter rules must match simultaneously to trigger an event. In both columns, you can enter a regular expression in {}. If there are characters outside the brackets, the regular expression is not evaluated.

**Show Trap Logger Tool**
Click to display the *SNMP Trap Logger* dialog box for tracing SNMP trap OIDs.

### 17.18.3 SNMP Trap Logger dialog box

Main window > Devices > Expand > Expand > Select a generic SNMP Trap Receiver > Click *Show Trap Logger Tool*
Allows you to trace SNMP trap OIDs. You can receive traps from all devices in your network or only from selected ones. You can filter the traps to be received and you can add OIDs and values of selected traps to the SNMP Trap Filter Rules: table.

Start/Pause
Click to start or stop a tracing process.

Only Traps From Sender
Enter the IP address or DNS name of a device. Only traps from this device are traced.

Only Traps Containing
Enter a string a trap can contain. You can use * and ? as wildcards. Strings in {} are treated as regular expressions. Only traps containing such a string are traced.

Received Traps
Displays the traps that are received by a tracing process.

Click to remove all entries in the Received Traps field.

Trap Details
Displays the trap details. You can copy the OID and the Value entry to the SNMP Trap Filter Rules: table.

17.19 CCTV Keyboards page

Main window > Devices > Expand > Allows you to add a CCTV keyboard connected to a Bosch Video Management System workstation or to a decoder.

Add Keyboard
Click to add a row to the table for configuring a keyboard.

Delete Keyboard
Click to remove the selected row.

Keyboard Type
Displays the type of the keyboard that is connected to your workstation.

Connection
In a cell, select the required connection of the keyboard to a workstation or a decoder. If you select a workstation, the keyboard is also added to the Devices page.

Port
In a cell, select the desired COM port.

Baudrate
In a cell, select the maximum rate, in bits per second (bps), that you want data to be transmitted through this port. Usually, this is set to the maximum rate supported by the computer or device you are communicating with.

Data bits
Displays the number of data bits you want to use for each character that is transmitted and received.
**Stop bits**
Displays the time between each character being transmitted (where time is measured in bits).

**Parity**
Displays the type of error checking you want to use for the selected port.

**Port type**
Displays the connection type that is used to connect the CCTV keyboard with the workstation.

### 17.20 **I/O Modules page**

Main window > ![Devices] > Expand > ![Devices] > ![ADAM tab]

Allows you to add or configure an I/O module. Currently only ADAM devices are supported.

#### 17.20.1 **ADAM page**

Main window > ![Devices] > Expand > ![ADAM tab]

Displays information on the selected ADAM device. Allows you to change the display name of an ADAM device.

**ADAM type:**
Select the appropriate device type.

**Inputs total:**
Displays the total number of inputs available with this device type.

**Relays/Outputs total:**
Displays the total number of relays available with this device type.

#### 17.20.2 **Inputs page**

Main window > ![Devices] > Expand > ![Inputs tab]

Allows you to change the display names of the inputs of the selected ADAM device.

**Number**
Displays the logical number of the input.

**Name**
Click a cell to change the display name of an input.

#### 17.20.3 **Relays page**

Main window > ![Devices] > Expand > ![Relays tab]

Allows you to change the display names of the relays of the selected ADAM device.

**Number**
Click a cell to change the logical number of a relay.

**Name**
Type the display name of the relay.
17.21 Allegiant CCL Emulation page

Main window > Devices > Expand >

Allows you to activate the Bosch Allegiant CCL emulation. This emulation starts an internal Bosch VMS service that translates CCL commands of the Matrix Switch into Bosch VMS. You configure a COM port of the Central Server to listen to these CCL commands. The CCL emulation helps to exchange existing Allegiant devices with Bosch Video Management System or to use Bosch Video Management System with applications that support the Allegiant CCL commands.

**Note:**
Do not configure the Allegiant CCL emulation and an Allegiant device to the same COM port. If for both devices the same COM port is configured, the Allegiant device wins. The access of the Allegiant CCL emulation device fails with an appropriate message.
To solve this, the Central Server must have two different COM ports or connect the Allegiant device to another computer.

**Enable Allegiant CCL Emulation**
Select the check box to enable the emulation.

**Baud rate**
Select the value for the transmission rate in bit/s.

**Stop bits**
Select the number of stop bits per character.

**Parity check**
Select the type of parity check.

**Interface mode**
Select the desired protocol for the serial interface.

**Half-duplex mode**
Select the setting appropriate for your application.

17.22 VRM Devices page

Main window > Devices > Expand >

Allows you to add and configure VRM devices. A VRM device needs at least an encoder, an iSCSI device, and a LUN assigned to the iSCSI device. See the Release Notes and the data sheet for current firmware versions. The recording mode of the assigned encoders is set to VRM when the configuration is activated.

**CAUTION!**
After you have added an iSCSI device with respective encoders to your Bosch Video Management System, you must add the IQN of each encoder to this iSCSI device.
See Section 6.22 Configuring an iSCSI device, page 33 for details.
CAUTION!
Ensure that the VRM computer is synchronized. Otherwise you can lose video data.
Configure the time server software on the Central Server. On the VRM computer, configure
the IP address of the Central Server as time server using standard Windows procedures.

17.23 VRM Settings page

Main window > Devices > Expand
Info — VRM Server name
Type a name that is displayed in the device tree of Archive Player.

Info — Server initiator name
Displays the iSCSI initiator name of VRM Server.

Access — Password
Must be configured in the iSCSI device; is required by the VRM system to communicate with
the storage systems; corresponds to the password, which is set for every storage system. The
CHAP password is valid for the VRM and is sent to all devices automatically. You can configure
only one global CHAP password for a VRM environment. Replay clients that perform replay via
VRM, do not need additional configuration. CHAP is optional.
Replay clients that perform replay directly from the iSCSI device, must be configured with the
CHAP password.

Global settings — Secondary target block allocation [GB]
Enter the number of 1 GB storage blocks that are allocated to a device on the failover iSCSI
target (secondary target). The minimum number of blocks for each device allocated to the
secondary target is eight. When carrying out this step, note that each VIP X1600 module is
counted as an individual device.
The retention time specified in the system also applies to secondary target blocks.
The number of secondary target blocks for a device should be selected in such a way that
there is enough disk space to continue recording for the required length of time if the primary
target fails. Depending on the baud rate, you can assume that one block is sufficient for
approximately one hour of recording.
Blocks should remain free on the secondary target as a buffer. These are used by the VRM
system if the blocks allocated to a device are insufficient.

Calculation example:
- Storage capacity of the failover iSCSI target: 5,024 GB
- Number of allocated VIP X1600 devices: 140 (each occupied with four modules)
- Failover block allocation: 8 (minimum)
- Resulting number of allocated failover blocks:
  140 x 4 x 8 = 4,480
- Resulting number of free failover blocks:
  5,024 - 4,480 = 544
A buffer of 544 GB remains for recordings in case of a failover; this buffer is also
available to the allocated devices if required.

Block reservation for VRM Server downtime (days)
Enter the approximate number of days that the assigned encoders are recorded although the
VRM Server is down.
For example, if you set 4, the devices are recorded during approximately 4 days of VRM Server
downtime.
If your system has devices with low bit rate, you can significantly reduce the pre-allocated disk space.

17.23.1 Advanced page

Main window > Devices > Expand
Activate the different logs for VRM Server and VRM Configurator, and specify the retention time for log files in days.
The log files for VRM Server are stored on the computer on which VRM Server has been started, and can be viewed with VRM Monitor.
The log files for VRM Configurator are stored locally in the following directory:
C:\Documents and Settings\<User>\My Documents\Bosch\Video Recording Manager\Log
Other settings are also available:
**VRM Server – Complete memory dump file**
Only activate this option if necessary, for example if the Technical Customer Service team requests a complete summary of the main memory.
**VRM Server – Telnet support**
Activate this option if access with the Telnet protocol is to be supported. Only activate if necessary.

---

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

17.23.2 SNMP page

Main window > Devices > Expand
1. SNMP host address 2. SNMP host address
VRM supports the SNMP V2 (Simple Network Management Protocol) for managing and monitoring network components, and can send SNMP messages (traps) to IP addresses. The unit supports SNMP MIB II in the unified code. If you wish to send SNMP traps, enter the IP addresses of one or two required target units here.
Some events are sent as SNMP traps only. Refer to the MIB file for descriptions.

17.23.3 iSCSI System Access page

Main window > Devices > Expand
Allows you to enter a password so that the VRM system can access this iSCSI storage system for configuration.

17.23.4 Default Configuration page

Main window > Devices > Expand
Click Default Configuration tab
Allows you to perform a basic configuration of your iSCSI device. You create LUNs on the iSCSI hard drive and format these LUNs.
Only displayed if the device is one of the iSCSI storage systems supported by Bosch, for example NetApp.

**Capacity [MB]**
Displays information on the total capacity of the storage system.

**Number of LUNs**
You can change the number of LUNs.

---

**CAUTION!**
If you change the number of LUNs, the entire iSCSI system will be reorganized and any videos saved on the system will be lost. Therefore, before making changes, check the recordings and back up any important videos on another iSCSI drive or on the computer's hard drive.

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

**Note:** On NetApp storage systems, it can take several hours before LUNs are fully deleted. During that time, the total capacity of newly created LUNs can be reduced. You can only create new LUNs with full capacity after the old LUNs have been completely deleted.

**RAID-DP (reliability focused)**
Only displayed for NetApp DSA-N2B20. Activate this option if you do not wish to use the specified RAID type RAID-4, but would prefer to use the more reliable RAID type RAID-DP.

### 17.23.5 Load Balancing page

Main window > **Devices** > Expand > Expand > Expand > **Load Balancing** tab

Allows you to configure limits for write access. When these values are exceeded, data is not written to the iSCSI device but can be lost. For supported devices (for example by Bosch, NetApp, or Infortrend) leave the default values unchanged. For another device see the documentation of this device. Start testing with small values.

**Soft limit**
Enter a value smaller or equal to the value in **Hard limit**. If the values are not exceeded, data is written to the iSCSI device without internal reorganization. If they are exceeded but smaller than the values in **Hard limit**, the data is internally reorganized before writing.

**Hard limit**
If the values are exceeded, data is lost. Reduce the number of cameras that are recorded on this iSCSI device.

### 17.23.6 iqn-Mapper dialog box

Main window > **Devices** > Expand > Expand > Right-click > **iSCSI** > **Map IQNs**

Allows you to start the IQN mapping process.

### 17.23.7 LUNs page

Main window > **Devices** > Expand > Expand > Expand > Expand > **iSCSI**
Allows you to add, remove, or format LUNs.

**Add**
Click to display the Add LUN dialog box.

**Remove**
Click to remove the selected LUNs. A message box is displayed.

**Format LUN**
Click to format the selected LUN. A message box is displayed.

**Note:**
In the Format column, click the check box for the desired LUN.

### 17.23.8 Add LUN dialog box

Main window > Devices > Expand > Expand > Expand > Click Add

**Id**
Enter the ID of the desired LUN.

### 17.24 Live Only page

Main window > Devices > Expand

Allows you to add and configure encoders used for live only.

### 17.25 Local Storage page

Main window > Devices > Expand

Allows you to add and configure encoders with local storage.
18 Encoders / Decoders page

To configure an encoder:

Main window > Devices > Expand > Expand > Expand > or

Main window > Devices > Expand > Expand > or

Main window > Devices >

To configure a decoder:

Main window > Devices > Expand > Expand > Expand > or

Displays the property pages of a selected encoder/decoder.
Allows you to make the required settings for each device.
Most of the settings on the encoder/decoder pages are active immediately after you click . When you click another tab without clicking and changes have occurred, two corresponding message boxes are displayed. Confirm them both if you want to save.
To change the access password right-click the device icon and click Change password.
To display the device in a Web browser right-click the device icon and click Show Webpage in Browser.

Note:
Depending on the selected encoder or camera, not all pages described here are available for each device. The wording used here for describing the field labels can deviate from your software.

Click a tab to display the corresponding property page.

18.1 Main Settings > Unit Access page

Device name
Type the name of the device.
The name simplifies the management of multiple devices in large systems. The name is used for identification of a device. Use a name that makes it as easy as possible to identify its location.
Do not use any special characters in the name. Special characters are not supported and may cause problems, e.g. with playback.

Click to update the name in the Device Tree.

Device ID
Type the ID of the device.

Initiator name
Displays the name of the iSCSI client, which has access to iSCSI targets. The initiator name is automatically displayed after a connection is established.
Hardware version
Displays the version of the hardware.

Firmware version
Displays the version of the firmware.

Error code
Displays a number if a storage device is no longer available for recordings, for example due to a technical defect.
Click Reset, to check whether the error still exists after a reset of the device. If the error still exist, note the number and inform the Technical Support.

18.2 Main Settings > Date/Time page
If there are multiple units operating in your system or network, it is necessary to synchronize their internal clocks.

Device date format / Device date / Device time
If there are multiple devices operating in your system or network, it is important to synchronize their internal clocks. For example, it is only possible to identify and correctly evaluate simultaneous recordings when all devices are operating on the same time.

Synchr. PC
Click to apply the system time from your computer to the device.

Device time zone
Select your time zone from the list.

Details
Click to display the DST Dialog dialog box.

Time server IP address
Set by Bosch VMS Central Server.

Time server type
Set by Bosch VMS Central Server. Default setting is SNTP.

18.2.1 DST Dialog dialog box
Date/Time page > Details

Generate
Set by Bosch VMS Central Server.

Delete
Set by Bosch VMS Central Server.

Day / Month / Year / Hour / Minute / Offset
Set by Bosch VMS Central Server.

18.3 Advanced Settings > Video input page

18.3.1 Camera name

Camera
Type the name of the camera. Ensure that Camera 1 is allocated to Video Input 1, Camera 2 to Video Input 2, etc.
The camera name facilitates the identification of the remote camera location, e.g. in case of an alarm. Use a name that makes it as easy as possible to identify the location. Do not use any special characters in the name. Special characters are not supported and may cause problems, e.g. play back of recordings. The settings on this page apply to all camera inputs.

Click to update the name in the Device Tree.

### 18.3.2 Display stamping
This function allows you to display important supplementary information in the video image. These information can be enabled individually.

**Camera name stamping**
Set the position of the camera name overlay.
Click the item you want to select.
- **Off**
  No camera name is displayed in the video image.
- **Bottom**
  The camera name is displayed at the bottom of the video image.
- **Top**
  The camera name is displayed on the top of the video image.
- **Custom**
  Enter the position where the camera name is displayed in the video image.

**Time stamping**
Set the position of the time overlay.
Click the item you want to select.
- **Off**
  No time and date is displayed in the video image.
- **Bottom**
  The time and date is displayed at the bottom of the video image.
- **Top**
  The time and date is displayed on the top of the video image.
- **Custom**
  Enter the position where the time and date is displayed in the video image.

**Alarm mode stamping**
If necessary, you can also display milliseconds. This information can be useful for recorded video images; however, it does increase the processor's computing time.
Click the item you want to select.
- **On**
  Milliseconds are displayed on the video image.
- **Off**
  Milliseconds are not displayed on the video image.

**Displayed alarm message**
Enter the message to be displayed in case of an alarm. The maximum text length is 31 characters.
Click the item you want to select.
- **On**
  In case of an alarm a message is displayed on the video image.
114 en | Encoders / Decoders page Bosch Video Management System

– Off
No alarm message is displayed in the video image.
– Custom
Enter the position where a message is displayed in the video image in case of an alarm.

18.3.3 Input termination
Allows you to activate or deactivate the 75 Ohm terminating resistor for each video input.
The numbering follows the labeling of the video inputs on the device. Every video input is
closed at the time of delivery.

75 Ohm termination
Select one of the following:
– Off: Deactivates the 75 Ohm terminating resistor and loops through the video signal.
– On: Activates the 75 Ohm terminating resistor. No loop through of the video signal.

18.3.4 Image quality
Allows you to adjust each video image to your requirements. All changes are displayed
immediately. Be aware that changes in the image quality affects processor performance.

Video
Enter the number of the camera you want to adjust. If you want to do this for each camera,
enter the number of the camera, adjust the settings (brightness, contrast, etc.), and then
enter the next camera number, and adjust their settings.

Brightness
Enter the value to adjust the brightness of the video image to your working environment.

Contrast
Enter the value to adjust the contrast of the video image to your working environment.

Saturation
Enter the value to adjust the color saturation of the video image on your monitor as realistic as
possible.

Low-pass filter
Enter the value to remove very fine noise from the image. This reduces and optimizes the
bandwidth necessary for the image transmission over the network. The image resolution may
be impaired. The higher the value, the flatter the image signal.

Default
Click to change the current settings to the factory settings.

Show Image
Click to display the image window of the encoder. In the menu bar of the video image you can
select the video input that you want to display.

18.3.5 Source type
Allows you to connect video recorders as video source. Video recorders require a more
tolerant setting as a result of unwanted effects caused by the mechanical components of a
video recorder.

Input 1-Input 4
Select VCR to connect video recorders as video source. Select Camera to connect cameras.
In some cases, selecting VCR also for cameras can lead to an improvement in the video image.
18.4 Advanced Settings > Audio page
This function allows you to set the gain of the audio signals to suit your specific requirements.
The current video image is shown in the small window next to the slide controls to help you
check the selected audio source and improve assignments. Your changes are effective
immediately.
The numbering of the audio inputs follows the labeling on the device and the assignment to
the respective video inputs. The assignment cannot be changed for Web browser connections.

Line In 1-Line In 4
Enter the value of the gain of the audio signal. Make sure that the display of the slider
remains green.

Line Out
Enter the value of the gain. Make sure that the display of the slider remains green.

Microphone (MIC)
Enter the value of the gain for the microphone.

Line Out/Speaker (SPK)
Enter the value of the gain of the line and the loudspeaker.

18.5 Advanced Settings > Privacy Masks page
Allows you to configure multiple areas on the camera image which are not recorded and
cannot be viewed. For example, you might want to hide public places adjacent to your
property.

18.6 Advanced Settings > Recording Management page
Active recordings are indicated by .
If you point to the icon, you see detailed information about the active recordings.

Management mode
Specify how the device's recordings should be managed:
- **Recordings manually managed**
The recordings are managed locally on the device. All relevant settings must be carried
out manually. The device is removed from the VRM system.
If activated, no further settings are required on this page.
- **Recording 1 managed by external VRM**
The recordings of this device are managed by the VRM system, which is considered
external from the point of view of the device.
If activated, no further settings are required on this page.
- **Recording 1 managed by external VRM · Recording 2 used for ANR**
Not supported.

Overwrite older recordings
If activated, the oldest recordings are deleted as soon as the medium is full. A loop recording
process occurs.
If not activated, nothing more is saved to the medium once it is full.
18.7 Advanced Settings > Recording preferences page

The Recording preferences page is displayed for each encoder. This page only appears if a device is assigned to a VRM system.

Mode
Select the required option.

– All
The VRM system discovers all available and configured iSCSI targets and displays the available capacity automatically. If a target fails or memory capacity is used, another target is selected automatically. In this case, you cannot enter targets on the tab.

– Restricted
Recordings are stored primarily to the targets entered here. Primary target and secondary target are used equivalently.

If no disk space is available on either of the targets entered, other storage blocks of the VRM system are used until there is space available again on the entered targets.

– 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.

You can leave the second list empty. In this case no failover is possible but the number of required iSCSI sessions is reduced.

– Preferred
Recordings are saved to the entered targets in the specified sequence. For this, enter both a primary and a secondary target. The secondary target is only used while the primary target has no storage capacity available.

Only if these targets are not available, the recordings will be distributed across other targets.

Primary target
Select the entry for the required target, if you have selected a setting other than All under Mode.

Secondary target
Select the entry for the required target if you have selected Failover under Mode. If you have set Restricted, Failover, or Preferred, entering a secondary target is optional. Restricted and Preferred without a second target are identical.

18.8 Advanced Settings > VCA page

The device contains an integrated Video Content Analysis (VCA), which can detect and analyze changes in the signal using image processing algorithms. Such changes are triggered by motion in the camera's field of view.

If there is not enough computing power, priority is given to live images and recordings. This can lead to impairment of the VCA system. Observe the processor load and optimize the settings of the device or the VCA settings, if necessary.

VCA configuration
You can configure profiles with different VCA configurations. You can save profiles on your computer's hard drive and load saved profiles from there. This can be useful if you want to test a number of different configurations. Save a functioning configuration and test new settings. You can use the saved configuration to restore the original settings at any time.

Select the VCA profile and change the settings if necessary.
To rename the VCA profile:
Click \( \text{Edit} \). The \text{Edit} dialog box is displayed. Type the new name, and then click \text{OK}.

**Alarm status**
Displays the current alarm state to check the effects of your settings immediately.

**Aggregation time [s]**
You can set an aggregation time of between 0 and 20 seconds if necessary. The aggregation time always starts when an event occurs. All following events that occur during the aggregation time are counted as one event. This ensures that events following in quick succession do not trigger many alarms. During the aggregation time no further event is counted.

The post-alarm time set for alarm recordings only starts once the aggregation time has expired.

**Analysis type**
Select the analysis algorithm. By default, only MOTION+ is available. MOTION+ offers a motion detector and essential tamper detection functionality.

Additional analysis algorithms with comprehensive functions, such as IVA, are available from Bosch Security Systems.

Metadata is always created for a video content analysis, unless this was explicitly excluded.

Depending on the analysis type selected and the relevant configuration, additional information overlays the video image in the preview window next to the parameter settings.

With the MOTION+ analysis type, for example, the sensor fields in which motion is recorded will be marked with rectangles.

**Load...**
Click to load a stored profile. The the \text{Open} dialog box is displayed. Select the filename of the profile you want to load, and then click \text{OK}.

**Save...**
Click to save the profile. The \text{Save} dialog box is displayed. Type the filename, select the folder where to store the file, and then click \text{OK}.

**Default**
Click to change the current settings to the factory settings.

**18.8.1 Motion detector (MOTION+ only)**
Reflections of light (from glass surfaces, etc.), lights switching on and off, or changes in the light level caused by cloud movement on a sunny day can trigger unintended responses from the motion detector and generate false alarms. For indoor surveillance, ensure constant lighting of the areas during the day and at night. Run a series of tests at different times of the day and night to ensure that the video sensor is operating as intended.

**Debounce time 1s (MOTION+ only)**
The debounce time is intended to prevent very brief events from triggering individual alarms. If the \text{Debounce time 1s} option is activated, an event must last at least 1 second to trigger an alarm.

**Select Area...**
Click to configure the areas to be monitored by the motion detector. The \text{Select Area} dialog box is displayed.
**Sensitivity (only with MOTION+ functionality)**
Move the slider to adjust the sensitivity of the motion detector. The motion detector reacts to variations in the brightness of the video image. The darker the observation area, the higher the value that must be selected.

**Minimum object size (only with MOTION+ functionality)**
Specify the number of sensor fields that a moving object must cover to generate an alarm. This setting prevents small objects from triggering an alarm.
A minimum value of 4 is recommended. This value corresponds to four sensor fields.

### 18.8.2 Select Area dialog box
This dialog box displays the camera image. Within this window you can activate the areas of the image to be monitored.

**To activate an area:**
In the camera image, drag over the area you want to activate. Activated areas are marked yellow.

**To deactivate an area:**
In the camera image, press the SHIFT key and click the area you want to deactivate.

**To obtain commands in the window:**
To see the commands for activating or deactivating the areas, right-click anywhere in the window. The following commands are available:
- **Undo**
  Undoes the last command.
- **Set All**
  Activates the entire camera image.
- **Clear All**
  Deactivates the entire camera image.
- **Tool**
  Defines the shape of the mouse pointer.
- **Settings**
  Displays the Editor Settings dialog box. In this dialog box you can change the sensitivity and the minimum object size.

### 18.8.3 Tamper detection
You can detect tampering of cameras and video cables by means of various options. Run a series of tests at different times of the day and night to ensure that the video sensor is operating as intended.
The options for tamper detection can only be set for fixed cameras. Dome cameras or other motorized cameras cannot be protected in this manner as the movement of the camera itself causes changes in the video image that are too great.

**Scene too bright**
Select the check box if extreme light (for instance, shining a flashlight directly on the lens) should trigger an alarm. The average brightness of the scene provides a basis for recognition.

**Global change**
Select the check box if the changes, set with the Global change slider, should lead to trigger an alarm.
Move the slider to set how large the changes in the video image must be for an alarm to be triggered. Set a high value if changes that occur simultaneously in few areas should lead to
trigger an alarm. Set a low value if changes that occur simultaneously in a large number of areas should lead to trigger an alarm. This setting allows you to detect, independently of motion alarms, manipulation of the orientation or location of a camera resulting from turning the camera mount bracket.

This setting is independent of the areas selected in the **Select Area** window (see Section 18.8.2 Select Area dialog box, page 118).

**Scene too dark**
Select the check box if covering the objective (for instance, by spraying paint on the objective) should trigger an alarm. The average brightness of the scene provides a basis for recognition.

**Scene too noisy**
Select the check box if EMC interferences (noisy scene as the result of a strong interference signal) should trigger an alarm.

### 18.8.4 Reference check
Allows you to compare the current video image with the reference image that is stored.

If the current video image differs from the reference image in the marked areas, an alarm is triggered. This function detects tampering that would otherwise not be detected, for example if the camera is turned.

**Enable**
Select the check box to activate the reference check.

**Select Area...**
Click to configure the areas for tamper detection. The **Select Area** dialog box is displayed (see Section 18.8.2 Select Area dialog box, page 118).

**Set Reference**
Click to save the currently visible video image as reference image.

**Sensitivity**
Move the slider to set the basic sensitivity of the tamper detector. The tamper detector reacts to the differences between the reference image and the current video image. The darker the observation area, the higher the value that must be selected. **Sensitivity** can only be changed if **Reference check** is enabled.

**Trigger delay [s]**
Enter the time for delayed alarm triggering. The alarm is only triggered if the triggering condition still exists after this time. If the triggering condition does not exist after this time, the alarm is not triggered. The delay avoids false alarms triggered by short-term changes, for example, cleaning activities in the direct field of vision of the camera. **Trigger delay [s]** can only be changed if **Reference check** is enabled.

**Edge check**
Select an item from the list to specify the reference check.

**Disappearing edges:** The area selected in the reference image should contain a prominent structure. If this structure is concealed or moved, the reference check triggers an alarm. If the selected area is too homogenous, so that concealing and moving the structure would not trigger an alarm, then an alarm is triggered immediately to indicate the inadequate reference image.

**Appearing edges:** Select this option if the selected area of the reference image includes a largely homogenous surface. If structures appear in this area, then an alarm is triggered.
18.9 Advanced Settings > Audio Alarm

Some encoders can create alarms on the basis of audio signals. You can configure signal strengths and frequency ranges in such a way that false alarms, for example due to machine noise or background noise, are avoided.

**Note:** First set up normal audio transmission before you configure the audio alarm (see Advanced Settings > Audio page).

**Audio alarm**
Select **On** if you want the device to generate audio alarms from the input in question.

**Name**
The name makes it easier to identify the alarm in extensive video monitoring systems, for example with the VIDOS and Bosch Video Management System programs. Enter a unique and clear name here.

---

**CAUTION!**

Do not use any special characters, for example &, in the name.
Special characters are not supported by the internal recording management and may therefore result in the Bosch VMS Archive Player being unable to play back the recording.

---

**Signal Ranges**
You can exclude particular signal ranges in order to avoid false alarms. For this reason the total signal is divided into 13 tonal ranges (mel scale). Check or uncheck the boxes below the graphic to include or exclude individual ranges.

**Threshold**
Set up the threshold on the basis of the signal visible in the graphic. You can set the threshold using the slide control or, alternatively, you can move the white line directly in the graphic using the mouse.

**Sensitivity**
You can use this setting to adapt the sensitivity to the sound environment. You can effectively suppress individual signal peaks. A high value represents a high level of sensitivity.

18.10 Decoder > Decoder page

18.10.1 Decoder profile
Allows you to set the various options for the display of video images on an analog monitor or VGA monitor.

**Monitor name**
The name of the monitor. The monitor name facilitates the identification of the remote monitor location. Use a name that makes it as easy as possible to identify the location.

Click ![ ] to update the name in the Device Tree.

**Standard**
Select the video output signal of the monitor you are using. Eight pre-configured settings for the VGA monitors are available in addition to the PAL and NTSC options for analog video monitors.

---

**CAUTION!**
Selecting a VGA setting with values outside the technical specification of the monitor can result in severe damage to the monitor. Refer to the technical documentation of the monitor you are using.
**Window layout**
Select the default image layout for the monitor.

**VGA screen size**
Type the aspect ratio of the screen (e.g. 4 x 3) or the physical size of the screen in millimeters. The device uses this information to accurately scale the video image for distortion-free display.

### 18.10.2 Monitor display
The device recognizes transmission interruptions and displays a warning on the monitor.

**Display transmission disturbance**
Select **On** to display a warning in case of transmission interruption.

**Disturbance sensitivity**
Move the slider to adjust the level of the interruption that triggers the warning.

**Disturbance notification text**
Type the text of the warning the monitor displays when connection is lost. The maximum text length is 31 characters.

**Delete decoder logo**
Click to delete the logo that has been configured on the Web page of the decoder.

### 18.11 Interfaces > Relay page
This function allows you to configure the switching behavior of the relay outputs.

#### 18.11.1 Relay number
You can configure the switching behavior of the relay outputs. For each relay, you can specify an open switch relay (normally closed contact) or a closed switch relay (normally open contact).

You can also specify whether an output should operate as a bistable or monostable relay. In bistable mode, the triggered state of the relay is maintained. In monostable mode, you can set the time after which the relay returns to the idle state.

You can select different events that automatically activate an output. It is possible, for example, to turn on a floodlight by triggering a motion alarm and then turning the light off again when the alarm has stopped.

**Idle state**
Select **Open** if you want the relay to operate as an NO contact, or select **Closed** if the relay is to operate as an NC contact.

**Operating mode**
Select an operating mode for the relay. For example, if you want an alarm-activated lamp to stay on after the alarm ends, select the **Bistable** entry. If you wish an alarm-activated siren to sound for ten seconds, select the **10 s** entry.

**Relay follows**
If required, select a specific event that will trigger the relay. The following events are possible triggers:
- **Off**: Relay is not triggered by events
- **Connection**: Trigger whenever a connection is made
- **Video alarm**: Trigger by interruption of the video signal at the corresponding input
**Motion alarm**: Trigger by motion alarm at the corresponding input, as configured on the VCA page.

**Local input**: Trigger by the corresponding external alarm input

**Remote input**: Trigger by remote station's corresponding switching contact (only if a connection exists)

**Note:**
The numbers in the lists of selectable events relate to the corresponding connections on the device, Video alarm 1, for example to the Video In 1 connection.

**Trigger relay**
Click the relay button to trigger the relay manually (for example, for testing purposes or to activate a door opener).

### 18.11.2 Relay states
Displays the state of each relay.
- Red: Relay is activated.
- Blue: Relay is not activated.

### 18.12 Interfaces > Periphery page

#### 18.12.1 COM1
This function allows you to configure the serial interface parameters according to your requirements.

If the device is working in multicast mode, the first remote location to establish a video connection to the device is also assigned the transparent data connection. However, after about 15 seconds of inactivity the data connection is automatically terminated and another remote location can exchange transparent data with the device.

**Serial port function**
Select a controllable device from the list. Select **Transparent data** to transmit transparent data via the serial port. Select **Terminal** to operate the device from a terminal.

After selecting a device, the remaining parameters in the window are set automatically and should not be changed.

**Baud rate (bps)**
Select the value for the transmission rate.

**Stop bits**
Select the number of stop bits per character.

**Parity check**
Select the type of parity check.

**Interface mode**
Select the protocol for the serial interface.

### 18.13 Network > Network page

#### 18.13.1 Network
The settings on this page are used to integrate the device into an existing network.

**Note:**
After changing the Subnet mask and/or the Gateway address, restart the computer.
Automatic IP assignment DHCP
Allows you to activate the automatic acceptance of DHCP server assigned addresses. Select **On** to activate this function.

CAUTION!
Be careful with enabling the automatic IP assignment. This can make the device unreachable.

Subnet mask:
Type the subnet mask number of the device obtained from your network administrator.

Gateway address
Type the IP address for the gateway to connect the device to a remote location in a different subnet. Otherwise, this box can remain empty (0.0.0.0).

DNS server address
Type the IP address of the DNS server for this device.
Units listed on a DNS server are easier to access. To establish an Internet connection to the device, it is sufficient to enter the name of the device used in the DNS server as URL in the browser. Secure and dynamic DNS servers are supported.

Video transmission
Select TCP as protocol for units used behind firewalls. Select UDP for units used in a local network.

Note:
- UDP supports multicast. TCP does not. The *Maximum Transmission Unit (MTU)* value in UDP mode is 1514 bytes.
- Bosch VMS NVR only supports UDP.

HTTP browser port
Select the HTTP browser port from the list. The default port is 80. To limit connection to HTTPS, deactivate the HTTP port. To do this, select **Off**.

HTTPS browser port
Not supported.

RCP+ port 1756
Select **On** to allow unencrypted connections on this port. Select **Off** to allow only encrypted connections (not supported).

Telnet support
Select **On** to allow unencrypted connections on this port. Select **Off** to allow only encrypted connections (not supported).

Interface mode ETH 1 / Interface mode ETH 2
If necessary select the value for the interface, e.g. 100 Mbps HD. This value is device dependent and must be set individually.

Network MSS [Byte]
Enter the maximum segment size (MSS) of the IP packets. This setting allows you to adjust the size of the data packets to the network environment and to optimize data transmission. Observe the MTU value of 1514 bytes in UDP mode.

iSCSI MSS [Byte]
Enter the *Maximum Segment Size (MSS)* for a connection to the iSCSI system.
The maximum segment size for a connection to the iSCSI system can be higher than for the other data traffic via the network. The size depends on the network structure. A higher value is only useful if the iSCSI system is located in the same subnet as the device.

18.13.2 DynDNS
Allows you to use the Dynamic DNS network service, provided that a DynDNS.org account exists and the registration of the host name of the device.

Enable DynDNS
Select On to enable Dynamic DNS.

Host name
Type the host name. Use the host name listed in DynDNS.org.

User name
Type the user name. Use the user name listed in DynDNS.org.

Password
Type the password. Use the password listed in DynDNS.org.

Status
Displays the status of the DynDNS function.

18.14 Network > Advanced page

18.14.1 SNMP
The device supports the SNMP V2 (Simple Network Management Protocol) for managing and monitoring network components, and can send SNMP messages (traps) to IP addresses. The device supports SNMP MIB II in the unified code.

SNMP
Select On to activate the SNMP function.

1. SNMP host address / 2. SNMP host address
Type the IP addresses of one or two target units. The device (e.g. encoder, camera) sends SNMP traps automatically to the target units.
If you do not enter IP addresses, the device only replies to SNMP requests and does not send SNMP traps to the target units.

SNMP traps
Allows you to select which traps the device sends to the target units. To do this, click Select.

Select
Click Select. The SNMP traps dialog box is displayed.

SNMP traps dialog box
Select the check boxes of the appropriate traps, and then click OK.

18.14.2 802.1x
IEEE 802.1x allows you to communicate with the device if a RADIUS server is used in a network.

Authentication
Select On to activate 802.1x.

Identity
Type the user name that the RADIUS server uses for identifying the device.
Password
Type the password that the RADIUS server uses for identifying the device.

18.14.3 RTSP
RTSP port
Select the port. Off disables the RTSP function. The default port is 554.

18.15 Network > Multicast page
In addition to a 1:1 connection between an encoder and a single receiver (unicast), the device enables multiple receivers to receive the video signal from an encoder simultaneously. The prerequisite for multicast operation is a multicast-capable network that uses the UDP and IGMP protocols. Other group management protocols are not supported. The TCP protocol does not support multicast connections.

A special IP address (class D address) must be configured for multicast operation in a multicast-enabled network. The network must support group IP addresses and the Internet Group Management Protocol (IGMP V2). The address range is from 225.0.0.0 to 239.255.255.255. The multicast address can be the same for multiple streams. However, it is then necessary to use a different port in each case so that multiple data streams are not sent simultaneously using the same port and the same multicast address.

Note: The settings must be done for each encoder (video input) and for each stream individually. The numbering follows the labeling of the video inputs on the device.

Enable
To enable simultaneous data reception on several receivers you need to activate the multicast function. To do this, check the box. You can then enter the multicast address.

Multicast Address
Enter a valid multicast address for each stream from the relevant encoder (video input) to be operated in multicast mode (duplication of the data streams in the network).

With the setting 0.0.0.0 the encoder for the relevant stream operates in multi-unicast mode (copying of data streams in the device). The device supports multi-unicast connections for up to five simultaneously connected receivers.

Note: Duplication of data places a heavy demand on the device and can lead to impairment of the image quality under certain circumstances.

Port
Assign a different port to each data stream if there are simultaneous data streams at the same multicast address.

Enter the port address of the required stream here.

Streaming
Click the checkbox to activate multicast streaming mode for the relevant stream. An enabled stream is indicated by a check mark.

For normal multicast operation, streaming is typically not required.

Packet TTL (only for Dinion IP, Gen4 and FlexiDome)
Enter a value to specify how long the multicast data packets are active on the network. If multicast is to be run via a router, the value must be greater than 1.
18.16 **Network > JPEG posting page**

This function allows you to save individual JPEG images on an FTP server at specific intervals. Then, retrieve these images at a later date to reconstruct alarm events, if required.

**Image size**
Select the resolution for the JPEG images.

**File name**
Select how file names are created for the individual images that are transmitted.
- **Overwrite**
  The same file name is always used. An existing file is overwritten by the current file.
- **Increment**
  A number from 000 to 255 is added to the file name and automatically incremented by 1. When the number reaches 255, the number starts again from 000.
- **Date/time suffix**
  The date and time are automatically added to the file name. Ensure that the date and time of the device are always set correctly. For example, the file `snap011008_114530.jpg` was stored on October 1, 2008 at 11:45 and 30 seconds.

**Posting interval (s; 0 = Off)**
Enter the interval in seconds at which the images is sent to an FTP server. Enter zero for no images to be sent.

**FTP server IP address**
Type the IP address of the FTP server on which to save the JPEG images.

**FTP server login**
Type your login name for the FTP server.

**FTP server password**
Type the password for the FTP server.

**Path on FTP server**
Type the exact path where to save the images on the FTP server.

**Post JPEG from camera**
Select the check box to activate the camera input for the JPEG image. The numbering follows the labeling of the video inputs on the device.

18.17 **Service > License page**

This page allows you to enable additional functions or software modules.

**Installation code**
Displays the installation code.

**Activation key**
Type the activation key. The activation key cannot be deactivated and is not transferable to other units.

**Installed licenses**
Displays the installed licenses after their activation.
19 Maps and Structure page

Main window > Maps and Structure
Permissions can get lost. If you move a group of devices, these devices loose their permission settings. You must set the permissions on the User Groups page again.
Displays the Device Tree, the Logical Tree, and the map window.
Allows you to introduce a structure for all the devices in your Bosch Video Management System. Your structure is displayed in the Logical Tree.
Allows you to perform the following tasks:
– Configuring the Full Logical Tree
– Managing resource files, assigning them to nodes
– Creating hot spots on a map
Resource files can be:
– Site map files
– Document files
– Web files
– Audio files
– Command Scripts
– Camera sequence files
Hot spots can be:
– Cameras
– Inputs
– Relays
– Command Scripts
– Sequences
– Links to other maps
Displays a dialog box for managing resource files.
Displays a dialog box for adding a Command Script to the Logical Tree.
Displays a dialog box for adding a camera sequence file.
Displays a dialog box for adding a node.
Displays a dialog box for adding map resource files.
Displays a dialog box for adding an HTML file.

19.1 Resource Manager dialog box

Main window > Maps and Structure >
Main window > Maps and Structure > Manage...

Allows you to manage resource files.

You can manage the following file formats:

- DWF files (map resource files)
  For use in Operator Client, these files are converted to a bitmap format.
- HTML files (HTML documents, e.g. action plans)
- MP3 (audio file)
- TXT files (text files)
- URL files (contain links to Web pages)
- MHT files (Web archives)
- WAV (audio file)

Click to display a dialog box for importing a resource file.

Click to display the Add URL dialog box.

Click to remove the selected resource file.

Click to rename the selected resource file.

Click to display a dialog box for replacing the selected resource file with another one.

Click to display a dialog box for exporting the selected resource file.

### 19.2 Select Resource dialog box

Main window > Maps and Structure

Allows you to add a map file in DWF format to the Logical Tree.

**Select a resource file:**

Click a filename to select a map file. The content of the selected file is displayed in the preview pane.

**Manage...**

Click to display the Resource Manager dialog box.

### 19.3 Sequence Builder dialog box

Main window > Maps and Structure

Allows you to manage camera sequences.
Click to display the **Add Sequence** dialog box.

Click to rename a camera sequence.

Click to remove the selected camera sequence.

**Add Step**
Click to display the **Add Sequence Step** dialog box.

**Remove Step**
Click to remove selected steps.

**Step**
Displays the number of the step. All cameras of a particular step have the same *dwell time*.

**Dwell**
Allows you to change the dwell time (seconds).

**Camera Number**
Click a cell to select a camera via its logical number.

**Camera**
Click a cell to select a camera via its name.

**Camera Function**
Click a cell to change the function of the camera in this row.

**Data**
Type the time for the duration of the selected camera function. To configure this, you must have selected an entry in the **Camera** column and an entry in the **Camera Function** column.

**Data Unit**
Select the unit for the selected time, for example seconds. To configure this, you must have selected an entry in the **Camera** column and an entry in the **Camera Function** column.

**Add to Logical Tree**
Click to add the selected camera sequence to the *Logical Tree* and to close the dialog box.

### 19.4 Add Sequence dialog box

Main window > ![Maps and Structure](image) > ![Sequence Builder](image) dialog box > ![Sequence Builder](image)
Allows you to configure the properties of a camera sequence.

**Sequence name:**
Type an appropriate name for the new camera sequence.

**Logical number:**
For using with a CCTV keyboard, enter a logical number for the sequence.

**Dwell time:**
Enter the appropriate *dwell time*. 
Cameras per step:
Enter the number of cameras in each step.

Steps:
Enter the appropriate number of steps.

19.5 Add Sequence Step dialog box

Main window > Maps and Structure > Add Step button
Allows you to add a step with a new dwell time to an existing camera sequence.

Dwell time:
Enter the appropriate dwell time.

19.6 Add URL dialog box

Main window > Maps and Structure > Add >
Allows you to add an Internet address (URL) to your system. You can add this Internet address to the Logical Tree as a document. The user can display an Internet page in his Operator Client.

Name:
Type a display name for the URL.

URL:
Type the URL.

19.7 Select Map for Link dialog box

Main window > Maps and Structure > Select a map folder in the Logical Tree >
On the map, right-click and click Create Link
Allows you to select a map for creating a link to another map.

Click another map to select.

Select
Click to insert the link to the selected map.
20 **Schedules page**

Main window >
Allows you to configure **Recording Schedules** and **Task Schedules**.

Click to rename the selected Recording or Task Schedule.

**Recording Schedules**
Displays the Recording Schedules Tree. Select an entry for configuring.

**Task Schedules**
Displays the Task Schedules Tree. Select an entry for configuring.

**Add**
Click to add a new Task Schedule.

**Delete**
Click to delete the selected Task Schedule.

20.1 **Recording Schedules page**

Main window >  > Select an item in the Recording Schedules tree
Allows you to configure **Recording Schedules**.

**Weekdays**
Click to display the Schedule Table for weekdays. The time periods of all configured Recording Schedules are displayed.
Drag the pointer to select the time periods for the selected schedule. All selected cells get the color of the selected schedule.
The 24 hours of the day are displayed horizontally. Every hour is divided into 4 cells. One cell represents 15 minutes.

**Holidays**
Click to display the Schedule Table for holidays.

**Exception Days**
Click to display the Schedule Table for exception days.

**Add**
Click to display a dialog box for adding the required holidays or exception days.

**Delete**
Click to display a dialog box for removing holidays or exception days.

20.2 **Task Schedules page**

Main window >  > Select an item in the Task Schedules tree
Allows you to configure the available **Task Schedules**. You can configure a standard or a recurring pattern.
**Standard**
Click to display the Schedule Table for configuring standard Task Schedules. If you configure a Standard Pattern, no Recurring Pattern is valid for the selected schedule.

**Recurring**
Click to display the Schedule Table for configuring a recurring pattern for the selected Task Schedule. For example, you configure a schedule for every second Tuesday of every month or for the 4th of July of every year. If you configure a recurring pattern, no standard pattern is valid for the selected Task Schedule.

**Weekdays**
Click to display the Schedule Table for weekdays.
Drag the pointer to select the time periods for the selected schedule. The selected cells are displayed in the color of the selected schedule.
The 24 hours of the day are displayed horizontally. Every hour is divided into 4 cells. One cell represents 15 minutes.

**Holidays**
Click to display the Schedule Table for holidays.

**Exception Days**
Click to display the Schedule Table for exception days.

**Clear All**
Click to clear the time periods of all available days (weekdays, holidays, exception days).

**Select All**
Click to select the time periods of all available days (weekdays, holidays, exception days).

**Add...**
Click to display a dialog box for adding the required holidays or exception days.

**Delete...**
Click to display a dialog box for deleting holidays or exception days.

**Recurrence Pattern**
Click the frequency with which you want the Task Schedule to recur (Daily, Weekly, Monthly, Yearly) and then select the corresponding options.

**Day Pattern**
Drag the pointer to select the time period(s) for the recurring pattern.
21 Cameras and Recording page

Main window > Cameras and Recording
Displays the Camera Table page or a Recording Table page.
Allows you to configure camera properties and recording settings.
 Allows you to filter the cameras that are displayed according to their type.

Click to copy recording settings from one Recording Schedule to another.

Click to display the Stream Quality Settings dialog box.

Click to display the dialog box for configuring a selected PTZ camera.

Click to display the recording settings for the selected Recording Schedule.

Displays all available cameras regardless of their storage device. Their schedules are not displayed.

Click to filter the displayed cameras according to their storage device.

Displays the corresponding Camera Table. No Recording Tables are available because these cameras are not recorded in Bosch Video Management System.

21.1 Cameras page

Main window > Cameras and Recording > tab > Click a recording device, for example
Displays various information on the cameras available in your Bosch Video Management System.
Allows you to change the following camera properties:
  – Camera name
  – Assignment of an audio source
  – Logical number
  – PTZ control, if available
  – Live quality (VRM and Live / Local Storage)
  ▶ Click a column title to sort the table by this column.

Encoder
Displays the device type.
### Device Family
Displays the type of firmware used in the encoder.

### Camera
Displays the name of the camera.

### Network Address
Displays the IP address of the camera.

### Location
Displays the location of the camera. If the camera is not assigned to a location yet, **Unassigned Location** is displayed.

### Number
Click a cell to edit the logical number that the camera received automatically when it was detected. If you enter an already used number, a corresponding error message is displayed. The logical number is "free" again when the camera is removed.

### Audio
Click a cell to assign an audio source to the camera. Only for NVR recording: You can assign one audio source to multiple cameras.

If an alarm occurs with low priority and with a camera that has audio configured, this audio signal is played even when an alarm with higher priority is currently being displayed. But this is only true, if the high priority alarm has no audio configured.

#### Stream 1 - Codec / Stream 2 - Codec (only VRM and Local Storage)
Click a cell to select the desired codec for encoding the stream.

The following entries are available:

- **H.263** (only for encoders that do not support H.264)
  Classic codec for MPEG-4 encoding.

- **H.264 BP+** (only for VIPX and ARM)
  Codec for H.264 encoding with the Baseline+ Profile optimized for low bit rates. Use for live viewing with VIPX.
  **Note:** If live video is to be displayed on a VIPX Decoder, select **H.264 BP+**.

- **H.264 MP** (only for VIPX)
  Codec for H.264 encoding with the Main Profile optimized for efficient encoding. Use for recording.

- **H.264 MP Low Latency** (only for ARM)
  Codec for H.264 encoding with the Main Profile optimized for low bit rates and efficient encoding. Use for live viewing and recording.

  **For ARM:** Use **H.264 MP Low Latency** for both live viewing and for recording.

#### Stream 1 - Default Quality / Stream 2 - Quality (only VRM and Local Storage)
Click a cell to select the desired basis quality level for stream 1. This quality is used if recording is off.

Click a cell to select the desired quality level for stream 2. This quality is used for live, if selected, and for recording (only possible for ARM devices).

### Live Video (only VRM and Live / Local Storage)
Click a cell to select the live quality for a VRM or a local storage / live only encoder of stream 2.

(Only visible when you click ![All])
Select a check box to activate PTZ control.
Note:
For port settings refer to Section 18.12.1 COM1, page 122.

**Protocol** (Only visible when you click ![All])
Click a cell to select the appropriate protocol for the PTZ control.

**PTZ Address** (Only visible when you click ![All])
Type the address number for the PTZ control.

**Storage**
**Min Time [days] (only VRM and Local Storage)**
Click a cell to edit the minimum number of days that video data from this camera is retained. Recordings younger than this number of days are not deleted automatically.

**Storage**
**Max Time [days] (only VRM and Local Storage)**
Click a cell to edit the maximum number of days that video data from this camera is retained. Only recordings older than this number of days are deleted automatically.

## 21.2 Recording settings pages

Main window > ![Cameras and Recording] > Click an icon for recording device, for example ![ ] > Click a Recording Schedule tab (for example ![ ])
Allows you to configure the recording settings for all encoders assigned to your system. The displayed Recording Schedules are configured in Schedules.
Only those columns are described that are not part of a Camera Table.

- Click a column title to sort the table by this column.

**Recording (only VRM and Local Storage)**
Allows you to start or stop recording for this encoder.

**Quality Stream 1 (only VRM and Local Storage)**
Click a cell to select the stream quality of stream 1 used for recording. This setting overrides the setting on the ![ ] tab.

**Quality Stream 2 (only VRM and Local Storage)**
Displays the stream quality of stream 2 that you configured on the ![ ] tab.

**Continuous or Prealarm Recording (only VRM and Local Storage)**
In the Mode column, select the recording mode:
- **Continuous**: The settings in the next 2 columns are valid for continuous recording.
- **Prealarm**: The settings in the next 2 columns are valid for alarm recording.
If you select Prealarm as the recording mode, click a cell in the Duration column to select the alarm recording time before the alarm in seconds. The effective recording duration depends on the maximum target bit rate configured for this encoder. We recommend configuring at least 15 seconds.
Alarm Recording (only VRM and Local Storage)
In the Stream column, select the stream that is recorded in case of an alarm. The settings in the next 2 columns are valid for the selected stream. You can select stream 2 only on encoders running ARM firmware.
In the Alarm Quality column, click a cell to select the stream quality of the selected stream. Only for ARM: When you select the No modification entry, the same quality is used for continuous and for alarm recording without any modification. We recommend using the No modification entry. When you select a stream quality, only the values for image encoding interval and target bit rate are modified according to the settings in this stream quality.
In the Duration column, click a cell to select the alarm recording time in seconds. The effective recording duration depends on the maximum target bit rate configured for this encoder. We recommend configuring at least 15 seconds.
To start alarm recording, configure a corresponding alarm or start manual recording in the Operator Client.

Continuous Recording (only NVR)
In the Quality column, click a cell to disable recording or to select the stream quality of stream 1.
In the column, select a check box to activate audio.

Live/Pre-event Recording (only NVR)
In the Quality column, click a cell to select the stream quality of the live view (required for instant playback) and the pre-event recording (required for motion and alarm recording) mode of stream 2. If dual streaming is active on this encoder, you can select stream 1 to use for live or pre-event recording.
In the column, select a check box to activate audio.

Motion Recording (only NVR)
In the Quality column, click a cell to disable recording or to select the stream quality of stream 1.
In the column, click a cell to activate audio.
In the Pre-event [s] column, click a cell to select the recording time before the motion event in seconds.
In the Post-event [s] column, click a cell to select the recording time after the motion event in seconds.

Alarm Recording (only NVR)
In the Quality column, click a cell to select the stream quality of stream 1.
To enable alarm recording, configure a corresponding alarm.
In the column, select a check box to activate audio.
In the Pre-event [s] column, click a cell to select the time before the alarm in seconds.
In the Post-event [s] column, click a cell to select the time after the alarm in seconds.

21.3 Copy Recording Settings dialog box (NVR only)
Main window > Cameras and Recording > Click an icon for recording device, for example > Click a Recording Schedule tab (for example ) > . Allows you to copy recording settings from one Recording Schedule to another.
Copy all
Click to copy all recording settings of the selected schedule to another schedule.

Copy current selection
Click to copy only the recording settings of the selected table rows to another schedule.

21.4 Stream Quality Settings dialog box

Main window > Cameras and Recording >
Allows you to configure stream quality profiles that you can later assign to the recording modes.
A stream quality combines video resolution, frame rate, maximum bandwidth, and video compression.

Click to add a new stream quality.

Click to delete a selected stream quality. You cannot delete the default recording settings.

Name:
Displays the name of the stream quality. When you add a new stream quality, you can change the name.

SD video resolution:
Select the desired video resolution.

Image encoding interval:
Move the slider or type the appropriate value.
The system calculates the corresponding values for IPS (PAL and NTSC).
With the image encoding interval you configure the interval at which images are encoded and transmitted. If 1 is entered, all images are encoded. Entering 4 means that only every fourth image is encoded, the following three images are skipped - this can be particularly advantageous with low bandwidths. The lower the bandwidth the higher this value should be to achieve best-quality video.

Target bit rate [Kbps]:
Move the slider or type the appropriate value.
You can limit the data rate for the encoder to optimize utilization of the bandwidth in your network. The target data rate should be set according to the desired picture quality for typical scenes with no excessive motion.
For complex images or frequent changes of image content due to frequent movements, this limit can be temporarily exceeded up to the value you enter in the Maximum bit rate [Kbps]: field.

Maximum bit rate [Kbps]:
Move the slider or type the appropriate value.
With the maximum bit rate you configure the maximum transmission speed which cannot be exceeded.
You set a bit rate limit to be able to reliably determine the appropriate disk space for storage of the video data.
Depending on the video quality settings for the I- and P-Frames, this fact can result in individual images being skipped.

The value entered here must be at least 10% higher than the value entered in the Target bit rate [Kbps]: field. If the value entered here is too low, it will automatically be adjusted.

**I-Frame Distance**

This parameter allows you to set the intervals in which the I-Frames are coded. Click **Automatic**, to insert I-Frames as necessary. An entry of 1 indicates that I-Frames are continuously generated. An entry of 2 indicates that only every second image is an I-Frame, and 3 only every third image etc. The I-Frames in between are coded as P-Frames.

**Frame Quality Level**

Here you can set a value between **Smooth** and **Detailed** for both the I-Frames and the P-Frames. The smooth value results in the highest quality and the lowest frame refresh rate. The detailed value results in the highest frame refresh rate and the lowest image quality.

The lower the available transmission bandwidth, the higher adjust the quality level to maintain high quality of the video.

**Note:**

You adjust the video quality dependent on the motion and level of detail in the video. If you check the **Automatic** check boxes, the optimum relationship between motion and image definition is automatically adjusted.

**VIP X1600 XFM4 Settings**

Allows you to configure the following H.264 settings for the VIP X 1600 XFM4 encoder module.

- **H.264 deblocking filter**: Select to improve visual quality and prediction performance by smoothing the sharp edges.
- **CABAC**: Select to activate high efficient compression. Uses a large amount of processing power.

### 21.5 PTZ Settings dialog box

- **Main window > Cameras and Recording > Select a PTZ camera >**

Allows you to configure a PTZ camera.

**Note:**

First configure the port settings of your PTZ camera before you can configure the PTZ camera settings. Otherwise the PTZ control is not working in this dialog box.

You set predefined positions and auxiliary commands.

- **Click to move the camera to the predefined position or to execute the command.**
- **Click to save the predefined position or command.**
- **Click to rename the predefined position or command.**
- **Click to remove the predefined position or command.**
**Predefined Positions tab**
Click to display the table with the predefined positions.

**Nr**
Displays the number of the predefined position.

**Name**
Click a cell to edit the name of the predefined position.

**Aux Commands tab**
Click to display the table with the auxiliary commands.

**Nr**
Displays the number of the auxiliary command.

**Name**
Click a cell to edit the name of the command.

**Code**
Click a cell to edit the command´s code.
Events page

Main window > Events
Displays the Event Tree with all available events and an Event Configuration Table for each event. The events are grouped by their type, for example, all camera recording events like continuous recording or alarm recording are grouped under Recording Mode.

The available events are grouped beyond their corresponding devices. A state change of a device is displayed beyond as . All other events are displayed under device dependant groups as .

You can configure for each event:
- Trigger an alarm according to a schedule (not available for all events)
- Log the event according to a schedule. An event is displayed in the Event List of the Operator Client if it is logged.
- Execute a Command Script according to a schedule (not available for all events)
If the event occurs, your settings are executed.

You can create a Compound Event which combines several events with Boolean expressions.

▶ Click a tree item to display the corresponding Event Configuration Table.

Click to duplicate an event. Use it to generate multiple alarms for a certain event.

Click to delete a duplicated or a Compound Event.

Click to rename the selected Compound Event.

Click to display a dialog box for creating Compound Events using Boolean expressions of other events (maximum 10).

Compound Events are added to the Event Configuration Table.

Click to edit the selected Compound Event.

Click to display a dialog box for creating and editing Command Scripts.

Device
Displays the name of the device or schedule.

Network
Displays the IP address of the corresponding IP device.

Trigger Alarm
Click a cell to select a Recording or Task Schedule for triggering an alarm.
Select Always if you want the alarm to be triggered independently from the point in time.
Select Never if you do not want the alarm to be triggered.
Log
In the Schedule column, click a cell to select a Recording or Task Schedule for logging. Select Always if you want the event to be logged independently from the point in time. An event is displayed in the Event List of the Operator Client if it is logged. Select Never if you do not want the event to be logged.

Script
In the Script column, click a cell to select a Command Script. In the Schedule column, click a cell to select a Recording or Task Schedule for executing a Command Script. Select Always if you want the Command Script to be executed independently from the point in time. Select Never if you do not want the Command Script to be executed.

Minimum Event Time
Click a cell to enter a number of milliseconds. This time period defines the duration of an event. If the next event follows within this time period, it is not recognized as a new event. If the state of the device is changed after this time period, a new event is triggered. For example, you can avoid that a loose contact in a relay creates masses of events.

22.1 Command Script Editor dialog box

Main window >  
Allows you to create and edit Command Scripts.

Click to save the changed settings.

Click to restore the saved settings.

Click to check the code of a script.

Click to create a scriptlet file.

Click to delete a scriptlet file.

Click to display a dialog box for importing a script file.

Click to display a dialog box for exporting a script file.

Click to convert an existing script to the other available script language. All existing script text is deleted.
22.2 Create Compound Event / Edit Compound Event dialog box

Main window > Events > 
Allows you to create or modify a Compound Event.

Event name:
Type the required name for the Compound Event.

Event States:
Select the state change that shall be part of a Compound Event.

Objects:
Select one or more of the available objects of the selected state change.

Boolean operation between objects
Select a check box to associate two or more objects with AND or OR.

Resulting Compound Event will be fired, IF:
Displays the conditions for the Compound Event.

Boolean operation between conditions
Select a check box to associate two or more conditions with AND or OR.

22.3 Select Script Language dialog box

Main window > Events > 
Allows you to set the script language for your Command Scripts.
You cannot change the script language for existing Command Scripts.

Script Language:
Select the required script language.
23 Alarms page

Main window > Alarms
Displays the Event Tree and an Alarm Configuration Table for each event. Only the events configured on the Events page are displayed.

In the tables you configure for each event how an alarm triggered by this event is displayed and which cameras are recorded and displayed when this alarm occurs.
Some events are configured as alarms per default, e.g., a system error.
For the following events you cannot configure an alarm:
- Change of a recording mode
- Change of an alarm state
- Most of the user actions, e.g. PTZ action

Click to display the Resource Manager dialog box.

Displays a dialog box to set global alarm settings.
► Click a tree item to display the corresponding Alarm Configuration Table.

Device
Displays the device of the event condition selected in the Events Tree.

Network Address
Displays the IP address of the corresponding IP device.

Alarm Identity
In the Priority column, click in a cell to type the alarm priority for the selected alarm (100 is low priority, 1 is high priority).
In the Title column, click in a cell to type the title of the alarm to be displayed in Bosch Video Management System, for example in the Alarm List.
In the Color column, click in a cell to display a dialog box for selecting a color for the alarm to be displayed in the Operator Client, for example in the Alarm List.

Alarm Image Panes
In one of the 1-5 columns, click ... in a cell to display a dialog box for selecting a camera.
You can only select a camera that was added to the Logical Tree in Maps and Structure.
You can configure the number of available Alarm image panes in the Global Alarm Settings dialog box.
In the Audio File column, click ... in a cell to display a dialog box for selecting an audio file that is played in case of an alarm.

Alarm Options
Click ... in a cell to display the Alarm Options dialog box.

23.1 Global Alarm Settings dialog box

Main window > Alarms >
Alarm Settings tab

Display order in case of same alarm priority:
Select the appropriate value to configure the order of Alarm Image panes in the Alarm Display of the Operator Client.

Max. Image panes per alarm:
Enter the maximum count of Alarm Image panes to be displayed in case of an alarm.

Auto-clear time:
Enter the number of seconds until an alarm is automatically cleared.
This only applies for alarms that are set to Auto-clear in the Alarms page.

Instant playback rewind time:
Enter the number of seconds for the duration of instant playback.

Manual alarm recording time:
Only valid for NVR recordings.
Enter the number of minutes for the duration of alarm recording that a user can start manually in the Operator Client.
The user can stop the manual recording before this time is elapsed.

Repeat alarm audio:
Select the check box and enter the number of seconds after an alarm sound is repeated.

Interrupt the Windows Screen Saver for incoming alarms
Select the check box to ensure that an incoming alarm is displayed even when the screen saver is active. If the screen saver requires a user name and password for being interrupted, this setting has no effect.

Analog Monitor Groups tab

Show blank screen
Click to configure that on a monitor not being used for alarm display nothing is shown.

Continue live display
Click to configure that on a monitor not being used for alarm display live display is shown.

23.2 Select Image Pane Content dialog box

Main window > ![Alarms] > ![Alarm Image Panes] or ![Alarm Image Panes] column > Click ... in one of the 1-5 columns
Allows you to select the Logical tree item that is displayed and recorded (if the item is a camera) in case of the selected alarm.

NOTICE!
A map displayed in an Alarm Image pane is optimized for display and contains only the initial view of the basic .dwf file.

Search Item
Enter text to find an item in the Logical Tree.

Find
Click to find the camera with the entered search text in its description.
Live
Click to determine that the live image of the camera is displayed in case of an alarm.

Instant playback
Click to determine that instant playback of the camera is displayed. The rewind time for instant playback is configured in the Global Alarm Settings dialog box, see Section 23.1 Global Alarm Settings dialog box, page 143.

Pause playback
Select the check box to display the alarm instant playback camera with paused instant playback. The user can start instant playback if needed.

Record this camera
Select the check box to enable alarm recording for this camera in case of an alarm. If an alarm is triggered, this camera is recorded in alarm recording quality. The duration of the recording is the duration of the alarm state plus pre- and post-alarm time. This setting directly changes the setting for alarm recording in the Alarm Options dialog box and vice versa.

23.3 Select Resource dialog box
Main window > Alarms > or > Alarm Image Panes column > Audio File column > Click ...
Allows you to select an audio file that is played in case of an alarm.

Play
Click to play the selected audio file.

Pause
Click to pause the selected audio file.

Stop
Click to stop the selected audio file.

Manage...
Click to display the Resource Manager dialog box.

23.4 Alarm Options dialog box
Main window > Alarms > or > Alarm Options column > ...
Allows you to configure the following settings for alarms:
- Cameras that start recording in case of an alarm
- Enabling protection for these alarm recordings (only for NVR recording)
- Triggering PTZ commands in case of alarm
- Notifications that are sent in case of an alarm
- Workflow that has to be processed in case of an alarm
- Assigning cameras that are displayed in analog monitor groups in case of an alarm.

Cameras tab
Nr
Displays the camera number as configured on the Cameras and Recording page.
Name
Displays the camera name as configured on the **Cameras and Recording** page.

Location
Displays the location as configured on the **Maps and Structure** page.

Record
Select a check box to enable alarm recording for this camera in case of an alarm. If an alarm is triggered, this camera is recorded in alarm recording quality. The duration of the recording is the duration of the alarm state plus pre- and post-alarm time. This setting directly changes the setting for alarm recording in the **Select Image Pane Content** dialog box and vice versa.

Protect Recording (only for NVR recording)
Select a check box to protect the alarm recording of this camera.

Auxiliary Command
Click a cell to select an auxiliary command to be executed in case of an alarm. Entries in this list are only available for a PTZ camera.

Predefined Position
Click a cell to select a predefined position to be set in case of an alarm. Entries in this list are only available for a PTZ camera.

Notifications tab

E-mail
Select the check box to send an e-mail in case of an alarm.

Server:
Select an e-mail server.

Recipients:
Type the e-mail addresses of the recipients (example: name@provider.com).

SMS
Select the check box to send an SMS in case of an alarm.

Device:
Select an SMS device.

Recipients:
Type the mobile numbers of the recipients.

Text:
Type the text of the notification.

Information:
Select the check box to add the corresponding information to the notification text.

Workflow tab

Record only alarm
Select the check box to specify that the camera is only recorded and not being displayed in case of this alarm. This check box is only active if the **Record** check box on the **Cameras** tab is selected.

Auto-clear alarm after configured time ('Global Alarm Options' dialog box)
Select the check box to specify that this alarm is automatically cleared.
**Auto-clear alarm when event state changes back to normal**
Select the check box to specify that this alarm is automatically cleared when the event that triggers this alarm changes its state. The alarm will not be cleared automatically if it is accepted and unaccepted.

**Show action plan**
Select the check box to enable the workflow that must be processed in case of an alarm.

**Resources...**
Click to display the Resource Manager dialog box. Select a document with a description of the corresponding workflow.

**Display a comment box**
Select the check box to enable displaying a comment box in case of an alarm. In this comment box the user can type comments on the alarm.

**Force the operator to process the workflow**
Select the check box to force the user to process the workflow. If selected, the user cannot clear the alarm until he has entered a comment on the alarm.

**Execute the following Client Script when alarm is accepted:**
Select a Client Command Script that is executed automatically, when the user accepts an alarm.

**Analog Monitor Group tab**

**1...10**
In a numbered column, click a cell and select a camera from the Logical Tree. This camera will be displayed in the assigned monitor in case of an alarm.

**Clear table**
Click to remove all camera assignments to analog monitor groups.

**Alarm title**
Select the check box to configure that the title of the alarm is displayed on the analog monitors as an on-screen display.

**Alarm time**
Select the check box to configure that the time of the alarm is displayed on the analog monitors as an on-screen display.

**Alarm date**
Select the check box to configure that the date of the alarm is displayed on the analog monitors as an on-screen display.

**Alarm camera name**
Select the check box to configure that the name of the alarm camera is displayed on the analog monitors as an on-screen display.

**Alarm camera number**
Select the check box to configure that the number of the alarm camera is displayed on the analog monitors as an on-screen display.

**Only on 1st monitor**
Select the check box to configure that the title and the time of the alarm is displayed only on the first monitor of the analog monitor group as an on-screen display.
User Groups page

Main window > User Groups
The following user group is available by default:
– Admin Group (user name: Admin)
Allows you to configure user groups.

Click to delete a selected user or user group.

Click to add a new user group.

Click to add a new user to the selected user group. Change the default user name if desired.

Click to add a new dual authorization group.

Click to add a new logon pair for dual authorization.

Displays a dialog box for copying permissions from a selected user group to another user group.

Click to display the pages available for configuring the access rights of this user group.

Click to display the page available for configuring the properties of this user.

Click to display the page available for configuring the properties of this logon pair.

Click to display the pages available for configuring the access rights of this dual authorization group.

User Properties page

Main window > User Groups > User Properties tab
Allows you to configure a new user.

Full name:
Type the full name of the user.

Description:
Type an informative description for the user.
Enter new password:
Type the password for the new user.

Confirm new password:
Type the new password again.

Apply
Click to apply the settings.

24.2 User Group Properties page

Main window > [User Groups] > [User Group Properties] tab
Allows you to configure the following settings for the selected user group:
- Logon schedule
- Association of an LDAP user group

Description:
Type an informative description for the user group.

Language:
Select the language of the Operator Client (both NVR and VRM).

Logon schedule:
Select a task or recording schedule. The users of the selected user group can only log on to the system in the times defined by this schedule.

Associated LDAP group:
Type the name of the LDAP user group that you want to use for your system. You can also double-click an item in the LDAP Groups: list.

LDAP Groups:
Displays the available LDAP user groups. You configure LDAP groups in the LDAP Server Settings dialog box.

Search for Groups
Click to display the available LDAP user groups in the LDAP Groups: list. To find user groups you must make the appropriate settings in the LDAP Server Settings dialog box.

Settings
Click to display the LDAP Server Settings dialog box.

Associate Group
Click to associate the selected LDAP group with this user group.

Clear Group
Click to clear the Associated LDAP group: field. The association of the LDAP group to the Bosch Video Management System user group is removed.

24.3 LDAP Server Settings dialog box

Main window > [User Groups] > [User Group Properties] tab > Settings button
You enter the LDAP server settings that are configured outside of Bosch Video Management System. You will need the assistance of your IT administrator who set up the LDAP server for the following entries.

All fields are mandatory except the fields in the Test User / User Group group box.

**LDAP Server Settings**

**LDAP Server:**
Type the name of the LDAP server.

**Port:**
Type the port number of the LDAP server (default unencrypted: 389, encrypted: 636)

**Secure connection**
Select the check box to activate encrypted data transmission.

**LDAP basis for user:**
Type the unique name (DN = distinguished name) of the LDAP path in which you can search for a user.
Example for a DN of the LDAP basis: CN=Users, DC=Security, DC=MyCompany, DC=com

**Filter for user:**
Select a filter used to search for a unique user name.
Examples are predefined.
Replace %username% with the actual user name.

**LDAP basis for group:**
Type the unique name of the LDAP path in which you can search for groups.
Example for a DN of the LDAP basis: CN=Users, DC=Security, DC=MyCompany, DC=com

**Filter for group member search:**
Select a filter used to search for a group member.
Examples are predefined.
Replace %usernameDN% with the actual user name and his DN.
Proxy User

**User name (DN):**
Type the unique name of the proxy user. This user is required to allow the users of this Bosch Video Management System user group to access the LDAP server.

**Password:**
Type the proxy user password.

**Test**
Click to test whether the proxy user has access to the LDAP server.

**Test User / User Group**
The entries in this group box are not saved after clicking OK. They only serve for testing.

**User name:**
Type the name of a test user. Omit the DN.

**Password:**
Type the test user password.

**Test User**
Click to test whether the combination of user name and password is correct.

**Group (DN):**
Type the unique group name with which the user is associated.

**Test Group**
Click to test the association of the user with the group.

**Group search filter:**
Do not leave this field empty. If there is no entry, you cannot assign an LDAP group to a Bosch Video Management System user group.
Select a filter to find a user group.
Examples are predefined.

### 24.4 Copy User Group Permissions dialog box

Main window > **User Groups** > **User** > **Permissions**
Allows you to select user group permissions to be copied to selected user groups.

**Copy from:**
Displays the selected user group. Its permissions are to be copied to another user group.

**Settings to Copy**
Select a check box to select the desired user group permissions for copying.

**Copy to:**
Select a check box to specify the user group where to copy the selected user group permissions to.

### 24.5 Select User Groups dialog box

Main window > **User Groups** > **User** > **Groups**

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Allows you to add a pair of user groups to a **dual authorization group**. The users of the first user group are the users that must log on in the first dialog box for logging on, the users of the second user group confirm the logon.

**Select Logon Pair**
In each list, select a user group.

**Force dual authorization**
Select the check box to force each user to log on only together with a user of the second user group.

### 24.6 Logon Pair Properties page

Main window > ![User Groups] > ![Logon Pair Properties]  
Allows you to modify a pair of user groups to a **dual authorization group**. The users of the first user group are the users that must log on in the first dialog box for logging on, the users of the second user group confirm the logon.

**Select Logon Pair**
In each list, select a user group.

**Force dual authorization**
Select the check box to force each user to log on only together with a user of the second user group.

### 24.7 Logical Tree page

Main window > ![User Groups] > ![Logical Tree]  
Allows you to configure the **Logical Tree** for each **user group**.

**Logical Tree**
Select a check box to give the users of the selected user group access to the corresponding devices.
You can recall the access to a camera on the **Priorities** page.

### 24.8 Events and Alarms page

Main window > ![User Groups] > ![Events and Alarms]  
Allows to configure the permissions for the Events Tree, i.e. you set the events the **user group** is authorized or not authorized to use.

For each event there is at least one device. For example, for the **Video Loss** event the available cameras are the devices. For an event like **Backup Finished** the corresponding device is **Time Controlled Backup**. Hence, a device can be a software process.

- Expand a tree item and click the required check boxes for enabling the events.
  In the **Camera** column, select the check box to enable the events of all the available devices. This ensures that the user group gets events from devices that this user group has no access to. The access to the devices is configured on the **Logical Tree** page and on the **Priorities** page.
- To enable or disable all events at once, select or clear the **Events and Alarms** check box.
24.9 Permissions page

Main window > ![User Groups icon] > ![Permissions icon] > Permissions tab

Allows you to configure various permissions for the selected user group.

**PTZ control of dome cameras**
Select the check box to allow the control of a camera.

**Priorities page:** In the Control Priorities field, you can set the priority for acquiring the control of a camera.

**Allegiant trunk lines**
Select the check box to allow accessing Bosch Allegiant trunk lines.

**Priorities page:** In the Control Priorities field, you can set the priority for acquiring Bosch Allegiant trunk lines.

**Print and save video data**
Select the check box to allow printing and saving video data.

**Alarm processing**
Select the check box to allow alarm processing.

**Alarm display**
Select the check box to allow alarm display. If you select this option, the Alarm processing is deactivated simultaneously.

**Playback**
Select the check box to allow a higher priority for Playback Mode and to allow the other playback features.

If you clear this check box, the Export video files, Protect and unprotect video data, Delete video, and Access to video data that has been recorded in periods when the user group has not been allowed to logon permissions and the Live Video permissions for all available cameras on the Camera Permissions page are cleared and disabled.

**Export video files**
Select the check box to allow exporting video data.

If you clear this check box, the permissions for all available cameras on the Camera Permissions page are disabled also.

**Protect and unprotect video data**
Select the check box to allow protecting video data.

**Delete video**
Select the check box to allow deleting video data.

**Access to video data that has been recorded in periods when the user group has not been allowed to logon**
Select the check box to allow accessing the described video data.

**Logbook access**
Select the check box to allow accessing the Logbook.

**Operator event buttons**
Select the check box to allow user event buttons in the Operator Client.
Close Operator Client
Select the check box to allow closing the Operator Client.

Minimize Operator Client
Select the check box to allow minimizing the Operator Client.

Audio Intercom
Select the check box to allow the user to speak on the loudspeakers of an encoder with audio-in and audio-out function.

Manual Alarm Recording
Select the check box to allow manual alarm recording.
If you clear this check box, the Metadata permissions for all available cameras on the Camera Permissions page are cleared and disabled.

Access VRM Monitor
Select the check box to allow access to the VRM Monitor software.

Set reference image
Select the check box to allow updating the reference image in the Operator Client.

Set area selection for reference image
Select the check box to allow selecting the area in the camera image for updating the reference image in the Operator Client.

Limit access to recorded video to the last n hours.
Select the check box to limit the access to recorded videos.
In the list, enter the number of hours.

24.10 Priorities page

Main window > User Groups > > Priorities tab
Allows you to configure the timeout for explicit PTZ locking. You can set the priorities for PTZ control and the display of incoming alarms.

Control Priorities
Move the appropriate slider to the right to decrease the priority for acquiring PTZ controls and Bosch Allegiant trunk lines. A user with a high priority can lock the PTZ controls or the control of a trunk line for users with lower priorities. You set the timeout for locking PTZ control on the Timeout in min. field. The default setting is 1 minute.

Automatic Popup Behavior
Move the slider to adjust the priority value of Live Image window or Playback Image window. This value is required for incoming alarms to decide whether this alarm is automatically displayed in the Alarm Image window.
For example: If you move the slider for Live Image window to 50 and for the Playback Display to 70 and an alarm comes in with a priority of 60, the alarm is only automatically displayed if the user has Playback Display active. The alarm is not automatically displayed when the user has Live Display active.

Timeout in min.
Enter the time period in minutes.
24.11 Camera Permissions page

Main window > User Groups > Camera Permissions tab

Allows you to configure the access rights for the features of a selected camera or camera group for the selected user group.

If new components are added, camera permissions must be configured afterwards.

You can recall the access to a camera on the Logical Tree page.

**Camera**
Displays the camera name as configured on the Cameras and Recording page.

**Location**
Displays the location of the camera as configured on the Maps and Structure page.

**Access**
Select a check box to allow access to this camera.

**Live Video**
Select a check box to allow using live video.

**Live Audio**
Select a check box to allow using live audio.

**Manual Recording**
Select a check box to allow manual recording (alarm recording).
You can select or clear this check box only when the manual alarm recording is globally enabled on the Permissions page.

**Playback Video**
Select a check box to allow using playback video.
You can select or clear this check box only when playback is globally enabled on the Permissions page.

**Playback Audio**
Select a check box to allow using playback audio.
You can select or clear this check box only when playback is globally enabled on the Permissions page.

**Metadata**
Select a check box to allow displaying metadata.
You can select or clear this check box only when the display of metadata is globally enabled on the Permissions page.

**Export**
Select a check box to allow exporting video data.
You can select or clear this check box only when the export of video data is globally enabled on the Permissions page.

**PTZ**
Select a check box to allow using the control of this camera.
You can select or clear this check box only when the PTZ control of a camera is globally enabled on the Permissions page.

**Aux**
Select a check box to allow executing auxiliary commands.
You can select or clear this check box only when the PTZ control of a camera is globally enabled on the Permissions page.

**Set Presets**
Select a check box to allow the user to set prepositions of this PTZ camera. You can select or clear this check box only when the PTZ control of a camera is globally enabled on the Permissions page.

**Reference Image**
Select a check box to allow updating the reference image of this camera.

### 24.12 Decoder Permissions page

Main window > User Groups > Decoder Permissions tab
Allows you to configure the decoders that the users of this group have access to.

- **Decoder**
  Displays the available decoders.
  Click the check box to give the user group access to this decoder.

### 24.13 User Interface page

Main window > User Groups > User Interface tab
Allows to configure the user interface of 4 monitors used by the Operator Client.

- **Control Monitor**
  Select the control monitor which displays Live Mode only.

- **Alarm Monitor**
  Select the alarm monitor which can display either Live and Alarm Mode or only Alarm Mode.

- **Monitor 1 - 4**
  In the corresponding list, select the required entry.

- **Image panes aspect ratio**
  For each monitor select the required aspect ratio for the initial startup of Operator Client. Use 16:9 for HD cameras.

- **Save settings when shutting down**
  Select the check box to activate that the system remembers the last state of the user interface when the user logs off from the Operator Client. If the check box is not selected, the Operator Client starts always with the configured user interface.

- **Restore Default**
  Click to restore the default settings of this page.

- **Load Custom Layout**
  Click to import an XML file with user interface settings.

- **Unload Custom Layout**
  Click to display a dialog box for unloading imported interface settings.
25 **Concepts**

This chapter provides background information on selected issues.

25.1 **Alarm handling**

Alarms can be individually configured to be handled by one or more user groups. When an alarm occurs, it appears in the Alarm List of all users in the user groups configured to receive that alarm. When any one of these users starts to work on the alarm, it disappears from the Alarm List of all other users.

Alarms are displayed on a workstation's alarm monitor and optionally on analog monitors. This behavior is described in the following paragraphs.

**Alarm flow**

1. An alarm occurs in the system.
2. Alarm notifications appear in the Alarm Lists of all users configured for this alarm. Alarm video is immediately displayed on configured monitors. If it is an automatically displayed alarm (auto pop-up), the alarm video is also automatically displayed on the Operator Client workstation's alarm monitors.
   - If the alarm is configured as an auto-clear alarm, the alarm is removed from the Alarm List after the auto-clear time (configured in the Configuration Client).
   - On analog monitors, any quad views from VIP XDs are temporarily replaced by full-screen displays.
3. One of the users accepts the alarm. The alarm video is then displayed on this user's workstation (if it is not already displayed via auto pop-up). The alarm is removed from all other Alarm Lists and alarm video displays.
4. The user who accepted the alarm invokes a workflow that can include reading an action plan and entering comments. This step is optional - requirements for workflow can be configured by the administrator.
5. Finally, the user clears the alarm. This removes the alarm from his Alarm List and alarm display.
   - On an **analog monitor group**, the monitors return to the cameras that were displayed before the alarm occurred.

**Alarm Image window**

1. To display alarm video, the **Alarm Image window** replaces the Live or Playback Image window on the monitor that has been configured for alarm display.
2. Each alarm gets a row of **Image panes**. Up to 5 Image panes can be associated with each alarm. These Image panes can display live video, playback video, or maps.
   - On an analog monitor group, each alarm can call up cameras on a row of analog monitors. The number of cameras in the row is limited by the number of columns in the analog monitor group. Monitors in the row that are not used for alarm video can be configured to either continue with their current display or to display a blank screen.
3. Higher priority alarms are displayed above lower priority alarms on both analog monitor rows and the Operator Client workstation display alarm rows.
4. If the Alarm Image window is completely full of Alarm Image rows and an additional alarm must be displayed, the lowest priority alarms "stack up" in the bottom row of the Alarm...
Image window. You can step through the stacked alarms with the controls at the left side of the alarm row.

You can step through the alarm stacks on analog monitor groups with control buttons in the Monitors window of the Operator Client workstation display. Analog monitors in alarm are indicated by red icons with blinking "LEDs".

The alarm title, time, and date can be optionally be displayed on all analog monitors, or only the first monitor in the alarm row.

5. For equal priority alarms, the administrator can configure the order behavior:
   - Last-in-First-out (LIFO) mode: in this configuration, new alarms are inserted above older alarms of the same priority.
   - First-in-First-out (FIFO) mode; in this configuration, new alarms are inserted below older alarms of the same priority.

6. An alarm's Image row can appear in the Alarm Image window in one of two ways:
   - When it is generated (auto pop-up). This occurs when the alarm priority is higher than display priority.
   - When the alarm is accepted. This occurs when the alarm priority is lower than display priority.

Auto pop-up alarms
Alarms can be configured to automatically display (pop up) in the Alarm Image window, based on the alarm priority. Each user group's live and playback displays are also assigned priorities. When alarms are received with priority higher than that of the user's display, the alarm automatically displays its alarm row in the Alarm Image window. If the Alarm Image window is not currently displayed, it automatically replaces the Live or Playback Image window on the alarm-enabled monitor.

Although auto pop-up alarms are displayed in the Alarm Image window, they are not automatically accepted. They can be displayed on multiple users' displays simultaneously. When a user accepts an auto pop-up alarm, it is removed from all other users Alarm Lists and alarm displays.

25.2 Connecting Bosch Allegiant Matrix to Bosch Video Management System

The Bosch Video Management System Allegiant Matrix interface provides seamless access to analog matrix cameras in the Operator Client interface. Allegiant cameras appear almost identical to IP cameras. The only difference is a small grid symbol on the camera to indicate that it is a Allegiant camera. You can display cameras using the same tasks as for IP cameras. They are included both in the Logical Tree and the site maps, and users can add them to their Favorites Trees. In-video-window control for Allegiant-connected PTZ cameras is supported, and you can easily display Allegiant cameras on analog monitors connected to IP decoders. Bosch Video Management System provides an interface to the matrix switch via the Allegiant MCS (Master Control Software) application). The MCS, in this case, runs invisibly in the background. This software provides an efficient, event-driven interface to the Allegiant. It provides fast, real-time event response from the Allegiant to Bosch Video Management System. So, for example, if a defective coax cable results in video loss in the Allegiant, an immediate notification is sent to Bosch Video Management System. Also, you can program Bosch Video Management System to respond to Allegiant alarms.
25.2.1 Bosch Allegiant Connection Overview

To achieve a connection between Bosch Video Management System and an Allegiant matrix switching system, you configure a control channel between the Bosch Video Management System and the Allegiant matrix.

Two scenarios are possible:
- Local connection
  The Central Server controls the Allegiant matrix.
- Remote connection
  A dedicated Bosch Allegiant PC connected to the network controls the Allegiant matrix.

Local connection

![Diagram of Bosch Video Management System local connection to a Bosch Allegiant matrix switch](image)

**Figure 25.1** Bosch Video Management System local connection to a Bosch Allegiant matrix switch

1. Bosch Video Management System Client workstations
2. Central Server with Master Control Software
3. RS-232 connection
4. Allegiant matrix
5. encoders
6. Network
Remote connection

![Diagram showing remote connection between Bosch Video Management System and Allegiant matrix]

**Figure 25.2** Bosch Video Management System remote connection to a Bosch Allegiant matrix switch

1. Bosch Video Management System Client workstations
2. Central Server with Master Control Software
3. Network
4. Allegiant PC with Master Control Software
5. RS-232 connection
6. encoders
7. Allegiant matrix

### 25.2.2 Configuring the control channel

Perform the following tasks to configure the control channel:

- Wiring
- Installing the software
- Creating Allegiant configuration file
- Adding the Allegiant matrix to Bosch Video Management System
- Configuring user names

**Wiring**

To configure the control channel between Bosch Video Management System and the Allegiant matrix, connect one PC through an RS-232 serial port to the Allegiant's console port (use the specified Bosch cable for connection). This can be the Bosch Video Management System Central Server, or any other PC on the network.

**Installing Allegiant Master Control Software**

1. Stop the Central Server service if running (**Start** > **Control Panel** > **Services** > Right-click **Bosch VMS Central Server** > **Stop**)
2. Install the Allegiant **Master Control Software** on the Central Server and on the Allegiant PC (if present).
3. On a remote Allegiant PC configure it to start the Allegiant Network Host program (`ld_alghw.exe`) on startup. This starts the necessary Allegiant services to allow other PCs on the network to access the Allegiant. The software runs invisibly. It is not necessary to have a dongle attached to this computer.

To have the service started on computer startup automatically, copy a link to `ld_alghw.exe` to the Startup folder of your computer.

Creating a Bosch Allegiant configuration file

1. Using the Allegiant Master Control Software, create a Allegiant configuration file that specifies the computer attached to the Allegiant matrix. For this task, the Master Control dongle is required.

2. On the **Transfer** menu, click **Communication Setup**. In the **Current Host** list, enter the DNS name of the computer connected to the Allegiant matrix, and enter the serial port parameters (COM port number, baud rate, etc.) of the Allegiant-connected serial port. This allows the Master Control Software on the Central Server or PC to go on-line with the Allegiant system. If this is not successful, ensure that either the Master Control Software or the Allegiant Network Host program is running on the computer attached to the Allegiant matrix, and that the network security is configured to allow remote access to this computer.

3. On the **Transfer** menu, click **Upload**. Select all tables and click **Upload**. To save the configuration file, select a directory.

4. Exit the Master Control Software.

Adding the Bosch Allegiant matrix to Bosch Video Management System

1. Start the Bosch Video Management System Central Server service, start the Configuration Client, and add the Allegiant device by adding this configuration file (see **Section 6.3 Adding a device, page 23** for the step-by-step instruction).

2. Ensure that the Allegiant Master Control Software configuration file used in Bosch Video Management System matches the current Allegiant configuration.

Bosch Video Management System runs the required components of Master Control Software invisibly in the background.

Configuring the user name for logging on the Allegiant services

If the Allegiant matrix is connected to a PC in the network and not to the Central Server, ensure that the Allegiant services on this PC and on the Central Server log on with the same user account. This user must be member of an administrators group.

Further notes in the documentation

Follow these references to get detailed information on the available windows:

- **Section 17.11 Matrix Switches page, page 93**

Follow these references to get detailed information on the available step-by-step instructions:

- **Section 6.8 Configuring a Bosch Allegiant device, page 28**

25.2.3 Bosch Allegiant Satellite System Concept

The Allegiant matrix switch allows multiple Allegiant systems to be tied together using the Satellite concept. In this case, multiple Allegiant systems can appear to the Bosch Video Management System as one large system, providing access to all cameras on all systems.

In an Allegiant Satellite System, monitor outputs of a slave Allegiant are tied to video inputs on the master Allegiant. This connection is called a **trunk line**. In addition, a control channel is established between the master and the slave. When a camera from a slave Allegiant is requested from the master Allegiant, a command is sent to the slave instructing it to switch the requested camera to a trunk line. At the same time, the master Allegiant switches the
trunk input to the requested master Allegiant monitor output. This completes the video connection from the requested slave camera to the desired master monitor.

![Diagram](image_url)

**Figure 25.3** Bosch Allegiant system extended with Satellite switches

1. Bosch Video Management System Client workstations
2. Central Server with Master Control Software
3. Network
4. Allegiant PC with Master Control Software
5. RS-232 connection
6. encoders
7. Allegiant matrix
8. Allegiant Satellite matrix

You can apply the Satellite concept such that an Allegiant can be both a master and a slave. In this way, each Allegiant can view cameras from the others. It is only necessary to connect trunk lines and control lines in both directions, and to properly configure the Allegiant tables. The concept can be further extended, with no practical limit, to multiple Allegiant systems. An Allegiant can have many slaves, and it can be a slave to many masters. You can program the Allegiant tables to allow or disallow user access to camera views as required by site policies.

### 25.3 Connecting CCTV keyboard to Bosch Video Management System

This chapter provides background information on configuring a CCTV keyboard.

#### 25.3.1 Scenarios for CCTV keyboard connections

You can connect a CCTV keyboard to the COM port of a Bosch Video Management System workstation (scenario 1) or to a hardware decoder (e.g. VIP XD, scenario 2).

If you connect the keyboard to a Bosch Video Management System workstation, you can control the complete system. If you connect the keyboard to a decoder, you can only control the analog monitors of the system.

**NOTICE!**

For connecting the CCTV keyboard with a Bosch Video Management System workstation, use the specified Bosch cable.

For connecting the CCTV keyboard with a VIP XD decoder, you need a cable which connects a serial COM port of the keyboard with the serial interface of the decoder. See Section 25.3.2 Connecting a CCTV keyboard to a decoder, page 164 for connections.
CCTV keyboard connected to a Bosch VMS workstation

**Figure 25.4** Scenario 1: CCTV keyboard connected to a Bosch Video Management System workstation

1. Various cameras connected to network via *encoders*
2. Bosch Video Management System workstation
3. CCTV keyboard
4. Bosch Video Management System network
5. Decoder
6. Analog monitors

CCTV keyboard connected to a decoder

**Figure 25.5** Scenario 2: CCTV keyboard connected to a decoder
Follow these references to get detailed information on the available windows:
– Section 17.19 CCTV Keyboards page, page 104
Follow these references to get detailed information on the available step-by-step instructions:
– Section 6.17 Configuring a CCTV keyboard (workstation), page 30
– Section 6.18 Configuring a CCTV keyboard (decoder), page 31
– Section 6.5 Configuring a decoder for use with a CCTV keyboard, page 26

25.3.2 Connecting a CCTV keyboard to a decoder

Configuring the decoder
See Section 6.5 Configuring a decoder for use with a CCTV keyboard, page 26 for details.

Connections between COM port and VIP XD decoder
The following table lists the connections between an RS232 adapter and a serial interface of a VIP XD decoder:

<table>
<thead>
<tr>
<th>RS232 adapter</th>
<th>Serial interface of a VIP XD decoder</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>TX</td>
</tr>
<tr>
<td>3</td>
<td>RX</td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>GND</td>
</tr>
<tr>
<td>6</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>CTS</td>
</tr>
<tr>
<td>8</td>
<td>RTS</td>
</tr>
<tr>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

The following illustration shows the pinout of a standard RS232 adapter (1) and the pinout of the decoder’s serial adapter (2):
25.3.3 Updating CCTV keyboard firmware

1. On any PC, install the IntuiKey downloader.
2. Start IntuiKey Firmware Upgrade Utility.
3. Connect the keyboard with a valid serial cable (refer to Bosch Support if such a cable is not available) to this PC.
4. On the keyboard, press **Keyboard Control** softkey, then **Firmware Upgrade**.
5. Enter the password: 0 and 1 simultaneously.
   The keyboard is in bootloader mode.
6. On the PC, click **Browse** to select the firmware file: for example **kbd.s20**
7. Set the COM port.
8. Click the **Download** button to download the firmware.
   On the keyboard display, **Programming** is displayed.
   Do not press the **Clr** key now. Otherwise the keyboard is not usable after restart (see Notice below).
9. Click **Browse** to select the language: for example **8900_EN..82.s20**
   On the keyboard display, **Programming** is displayed.
10. Close IntuiKey Firmware Upgrade Utility.
11. On the keyboard, press **Clr** key to exit.
    The keyboard restarts. Wait some seconds until the menu for selecting the keyboard language appears.
12. Select the desired language with a softkey.
    The default start display appears.

**NOTICE!**

For starting the bootloader mode directly, you can unplug the power supply from the keyboard, press 0 and 1 simultaneously, plug in the power supply again, release 0 and 1.
# Troubleshooting

This chapter contains information on how to handle known problems using Bosch Video Management System Configuration Client.

## Problems after updating Bosch Video Management System

<table>
<thead>
<tr>
<th>Issue</th>
<th>Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>The NVR does not record after updating Bosch Video Management System.</td>
<td>The connection between NVR and Central Server was lost after the update. The update can potentially have changed the Bosch VMS database on the Central Server. The NVR must “know” these changes.</td>
<td>Reestablish the connection between NVR and Central Server.</td>
</tr>
</tbody>
</table>

## Problems during installation

<table>
<thead>
<tr>
<th>Issue</th>
<th>Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setup displays wrong characters.</td>
<td>The Windows language settings are not correct.</td>
<td>Section 26.1 Configuring the desired language in Windows</td>
</tr>
<tr>
<td>Setup stops with a message that OPC Server cannot be installed.</td>
<td>OPC Server files cannot be overwritten.</td>
<td>Uninstall OPC Core Components Redistributable and restart Bosch VMS Setup.</td>
</tr>
<tr>
<td>The software cannot be uninstalled by executing Setup.</td>
<td></td>
<td>Start Control Panel &gt; Add/Remove Programs and uninstall Bosch Video Management System.</td>
</tr>
</tbody>
</table>

## Problems immediately after starting the application

<table>
<thead>
<tr>
<th>Issue</th>
<th>Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bosch Video Management System displays the wrong language.</td>
<td>Windows is not switched to the desired language.</td>
<td>Section 5.7 Configuring the language of Configuration Client or Section 5.8 Configuring the language of Operator Client</td>
</tr>
<tr>
<td>The logon dialog box of Operator Client shows the wrong language.</td>
<td>Although you have changed the language for Operator Client in Configuration Client, the language for the logon dialog box of Operator Client depends on the Windows language.</td>
<td>Section 26.1 Configuring the desired language in Windows</td>
</tr>
</tbody>
</table>
### Problems with display language

<table>
<thead>
<tr>
<th>Issue</th>
<th>Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some display texts in Configuration Client or Operator Client are in a foreign language, usually English.</td>
<td>The OS language of the computer where the Central Server is installed, is often English. Hence, when the Bosch Video Management System database is generated on this computer, many display texts are created in English. They remain unchanged regardless of the Windows language of an Operator Client computer. To avoid such language discrepancies, install Central Server software on a computer with the desired Windows interface language.</td>
<td>Do not change this.</td>
</tr>
</tbody>
</table>

### Problems with CCTV keyboard

<table>
<thead>
<tr>
<th>Issue</th>
<th>Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>The CCTV keyboard triggers an alarm and the softkey display displays Off Line.</td>
<td>The connection to the workstation is lost. Either the cable is damaged or unplugged, or the workstation has been reset.</td>
<td>Section 26.2 Reestablishing the connection to a CCTV keyboard.</td>
</tr>
</tbody>
</table>

### Problems with the settings in the recording control of your soundcard

<table>
<thead>
<tr>
<th>Issue</th>
<th>Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feedbacks occur when using a microphone for Intercom functionality.</td>
<td>In the recording control of your soundcard the microphone must be selected, not the stereo mix (or something else). Operator Client checks its configuration file during startup and changes the settings in the recording control accordingly. This configuration file contains a default entry which might not match your system configuration. This setting is restored during each start of Operator Client.</td>
<td>Change the setting in the configuration file of Operator Client to microphone. See Section 26.3 Fixing the recording setting for Intercom functionality, page 168.</td>
</tr>
</tbody>
</table>
### 26.1 Configuring the desired language in Windows

If you want to change the display language for the setup of Bosch Video Management System, you must switch the language in your Windows. For activating the language settings the computer is restarted after performing the following steps.

**To configure the desired language:**
1. Click **Start**, click **Control Panel**, and then double-click **Regional and Language Options**.
2. Click the **Advanced** tab, under **Language for non-Unicode programs**, select the desired language.
3. Click **OK**.
4. In each of the next message boxes, click **Yes**. 
   Your computer is restarted.

### 26.2 Reestablishing the connection to a CCTV keyboard

1. Plug in the cable again or wait until the workstation is online. 
   The **Off Line** message disappears.
2. Press the **Terminal** softkey to enter Bosch Video Management System.

### 26.3 Fixing the recording setting for Intercom functionality

**To fix the recording setting:**
1. Start Operator Client.
2. View the newest Operator Client log file:
   
   C:\Documents and Settings\All Users\Application Data\Bosch\VMS\Log\BvmsClientLog.*

3. Look for a line like the following:
   
   2007-09-26 15:39:56,442 26036 [GUI Thread] INFO Bosch.Vms.Dvs.VideoSDK.EntryPoint CreateLocalAudioSource - audioSource inputNr 1 has the name 'Microphone'

   The number for the microphone entry can be different on your system.
   Note this number, in this example it is the number 1.

---

**Issue | Cause | Solution**
---|---|---
Configuration Client crashes. | If there are many cameras configured in an Allegiant file which are not connected to Bosch Video Management System, you can reduce this number. This avoids unnecessary system load. | See Section 26.4 Reducing the number of Allegiant cameras. 

**Issue | Cause | Solution**
---|---|---
Operator Client crashes. | DiBos Web client is installed and has been started on the computer where Operator Client is installed. | Uninstall the DiBos Web client.
4. Edit the Operator Client configuration file:
   C:\<Bosch installation
directory>\Bosch\VMS\bin\OperatorClient.exe.config

5. Look for a line like the following:
   <add key="MicrophoneInputNr" value="2"/>
   If the number for the microphone differs from the number found in the log file, change
   the number here to the number in the log file. In this example, change to number 1.

   Now the microphone is used as input source.

26.4 Reducing the number of Allegiant cameras
You need the Allegiant Master Control Software to edit the Allegiant file.

To reduce the number of Allegiant cameras:
1. Start the Master Control Software.
2. Open the Allegiant file.
3. Click the Camera tab.
4. Mark the cameras that are not required.
5. On the Edit menu, click Delete.
6. Save the file. The file size remains unchanged.
7. Repeat the last step for monitors that you do not need. Click the Monitors tab.
8. Import this file in Bosch Video Management System (see Section 6.3 Adding a device, page 23).

26.5 Restoring a system configuration
You can restore a system configuration using the exported configuration data and user data.

To restore:
1. Stop Central Server service and all NVR services.
2. Unzip the .zip file.
3. Replace the elements.bvms by the export.bvms.
4. Replace the UserData folder by the contents of the unzipped UserData folder.
5. Delete all NVR.elements.bvms at all NVR instances.
6. Start the Central Server service and all NVR services.

Further configuration files:
- Elements.bvms.bak (from V.2.2 on): Backup file before the last activation incl. history
- Elements_Backup******.bvms: Configuration from an older version. Will be created after a software update.
**Glossary**

### 0...9

**802.1x**
The IEEE 802.1x standard provides a general method for authentication and authorization in IEEE-802 networks. Authentication is carried out via the authenticator, which checks the transmitted authentication information using an authentication server (see RADIUS server) and approves or denies access to the offered services (LAN, VLAN or WLAN) accordingly.

### A

**Alarm**
Event that is configured as an alarm. This is a particular situation (motion detected, doorbell rung, signal lost, etc.) that requires immediate attention. An alarm can display live video, playback video, an action plan, a web page, or a map.

**Alarm Image window**
Image window for displaying one or more Alarm Image panes.

**Alarm List**
Window in Bosch Video Management System used to display a list of active alarms.

**Alarm priority**
Each alarm is assigned a priority. Alarms can be configured to automatically display (pop up) in the Alarm Image window, based on the alarm priority. Each user's live/playback display is also assigned a priority. When alarms are received with priority higher than that of the user's display, the alarm automatically displays its alarm row in the Alarm Image window. If the Alarm Image window is not currently displayed, it automatically replaces the Live or Playback Image window on the alarm-enabled monitor.

**Allegiant**
Bosch family of analog matrix switching systems.

**Analog monitor**
External composite video monitor requiring a video decoder to view video streams and archives.

**Analog monitor group**
A set of analog monitors connected to decoders. The analog monitor group can be used for alarm processing in a given physical area. For example, an installation with three physically separated control rooms might have three monitor groups. The monitors in an analog monitor group are logically configured into rows and columns and can be set to full-screen or quad view.

**ANR**
Automatic Network Replenishment; software process that copies missing video data from a video transceiver to the network video recorder after a network failure. The copied video data exactly fills the gap that occurred after the network failure. For proper working ANR needs the information when the network failure started, when it was fixed again, and the recorded video data on the video transceiver. Hence the transceiver needs any kind of local storage. The recording capacity on this local storage is calculated with the following formula: (network bandwidth x estimated network downtime + safety margin) x 2. Doubling this recording capacity is required because the continuous recording must continue during the copy process.

**ASF**
Advanced Systems Format; Microsoft Windows media audio and video format.

**Asynchronous replay**
Simultaneous playback of archived videos without regard to synchronization of time between them.
<table>
<thead>
<tr>
<th><strong>ATM</strong></th>
<th>Automatic Teller Machine</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Audio decoder</strong></td>
<td>Device or software that decodes compressed audio streams for playback.</td>
</tr>
<tr>
<td><strong>Audio encoder</strong></td>
<td>Device or software that encodes audio streams using a video compression algorithm.</td>
</tr>
<tr>
<td><strong>Authentication</strong></td>
<td>Process of verifying the authenticity of a video stream. The user can start an authentication process. If non-authentic data is encountered, a message is displayed.</td>
</tr>
<tr>
<td><strong>Auto pop-up alarm</strong></td>
<td>Event that is configured as an alarm which is displayed in the Alarm Image window of Operator Client automatically.</td>
</tr>
</tbody>
</table>

**B**

| **B-Frame** | Bidirectional frame. Part of a video compression method. |
| **BIS** | Building Integration System |
| **Bit rate** | Number of bits that are transferred between devices in a specified amount of time, expressed in kilobits per second (Kbps). |
| **Bosch ATM/POS Bridge** | Receives string via serial cable / COM interface and forwards these strings via Ethernet cable (TCP/IP). The strings are usually POS data or transactions from ATMs. |
| **Broadcast** | Receiver-unspecific transmission over a network. |

**C**

| **Camera control** | Provides scroll (pan/tilt) and zoom functions. It works on the selected Image window. |
| **Camera sequence** | A list of cameras that are displayed one after the other. Each camera is displayed for a specific time (dwell time). There are two types of sequences: predefined and automatic. Predefined sequences are defined by the administrator. Icons for these sequences are located in the Logical Tree. Automatic sequences are created when you drag a multiple selection or a folder from the Logical Tree to an Image pane or a decoder. All cameras in this folder or selection sequences in the Image pane. You can create your own sequences by creating a folder in your Favorites Tree. |
| **CCL** | Command Console Language. Set of commands that is used to control the functions of a Bosch Allegiant device. |
| **Central Server** | Computer in the Bosch Video Management System environment for central management. |
| **CIF** | Common Intermediate Format. Describes the lines and pixels a video image consists of. See Video resolution. |
| **Client workstation** | Computer in the Bosch Video Management System environment for viewing live and playback video and for configuration tasks. |
| **Command Script** | Macro, that the administrator can program to build an automatic action like positioning a PTZ |
camera or send E-mails. For that functionality Bosch Video Management System provides a specific set of commands. Command Scripts are divided into Client Scripts and Server Scripts. Client Scripts are used on client workstations to execute certain tasks that can run on a client workstation. Server Scripts are executed automatically by an event that was triggered in the system. They get arguments provided by the event like date and time. A Command Script can consist of several scriptlets. You can create a Command Script using the following scripting languages: C#, VB.Net. Command Scripts are executed in response to events or alarms automatically according to a schedule (Server Scripts only), manually from the Logical Tree, or manually from icons or on maps.

**Compound Event**
Combination of different events. The combination uses Boolean expressions, i.e. AND and OR. You can combine only state changes, for example the change of a connection state to disconnected or the activation of a schedule.

**Compression**
See Video compression.

**Configuration Client**
Application used to configure Bosch Video Management System.

**D**

**Database**
Collection of data that is organized so that its contents can easily be accessed, managed, and updated.

**Decoder**
Changes a digital stream to an analog stream, e.g., to display digital video on a analog monitor.

**Detection zone**
Motion detection zone. A user defined template that watches for motion in a specific part of the video image, as opposed to simply detecting motion anywhere in the image.

**Device**
Hardware component such as encoder/decoder, NVR, DiBos, analog matrix, ATM / POS bridge.

**Device Tree**
Hierarchical list of all the available devices in the system.

**Digital input**
An external device that interfaces with Bosch Video Management System providing an on/off signal to the application. Bosch Video Management System can then use the digital input to associate it with a pre-determined action. Digital input sources can include devices like door contacts, motion detectors, card readers, etc.

**Digital zoom**
Software manipulation of an image whereby the image is cropped and enlarged creating pixels through interpolation.

**DNS**
Domain Name System. A DNS server converts a URL (www.myDevice.com, for example) into an IP address on networks that use the TCP/IP protocol.

**Dome camera**
See PTZ camera.

**Dual authorization**
Security policy that requires two different users to log on to the Operator Client. Both the users must be member of a normal Bosch Video Management System user group. This user group (or these user groups if the users are members of different user groups) must be part of a dual authorization group. A dual authorization group has its own access rights within Bosch Video Management System. This dual authorization group should have more access rights than the normal user group that the user belongs to.
Example: User A is member of a user group called Group A. User B is member of Group B. Additionally a dual authorization group is configured with Group A and Group B as members. For the users of Group A, dual authorization is optional, for users of Group B it is mandatory. When user A logs on, a second dialog box for confirming the logon is displayed. In this dialog box, a second user can log on if he is available. If not, user A can continue and start the Operator Client. He then has only the access rights of Group A.

When user B logs on, again a second dialog box for logging on is displayed. In this dialog box, a second user must log on. If not, user B cannot start the Operator Client.

**Dual streaming**

Dual streaming allows an incoming data stream to be encoded simultaneously according to two different, individually configured settings. This creates two data streams: one for live and pre-event recording, the other for continuous, motion, and alarm recording.

**Duplex**

Term used to define the direction of data transmission between two parties. Half-duplex allows data transmission in both directions but not simultaneously. Full-duplex allows simultaneous data transmission.

**Dwell time**

Preset amount of time a camera is displayed in an Image window until the next camera is displayed during a camera sequence.

**DWF**

Design Web Format. Used to display technical drawings on a computer monitor.

**DynDNS**

Dynamic Domain Name System. A DNS host service that holds IP addresses ready in a database. Dynamic DNS allows you to connect to the device via the Internet using the host name of the device. See DNS.

**Encoder**

Changes an analog stream to a digital stream, e.g., to integrate analog cameras in a digital system like Bosch Video Management System. Some encoders can have a local storage like a flash card, a USB hard disk, or they can store their video data on iSCSI devices. IP cameras have an encoder built in.

**Event**

A circumstance or state that is linked to an alarm and/or an action. Events can arise from many sources such as cameras, archivers, directories, digital inputs, etc. They can include start-recording states, loss of signal states, disk full messages, user logons, digital input triggers, etc.

**Failover NVR**

Computer in the Bosch Video Management System environment. Takes over the tasks of a Primary NVR in case this server fails. This takeover can happen even when the Central Server is not working. Now the Failover NVR records all the cameras of the Primary NVR. When the Primary NVR is fixed and online again, the recordings are again stored on this NVR, the cameras are switched back automatically. The Failover NVR stops recording. The recordings of the down time of the Primary NVR stay on the Failover NVR.

**FIFO**

First in first out. Mode in the alarm handling of Bosch Video Management System that defines the order of active alarms with the same priority.

**Frame**

A single video image.

**Frame rate**

See IPS.
G

GOP  Group of Pictures; GOP length is the number of images in a compressed video file between two I-Frames.


GUID  Global unique identifier.

H

H.264  Standard for encoding (compressing) digital audio and video for multimedia applications. This standard includes different profiles that can be manufacturer-dependent. The following profiles are available: Baseline, Baseline+, Main Profile. Baseline (not used in Bosch Video Management System) supports 2 CIF. Baseline+ supports 4 CIF and provides a better image quality than Baseline. Main Profile supports 4 CIF and provides a high efficient compression algorithm called CABAC (Context-adaptive binary arithmetic coding). This serves for high quality encoding for storage.

Half-duplex  See Duplex.

Hot spot  Mouse sensitive icon in map that is configured in Configuration Client. Hot spots are cameras, relays, Command Scripts. The user uses it for localizing and selecting a device in a building.

HTML  Hypertext Markup Language

I

I-Frame  Intra Frame. Part of a video compression method. Contains the information of a complete image, unlike P- or B-Frames that contain information of the changes compared to the previous or next frame.

IIS  Internet Information Server

Image pane  Used for displaying live and recorded video of a single camera, a map, or an HTML file.

Image pane bar  Toolbar of an Image pane.

Image pane pattern  Arrangement of Image panes.

Image window  Container for Image panes, structured by an Image window pattern.

Instant playback  Plays the recorded image of the selected camera in an Image pane on the live screen. The start time (number of seconds in the past, or rewind time) can be configured.

Intercom functionality  Used to talk on the loudspeakers of an encoder. This encoder must have audio-in and audio-out. The Intercom functionality can be granted per user group.

IPS  Images per second. Number of video images transmitted or recorded per second.

IQN  iSCSI Qualified Name. The initiator name in IQN format is used for provisioning addresses for both iSCSI initiators and targets. With IQN mapping you create an initiator group that controls the access to the LUNs on an iSCSI target and you write the initiator names of each encoder.
and the VRM into this initiator group. Only the devices whose initiator names are added to an initiator group are permitted to access a LUN. See LUN and see iSCSI.

**iSCSI**

Internet Small Computer System Interface. Protocol that manages storage via a TCP/IP network. iSCSI enables access to stored data from everywhere in the network. Especially with the advent of Gigabit Ethernet, it has become affordable to attach iSCSI storage servers simply as remote hard disks to a computer network. In iSCSI terminology, the server providing storage resources is called an iSCSI target, while the client connecting to the server and accessing the resources of the server is called iSCSI initiator.

**IVA**

Intelligent Video Analysis. Algorithm that detects specific properties and the behavior of objects in a scene monitored by a video camera and from this generates alarm events that, in turn, can be processed in a CCTV system. Recording with IVA settings activated is a precondition to be able to selectively and quickly search through video material later. IVA makes it possible to capture and evaluate directional movement of objects in such a way that false alarms are prevented to a large extent. IVA adapts automatically to changing environmental conditions and is therefore largely non-sensitive to perturbing influences such as rain and tree movement. Especially when used for forensic search, IVA allows for filtering moving objects by their color specifications. With the aid of IVA algorithm extensive video material can be searched selectively for objects with specific color properties.

**IVMD**

Intelligent Video Motion Detection. Software algorithm that detects moving objects within an environment monitored by a video camera and generates alarm events that can be processed further in Bosch Video Management System. IVMD makes it possible to capture and evaluate directional motion of objects, thereby largely preventing false alarms. IVMD adapts automatically to changing environmental conditions and is therefore non-sensitive to perturbing influences such as rain and moving plants.

**K**

Kbps  Kilobits per second, a measure of data transfer speed.

**Key frame**  See I-Frame

**L**

**LAN**

Local Area Network.

**LDAP**

Lightweight Directory Access Protocol. Network protocol running over TCP / IP that allows accessing directories. A directory can be for example a list of user groups and their access rights. Bosch Video Management System uses it to get access to the same user groups as MS Windows or another enterprise user management system.

**LIFO**

Last in first out. Mode in the alarm handling of Bosch Video Management System that defines the order of active alarms with the same priority.

**Local Storage**

On encoders with local storage, recording is performed block-wise, i.e. the data is stored in blocks that are pre-allocated. When one block is filled up, the device continues to write to the next block. When all blocks are filled up, the blocks are overwritten. Local storage devices support multiple partitions of arbitrary size that are considered as blocks.
A block is divided into two parts, one for pre-alarm and alarm recording, the other one for continuous recording. The alarm recording part is organized in 1 to 128 tracks. If the system switches from continuous to alarm recording, the data is stored in one of the tracks. Per alarm a single track is used. A track has a fixed size on the disk. The size of the alarm track is determined by the bit-rate and the pre- and alarm-duration that you configure. These settings are used to calculate the size of an alarm track.

<table>
<thead>
<tr>
<th><strong>Logbook</strong></th>
<th>Container for logging all events in Bosch Video Management System.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Logical number</strong></td>
<td>Logical numbers are unique IDs assigned to each device in the system for ease of reference. Logical numbers are only unique within a particular device type. Typical use of logical numbers are Command Scripts.</td>
</tr>
<tr>
<td><strong>Logical Tree</strong></td>
<td>Tree with a customized structure of all the devices. The Logical Tree is used in the Operator Client to select cameras and other devices. In the Configuration Client, the &quot;Full Logical Tree&quot; is configured (on the Maps and Structure page) and tailored for each user group (on the User Groups page).</td>
</tr>
<tr>
<td><strong>LUN</strong></td>
<td>Logical Unit Number. Used in the iSCSI environment to address an individual disk drive or a virtual partition (volume). The partition is part of a RAID disk array (the iSCSI target).</td>
</tr>
</tbody>
</table>

**M**

| **Map window** | Used for displaying either maps or documents, it cannot display video content and is not limited to a 4:3 ratio. |
| **Master Control Software** | Software used as interface between Bosch Video Management System and an Allegiant device. Version 2.8 or greater is used. |
| **Metadata** | Data of a POS or ATM like date and time or bank account number stored with the corresponding video data to provide additional information for evaluation. |
| **MHT** | Also called 'Web Archive'. File format that can save all HTML and image files of an Internet site in one file. To avoid problems we recommend to create MHT files with Internet Explorer 7.0 or higher only. |
| **MIB** | Management Information Base. Term in the SNMP environment for a table containing state and control data for a network device. Every entry in a MIB is identified by its OID. The MIB is stored in the device. A MIB file is used for importing the MIB data into a MIB. |
| **Motion detection** | Software component that watches for changes in the video image. The threshold for the amount of change required to identify motion can be configured. |
| **MPEG-4** | Motion Picture Expert Group. Standard for encoding (compressing) digital audio and video for multimedia applications. |
| **MSS** | Maximum Segment Size. The largest amount of data, specified in bytes, that a computer or communications device can handle in a single, unfragmented piece. |
| **MTU** | Maximum Transmission Unit. Describes the maximum amount of data (in bytes) that can be transferred without being fragmented. |
**Multi-unicast**
Communication between a single transceiver and multiple receivers on a network by duplication of the data stream in the device with subsequent distribution to a number of receivers.

**Multicast**
Communication between a single transceiver and multiple receivers on a network by distribution of a single data stream on the network to a number of receivers in a defined group. Requirement for multicast operation is a multicast compliant network with implementation of the UDP protocol and the IGMP protocol.

---

**Network monitoring**
Measurement of network related values and evaluation of these values against configurable thresholds.

**No-touch deployment**
Method for automatic downloading, installing and running .NET applications without changing the registry or shared system components. With Bosch Video Management System, no-touch deployment is used for updating the Operator Clients from the Central Server. The update takes place if a new version is stored on the Central Server and when each user is logging on to the Operator Client. If you work with one Operator Client against multiple Central Servers, no-touch deployment uses only the software version stored on the Central Server the Operator Client has last logged on to successfully. When you try to log on to another Central Server with a different application version, this one displays **Central Server not online** because the software versions do not match.

**NTP**
Network Time Protocol is a protocol designed to synchronize the clocks of computers over a network. NTP version 3 is an internet draft standard, formalized in RFC 1305. NTP version 4 is a significant revision of the NTP standard, and is the current development version, but has not been formalized in an RFC (see RFC, SNTP).

**NVR**
Bosch Network Video Recorder; computer in the Bosch Video Management System storing audio and video data, acting as Failover NVR, or as Redundant NVR. This NVR is different from the VIDOS NVR which can be integrated in Bosch Video Management System.

---

**OID**
Object Identifier. Term in the SNMP environment. Determines a MIB variable.

**OPC**
OLE for Process Control.

**OPC Server**
Server that fires events and receives commands as defined in the OPC specification.

**OSD**
On-screen Display: Menus are shown on the display monitor.

**Output relay**
Electrical contact that can be opened under software control. It can be useful for creating actions such as turning on a light, ringing an alarm, etc.

---

**P**

**P-Frame**
Predicted Frame. Part of a video compression method.
Payload
Describes the portion of a packet of transmitted information that carries user traffic. It is effectively what remains in a packet if all headers or trailers are discarded.

Playback Mode
Used to playback and search through archived videos.

Port
1) On computer and telecommunication devices, a port (noun) is generally a specific place for being physically connected to some other device, usually with a socket and plug of some kind. Typically, a personal computer is provided with one or more serial ports and usually one parallel port. 2) In programming, a port (noun) is a "logical connection place" and specifically, using the Internet protocol, TCP/IP, the way a client program specifies a particular server program on a computer in a network. Higher-level applications that use TCP/IP such as the Web protocol, Hypertext Transfer Protocol, have ports with preassigned numbers. These are known as "well-known ports" that have been assigned by the Internet Assigned Numbers Authority (IANA). Other application processes are given port numbers dynamically for each connection. When a service (server program) initially is started, it is said to bind to its designated port number. As any client program wants to use that server, it also must request to bind to the designated port number. Port numbers are from 0 to 65535. Ports 1 to 1023 are reserved for use by certain privileged services. For the HTTP service, port 80 is defined as a default and it does not have to be specified in the Uniform Resource Locator (URL).

POS
Point of sale.

Post-alarm time
See Post-event time.

Post-event time
Time period after an event has happened. The system stores the recorded video for this period.

Pre-alarm time
Time period before an alarm happens. The system stores the recorded video for this period.

Pre-event time
Time period before an event. The system can store the recorded video for this period.

Primary NVR
Computer in the Bosch Video Management System environment. A Primary NVR stores audio and video data.

PTZ camera
Camera with pan, tilt, and zoom function.

QCIF
Quarter CIF. See Video resolution.

RADIUS server
Remote Authentication Dial-In User Service: a client/server protocol for the authentication, authorization and accounting of users with dial-up connections on a computer network. RADIUS is the de-facto standard for central authentication of dial-up connections via Modem, ISDN, VPN, Wireless LAN (see 802.1x) and DSL.
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<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAID</td>
<td>Redundant array of independent disks. Used for organizing two or more hard disks as if they were one drive. On such a drive data is shared or replicated. This is used to achieve greater capacity, reliability, and speed.</td>
</tr>
<tr>
<td>Recording quality</td>
<td>An adjustable setting for encoders (cameras). The slider range reflects the degree of compression used by the encoder when encoding/compressing the video signal. Setting the slider to the left lets the encoder use as much compression as possible (reducing the bandwidth requirements, file sizes and picture quality). Setting the slider to the right lets the encoder use as little compression as possible (increasing the bandwidth requirements, file sizes and picture quality).</td>
</tr>
<tr>
<td>Recording Schedule</td>
<td>Used for scheduling recording and for scheduling some events like starting backup or limiting log on. Recording Schedules cannot have gaps or overlaps. It also determines the video recording quality.</td>
</tr>
<tr>
<td>Recording settings</td>
<td>Can be set in dependency on the Recording Schedule and the state of the camera. The following states are possible: recording disabled, manual recording, continuous recording, motion recording, alarm recording</td>
</tr>
<tr>
<td>Redundant NVR</td>
<td>Computer in the Bosch Video Management System environment. Records the same video and audio data as the Primary NVR. A Primary NVR can have maximum one Redundant NVR.</td>
</tr>
<tr>
<td>Reference image</td>
<td>A reference image is continuously compared with the current video image. If the current video image in the marked areas differs from the reference image, an alarm is triggered. This allows you to detect tampering that would otherwise not be detected, for example if the camera is turned.</td>
</tr>
<tr>
<td>Rewind time</td>
<td>Number of seconds in the past when an Image pane is switched to instant playback.</td>
</tr>
<tr>
<td>RFC</td>
<td>Request for Comment. One of a long-established series of informal informational documents and standards that guide the development of the Internet.</td>
</tr>
<tr>
<td>RTSP</td>
<td>Real Time Streaming Protocol. A network protocol which allows to control the continuous transmission of audio-visual data or software over IP-based networks.</td>
</tr>
<tr>
<td>Silent alarm</td>
<td>Alarm that puts cameras into alarm recording mode but causes no other alarm responses. These alarms are shown in the Event List, but do not appear in any Alarm Lists.</td>
</tr>
<tr>
<td>Site</td>
<td>User-created entity for grouping related system resources together for ease of viewing and management. Typically, a site corresponds to a physical location, like a building or a floor, but it may be used to represent any concept.</td>
</tr>
<tr>
<td>SNMP</td>
<td>Simple Network Management Protocol. IP based protocol that allows to get information from networking devices (GET), to set parameters on network devices (SET) and to be notified about certain events (EVENT).</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>--------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>SNTP</td>
<td>Simple Network Time Protocol is a simplified version of NTP (see NTP). SNTP can be used when the ultimate performance of the full NTP implementation described in RFC 1305 is not needed or justified. SNTP version 4 is described in RFC 2030 (see RFC).</td>
</tr>
<tr>
<td>SSL</td>
<td>Secure Sockets Layer. Protocol used to secure applications that need to communicate over a network.</td>
</tr>
<tr>
<td>Subnet mask number</td>
<td>Combined with the IP address number used to identify the network segment your computer is on. A subnet mask is a 32-bit number written in dotted decimal notation, e.g. 255.255.255.192.</td>
</tr>
<tr>
<td>Synchronous replay</td>
<td>Simultaneous playback of archived videos that are synchronized in time.</td>
</tr>
<tr>
<td>Task</td>
<td>User-programmed behavior that is triggered by specific events (motion detected, doorbell rung, alarm triggered, etc.) Tasks can be: Control of PTZ cameras, relay outputs, camera sequences, start of an alarm recording. Typical tasks are for example: An event triggers an alarm; event executes a Command Script; event is logged; user login is allowed only from 8 a.m. to 5 p.m; execution of a Command Script at 11 p.m.</td>
</tr>
<tr>
<td>Task Schedule</td>
<td>Used for scheduling events which can occur in Bosch Video Management System, for example executing a Command Script. In Events you assign Task Schedules to events. For scheduling events you can also use Recording Schedules. With a standard Task Schedule you configure time periods for every day of the week, for holidays, and for exception days. With a recurring Task Schedule you configure recurring time periods. They can recur every day, every week, every month, or every year.</td>
</tr>
<tr>
<td>Timeline</td>
<td>Part of the Bosch Video Management System user interface. Displays lines as graphical representations of the recordings of the selected cameras. The Timeline allows you to navigate through recorded videos.</td>
</tr>
<tr>
<td>Trap</td>
<td>Term in the SNMP environment for an unrequested message from a monitored device (agent) to the network monitoring system (manager) about an event in this device.</td>
</tr>
<tr>
<td>Trunk line</td>
<td>Analog outputs of an analog matrix that are connected to an encoder device. Thereby matrix video sources can be used in the Bosch Video Management System.</td>
</tr>
<tr>
<td>UDP</td>
<td>User Datagram Protocol. A connection less protocol used to exchange data over an IP network. UDP is more efficient than TCP for video transmission because of lower overhead.</td>
</tr>
<tr>
<td>Unicast</td>
<td>Communication between a single transceiver and a single receiver over a network.</td>
</tr>
<tr>
<td>User group</td>
<td>User groups are used to define common user attributes, such as permissions, privileges and PTZ priority. By becoming a member of a group, a user automatically inherits all the attributes of the group.</td>
</tr>
</tbody>
</table>
User privilege
Particular operations that a user has been granted the right to perform.

User profile
List of information concerning a particular user, such as user type, E-mail, etc. Each user profile is identified by a unique user name.

User tree
See Logical Tree.

Video compression
Method for reducing the size of video files. The higher the compression, the lower the quality. Video compression reduces the spatial and the temporal redundancy in video data. For reducing spacial redundancy, image compression is used. The frame of a single point in time is compressed as an image file. For reducing temporal redundancy, motion compensation is used. Motion compensation uses the fact, that two consecutive frames are nearly identical. Hence, only one frame is stored completely. For the next one, only the difference is stored. This is repeated after a given number of frames (GOP).

Video format
Resolution of the video. There are typically four video resolutions available: QCIF, CIF, 2CIF and 4CIF. See Video resolution.

Video resolution
Specification of horizontal and vertical pixels transferred with video signals.
PAL:
1CIF = 352 x 288
2CIF = 704 x 288
4CIF = 704 x 576
QCIF = 176 x 144
NTSC
1CIF = 352 x 240
2CIF = 704 x 240
4CIF = 704 x 480
QCIF = 176 x 120

VIDOS NVR
VIDOS Network Video Recorder. Software that stores the audio and video data of IP encoders on a RAID 5 disk array or any other storage medium. VIDOS NVR provides functions for playback and retrieval of the recorded video. You can integrate cameras in your Bosch Video Management System that are connected to a VIDOS NVR computer.

View
Collection of cameras assigned to Image panes that you can recall for instant live viewing. Image panes with maps or HTML files can be part of a View. Sequences cannot be part of a View.

Virtual input
Used for forwarding events from third-party systems to Bosch Video Management System.

VRM
Video Recording Manager. Software package in Bosch Video Management System which manages storing video (MPEG-4 SH++ and H.264) and audio data on iSCSI devices in the network. VRM maintains a database containing the recording source information and a list of associated iSCSI drives. VRM is realized as a service running on a computer in the Bosch Video Management System network. VRM does not store data itself but distributes storage capacities on iSCSI devices to the encoders, while handling load balancing between multiple iSCSI devices.
VRM streams playback video and audio data from iSCSI to Operator Clients.
<table>
<thead>
<tr>
<th><strong>WAN</strong></th>
<th>Wide Area Network.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WatchDog</strong></td>
<td>Application used to monitor the other Bosch VMS services. Should a service fail, the WatchDog is responsible for re-starting services as well as notifying the user by E-mail or event log of the reason and time of the crash.</td>
</tr>
</tbody>
</table>
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